Repetition and Transformation:
The Housing Project and the City of New York

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as part of the collaborative doctoral degree and/or fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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8.2 Publication: FINNEY, T. December 2015. The Ground, Object and Strategy: Architectural Transformation in Housing Projects, New York City. *Journal of Architecture,* 20.

8.3 Conference: Architectural type and the Discourse of Urbanism. Co-organizer, UTS with Nottingham University hosted by the Royal College of Arts, London. 14th December 2015.

9. **Bibliography**

REPETITION AND TRANSFORMATION: The Housing Project and The City

Abstract

From the early decades of the twentieth century the housing project has, with varying intensities, acquired a critical instrumentality within urban spatial reasoning. The following thesis examines this reasoning across several terrains. The first concerns architecture's disciplinary outside: an agonistic governmental rationality regarding the constellation of home, work, leisure and transport in the formation of urban and domestic subjects. It is a disputed terrain that can be seen to consistently cut through the urban diagram of the housing project. The second is seen through architecture's limited and iterative autonomy to engage and experiment with this diagram via a strategic field of material and formal organization, that is, through the disciplinary specific work of architectural typology in its negotiation with this outside.

The decades 1960-1980 are generally identified within architectural and urban history and theory as marking a dramatic critique and transformation in the field of architecture. This critique involved a review of architecture's relationship to the city and is particularly evident with reference to the tower in the park housing type of the Modern Movement and its perceived failure in terms of an 'existing and traditional city'. This thesis reframes several projects argued to be definitional of such change. Examples here are drawn from the specificity of the city that throughout the twentieth century has repeatedly been held up as the exemplar of all that the delirious metropolis of change might be: the City of New York.

Through an examination of specific projects, this thesis aims to clarify where architecture's iterative and limited autonomy can be seen in action through this period. In the first instance this is examined through the housing project's definitional role as part of its coming into form, of understandings of the city itself. Evident here is an inherent instability to understandings of the city that has not been central to historical accounts of change as part of architectural history's writing around transformation. In the second instance, the thesis proposes the typological burden, first identified by Kenneth Frampton, as evidence of sustained trajectories of spatial and formal experimentation that belong entirely to architecture's disciplinary autonomy. As such the typological burden, in this instance the ground, is the site of space and form emerging prior to,

rather then as a consequence of, function, challenging the Modern Movement's account of its own design process and understanding of architectural agency. Finally, the thesis demonstrates the discipline's agency relative to legislative change in the United States during this period and the transformation of the Fifth Amendment of the United States Constitution in the context of Eminent Domain and slum clearance in cities on the occasion of the housing project.

In clarifying architecture's disciplinary interior and exploring its iterative and conditional autonomy to a discursive exterior, each of these instances demonstrates a unique kind of directed material politics that is specific to architecture's disciplinary skill set, and quite different to either the passive reflective role typically attributed to it by historical accounts of change, or the formal political role that many contemporary accounts of architecture claim for it. By bringing together the two lenses of governmental rationality and architecture's limited and iterative autonomy this thesis has clarified, to a field that insists on defining itself in terms of the new, where architecture's limited actual agency for transformation is – not the avant-garde edge of a discipline defined in terms of the disciplines of philosophy, sociology, political science or anthropology, or the politics of revolution and subjugation found in contemporary art practice, but rather architecture's disciplinary agency involves a significantly more nuanced directed material politics transformative of both the city and we its urban and domestic subjects.

Introduction

REPETITION AND TRANSFORMATION: The Housing Project and The City

The Housing Project and the City.

There is evident in housing a tension: on the one hand, we understand it to be concerned with the uniqueness of the singular object and an expression of the uniqueness of those housed within: home. On the other, we understand the spatial organization of housing at the scale of the dwelling unit and, equally, housing prototypes at the scale of the building block, to be subject to considerable and almost infinite repetition.

The private life of home as the space of intimacy, familiarity and care is held up in opposition to the public sphere of judgement and the political action of urban life.[1] From the identity cultivated within the teenager's bedroom, with posters on walls, triumphant shelves of objects, awards and sporting equipment; to the space of retreat and intimacy of the parents' bedroom; to the living room as collective social life; in the home each member of the modern family has his or her own place and role, and each has contested yet definable space, the gender-specific child's bedroom, for example, or the sanctity of the parents' bedroom. From the occupant's own choice in furnishing that mark and define the space of the dwelling, to the whole object of architecture itself commissioned as a single unique work, whether architect-designed, or mass-produced by builders, building designers or developers with no professional architectural input, the house is understood to be a container for, and expressive projection of, those who find home within. We understand that the house is to be cultivated by the occupant as a unique and singular condition, an expression of the ambition for the good life and our authentic selves.

On the other hand, however, and in contradiction to this idea of the cultivation of a unique condition, one is struck by the generalized repetition of the spatial organization of housing. Across cities, and through time over the past 150 years, the repetition and continuity of the domestic plan and the single-family dwelling is as evident in the suburban array that typifies the outer edge of cities in the United States, Europe and Australia, as it is in the stacked critical mass of contemporary inner-urban housing projects where there is an aggregation of dwelling units across whole urban blocks in the pursuit of density and new walkable, resilient, sustainable neighborhoods, for example. Regardless of what mechanism produced it – whether

[1] LASCH, C. 1977. *Haven in a Heartless World: The Family Besieged*. New York: Basic Books.

private investment and developers, the state via social housing, or some kind of amalgam or partnership of both; and in spite of the means of procurement, with or without the specialist design services of an architect; and regardless of the size of the dwelling, from the economy of post-WWII state-provided social housing in the form of apartments in most developed nations, for example, to contemporary, bespoke, architect-designed single dwellings such as OMA's 1998 Maison à Bordeaux – each can be seen to be a variation on the same set of organizational principles of individuals in space, often simply with a greater amount of space between users; individual bedrooms that allow autonomy and individualization, coupled with the spaces of collective life, living room, kitchen, bathroom. The banality of housing, the repetition of this basic spatial arrangement of individuals more often than not blinds us to the extraordinariness of it as a generalized condition.

There are many accounts of domesticity and housing: some tell us that since earliest recorded times, the family has aspired to its place to dwell together, that housing is ahistorical, and contemporary housing is the stability and continuity of this desire.[2] Architecture's relationship to this is argued through its origins and via Vitruvius' primitive hut, most familiar from Marc-Antoine Laugier's frontispiece to the 1753 publication *An Essay On Architecture*.[3] Or it can be seen through the more recent Heideggerian notions of a place to dwell via the isolated and austere Black Forest peasant hut that resonates through Bachelard's *Poetics of Space* in a kind of nostalgia for the 'reverie of a maternal womblike and stable home, sheltering and remote.'[4] These images are not unlike the contrasting ideas presented by Jacques Tati in the 1958 film *Mon Oncle*, where the warm, generous, rambling old-town apartment building of known eccentric neighbours and shared experiences is presented as a critique and solution to the cold, isolated functional home of modernity that surgically places its three occupants: mother, father and single child.[5] What these accounts have in common is an understanding of the ahistorical

[2] Ibid.
[3] LAUGIER, M.-A. 1977 (1753). *An Essay on Architecture.* Los Angeles: Hennessey & Ingalls.
[4] OCKMAN, J. 1998. The Poetics of Space. *Harvard Design Magazine,* 6. BACHELARD, G. 1958. *La poétique de l'espace.* Presses Universitaires de France. BACHELARD, G. 1969. *The Poetics of Space.* Boston: Beacon Paperbacks. HEIDEGGER, M. 1971 (1954). Building, Dwelling, Thinking. *Poetry, Language, Thought.* New York: Harper Colophon Books.
[5] *Mon Oncle (My Uncle),* 1958. Directed by TATI, J.

continuity of the domestic subject and the modern family, through a state of constant critique and crises: the greatest contemporary problem is the family; the solution is the family.

Other accounts of the generalized condition of contemporary housing identify the development of technical innovation and the functionalist economics of domestic labour of the nineteenth and twentieth centuries as playing a central role in the emergence of such a consistency to housing.[6] In this argument, housing is the closest we get to mass production, its spatial performance dependent on tightly constrained economic logics and legislative framings unique to state territory. In this historical account, the liberation of women from the home and domestic life through the late nineteenth century, as part of economic, political and social-reform programs, forms a core to accounts of housing's political past. Fordist production systems following World War II, in turning away from military demands, turned instead toward the production of housing for nations producing the *Functional Housing for Frictionless Living*[7] where labour-saving devices and new technology in the home released women into the workforce in ever greater numbers.[8]

There are many contemporary experiments into domesticity within both architectural and art practices that recognize and attempt to push away from the boundaries of these generalized conditions, and from the events described in these histories. Lawrence Barth argues that these operate either by presenting the transgression of the house/home, such as Dan Graham's *Alteration to a Suburban House*, 1978, or Gordon Matta-Clark's *Splitting*, 1974, Foreign Office's *Virtual House*, 1996, or Eisenman's *House Series*, 1967-78. Or they operate by presenting an oppositional caricature to the stability of the domestic, in the figure of The Nomad, such as Toyo Ito's *Dwellings for Tokyo Nomad Women, Pao 1 and 2* (1985-89).[9] However, domesticity itself, the site of intimacy and family life, remains the ground for these challenges. Like Tati in *Mon Oncle*, what all these art practices and avant-garde architectural experiments have in common is a tendency to still position the singular and unique eccentricity of the domestic subject, or the

[6] WRIGHT, G. 1981. *Building the Dream: A Social History of Housing in America.* New York: Pantheon Books.
[7] KLEIN, A. 1928. ***The*** *Functional House for Frictionless Living.*
[8] HAYDEN, D. 1981. *The Grand Domestic Revolution: A History of Feminist Designs for American Homes, Neighbourhoods and Cities.* London: MIT Press. HAYDEN, D. 1984. *Redesigning the American Dream: Gender, Housing and Family Life.* New York: W.W. Norton + Company. HEYNEN, H. 2005. *Negotiating Domesticity: Spatial Productions of Gender in Modern Architecture.* New York: Routledge. HEYNEN, H. 2004. The Rational Kitchen in the Interwar Period in Belgium: Discourses and Realities. *Home Cultures,* 1**,** 23-49.
[9] BARTH, L. 2002. Review. The Good Life: A Guided Visit to the Houses of Modernity. *AA Files,* 48 (Winter)**,** 76-78.

transgression of the object, on the same terrain that housing has been problematized since the nineteenth century, through the lens established by the human sciences: sociology, psychology and anthropology.

This thesis, then, is an attempt to approach the question of what housing and the multi-residential housing project do, from a different direction. Terms such as home, house, domesticity, household, dwelling, residence, and domicile, etc, invoke different cultural and social habits, cultural contexts, legal definitions or economic meanings, an understanding of which is essential for establishing how housing is mobilized for political arguments in different contexts. Each political, legal and cultural jurisdiction with its specific national politics, local authorities, think tanks, house builders, and cultural and contractual architect-client relationship, is complicit in creating the conditions for specific housing markets and production conditions. At the same time, the formal problem of housing design, especially for multi-residential housing projects and social and public housing, is defined by a complementary set of regional, urban, typological and architectural problems, through which a city and its neighborhood become characterized.

Despite this localized difference, and in addition to the repetition at the scale of the dwelling unit, large-scale repetitive housing prototypes at the scale of the building block are equally not as diverse between cultures and cities as one might first expect. As Roger Sherwood observed in his 1978 publication *Modern Housing Prototypes*, they make use of well-known typological arrangements that have dominated production since the late nineteenth century, with relatively minor variations, such as the courtyard block versus the terrace, versus the tower-in-the-park, versus the distributed contextual urban block.[10] A new catalogue of contemporary housing publications reiterates this fact. Publications such as Hilary French's *New Urban Housing***,** 2006; the D-Book series that began as a set of a+t Journal special issues on collective housing in 1996; Firley and Stahl's *Urban Housing Handbook*, 2009; *The Intermediate Size: A Handbook for Collective Dwellings*, by Bijlsma and Groenland, 2006;

[10] SHERWOOD, R. 1978. *Modern Housing Prototypes.* London: Harvard University Press.

Gimenez and Monzonis' *Collective Housing*, 2007; and the *Floor Plan Manual* by Heckmann and Schneider, provide an edited collection of multi--residential housing projects drawn from the past 100 years.[11]

In 1972, Colin Rowe argued that there is a contradiction in architecture that is particularly evident in a practice as tightly bound as housing. He wrote of the strange ground on which architecture stands, with its claim to infinite transformation – yet what the contemporary housing manuals outlined above demonstrate is enormous and continuing repetition. To make this even stranger, the field still, to a large degree, holds an idea that 'any repetition, any copying, any employment of a precedent or a physical model is a failure of creative acuity,' as was a central tenet of the modern movement. Contemporary discourse still holds the idea that repetition establishes convention, and that repetition leads nowhere, and that contemporary architecture must be opposed 'to the dictatorship of the merely received.'[12]

This thesis work, then, is an attempt to address the question of housing transformation and the city from a different direction. On one terrain, and initially in an account of the single family dwelling unit, it works with the biopolitical writings of Michel Foucault and that group of writers that gathered around him and put forward a different argument for the role and constitution of the modern family and, it follows, the single-family dwelling in which it is situated. Here, there is recognition of both the constitutive terrain of the human sciences, and the linked and unique discourse of space that emerges by the nineteenth century.[13] As Françoise Choay reminds us, in the face of the complexity of traditional pre-nineteenth-century urban and architectural spaces, it is easy to forget that 'the creation of an autonomous discourse on space is a recent

[11] FRENCH, H. 2006. *New Urban Housing.* London: Laurence King Publishing. FIRLEY, E. & STAHL, C. 2009. *The Urban Housing Handbook.* West Sussex: John Wiley and Sons Ltd. BIJLSMA, L. & GROENLAND, J. 2006. *The Intermediate Size: A Handbook for Collective Dwellings.* Uitgeverij SUN. GIMENEZ, A. & MONZONIS, C. (eds.) 2007. *Collective Housing.* Alboraya Valencia: Editorial Pencil SL. SCHNEIDER, F. & HECKMANN, O. (eds.) 2004. *Floor Plan Manual: Housing.* Basel: Birkhauser.

[12] ROWE, C. 1972. Introduction to Five Architects. *In:* HAYS, K. M. (ed.) *Architectural Theory Since 1968.* Cambridge, Mass.: MIT Press.

[13] FOUCAULT, M. 1985 (1984). *The History of Sexuality, Vol. 2: The Use of Pleasure.* London: Penguin Books. FOUCAULT, M. 1986. *The History of Sexuality, Vol. 3: The Care of the Self.* Melbourne: Penguin Books. FOUCAULT, M. 1989 (1963). *The Birth of the Clinic: An Archaeology of Medical Perception.* London: Routledge. FOUCAULT, M. 1991 (1978). Governmentality. *In:* BURCHELL, G., GORDON, C. & MILLER, P. (eds.) *The Foucault Effect: Studies in Governmentality with Two Lectures and an Interview with Michel Foucault.* London: Simon and Schuster International Group. FOUCAULT, M. 1979b. On Governmentality. *The History of Sexuality.* London: Allen Lane. FOUCAULT 1979a. *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books.

western development,'[14] and that this has been a hugely transgressive and disruptive force. While Choay's writing focuses on a textual analysis of the 'theoretical writings of urbanism' via a series of foundational texts, Alberti's 1452 *De re aedificatoria* and the utopian literature of Thomas More, this thesis work proposes instead to examine the role of spatial reasoning itself.[15]

Gathering around Foucault's governmentality writing on the history of the disciplines of psychology, clinical medicine and the family, writers such as Jacques Donzelot, Geoffrey Minson, Nikolas Rose and Thomas Osborne have begun to investigate in more detail these socio-spatial institutional forms such as the asylum, penitentiary and medical clinic, and through them the development of what Minson has labelled the 'familial-social mechanism of domesticity.'[16] These writers, but Donzelot in particular, make an account of housing's sociopolitical role in the constitution of new urban and domestic subjectivities. If it is Foucault that introduces the notion of the extension of the mechanism of discipline through the seventeenth and eighteenth centuries into the social body of the city in the formation of what is called the generalized disciplinary society, this group of writers explore in more detail its specific institutional operations where spatial reasoning itself as a system of organizing bodies has formed a fundamental aspect of modernity's epistemological specificity with particular regard to the city and urbanism as a practice. Housing, in this account, is a fundamental mechanism within the constellation of liberal governmental initiatives that in organizing and managing populations of people have emerged as a powerful constitutive force.

The modern family, Chapter One argues, quite unlike many arguments made in its name, is not the bastion of privacy, intimacy and personal expression that sits in opposition to the political

[14] CHOAY, F. 1997. *The Rule and the Model. On the Theory of Architecture and Urbanism.* Cambridge, Mass.: MIT Press. pp. 3

[15] MOORE, T. 2003 (1516). *Utopia.* London: Penguin Classics. ALBERTI, L. B. 1988 (1452). *De re aedificatoria. On the Art of Building in Ten Books.* Cambridge, Mass.: MIT Press.

[16] DONZELOT, J. 1979. *The Policing of Families.* Baltimore: John Hopkins University Press. MINSON, J. 1985. Familiar Terms: Politics, the Family and History of the Present. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan. ROSE, N. 1989. *Governing the Soul: The Shaping of the Private Self.* London: Free Association Books, ROSE, N. 1998. *Inventing Ourselves: Psychology, Power and Personhood.* Cambridge University Press, ROSE, N. 1999. *Powers of Freedom: Reframing Political Thought.* Cambridge University Press, ROSE, N., O'MALLEY, P. & VALVERDE, M. 2006. Governmentality. *Annual Review Law Society,* 2**,** 83-104. ISIN, E. F., OSBORNE, T. & ROSE, N. 1998. Governing Cities: Liberalism, Neoliberalism and Advanced Liberalism. *Urban Studies Programme, Working Paper No. 19.* Toronto: York University. See also BARRY, A., OSBORNE, T. & ROSE, N. 1996. *Foucault and Political Reason: Liberalism, Neoliberalism and Rationalities of Government.* London: UCL Press.

exposure of the public realm. It is, in fact, the most public of spaces into which the technical and tutelary interventions of liberal governmentality are made in the name of the education, health and wellbeing of the child, in terms of sanitation and hygiene, in terms of healthy domestic economies, and the production of gender-specific roles and responsibilities in the family. The retreat of populations into the home in the nineteenth and twentieth centuries isn't the absence of government or a lessening of political concern; rather, the modern family is argued to be the consequence of a particular problematization of government itself. Liberal political reason in this context is both the historic condition of the human and social sciences whereby society as a problem becomes known, but at the same time, it is also a field of concern that is as much technical as political or ideological.[17]

This throws into question the usual division between the public and private realm and operation of the city set up in discussions around the relationship between domesticity and urbanism. Equally, it raises the question of what architecture's relationship is to this spatial reasoning in the placing and organizing of populations of people. Is it as simple as a relationship of reflection such as is given in accounts of the history of the transformation of housing by historians, where changes in the political, social and economic conditions of the production of housing are understood to be 'reflected' in the finished built object and understanding of what housing does?

The second chapter proposes the grounds on which one might set up an alternate relationship between architecture and urbanism. Founded in Foucault's writing in *The Archaeology of Knowledge*, here clarification is made between architecture defined as a discipline versus architecture understood as discursive function.[18] Defined as a material and formal discipline, architecture's coming into form can be explored in its very specific relationship to the discursive structures of urbanism toward which it is called in to serve via typological reasoning. Within this definition, architecture's value is in its disciplinary material and organizational experimentation, rather than its discursive status. It, of course, has technical knowledge, but it has only a limited iterative relationship with discursive structures. Within the context of a discussion regarding urban transformation it is the specifics of that iterative relationship that are of interest.

[17] BARRY, A., OSBORNE, T. & ROSE, N. 1996. *Foucault and Political Reason: Liberalism, Neoliberalism and Rationalities of Government.* London: UCL Press. pp. 9
[18] FOUCAULT, M. 1972. *The Archaeology of Knowledge.* London: Tavistock.

As part of this investigation, the chapter turns to emerging definitions of architectural typology. While type is one of those slippery terms in architecture that has appeared and reappeared throughout the past 300 years, it is the notion of type as instrumental, as a process of formal and spatial reasoning constitutive of the design process itself, and predicated on architecture's graphic realm, that is clarified in this thesis. This design process is a critical diagnostic and propositional gesture, that establishes both a problem field and, in the same gesture, proposes a solution. Therefore, it is always operating on architecture's disciplinary history – the diagram of domesticity, for example – while also always making a proposition for transformation and another possible future.

To further explore this, this thesis will work through two specific housing projects, within the specificity of New York City. Typically, the housing project in the context of this thesis work is understood to be a piece of urban fabric that is, as part of its coming into form, isolated and abstracted from the city around it as part of a design process, experimented on and then replaced in an urban context to do its work: to have an effect on the city at multiple scales. No value distinction is made here between the means of financing housing or the occupants it is to serve, whether it is publicly funded or in public–private partnership-funded social housing, or market-driven housing for the middle class or above.

While Chapter One and Two speculate on a generic condition of spatial reasoning as it emerges specifically with reference to housing, and within the epistemology of modernity as a generalized condition, it is only in the specific materialization of the housing project as it is unique to legislative, historic and site-specific conditions that it can be operated on. The City of New York is a particularly intriguing terrain of consideration in this context because of the ambivalent reactions its spatial organization have provoked throughout much of the twentieth century. One understanding sees it as our quintessential idea of the modern city; New York is held up to be the positive amplified condition of intensity towards which global social and economic life aspires. But, equally, New York constitutes our idea of modernism's failures and the destruction of the ideal city, particularly in terms of the tower-in-the-park type housing projects that dominated the city from the 1930s through to the late 1960s, and a substantial

amount of primary research and writing has been undertaken to look at New York's urban development, housing and transformation. This inner tension forms the background for the writing of a diverse group of architects and urbanists. We might look at Lewis Mumford, Jane Jacobs or K. Michael Hays, or historian Richard Plunz and his definitive history of housing and social change in New York City, or even Robert Caro's Pulitzer Prize-winning biography of the life and work of city bureaucrat and planner Robert Moses.[19] Perhaps it can most poignantly be read in *Delirious New York*; in his 1978 publication, all of the early twentieth-century interventions in the city, the zoning strategies and fragmentations, are celebrated by Rem Koolhaas as part of a retroactive manifesto for success. For Koolhaas, the city's urban fabric is constituted of architectural mutations, utopian fragments and irrational phenomena, the success of which is set in opposition to the idea of the metropolis of Manhattan as the 'Capital of Perpetual Crisis,' where it is neither the success of New York, nor its failure, that Koolhaas celebrates, but rather the vitality of the dispute.

Working through a notion of the typological burden as described initially by Kenneth Frampton in a 1973 review of a housing project in the Bronx, the thesis takes two housing projects that are marked by historical accounts of housing in the city as representative of change and transformation.[20] The first is Twin Parks Northeast by Richard Meier & Partners, completed in 1973 and argued by historians to mark the demise of the modern movement's domination of housing provision in the city. The second is the Brounn and Muschenheim slum-clearance proposal of 1934/35 for fifty blocks of the Upper East Side of Manhattan, positioned by historians as the first move of European modernism onto the continent of North America.

The second part of the thesis then presents three chapters that each work through a trajectory of investigation. Chapter Three will look at a prevailing idea regarding the city, often presented

[19] For Mumford see the following, and discussion in Chapter Three, MUMFORD, L. 1940. The Sky Line: Versailles for the Millions. *In:* WOJTOWICZ, R. (ed.) *Sidewalk Critic: Lewis Mumford's Writings on New York.* New York: Princeton Architectural Press, MUMFORD, L. 1955. The Skyline: The Roaring Traffics Boom – III. *The New Yorker,* April 16, 1955, MUMFORD, L. 1956. *From the Ground Up: Observations on Contemporary Architecture, Housing, Highway Building and Civic Design.* Harcourt Brace, MUMFORD, L. 1956 (1947). *From the Ground Up: Observations on Contemporary Architecture, Housing, Highway Building and Civic Design.* New York: Harcourt, Brace and Company. JACOBS, J. 1961. *The Death and Life of Great American Cities.* New York: The Modern Library. HAYS, K. M. 1992. *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer.* London: MIT Press. PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press, CARO, R. 1974. *The Power Broker: Robert Moses and the Fall of New York.* New York: Alfred A. Knopf. KOOLHAAS, R. 1978. *Delirious New York.* Rotterdam: 010 Publishers.

[20] FRAMPTON, K. 1973. Twin Parks as Typology. *Architectural Forum***,** p.56-61.

by histories of housing, of a conceptual stability to our understanding of what the city is, despite transformations in urban form and type. One can see this in accounts of the the late 1960s and early 1970s, when there was a claimed break or a rupture in the city, and a turning away from the city of the modern movement, with its tower-in-the-park housing solutions, to the new finer-grained housing of the contextual. This is in contrast to the understanding that underpins the operational tactics of urban operators as diverse as Lewis Mumford and Robert Moses, for whom the city is understood to be in a dynamic state of transformation. This idea will be explored through an examination of the role and instrumentality of scale via the emergence in the early twentieth century of the scale of the metropolitan region. With the emergence of the spatial administrative vehicle of the public authority, for the first time, geographical space was linked with governance across uncooperative local authority boundaries, asking always: What size is the scale of the city? By the time the Regional Plan of New York and its Environs was published in 1929, the notion of both the metropolitan region and the neighborhood unit as scales in the city was generalized.

In Chapter Five, the thesis will examine the iterative role of the coming into form of the housing project in the transformation of definitions of public use within the Fifth Amendment of the United States Constitution. Via a continual jurisprudential testing of concepts of blight and eminent domain through the nineteenth and twentieth centuries, this redefinition occurred as part of the designation and procuring of sites for new housing projects. Both the 1934/35 B+M slum-clearance proposal and the 1973 Twin Parks project were the result of eminent domain and the forced acquisition of land. In these instances, it is not the material value of the land in question that is a problem for courts to resolve; this is a simple matter of valuation. Rather, it is the designation of changing definitions of ‘public use’ and what constitutes ‘public benefit’: simple use, or economic benefit. Here, each occasion of the housing project required a new testing of what constituted public benefit within the Fifth Amendment, where the questions, what is the city, and who are we, are asked over and over and over.

Finally, in Chapter Five, the thesis will pursue an idea of the object and strategy of the ground as a site of architecture’s disciplinary experimentation, explored through a trajectory of

nineteenth and twentieth-century projects. Such a trajectory of study reveals the degree to which form and function can exist untethered despite the modern movement's account of its own design process. This raises the question of the process of the attribution of the use of space, and the meaning or name we give it. Modernism tells us that form follows function; what this research will show is that, in fact, more often than not in these trajectories of experimentation, form such as the piloti-flanked arcades of the tower-in-the-park housing type emerges before we know what to call it or do with it.

In conclusion, this thesis is predicated on the agreement that the urban is both an aspiration for architecture and its critical resource. However, there is clearly a slippery mobility to the term 'urban,' such that neither of these two dimensions can be assumed to be stable; not what we generally understand to be the mobile object of architecture, but equally not our understanding and definition of the city into which it is placed. This suggests, then, that perhaps it is not architecture that dramatically transforms in great ruptures through the twentieth century as is so often argued in architectural histories of the housing project, but rather it is our very concept of what the city is that is transformed. This thesis will show that the terrain on which the new spaces of neighborhood, the domestic and the 'traditional and existing city' are formed, is the same terrain on which our understanding of the city itself is constituted. And as part of this, what also transforms is our understanding of who we are as urban subjects. Here, architecture's material and formal practice form part of the problematizing potential of the formation of the specific form of knowledge in the urban. It brings into being subjectivities such as 'the public' as practice, rather than it being the manifestation and reflection of a pre-existing group suggesting a different kind of directed material politics to the disciplinary practice of architecture.[21]

[21] RAJCHMAN, J. 2007. Introduction: Enlightenment Today. *In:* LOTRINGER, S. (ed.) *The Politics of Truth: Michel Foucault.* Los Angeles: Semiotext(E).

DISCIPLINARY EXTERIORITY

Domesticity, The Housing Project and Strategic Spatial Reasoning.

‘What is decisive is that, from the nineteenth century, the government of the city becomes *inseparable from the continuous activity of generating truths about the city*. From that time onwards, governments get tied to novel practices of truth that have a spatial character. The Greeks did not tie urban existence to practices of truth in this way. Or at least the immanence of the city took, for them, primarily a political or ethical form which was not attached to a specifically urban – spatializing – will to truth.’[1]

ISIN, E. F., OSBORNE, T. & ROSE, N. 1998

[1] ISIN, E. F., OSBORNE, T. & ROSE, N. 1998. Governing Cities: Liberalism, Neoliberalism and Advanced Liberalism. *Urban Studies Programme, Working Paper No. 19.* Toronto: York University. pp. 4

Introduction: The Familial-Social and the Domestic Subject

> 'The most familiar things are often shrouded in the deepest mystery. At first it is difficult to see in the conventional layout of a contemporary house anything but the crystallization of cold reason, necessity and the obvious, and because of this we are easily led into thinking that a commodity so transparently unexceptional must have been wrought directly from the stuff of basic human need…'[2]
>
> Evans 1997

1.1 Building the City with Housing: Contemporary Housing Manuals 2006–15

The idea of the housing project, or multi-residential housing development, as 'generator of the city' and agent in large-scale urban transformation seems to have undergone something of a resurgence in the past decade.[3] This is in marked contrast to the field of architecture and urbanism that had so roundly condemned itself during the late 1960s in terms of large-scale housing interventions in the city. Then, critique and condemnation was in response to the perceived failures of the modern movement in terms of the existing and traditional city, and specifically it was criticism directed at the tower-in-the-park housing type that had dominated housing provision in cities like New York and London during the mid-twentieth century.

[2] EVANS, R. 1997a. Figures, Doors and Passages. *In:* EVANS, R. (ed.) *Translations from Drawing to Building and other Essays.* London: Architectural Association Publications. pp. 44. 'The search for privacy, comfort and independence through the agency of architecture is quite recent, and even when these words first came into play and were used in relation to household affairs, their meanings were quite different from those we now understand.'

[3] In this thesis, both the terms 'housing project' and 'housing estate' are used in reference to large-scale urban interventions in the form of housing and its associated triad of concerns regarding work/home/leisure. 'Housing estate' is more commonly used in the United Kingdom and its ex-colonies, Australia and New Zealand, for example. Because this research work is concerned with examining this urban instrument through the specificity of New York, we will use the term more typically used in the American context: 'housing project.'

More recently, there has appeared a new catalogue of publications directed at the housing project: from Hilary French's *New Urban Housing* in 2006;[4] to the *D-Book series*;[5] Firley and Stahl's *The Urban Housing Handbook* in 2009;[6] *The Intermediate Size: A Handbook for Collective Dwellings* by Bijlsma and Groenland in 2006;[7] Gimenez and Monzonis' *Collective Housing* in 2007; [8] and the *Floor Plan Manual* by Heckmann and Schneider in 2011.[9] The underlying question being asked by each in this series of new publications that survey, review, catalogue and organize collections of existing multi-residential housing projects designed and built throughout the twentieth century, is this: How can housing be better deployed to build the city? It appears that the field so self-condemning in the 1960s now seems slightly uncomfortable when confronted with the kind of rupture and disruption that accompanied such critique, a rupture that claimed the period from the late 1960s as a break with a modernist past.

What these new housing publications have in common, apart from the presentation of catalogues of multi-residential housing itself, is their claim to be workbooks that reference material from either side of this 1960s divide.[10] They present themselves as tools addressed to those in practice with the aim of helping them to come faster, and in greater detail, complexity and depth, to solutions to problems involving multi-residential housing's contribution to building the city.[11] Each provides an edited collection of multi-residential housing projects that are analyzed graphically at multiple scales and catalogued such that their principles are generalizable, and in a way that is deployable by architects, urban designers and urban actors to specific sites, conditions and contemporary urban problems. As the *Floor Plan Manual* states in an opening introduction,

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[4] FRENCH, H. 2006. *New Urban Housing.* London: Laurence King Publishing.
[5] The D-Book Series began as a set of a+t Journal special editions on collective housing. It was first published in book form in 2006 and again in more detail in 2007. ibid. MOZAS, J. & PER, A. F. 2006. *Densidad/Density: New Collection Housing.* Vitoria-Gasteiz: a+t ediciones, PER, A. F., MOZAS, J. & ARPA, J. 2007. *D-Book: Density, Data, Diagrams, Dwellings: A Visual Analysis of 64 Collective Housing Projects.* Vitoria-Gasteiz: a+t ediciones.
[6] FIRLEY, E. & STAHL, C. 2009. *The Urban Housing Handbook.* West Sussex: John Wiley and Sons Ltd.
[7] BIJLSMA, L. & GROENLAND, J. 2006. *The Intermediate Size: A Handbook for Collective Dwellings.* Uitgeverij SUN.
[8] GIMENEZ, A. & MONZONIS, C. (eds.) 2007. *Collective Housing.* Alboraya Valencia: Editorial Pencil SL.
[9] First edition in 2002, with updates in 2009 and 2011. HECKMANN, O. & SCHNEIDER, F. (eds.) 2011. *Floor Plan Manual: Housing.* Basel: Birkhauser Verlag.
[10] The Floor Plan Manual actually states this: 'The Floor Plan Manual is designed as a workbook.' pp. 6
[11] D-Book.

> 'while the *Floor Plan Manual* serves as a tool to research the latest developments in housing, it goes beyond that brief and also contextualizes these in comparison to examples from the past 65 years. The systematic typological presentation of the projects allows readers to utilize the knowledge and ideas of others.'[12]

Central to the questions being asked by all these new housing publications is how multi-residential housing contributes to urban transformation in response to new demands on the city: its shifting demographics and population growth, changing work patterns, aging populations, climate-change and sustainability issues in addition to the opportunities and demands of new technology in cities. And these questions are asked in the context of the compelling transformative dynamism of urban environments like Shanghai and Dubai; in terms of the continuing demands of cities such as New York, London or Sydney, for change; and driven by the kind of statistical speculation underwriting international exhibitions like Ricky Burdett's 2006 Venice Biennale spin-off at London's Tate Modern, titled Global Cities*,* that reveled in a new global state of play that finds us, for the first time, with more than fifty percent of the world's population living in cities. There remains a contemporary anxiety over our capacity to fulfill all of architecture's promise of change and transformation, to act with the kind of audacity that typified post-World War II interventions; those moves in terms of infrastructure, leisure, work and housing which reorganized cities such as New York, Paris and London in the first half of the twentieth century.

If one considers these publications in more detail, it's possible to see that each establishes a graphic catalogue of projects organized around ideas of architectural type, where the architectural object is read as separate to, but influential on, the urban fabric around it. Exemplars are organized by urban type first: block edge, linear block, detached house, apartment tower.[13] This category is understood foremost to be predicated on the building's 'urban task.' Each publication, then, uses scale to organize its arguments – the scale of the urban block (typically 1:500); the scale of the building block (1:200), followed by that of the

[12] HECKMANN, O. & SCHNEIDER, F. (eds.) 2011. *Floor Plan Manual: Housing.* Basel: Birkhauser Verlag.
[13] Ibid.pp. 6

domestic single-family unit (typically lot:1:100, dwelling:1:50, room:1:20) and from this, a series of consequences for the plan of the single dwelling emerge.[14] In the *Floor Plan Manual*, for example, within each of these categories, the examples are organized chronologically to articulate, the authors argue, an 'evolution in housing' through time.[15]

At the scale of the dwelling unit itself, each of these publications questions the burden of the inherited functionalist plan of the single-family dwelling. The argument is that if multi-residential housing is to respond to shifts in demographics, and the demands of climate change and population growth, it is the strict functionalist burden of the plan, at the scale of the single-family dwelling that we need to somehow slip out from under. For Mozes and Per in the *D-Book*,[16] the diagnosis is that the plan doesn't respond with enough clarity and specificity to particular occupant life-cycle needs. Not every plan can do everything required of it, they argue. We need, therefore, to become better at producing dwelling units that are responsive to very specific life stages, and the occupants' needs specific to that stage: aged facilities and attendant accommodations and mobility requirements, for example, or the needs of housing and raising small children. So, for the *D-Book*, it is the dynamism of the occupant that needs to be cultivated, along with their capacity to move through the city at various times, while the plan of the dwelling itself differentiates and stabilizes. Gone is the idea of the 'family home' for the duration of 'the family.' The *D-Book*, then, is a proposition for a new kind of cyclical movement of occupants through the city, dependent on changes in their own life-cycle needs, focus and demands.

The *Floor Plan Manual* argues for almost exactly the opposite. For Schneider and Heckman, what is required for multi-residential housing to address shifting demographics and changing needs in cities is 'an ambiguity' in the plan itself. This, they argue, would allow for multiple ways of dwelling through time, within the same unit. The spatial performance of the dwelling needs to become more flexible in response to what is claimed to be the static, inherited functionalism of the plan of the single-family dwelling as produced by the modern movement.

[14] Ibid.pp. 7
[15] Ibid.Introduction
[16] MOZAS, J. & PER, A. F. 2006. *Densidad/Density: New Collection Housing.* Vitoria-Gasteiz: a+t ediciones, PER, A. F., MOZAS, J. & ARPA, J. 2007. *D-Book: Density, Data, Diagrams, Dwellings: A Visual Analysis of 64 Collective Housing Projects.* Vitoria-Gasteiz: a+t ediciones.

An ambiguity would allow many different ways of dwelling within each plan, rather than the need for many specific plans in response to specific ways of being. Here, dynamism through spatial performance and flexibility is required of the plan itself.[17]

Regardless of the site of investigation, the plan or the occupant, fundamental to both of these contemporary positions is a call for dynamism coupled with an underlying agreement that we have inherited from the modern movement a fixed and inflexible spatial arrangement in the single-family unit. Each writer makes a call for either the occupant becoming more dynamic (Mozas and Per) and moving between dwellings, or the spatial performance of the single-family dwelling itself becoming more dynamic (Schneider and Heckmann), such that we might reach our potential within the boundaries of a less-defined, less-burdened plan.[18]

1.1.1 The Question of Dynamism: What's at Stake in Housing

Both of these apparently oppositional arguments made by Mozas and Per and by Heckmann and Schneider regarding dynamism are predicated on an idea most clearly articulated by Robin Evans in in his 1978 essay Figures Doors and Passages.[19] Evans argues that there emerged in the eighteenth and nineteenth centuries a spatial transformation in the floor plan of housing, away from an ambiguity of spatial performance – what he describes as a 'matrix' of unprogrammed rooms – toward an ever-stricter programmatic functionalism that organized and placed bodies in space in the name of privacy and separation.

Oliver Heckmann, in his introductory essay to the *Floor Plan Manual* entitled The Sweetness of Functioning is Architecture,[20] directly references Evans' seminal essay. Heckmann,

[17] HECKMANN, O. & SCHNEIDER, F. (eds.) 2011. *Floor Plan Manual: Housing.* Basel: Birkhauser Verlag.
[18] Flexibility as a dispute in housing stretches back through the twentieth century. From the earliest experiments in functionalism and the minimal dwelling, it is the dispute itself that has lasted. However, as Katharina Borsi has pointed out in her survey of the development of the Berlin block and the insertion of the new scale of the domestic in the early twentieth century, the continuing argument for dynamism within the family home in terms of an ambiguity of planning can be understood to be internal to the functioning of the institution of the family itself. BORSI, K. 2009. Drawing and Dispute: The Strategies of the Berlin Block. *In:* LATHOURI, M., PERITON, D. & DI PALMA, V. (eds.) *The Intimate Metropolis.* London: Routledge.
[19] EVANS, R. 1997a. Figures, Doors and Passages. *In:* EVANS, R. (ed.) *Translations from Drawing to Building and other Essays.* London: Architectural Association Publications.
[20] HECKMANN, O. 2011a. The Sweetness of Functioning is Architecture: On the Use of Floor Plans. *In:* HECKMANN & SCHNEIDER (eds.) *Floor Plan Manual.* Basel: Birkhauser, GORDON, C. 1991a. Governmental Rationality: An

following Evans, makes a call for a return to an ambiguity in the domestic floor plan and a move away from the strict programmatic determinism that he argues typifies the modern movement. He quotes Evans' concluding remarks at length, where Evans writes:

> 'The cumulative effect of architecture during the last two centuries has been like that of a general lobotomy performed on society at large, obliterating vast areas of social experience. [Architecture] is employed more and more as a preventative measure: an agency for peace, security and segregation.'[21]

Evans argues that contemporary housing has emerged as a consequence of a drive for privacy that saw the gradual spatial separation of bodies through the separation of served spaces, such as living rooms and dining rooms, from servant spaces, such as corridors and access stairs. Evans claims that architecture is deployed as a preventative measure, that it

> 'limits the horizon of experience by reducing noise transmission, differentiating movement patterns, suppressing smells, cutting down the accumulation of dirt, impeding the spread of disease, veiling embarrassment, closeting indecency and abolishing the unnecessary, incidentally reducing daily life to a private shadow play.'[22]

What emerged, he argues, is space deployed to isolate individual from individual within households. This partitioning of individuals, Evans argues, is a new spatial condition, one that is in distinction to the kind of carnality of known bodies in the sociable space of a programmatically undefined network of spaces that had pre-existed it, what he describes as having been a 'matrix of rooms' absent from which is any predetermined use. In his argument, this equates to 'an architecture arising out of the deep fascination that draws

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Introduction. *In:* BURCHELL, G., GORDON, C. & MILLER, P. (eds.) *The Foucault Effect: Studies in Governmentality.* University of Chicago Press.

[21] Full quote continues '...But on the other side of this definition there is surely another kind of architecture that would seek to give full play to the things which have been so carefully masked by its anti-type; an architecture arising out of the deep fascination that draws people towards others; an architecture that recognizes passion, carnality and sociality. The matrix of connected rooms might well be an integral feature of such buildings.' EVANS. Figures, Doors and Passages, pp. 57. *In* HECKMANN, O. 2011b. The Sweetness of Functioning is Architecture: On the Use of Floor Plans. In: HECKMANN & SCHNEIDER (eds.) *Floor Plan Manual*. Basel: Birkhauser.

[22] EVANS, R. 1997a. Figures, Doors and Passages. *In:* EVANS, R. (ed.) *Translations from Drawing to Building and other Essays.* London: Architectural Association Publications.

people towards others; an architecture that recognizes passion, carnality and sociality;'[23] as if the connected rooms constituted physical intimacy between individuals, while the programmed determinacy of the modern movement excluded these relations by separating bodies.[24] Evans concludes his essay by calling for a return to this matrix of connected rooms in response to the failure of the over-programmed functionalism of the modernist housing project of the late 1960s.

1.1.2 The Repressive Hypothesis: The Problematization of Sexuality and Intimacy

One way of accounting of Evans' call for a return to the ambiguity of a room matrix would be to position it as part of what Foucault called the 'repressive hypothesis.' Evans published his essay at almost the same time, 1978, as Michel Foucault's *La Volonté de Savoir* was translated into English by Robert Hurley as *The History of Sexuality: An Introduction*.[25] Foundational to Foucault's argument in this publication is the identification of the repressive hypothesis, which he claims is a generally accepted idea by the late 1960s. It is the belief that we continue to be dominated by 'a Victorian regime with regard to sexuality' that imposed itself in the nineteenth century; a repression that has continued into the twentieth, and from which we seek continual liberation.[26] Part of this belief is the idea that up until the seventeenth century, there was a frankness and openness to understandings of sexuality. Foucault writes in describing these beliefs about physical intimacy prior to what is argued to be its repression by the Victorians, that it is understood that

> 'sexual practices had little need of secrecy; words were said without undue reticence, and things were done without too much concealment, one had a tolerant familiarity with the illicit. Codes regulating the coarse, the obscene, and the indecent were quite lax compared to those of the nineteenth

[23] Ibid.
[24] There is much repetition of this trope in cinema; one is reminded of Jacques Tati's *Mon Oncle,* 1958, for example.
[25] FOUCAULT, M. 1978 (1976)-a. *The History of Sexuality: An Introduction.* Melbourne: Penguin Books.
[26] For the purposes of this thesis argument, we will extend the idea of sexuality here to include a broader category of intimacy. This is following Richard Sennett's argument in The Fall of Public Man regarding the idea of a generalized condition in the contemporary of the intimate society. SENNETT, R. 2003. *The Fall of Public Man.* London: Penguin. See part IV. See also BORSI, K. 2009. Drawing and Dispute: The Strategies of the Berlin Block. *In:* LATHOURI, M., PERITON, D. & DI PALMA, V. (eds.) *The Intimate Metropolis.* London: Routledge.

century. It was a time of direct gestures, shameless discourse and open transgressions, when anatomies were shown and intermingled at will and knowing children hung about amid the laughter of adults: it was a period when bodies made a display of themselves.'[27]

However, so the argument goes, with the advent of the late eighteenth, and certainly by the nineteenth century, this openness had been brought into the conjugal bedroom and controlled within the confines of the family. One is reminded here of Evans' call for a return to the lived carnality of proximate bodies in space that he argues has been repressed by the plan of the modern movement, and the call for the return to ambiguity.

Foucault's argument is that this claim of a condition of repression and a constant striving to be liberated from under its burden is actually constitutive of the problematization of sexuality itself. With this comes a particular kind of subjectivity: the cry of repression is a constant productive, churning, discursive problematization of sexuality and of the sexually intimate subject. In his account, it was not that there was a different kind of 'proximity of known bodies in space' (Evans), 'when bodies made a display of themselves.' Rather, the 'problem' of sexuality simply had not existed.[28]

There is no doubt that in one sense, Evans' writing, and that of the contemporary housing manuals that follow him, belong to this constitutive discursive drive. It would be easy to see fault with and even dismiss Evans' writing on these grounds and when positioned as a function within the constitution of subjectivity itself as suggested by Foucault. Equally placed within the context of the disputing calls for dynamism evident in contemporary writing on housing, like Heckman and Schneider, and Mozas and Per, Evans' claim of repression can be seen in fact to be part of a trajectory of constitutive discourse of sexuality. By the middle of the twentieth century, the role of dynamism in the functioning of society was well articulated.

[27] FOUCAULT, M. 1978 (1976)-a. *The History of Sexuality: An Introduction*. Melbourne: Penguin Books. pp. 3
[28] The repressive hypothesis claims that with the nineteenth century, the conjugal, nuclear family was strengthening with its more regulated role within capitalist modes of production. Capitalism, says this argument, via the family, takes control of sexuality and absorbs it into 'the serious function of reproduction.' ibid. pp.3 'Proper demeanor avoided contact with other bodies, and verbal decency sanitized one's speech. And sterile behaviour carried the taint of abnormality; if it insisted on making itself too visible, it would be designated accordingly and would have to pay the penalty.' Foucault claims that from then on, central to the repressive hypothesis is the belief that 'a single locus of sexuality was acknowledged in social space as well as at the heart of every household, but it was a utilitarian and fertile one: the parents' bedroom.' Ibid. pp. 3

Pierre Manent explains in The City of Man that, following the French Revolution in the late eighteenth century, there had been an irresistible drive towards 'a necessary progress of human society,'[29] from both the liberals who continued to strive toward an equality of rights for man on par with those enjoyed by their counterparts in England and the United States, and from those in the newly constituted field of sociology, who Manent claims were extricating law from social necessity. 'Karl Marx and Auguste Comte are in agreement,' he writes. 'A fulfilling and just human order is less the work of liberty than the effect of necessity acting in history and society.'[30] While the polar opposition of these two groups is akin to that of the free social contract and social determinism, their agreement on the drive forward and upward of human society is undeniable, as is the idea that they were discovered with the same enthusiasm, and are entwined in this drive forward. Manent believes that it is this fundamental agreement as to humanity's inevitable progress that is critical, that dominates, in fact, all modern political thought, including liberal democracy's thought concerning the modern family and its ordering in space within the boundaries of the single-family dwelling – whether that be as house or apartment.[31] Dynamism in the pursuit of a better future is a central function.

If we return to Evans' use, and identification, of two distinct plans as part of his argument – one to illustrate the notion of a matrix of rooms, and the other, what he argues is representative of a hierarchy of spaces, there starts the suggestion of an alternate ground on which to consider the transformation he describes, and what is argued for in the demand for dynamism, particularly relative to architecture's specific agency.

To make his argument, Evans compares two sets of drawings of the partially-built sixteenth-century Villa Madama near Rome. The first set of drawings was submitted to Cardinal Giulio di Giuliano de' Medici in 1518 or 1519 and have been attributed to the painter Raphael. A second set of drawings was produced in 1809 by architectural practice Percier and Fontaine. This later set of drawings was of an imagined 'completed' Villa, what Evans describes as a 'reconstruction.' What is evident in a comparison of the two sets of documents is the presence in the latter of a fixed and rigid classical symmetry where there never was before, in

[29] MANENT, P. 1998. *The City of Man.* Princeton, N.J.: Princeton University Press. pp. 52
[30] Ibid.pp. 55
[31] Ibid. pp. 52

what we know of the partially completed building. The original and unfinished building, Evans observes, had no duplications as one finds in the kind of repetitions of rooms required to constitute classical symmetry. Instead, the Villa as it was built and as it was documented in the first set of drawings appears to have been constructed almost room upon room. As Evans writes, 'Every room was different. Uniformity was restricted to the parts where it could be immediately apprehended; the building as a whole was diverse.'[32] The original plan as it was given to the Cardinal in the first decades of the sixteenth century is also difficult to read, Evans writes, and that in this first drawing,

> 'it is very difficult to tell from the plan which parts are enclosed and which open, as the relationship between all spaces is much the same throughout. The chambers, loggias, courts, gardens and so on, all register as walled shapes – like large rooms – that add up to fill the site.'

He concludes that the building seems to have been 'conceived as an accumulation' of all these spaces, the overall pattern or symmetry of the whole much less apparent than what is found in its component parts.

Evans' conclusion is that the sixteenth-century drawing is evidence of a shift seen also in painting at the time, away from a 'vacuous signaling of gestures' in the composition of the figures, what he describes as an end to a separated, holy and untouchable tranquility to figures in space. Instead, painting moves toward figures articulated as 'descended from their pedestal to be engulfed by animated groups of familiar figures sharing their company.'[33] Evans argues that it is the matrix of rooms in the Villa Madama that provides the spatial infrastructure for this kind of carnal occupation.

However it is the drawing itself that seems to be fundamentally different. Later in the essay, Evans further builds this idea of the drawings representing two different ways of being in space, and of there being not so much an evolution of planning where one plan inevitably becomes the other through a kind of natural movement, but rather, he makes it clear that

[32] EVANS, R. 1997a. Figures, Doors and Passages. *In:* EVANS, R. (ed.) *Translations from Drawing to Building and other Essays.* London: Architectural Association Publications. pp. 45
[33] Ibid.pp. 45

these two drawings belong to two very different 'sensibilities.' One is 'appropriate to a type of society that feeds on carnality, that recognizes the body as the person and in which gregariousness is habitual.'[34] This is juxtaposed with the plan that was generalized by the late nineteenth century and typified, he argues, in William Morris' *Red House* in London. It is defined by the corridor and the separation of server and served spaces. This later plan, for Evans, is where the individual is the norm, and quiet isolation the desire.

What is clear in his description of the plan as completing the incomplete original building, and in the different ways that the drawing is able to be read, the clarity with which it defines what we understand open and closed space to be, for example, starts to suggest that the drawing itself is doing different things, not simply describing an existing building or condition, or reflecting different ideas of what a building is. The drawing is instrumentalized in a different way. One is reminded here of Françoise Choay's argument in 1997 in *The Rule and the Model*.[35] Through an analysis of texts produced in the fifteenth and sixteenth century, she outlines the emergence in the nineteenth century of a unique discourse of space. She writes, 'The creation of a specific, autonomous discipline for the construction of space is an enterprise whose uniqueness and audacity are easy to overlook, because of its present universality and banality.'[36]

Choay places the origin of written texts around space with Alberti and the publication of the *De re aedificatoria* in 1452 on the grounds of its production of a set of rules and principles for the built domain in its totality, from the house, to the city, to the rural settlement and landscape. Following Alberti's publication emerged the discursive genre of the architectural treatise, which spread particularly through France in the seventeenth and eighteenth century. Choay argues it generated its own field of theory and practice, helping to constitute the new professional category of architect as distinct from master builder.

And, she argues, the *De re aedificatoria* needs to be positioned within an epistemological configuration. Despite its originality, it is not an isolated phenomenon. During this period,

[34] Ibid.pp. 54
[35] CHOAY, F. 1997. *The Rule and the Model. On the Theory of Architecture and Urbanism.* Cambridge, Mass.: MIT Press.
[36] Ibid. pp. 3

Choay argues there was a new ideal of systemization and control being imposed on the world and a transformation in understandings of the relationship between European man and his productions. Man became both subject and object of knowledge in the pursuit of an autonomous discursive domain to the organization of built space.[37] Choay names Alberti's text and those like it 'instaurational,' those writings whose explicit aim was the development of a framework for the conception of new and previously unknown forms of space.

Unique about Choay's argument is her placing together of Alberti's treatise form, with the utopian literature exemplified by the writings of a diverse group such as Thomas More, and later Charles Fourier, Robert Owen and William Morris. However, it is important to note that in *The Rule and the Model*, the key to the inclusion of the genre of utopian literature is not the content of the utopian writing itself, but its form in terms of its relationship to writing on urbanism: a critical approach to a present condition and the projection and modelling of another possible future. Choay states, 'It offers, on the level of the imaginary, a device for the a priori conception of built space: the model.'[38]

For Choay then, the key in positioning two urban operators as oppositional as Le Corbusier and Ebenezer Howard is not their difference, but rather, through common procedures that 'ground and condition the proposals each author makes,' it is possible to see that what dispute blinds us to is utopia as a form that is fundamental to each of their approaches. Utopia structures and programs their work independent of any historical content. For Chaoy, the form of the utopian texts can't be excluded from the class of instaurational texts, but must be understood as a genre existing prior to theories of urbanism and upon which it is based, as is *De re aedificatoria*. This is Choay's Rule and Model. The architectural treatise consists of the application of principles and rules; the utopian form consists of the projection of models. Together, these two mechanisms have through time exhibited remarkable formal regularity and stability, which Choay argues contemporary 'authors may have failed to apprehend, and their readers have not decoded.'[39] She continues:

[37] Ibid. pp. 5
[38] Ibid. pp. 8
[39] Ibid. pp. 9

> ‘These two forms of discursive architecture, which survive the institutions and forms of knowledge that engender them, assume an irrevocable presence, like stone structures which continue to bear witness even in ruin, and over time continue to speak to us: figures of discourse pregnant with a force that resists the erosion of events, the sedimentation of mental habits, the restructuring of knowledge, and bearing a meaning that transcends their content.’[40]

This thesis, then, proposes following Choay’s work, to broaden the examination of discursive material at work in such constellations of effect, considering the role of the architectural drawing in an urban spatial reasoning concerned with the diagnostic and propositional gestures suggested in Choay’s identification of the utopian and treatise texts. This thesis will argue that the architectural drawing plays a critical transactional role between the discourse of urbanism and architecture’s disciplinary interior. If we return to Evans, then, the difference in the two drawings can be seen on this terrain. One sits within the discursive constellation of architecture’s modern disciplinary function, while the other is a drawing without a discipline, the drawing is yet to be codified. It looks like it belongs to architecture, but the discipline is yet to coalesce around the new systems of truth introduced from the emerging disciplines of science and in the organization or the material of the city. In Chapter Two, this thesis will deal more directly with architecture’s graphic realm and the instrumentality of drawing as a key innovation in the transformation of the discipline of architecture within modernity.

[40] Ibid. pp. 9

1.1.3 THE FAMILIAL-SOCIAL: The Single-Family Dwelling and the Modern Family

> 'Prison (family) "reform" is virtually contemporary with the prison (family) itself: it constitutes, as it were, its programme… For a century and a half, the prison (family) had always been offered as its own remedy: the reactivation of the penitentiary techniques (domesticity) as the only means of overcoming their perpetual failure.'[41]
>
> Foucault, Discipline and Punish: The Birth of the Prison, 1977, with Family interventions by the author.

It is possible to see that predicating disputes around housing since the mid-nineteenth century have been arguments regarding the failure of the family, to which the family itself is presented as the solution. These disputes take many forms and are typically concerned with the containment of the modern family, and the expressive relationships of intimacy held within. Typically, arguments for privacy as central to notions of housing take a form in conventional histories something like: the family, which the single-family dwelling houses, is entirely self-enclosed; it is identified as a domain of expressive relationships, of human sentiment, affect and emotion, as opposed to the instrumental relationships one finds in the public sphere and in the realm of work. This is particularly with regard to the issue of sexuality, and the conjugal relationship as we've seen with Foucault's repressive hypothesis. It then follows from these two ideas of containment and expressive relationships that the familial space is an ahistorical given of human existence. Yet, it is also understood at the same time to be subject to mutation and blockage. Christopher Lasch's 1977 publication *Haven in a Heartless World* is an example of this.[42] Lasch, for example, opens his introduction with the statement

> 'As business, politics and diplomacy grow more savage and warlike, men seek a haven in private life, in personal relationship, above all, in the family –

[41] My adjustment. FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books. pp. 234, 268
[42] LASCH, C. 1977. *Haven in a Heartless World: The Family Besieged.* New York: Basic Books.

> the last refuge of love and decency. Domestic life, however, seems increasingly incapable of providing these comforts. Hence the undercurrent of anxiety that runs through the vast and growing body of commentary on the state of the family.'[43]

Domestic life is failing, the answer is the family.

Foucault never spoke in detail about the urban, or about housing, or the domestic beyond the role of the family, in his *History of Sexuality*. However, those writers within the governmentality tradition that followed him – Jacques Donzelot, Geoffrey Minson, Nikolas Rose, Thomas Osborne, among many others[44] – have begun to investigate in more detail both the urban but also the institution of the family, or the 'family-social mechanism', in Minson's terms.[45] In the 1970s Foucault argued that the institution of the modern prison was predicated on failure, that, in fact, since its inception, prison reform has constituted the program of the contemporary penitentiary itself. In a similar way, this thesis proposes to consider housing and the housing project with its animating condition of domesticity at the scale of the dwelling unit as a new institutional form that links spatial urban reasoning and the city from the mid-nineteenth century.

In speaking of the prehistory of the family, Geoffrey Minson claims it is as discontinuous from the modern family of the late nineteenth century as the debtors' prison was in Foucault's

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[43] Ibid. pp. XVIII .

[44] Governmental literature from Foucault: FOUCAULT, M. 1979. On Governmentality. *The History of Sexuality.* London: Allen Lane; FOUCAULT, M. 1978 (1976)-a. *The History of Sexuality: An Introduction.* Melbourne: Penguin Books, FOUCAULT, M. 1978 (1976)-b. *The History of Sexuality: The Will to Knowledge.* London: Penguin Books, FOUCAULT, M. 1986. *The History of Sexuality: The Care of the Self.* Melbourne: Penguin Books, FOUCAULT, M. 1989. *The Birth of the Clinic: An Archaeology of Medical Perception.* London: Routledge, FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books. BURCHELL, G. (ed.) 1991. *The Foucault Effect: Studies in Governmentality.* Hertfordshire: Harvester Wheatsheaf, GORDON, C. 1991b. Governmentality: An Introduction. *In:* BURCHELL, G., GORDON, C. & MILLER, P. (eds.) *The Foucault Effect: Studies in Governmentality.* University of Chicago Press, ROSE, N. 1989. *Governing the Soul: The Shaping of the Private Self.* London: Free Association Books, ROSE, N. 1998. *Inventing Ourselves: Psychology, Power and Personhood.* Cambridge University Press, ROSE, N. 1999. *Powers of Freedom: Reframing Political Thought.* Cambridge University Press. RABINOW, P. 1989. *French Modern: Norms and Forms of the Social Environment.* Cambridge, Mass.: MIT Press, PROCACCI, G. 1991. Social Economy and the Government of Poverty. *In:* BURCHELL, GORDON & MILLER (eds.) *The Foucault Effect: Studies in Governmentality.* London: Harvester Wheatsheaf, OSBORNE, T. & ROSE, N. 1998. Governing Cities. *In:* ISIN, E. F., OSBORNE, T. & ROSE, N. (eds.) *Governing Cities: Liberalism, Neoliberalism and Advanced Liberalism.* Toronto: York University.

[45] The term 'family-social mechanism' is used by Minson pp. 202. It seems a more accurate way of accounting for the complexity of sociopolitical functioning of the 'family' and its spatial logic, than the overused term/concept 'family.' MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan.

Discipline and Punish[46] from the modern penitentiary. Following on from this, we will propose here that it is not a case of the 'family' transforming into different forms through time. Rather, there is a discontinuity between two different categories of the family operative in two different forms of social organization. The question for Donzelot in *The Policing of Families* did not concern the difference or similarity between one form of family or another. Rather, he asked: how could the category of the family itself lend itself to a liberal politics?[47] How could a category so fundamental to the unquestionable structure of political authority, government, hierarchy and obedience under the paternalism of the eighteenth-century Ancien Regime, come by the nineteenth century to designate a bastion of individual privacy, intense intimacy and freedom from political interference?[48]

Implicit in Donzelot's question is a critique of understandings of the modern family, what is typically understood as part of a strict and clear delineation between self-evident and pre-given domains of the interior of the family in its privacy and freedom, and an exterior of public space, in its outward-looking and open state of control. Instead, the modern family in Donzelot's account is a hybrid of public/private differentiations: the outcome of the problem of administering national populations through the formation of an area of liberal social policy, welfare and administration.

1.1.4 The Rise of the Social: Space, Governance and the Nineteenth-Century City

In Donzelot's question 'How could the category of the family lend itself to liberal politics?' and his observation of the transformation of the family as vehicle of the Ancien Regime to the bastion of individual privacy and freedom, one is reminded of Evans in his writing about the domestic plan. Evans had recognized two distinct 'sensibilities' at work in two distinctly

[46] FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books.
[47] DONZELOT, J. 1979. *The Policing of Families.* Baltimore: John Hopkins University Press. Through Minson, MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan. pp. 200
[48] MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan. pp. 200. Exploration of the texture of the category of pre-modern family is beyond the scope of this paper. However, Minson raises via Donzelot and Flandrian a question about its actual importance in political structure, asking whether perhaps its importance has been overinflated by teleological histories. He introduces the category of friendship instead, as a reflection on 'family and 'kinship' far from being ultimate organizing political categories, but rather secondary to and subsumed under 'the larger institution of friendship', a protean term embracing emotional ties, conjugal and filial relations, sibling links, clients, protective neighborhood ties and patronage. ibid. pp. 199

different drawings of the same building, suggesting a distinct change rather than a progressive transformation evident in the drawing. Chapter Two of this thesis work will discuss the instrumentality of the drawing in more detail. Here however, the question of how one might better understand spatial reasoning's relationship to the establishment of the category of the social in terms of the discourse of governmentality and the practice of liberal government, such that it is possible to see evident what is at stake in housing by the late nineteenth century.

Fundamental to this thesis is the idea that the principle development of the Industrial Revolution wasn't technical innovation, as is often claimed by histories of the period, but the invention of the 'social'.[49] The social doesn't refer to a way in which humans interact, an unavoidable human fact or a natural law. Rather, it is a reference to the 'way in which human intellectual, political and moral authorities, within a limited geographical territory, thought about and acted upon their collective experience.'[50] Prior to the nineteenth century, populations of cities were known as peoples, with a shared tradition of customs, of shared descent, shared language and habits, beliefs and systems of law, morality and politics. With the nineteenth century came a different understanding: the populations of nations became seen as collectives of individuals integrated 'through a certain moral order.'[51]

During the nineteenth century, society was discovered as a positive. There had been a prior shift in the way populations were understood and subject to investigation, 'classification and normalization in the interests of order and civility;' [52] in part, this involved a fundamental change from the principles of charity to those of philanthropy, as part of what were to become

[49] POLANYI, K. 1944. The Great Transformation. New York: Farrer & Reinhart.in PROCACCI, G. 1991. Social Economy and the Government of Poverty. *In:* BURCHELL, GORDON & MILLER (eds.) *The Foucault Effect: Studies in Governmentality.* London: Harvester Wheatsheaf.pp.152. See also ROSE, N., O'MALLEY, P. & VALVERDE, M. 2006. Governmentality. *Annual Review Law Society,* 2**,** 83-104, GORDON, C. 1991b. Governmentality: An Introduction. *In:* BURCHELL, G., GORDON, C. & MILLER, P. (eds.) *The Foucault Effect: Studies in Governmentality.* University of Chicago Press. FOUCAULT, M. 1991 (1978). Governmentality. *In:* BURCHELL, G., GORDON, C. & MILLER, P. (eds.) *The Foucault Effect: Studies in Governmentality with Two Lectures and an Interview with Michel Foucault.* London: Simon and Schuster International Group. FOUCAULT, M. 1979. On Governmentality. *The History of Sexuality.* London: Allen Lane, BARRY, A., OSBORNE, T. & ROSE, N. 1996. *Foucault and Political Reason: Liberalism, Neoliberalism and Rationalities of Government.* London: UCL Press. MINSON, J. 1985a. Familiar Terms: Politics, the Family and History of the Present. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan, BARTH, L. 1998. Michel Foucault. *In:* STONE, R. (ed.) *Key Sociological Thinkers.* London: Macmillan Press.

[50] ROSE, N. 1999. *Powers of Freedom: Reframing Political Thought.* Cambridge University Press. pp. 101

[51] Ibid.pp. 101 my italics

[52] Ibid.pp. 112

spatial interventions into the city in the name of moral order. Populations of cities came to be understood as having their own rules and laws of functioning. This new comprehension of populations of people involved a shift away from an understanding of the individual as a function of his/her own moral character. Instead, there emerged a sense in which the social milieu was the site within which an individual's actions were formed and made normal. Following this came the identification of the social milieu and the individual as a site for intervention by government as a positive move, in the interests of linking the power of the state with the regulation of populations and a certain pastoral drive that addressed itself to the conduct of those who recognized themselves as subjects.[53] This forms the definition of liberal governmentality. It is not the formal act of governing as part of the structure of elected democratic processes, nor is it a doctrine of political or economic theory. It is a mode of thinking concerned with the *practice* or *art* of governing that 'directs itself toward the conduct of all and each in their individuality and uniformity, and which furthermore emphasizes the freedom of the subject as a central part of that art.'[54] From this perspective, liberalism is both a constant critique of state reason, focused on the limitations and possibilities of government, while also seeking to understand and identify *how* government is possible: what it needs to know in order to govern, and what it cannot know.[55]

The idea of the 'moral' plays a critical role in the development of techniques of the social. In the nineteenth century, it had a very distinct meaning concerned with order,[56] order which 'liberal society discovers as a vital need,'[57] in response to a fear of the poor or, more specifically, that category of poverty 'pauperism', or what is described as the 'dangerous

[53] This definition of liberal governance following Foucault, Donzelot, Minson and the governmentality writers.
[54] BARTH, L. 1998. Michel Foucault. *In:* STONE, R. (ed.) *Key Sociological Thinkers.* London: Macmillan Press. pp. 264
[55] GORDON, C. 1991b. Governmentality: An Introduction. *In:* BURCHELL, G., GORDON, C. & MILLER, P. (eds.) *The Foucault Effect: Studies in Governmentality.* University of Chicago Press.
[56] PROCACCI, G. 1991. Ibid.Social Economy and the Government of Poverty. *In:* BURCHELL, GORDON & MILLER (eds.) *The Foucault Effect: Studies in Governmentality.* London: Harvester Wheatsheaf.
[57] Ibid.pp. 158
The Merriam-Webster Dictionary defines morality as 'beliefs about what is right behaviour and what is wrong behaviour; the degree to which something is right and good; the moral goodness or badness of something. 1*a***:** a moral discourse, statement, or lesson. *b***:** a literary or other imaginative work teaching a moral lesson. 2*a***:** a doctrine or system of moral conduct. *b plural***:** particular moral principles or rules of conduct. 3**:** conformity to ideals of right human conduct. 4**:** moral conduct**;** virtue 'http://www.merriam-webster.com/dictionary/morality accessed 21.06.14

classes.' What is critical is that the discourse was not about eliminating the poor,[58] who Procacci has argued were, during this period, an 'indispensable aid to the rich.' [59] Rather, identifying pauperism was about eliminating what was perceived as difference and disorder; different forms of conduct – specifically those not amenable to the project of socialization.[60] What emerged as critical to this practice was the creation of spatial enclosures that bounded the polluting influence of specific social milieu from a wider social sphere, where those who lacked or refused this moral character could be reformed.[61] Symons described the 'dangerous classes' as 'not only criminals, paupers and persons whose conduct is obnoxious to the interests of society, but of that proximate body of people who are within reach of its contagion and continually swell its number.'[62]

By the nineteenth century, poverty, morality and urban conditions had become conceptually linked and understood to be contagious. With a specifically spatial implication, this move has been described as a system of governing through 'the social'. The intention of these interventions was to shape the individual in beneficial ways while maintaining that individual's autonomy.[63] This discursive milieu is crucial to understanding the way in which the modern family, and housing, its spatial enclosure, emerged as locations within liberal governmentality's arsenal of organizing techniques. With the category of family lending itself to a liberal politics, housing emerges in the same gesture as fundamental to the spatial practice of liberal governmentality.

[58] For as Cherbuliez states, 'When pauperism is conquered, only the poor will remain, that is a certain sum of accidental poverty.' Poverty was seen as a natural condition and unavoidable. Pauperism, on the other hand, was unnatural and to be eliminated.
[59] PROCACCI, G. 1991. Social Economy and the Government of Poverty. *In:* BURCHELL, GORDON & MILLER (eds.) *The Foucault Effect: Studies in Governmentality.* London: Harvester Wheatsheaf.pp. 160
[60] Ibid.pp. 160
[61] ROSE, N. 1999. *Powers of Freedom: Reframing Political Thought.* Cambridge University Press.pp. 106
[62] SYMONS, J. 1849. *Tactics for the Times as Regards the Conditions and Treatment of the Dangerous Classes.* London: Pall Mall.pp 1 In EVANS, R. 1997b. Rookeries and Model Dwellings: English Housing Reform and the Moralities of Private Space. *Translations from Drawing to Building and Other Essays.* London: Architectural Association Publications. pp. 115 ftnt 21
[63] ROSE, N. 1999. *Powers of Freedom: Reframing Political Thought.* Cambridge University Press. pp. 101

1.1.5 The Conduct of Conduct: Constituting The Modern Family

Donzelot, following Foucault, identifies the modern family by the nineteenth century as 'a positive form of solution to the problems posed by [this] liberal definition of the state'[64] in the move away from the paternalism of the Ancien Regime. The principle of liberal governmentality here is what Foucault has called the 'conduct of conduct.' It is a way of doing things, or acting on the action of individuals 'taken either singly or collectively, so as to shape, guide, correct and modify the ways in which they conduct themselves'.[65] As Villerme demonstrates when he wrote in 1840:

> 'Institutions are impotent against poverty, but they can attenuate it; the means is not alms, humiliating for the recipient and repugnant to the man of feeling, but to prepare the populace from infancy to have good habits and to practice them in later life.'[66]

It is important to note at the outset the use of the term 'policing' by Donzelot. Policing in the context of nineteenth-century philanthropy is not understood in the limiting and repressive sense that we give it today, but according to a much broader meaning that encompassed all the methods for developing the quality of population and the strength of the nation as a function of liberal governmental thought. Johann von Justi wrote in 1768 that

> 'the purpose of policing is to ensure the good fortune of the state through the wisdom of its regulations, and to augment its forces and its power to the limits of its capability. The science of policing consists, therefore, in regulating everything that relates to the present condition of society, in strengthening and improving it, in seeing that all things contribute to the welfare of the members that compose it. The aim of policing is to make everything that composes the state serve to

[64] DONZELOT, J. 1979. *The Policing of Families.* Baltimore: John Hopkins University Press. pp. 53
[65] BURCHELL, G. 1996. Liberal Government and Techniques of the Self. *In:* BARRY, A., OSBORNE, T. & ROSE, N. (eds.) *Foucault and Political Reason: Liberalism, Neoliberalism and Rationalities of Government.* London: Routledge.
[66] Villerme 1840:147 in PROCACCI, G. 1991. Social Economy and the Government of Poverty. *In:* BURCHELL, GORDON & MILLER (eds.) *The Foucault Effect: Studies in Governmentality.* London: Harvester Wheatsheaf. pp. 166

strengthen and increase its power, and likewise serve the public welfare.'[67]

Here, policing is understood in the nineteenth century as the unifying pole around which gather 'that proliferation of political technologies that invested the body, health, modes of subsistence and lodging – the entire space of existence in European countries from the eighteenth century onward.'[68]

Much has been written about what Foucault has called the 'biotechnical': the constitutive assembly of a means of judgment, clinical examinations, tests and assessments, with their associated norms and normativities; the techniques of reformation and cure, pedagogic, physical, therapeutic, punitive; the apparatuses within which intervention is to take place, the design of prisons, classrooms, equipment; and the connection of these into larger assemblages such as schooling or health visiting.[69] This is what Minson called the multiplicity of the liberalizing dimensions of philanthropy.

Together, these constitute a response to the question of how to govern populations of people and with what legitimacy. This is the critical project and practice of liberal governmentality. It 'consists of various instruments and rationalities assembled to link the power of the state, the regulation of populations, and a 'pastoral' power which addressed itself to the conduct of those who recognized themselves as subjects.'[70] Liberalism, as we've seen, is not a political philosophy or the domain of *only* political government, but a category of ways of thinking about how government is to be exercised. It stressed 'the importance of fostering the self-organizing capacities of natural spheres of market, civil society, private life, individual.'[71] Implied in it is a skepticism regarding political government.[72] It asks: Why govern, who should govern, how is government legitimate, what should be governed? It is concerned with governing by acting on the choices and self-steering properties of individuals, families,

[67] VON JUSTI, J. 1769. *Éléments généraux de police démontrés par des raisonnements fondés sur l'objet et la fin qu'elle se propose.* Paris: Rozet.
[68] MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan. pp. 182
[69] ROSE, N. 1989. *Governing the Soul: The Shaping of the Private Self.* London: Free Association Books. pp. .xi
[70] BARTH, L. 1998. Michel Foucault. *In:* STONE, R. (ed.) *Key Sociological Thinkers.* London: Macmillan Press. pp. 264
[71] ROSE, N. 1989. *Governing the Soul: The Shaping of the Private Self.* London: Free Association Books.
[72] Which is amplified as contemporary 'advanced' liberalism.

communities and organizations.[73] Critically, this involves the twin process of autonomization plus self-responsibilization, achieved through a range of dispersed and non-totalized practices. Rose has called this a government through freedom which, he argues, is a 'mobile, dynamic and agonistic space.'[74]

It follows that the 'promotional aura' of philanthropy's interventions into the family weren't strategies based on simple carrot-and-stick relationships. Rather, *'The idea was to make these norms of hygiene, saving, etc, along with the domestically-based autonomy they would make possible, positively desired as conducive to a better, fuller life.'*[75] Closely bound with this component of 'social promotion,' philanthropy fostered and played on individual family members' desire for autonomy.[76] Rather than being a site of paternal control, the modern family as described here is the site of individual freedom and self-responsibilization and autonomization, practiced through, not in spite of, the desire for autonomy. It is a mobile, agonistic space that relies on the dynamism of the relationships held within it.

1.1.6 A Note on the Marxist Account of the Prehistory of the Modern Family

In contrast to the position outlined by governmentality writers such as Donzelot, Marxist arguments regarding the family locate 'the privatized family at the intersection of capitalist economic structure and a repressive bourgeois ideology of domesticity.'[77] While there are several points at which Donzelot's arguments and those of a Marxist position regarding the role of the modern family overlap, there are key moments where they diverge. It's worth

[73] ROSE, N. 1989. *Governing the Soul: The Shaping of the Private Self.* London: Free Association Books. pp. xxiii Rose continues that this is in distinction from the 'social state' whereby 'the political apparatus and its functionaries take the responsibility in arranging the affairs of a nation to maximize employment, security, tranquility.' In this thesis argument, we are less interested in arguing for the dominant role of capitalism. We will argue that liberal democracy and socialism are two sides of the same liberal governmental coin that rely on the man as the subject and object of knowledge within the modern episteme, in addition to the techniques of self-responsibilization of the individual within liberal democracy first, before these question appear.

[74] Ibid. pp. xxiii

[75] MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan. pp. 191

[76] Ibi. Surprisingly, given its reputation for authoritarianism, philanthropy actually worked to undermine both traditional parental power over children, and the traditional subordination of wives to husbands.

[77] Ibid. In this thesis argument, we are less interested in arguing for a dominant role of capitalism. Here, we understand instead that capitalism and socialism are two sides of the same liberal governmental coin that are predicated on a new understanding of man as subject and object of knowledge, a definitional condition within the modern episteme. It is this that grounds and enables the techniques of self-responsibilisation of the individual within liberal democracy. It is a condition that precedes any question of capitalism.

clarifying these, through a consideration in detail of the Marxist position. It is important to note that this thesis is not making an argument regarding a primary role of capitalism in the functioning or constitution of the modern family. There is no doubt that at specific times in the twentieth century – the ramping up of Fordist production following World War II, for example, in the direction of household products and whitegoods to fit out suburban expansion – capitalism and economics broadly played a role in amplifying the condition of domesticity and the centrality of the family, but it is not the intention of this thesis to argue that capitalism was the central driver of this move or can account for its emergence. Rather, our argument here is concerned with linking spatial reasoning and architecture's relationship to it, with a larger epistemological shift constituting modernity in the nineteenth century. Capitalism, we will argue, is only a minor instrument in this transformation.

The ground on which Marxist accounts of the modern family and the governmentality writers first agree is that of philanthropy, understood by both as an outgrowth of nineteenth-century poor law charitable institutions whose unconditional handouts were thought to positively compound the problem of pauperism. Equally, there is agreement between Donzelot and Marxist accounts that philanthropy was an assault on the lumpenproletariat[78] as part of

> 'an attempt to distinguish those unwilling to work from those incapable of working, and to transform the former's attitudes and habits. As such, it was, in part, a response to a perceived insurrectionary threat to the established bourgeois order posed by mass indigence, crime, vagabondage, homelessness and unwholesome urban domestic living arrangements.'[79]

Finally, there is also agreement between Donzelot and Marxist writers that the preferred form of solution to these perceived problems of traditional welfare, pauperism and urban demoralization, was an attempt to instate marriage and the family amongst the urban poor.

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[78] Lumpenproletariat , (German: 'rabble proletariat'), according to Karl Marx in *The Communist Manifesto*, the lowest stratum of the industrial working class, including also such undesirables as tramps and criminals. The members of the Lumpenproletariat—this 'social scum,' said Marx—are not only disinclined to participate in revolutionary activities with their 'rightful brethren,' the proletariat, but also tend to act as the 'bribed tools of reactionary intrigue.' http://www.britannica.com/EBchecked/topic/351300/Lumpenproletariat accessed 20.03.15

[79] MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan. pp. 189

In the nineteenth century, philanthropy transformed assistance to the needy and poor from a 'charitable handout,' to aid as a conditional, discretionary 'investment' that was contingent on the recipient getting and remaining married, and accepting professional and remedial advice on home economics, housekeeping and the raising of children.[80] By seeking to inculcate thrift and sobriety and to exclude irregular cohabitation, this new form of philanthropy sought to make lower-class families themselves, in preference to the state (or unsocial networks of proletarian or lumpenproletarian solidarity) responsible for maintaining and controlling otherwise rootless and socially disruptive individuals. In so doing, the social problems of indigence, worklessness, crime, etc, are transformed from being a political-cum-economic consequence of capitalism (as is presumed in socialist demands for state assistance as a right of the poor) into a moral problem of personal/familial mismanagement to be treated by public-spirited efforts of a private charity. Marxist accounts of philanthropy and the family agree with Donzelot's characterization of philanthropy as a *'*deliberately depoliticizing strategy for establishing public services and facilities at a sensitive point midway between private initiative and the state.' [81]

However, there are a number of conventional and strongly held views on the history of the family from Marxism that Donzelot's hypothesis diverges from. The first of these is the view that celebrates the essentially 'private' nature of the modern family and family life. We've seen in this chapter that this is a contradiction, in terms of the degree to which the interior space of the family and its specific subjectivities are, in fact, the very public space of the biotechnical: those interventions in the name of medical, educational, philanthropic and economic tutelage, for example, that are constitutive of the public space of the modern family, that apply external scrutiny and cultivate the self-responsibilizing demands of the roles of mother, father and gender-specific children within what Donzelot describes as a dynamic and mobile space of agonism.

[80] Ibid.
[81] DONZELOT, J. 1979. *The Policing of Families.* Baltimore: John Hopkins University Press. pp. 55 in MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan. pp. 190

The second view of the modern family rejected by Donzelot is that in accepting this private definition, Marxist writers then interpret this privacy as an historical construction 'in the service of capitalism.'[82] This second assumption is particularly pervasive. Donzelot describes two basic ways it is developed. The first is that there is an assumption that the privatised family is functional for the reproduction of capitalism. This may be developed in two basic ways. In the first instance, it may be a question of submission to the 'ideology' of domesticity. Here it is understood that

> 'along with the school, the family is one of the main vehicles of ideological conditioning into the values and norms of capitalist society. Girls will see their futures as primarily located in the family, as a man's wife, lover and best friend. Boys, well-disciplined and well-brought up, will see their future as providing economically for their families and enjoying emotional benefits.' [83]

In the second instance, this is an argument that the privatised family is understood as directly implicated in the functional prerequisites of capitalist economic organisation via the exploitation of 'domestic labour,' ie. the housewife.[84] Both of these positions are further amplified by understandings that the modern family is a patriarchal order; the heart of the systematic subordination of women, and equally it is a generally repressive institution that stunts and represses all its members' potentials for personal development.[85] All of these assumptions are predicated on the belief that the kernel 'family' and its membership have always existed.

In fact, Donzelot argues that there are two directions in which the liberalizing dimensions of philanthropy undermine marriage. The first is through a shift in marriage defined through a system of important alliances, the second is via the husband's estate as a system of political and economic exchange in which 'once exchanged in marriage and hence part of her husband's estate, a woman is legally her husband's property.' These shifts played out through

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[82] MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan. pp. 184

[83] Ibid. *'...The socialisation of children into the ideology of the family reproduces an orderly workforce and an ambitious managerial personnel, both of whom are motivated to get on with their jobs and careers, as opposed to committing their energies to political issues, for the sake of their family life.' pp. 185*

[84] Ibid.

[85] Ibid.

the issue of the dowry, '*the most conspicuous expression of this relation of exchange and the sine qua non of traditional marriage.*' [86] From philanthropy's standpoint, desirous as they were of providing a family-based solution to the problems of poverty and urban disorder, the dowry was pointless for a rootless urban mass living hand-to-mouth who had, therefore, little use for marriage, while the lower-middle classes sent their marriageable daughters into convent factories in order to earn a dowry whilst remaining chaste.[87] The philanthropic solution, then, was to transform the institution of marriage and its tradition of dowry into a form of payment in kind – the unpaid labour of housekeeping. Donzelot, and following him Minson, argue that this is where the value of housework lay, in its transformative capacity within the institution of marriage. Housework was not valuable as any kind of contribution to economic profit, as is argued by Marxist accounts of the family. The controversial claim entailed by this genealogy of housework is that,

> 'not even in spite of, but through the discovery that "women's place is in the home" the philanthropic strategy played an important part in elevating women's social status in the course of transforming marriage from a man's estate into its modern nuclear form.'[88]

Rather than being a retreat from the world, in this reading, the modern family is a multitude of practices for taking a place in the world via the dynamic agonism of the sociopolitical space of domesticity.

1.1.7 Domesticity: The Internal Differentiation of the Modern Family

It is important to note here that within Donzelot and Foucault's arguments regarding philanthropy and liberal governmental techniques of social policy, welfare and administration, there is not the application of a set of bourgeois family norms that the working classes sought. Rather, the strategies of family-reform programmes were, from the start, bifocal in character,

[86] Ibid. pp. 192
[87] Ibid. pp. 192
[88] Ibid. pp. 192

and involved both intervention from a constellation of external professional and philanthropic sources, as we've seen: medical, educational, economic. These were coupled in the other direction with the autonomous pursuit of self-improvement and self-responsibilization by individuals from within the family in the constitution of their new roles as mother, father, child. This was a process that was constitutive of the sociopolitical network of relationships of domesticity.[89]

In addition, in defining philanthropy as a liberal familiarizing strategy or mode of political rationality, philanthropy can be seen to be initiating a whole range and raft of new practices and shifts in family member status that are not in the least specific to capitalism or capitalist society.[90] More importantly, Minson indicates, they are not strategies that simply exist as 'ideas' into which individuals are inculcated. 'Domesticity is not merely an effect of ideological impregnation.' Rather, it is the internal differentiation and reconstruction of familial personnel.[91] This occurs via an opening up of the space of the family to external scrutiny, to practical instructions in hygiene and sanitation, new educational regimes involving children and their empowered mothers, new income management strategies, new regimes of inspection and reward, and the reform of domestic architecture in model housing schemes.[92] Equally and critically, in the other direction, domesticity is the outcome of individuals self-responsibilizing, by 'familial personnel' taking up strategies and tactics themselves from within the interior of the family.

Liberal government within the context of the modern family entails a plurality of sometimes overlapping, sometimes discrepant differentiations of public and private domains. That the public/private differentiations in the hybrid family are plural is critical. Minson writes that, 'there is simply no such thing as the distinction between the public and the private… There is no simple relationship [whether of conflict or conformity] between two self-evident and pre-

[89] Ibid. pp. 187
[90] Familaising, Minson's term ibid. pp. 193.
[91] Ibid.pp. 193
[92] It's important here to note that that the purpose of this paper is not to establish the success or failures of philanthropies strategies in alleviating pauperism, or their depth of understanding of the causes of pauperism. Rather, what is of interest is what actually was achieved, with all of its failings, such that the instrumentality and inheritance of philanthropy can be registered in its spatial and material logic within, in this context, architectural discursive fields.

given domains, such as we find in conventional representations [of the family].'[93] As such, the modern family works in two ways: on the one hand, it is cellular, spatially and organizationally quarantined from the realm of the public and its economic and political life; yet, at the same time, the modern family has always also been made permeable by public institutions, to 'policing,' 'hence open to either compulsory or advisory outside interventions.' The modern family always, in various and often conflicting ways, acts as a point of contact or 'relay' for the realizing of public objectives. These range from the control of dissidence, of disease, the management of behaviors, educational, sanitation, hygiene, and medical issues.[94] The failure of families is the condition for constituting this permeability; by definition, the family is predicated on always being on the edge of collapse, of failure. This is the argument, and the politically acceptable grounds, on which to carry out interventions into the familial domain. The much 'celebrated crises' of the family that has dominated public discussion regarding its functioning, its constant poise on the verge of collapse, is not so much contrary to the order to which the modern family aspires, and our understanding of all that the family can be. It is rather the 'condition of that order's emergence.'[95] The modern family is by definition predicated on failure.

When architectural writers and historians such as Schneider and Heckman call for the plan of the single-family dwelling to become more dynamic, more able to respond to the transforming life-cycles of its occupants, or when the authors of the *D-Book* series argue that it is the occupant that needs to become more dynamic in moving between dwellings in response to transforming needs, it is this discursive order that they are both arguing within; their dispute is two sides of the same coin of liberal governmental drives toward the dynamic self-responsibilized individual. Minson and Donzelot are clear to establish that these interventions into the modern family have no single point of origin, there is no guiding, singular hand, or gaze of 'government.' The primary occasions for interventions have been issues to do with the care and control of children. Within this dynamic, multiplicitous discursive cycle – of diagnosis of the modern family as the positive site, identification of failure as the grounds on

[93] MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan.
[94] Ibid. pp. 185
[95] DONZELOT, J. 1979. *The Policing of Families.* Baltimore: John Hopkins University Press.pp. 8

which to intervene, and proposition of intervention and solution – contemporary housing continues to sit. Put another way, this is the discursive, diagrammatic condition of housing; this thesis is concerned with better understanding what transformation is possible under the burden of such conditions.

1.2 Spatial Reasoning and Knowing the City

1.2.1 The Social Survey

In the second half of the nineteenth century, the production of Booth's Poverty Map of London marked for the first time the linking of populations of people, understood via the social, and through liberal governmentality's ambitions as outlined previously in this chapter, with space via the graphic medium of the map across the whole city. The following section of this thesis will outline how the graphic form of the 'poverty map' presented a finely calibrated spatialized argument that made a clear diagnosis of an urban problem and in the same gesture, a proposition for action in which implicit was the identification of clear conditions in the city. As we have seen, the problem of the city at this time was understood to be the social; the solution was housing, and the modern family as a positive site of intervention. Critical to the functioning of the poverty map was space itself. As Françoise Choay reminds us, in its ubiquity and banality, it is easy to overlook the uniqueness of the autonomous discourse on space that emerged by the middle of the nineteenth century.[96]

1.2.2 Prior Ways of Knowing the City Through Drawing

Multiple ways of representing the city were in circulation by the nineteenth century; these included the panorama, the map, as well as the work of the social observer in the form of literary description, etchings, and later in the nineteenth century, increasingly in the form of

[96] CHOAY, F. 1997. *The Rule and the Model. On the Theory of Architecture and Urbanism.* Cambridge, Mass.: MIT Press.

photography, such as the output of the muckrakers, like Jacob Riis, for example, in New York City. [97]

Early in the nineteenth century, the panorama was a very popular form of representing the city. An example was the one in the Colosseum near Regent's Park where, in 1829, London itself was laid out before visitors as if from the top of St Paul's. However, a panorama offered only a synthetic vision of the city that had no place for the inhabitants of the city themselves, only the centralized viewing position of the spectator. 'The panorama placed the spectator at the center of the landscape, and allowed him to see all of it simultaneously.'[98] It tended to emphasize the picturesque, or the grandeur of the urban scene. There was no inclusion of the social as described by Minson and Donzelot, unfolding as an argument within it, or constituted by it.[99]

The zenithal map, on the other hand, as an aerial view not only presented the city as a malleable graphic abstraction, but also placed the viewer external to the city over which s/he dominated.[100] The zenithal map was a representation of urban space seen as territory.[101] Since the early nineteenth century, maps had been a commonplace manner of representing the city. As early as the 1760s, maps of London had been sold. The first London atlas appeared in 1854, and with the inflow of tourists that accompanied the Great Exhibition of 1851, map manufacturing became a thriving industry in that city.[102] This was enhanced by the completion of the comprehensive national trigonometric survey in the 1820s.[103]

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[97] The muckraker, a term from Bunyan's The Pilgrim's Progress: '...could only look downward while holding a muckrake which he used to rake the filth at his feet.' Work in this category included the kinds of adventures into inner American slums seen in the images produced by photographers such as Jacob Riis. Innovations in photography were important to the effect muckraking material had on the public imagination, as was the willingness of newspapers to publish the material, thus broadcasting the material to a middle-class constituency. In New York City, Riis chronicled the life of the urban poor, publishing in the 1890s *How the Other Half Lives: Studies Among the Tenements of New York.* With a background in police reporting on the Lower East Side, he became an advocate and spokesman for the rights of the poor. President Roosevelt, who used the term in a speech in 1906, became an advocate for the poor documented by muckrakers; he had been a NY police commissioner, and was a friend of both Riis and Lincoln Steffens, who would become the influential editor of McClure's Magazine, that went on to publish many of the images, as well as expose political corruption in US cities. The writing of Charles Dickens, Andrew Mearns for example MEARNS, A. 1883. *The Bitter Cry of Outcast London: An Enquiry into the Condition of the Abject Poor.* London: Congregational Union.

[98] TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-1891. *Planning Perspectives,* 8**,** 395-425. pp. 409

[99] Ibid. pp. 409

[100] Ibid. pp. 409

[101] Ibid. pp. 411

[102] Ibid. pp. 409

[103] Publication was through Stanford's, a commercial map publisher in central London still in business today.

In addition to this mapping and image-making, throughout the nineteenth century a number of observers of urban populations were developing different scales and angles with which to carry out the task of looking at the city and the particularity of its conditions. The most common perspective was poor relief and philanthropy, which most often was a close-up view on a human scale, horizontal in the form of an elevation, a view of the street, from the perspective of the middle-class observer who ventured into the poor district, or the policeman responsible for the area, or the school administrator. These images were typically of decrepit buildings, rubbish, bodies, faces and, above all, atmospheres. This was the period of muckraking and slumming. For example, the publication in 1883 of Mearns' *The Bitter Cry of Outcast London*[104] marked the beginning of a debate regarding the poor in London. Less frequently, the images deployed by the muckrakers would be of interior spaces and scenes in workers' housing, a view from the perspective of the poor worker or the sanitary inspector; such illustrations were published in magazines as evidence of the city. The engravings of Gustave Dore from around 1870, for example, dramatized the shadows of the homes of misery and vice that were published in Punch in the 1880s, in a way that amplified an imagined condition rather than accurately described an existing condition.

Robin Evans, writing in the 1970s, describes the muckrakers as developing a picture of the urban poor that often had limited reference to actual conditions and were instead a kind of projection of worst-case scenarios as part of a call to action and reform.[105] *Sanitary Ramblings* by Hector Garvin, for example,[106] an 1848 survey of Bethnal Green, was, according to *The Slums of Victorian London* author H.J. Dyos, the most credible account of an early Victorian slum. However, such publications often did not present the image of an actual place. Rather, the illustrations were a projection of what was believed to be a latent condition that required addressing, 'a potent, fearful and lurid presentiment revealing the

[104] MEARNS, A. 1883. *The Bitter Cry of Outcast London: An Enquiry into the Condition of the Abject Poor.* London: Congregational Union.
[105] EVANS, R. 1997b. Rookeries and Model Dwellings: English Housing Reform and the Moralities of Private Space. *Translations from Drawing to Building and Other Essays.* London: Architectural Association Publications.
[106] GAVIN, H. 1848. *Sanitary Ramblings: Sketches and Illustrations of Bethnal Green, a Type of the Condition of the Metropolis and Other Large Towns.* London: John Churchill.

intimate bond between physical and moral degradation.'[107] Evans describes a particular illustration in amongst the tabulations and maps that presented the section of a decrepit and populous common lodging. The text of the publication in which it sits states that no such establishments were actually to be found anywhere. However, they formed a powerful projection of this fear of a latent condition and were illustrative of the specter behind philanthropy. Each floor of the section illustration shows a different kind of problem:

> 'The cellar flooded with effluent was regarded as the source of zymotic diseases; the day room [or common kitchen] was characteristically portrayed as the scene of daylight dissipation, drunkenness and criminal conspiracy; the dormitory as a nest of sexual promiscuity.'[108]

At a time when there was a relationship drawn between physical and moral wellbeing, these illustrations supported the need for action. The literature of improvement, such as the *Health of Towns Committee Report* of 1840 stated: 'In addition to the physical evils entailed upon the poorer classes by the state of their dwellings… their moral habits are affected by the same causes.' As we've seen already in this chapter, morality played a specific role in understanding populations of people in cities. Beckett Denison in *On Model Lodging-Houses* argued that 'filthy habits of life were never far from moral filthiness,'[109] and John Knox claimed in *The Masses Without* in 1857 that "where there were bad homes, bad hearts and bad deeds, also."[110] Immorality was also understood as a physical ailment, propagated in some mysterious way as a contagious disease 'from certain moral plague spots' such as St Giles, Drury Lane, the Devil's Acre, Jacob's Island and a dozen other rookeries in Victorian London. Evans describes a great variety of similes, metaphors and analogies that served to describe the moral malady in terms at once medical and melodramatic. In publications with titles such as *The Rookeries of London*, and *Tactics for the Times as Regards the Conditions and*

[107] H. J. Dyos in EVANS, R. 1997b. Rookeries and Model Dwellings: English Housing Reform and the Moralities of Private Space. *Translations from Drawing to Building and Other Essays.* London: Architectural Association Publications. pp.95
[108] Ibid. pp. 95
[109] BECKETT DENISON, W. 1852. On Model Lodging-Houses. *In:* INGESTRE (ed.) *Meliora.* London.
[110] KNOX, J. 1857. *The Masses Without!* London: Judd and Glass.

Treatment of the Dangerous Classes,[111] there is often an emphasis on the immanent possibility of this contagion bursting out of its restricted habitat within the rookeries to infect the population at large.

1.2.3 How Booth's Statistics Were Gathered

For social reformer Charles Booth, these publications cultivated the view that all workers were poor, that they all lived in misery, that the whole world was consistently on the verge of rioting,[112] that there was a constant danger of disorder and chaos. His criticism of these forms of mapping the city was that they 'all generalized on the basis of the partial and the specific'[113] not in terms of visibility and 'truth'. Booth (1840-1916) chose to work instead with what has become known as the social map, in the production of his 'poverty map' of London. The basis of Booth's map was the Ordnance Survey, first made available by Stanford's following the completion in 1822 of the national trigonometric survey.[114] Booth's map was a 'social map.' Its purpose wasn't for unfolding in the drawing rooms of the middle class of London, and 'it was not designed for individual consultation in the reading room of a gentleman's house in the West End.'[115] Rather, it was for displaying to the public as part of a public campaign calling for action on urban change. It was first exhibited at Toynbee Hall and Oxford House,[116] then later at the 1900 Exposition Universelle in Paris.

Booth was looking for a different kind of 'truth made visible' than those zenithal plans or panorama exhibitions that had previously been displayed to the public. What was unique about his map was the color-coded overlay of spatialized socioeconomic data drawn from actual populations of people, rather than projected as a philanthropic call to action, as was the case with some earlier drawings and accounts of urban conditions. Booth's data was

[111] SYMONS, J. 1849. *Tactics for the Times as Regards the Conditions and Treatment of the Dangerous Classes.* London: Pall Mall, BEAMES, S. T. 1852. *The Rookeries of London: Past, Present, and Prospective.* London: Thomas Bosworth.
[112] TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 398
[113] Ibid.
[114] Stanford's Map Sellers and Publishers. Still trading on Longacre Street, central London.
[115] TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 418
[116] Toynbee House and Oxford House were Settlement houses founded in 1884 at Whitechapel and Bethnal Green.

collected from existing authorities in local environments: the London School Board Visitors, for example, though later he also drew on information from the Poor Law officials, officers of the Charity Organization Society, the police, clergy and elementary school teachers. Booth noted that, 'Every fact I needed was known to someone... The information had simply to be collected and put together.'[117] He relied on data through the day-to-day activities of the administrative bodies and philanthropic organizations active in the city districts he was looking at, and in a sense this was one of his major contributions – the reorganization via the social survey and poverty map of existing and known data, spatialized at the scale of the city for the first time, in graphic form.

The survey involved a double taxonomy. It was based both on the categories of urban space, in addition to how that space was occupied. Booth's intention was to 'divide the entire population by districts and by groups of trades, each answering to a similar division in the census: and then to deal with each district by a local enquiry, and with each group of trades by a trade enquiry.'[118] In the first instance, he and his army of surveyors identified eight 'classes' designated by a letter of alphabet from A to H.[119]

To further develop this classification, Booth modified the occupational nomenclature of the day in order to permit the distinction of various levels of social status within the same industry. This resulted in the second category in the taxonomy of 'sections.' While 'classes' were defined by the 'means and condition of the household,' sections were defined by 'the nature of the employment of the head of household.' Key to the distinction of the section was the type of work carried out by the head of the household, its permanence or impermanence, the regularity or irregularity of the wage.

[117] Booth in TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425.
[118] BOOTH, C. 1887. The Inhabitants of Tower Hamlets (School Board Division), Their Condition and Occupations. *Journal of the Royal Statistical Society,* 50. pp. 326 in TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 397
[119] In the original bar chart used by Booth in his 1889 volume to represent the distribution of his social classes, the classifications were as follows: Class A, Lowest; Class B, Casual; Class C, Irregular; Class D, Regular-min.; Class E, Ordinary Standard; Class F, Highly-paid; Class G, L-mid; Class H, Upper-middle. BOOTH, C. (ed.) 1889b. *Labour and Life of the People.* London: Williams and Norgate. In TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 402

> 'Among the very poor, for instance, the 'lower class' was not distinguished by a lower standard of living, but by the fact that it stood outside of the labor market in a condition of irregularity. Similarly, a distinction was made within the category of the 'poor' between those whose poverty resulted from their irregular earnings and those who earned regular, but limited, wages.'

Their standard of living was virtually the same, but their occupational status separated them.[120]

This is the heart of Booth's theory and categorization of poverty, the diversification of the notion of poverty into the unemployable, the irregular surplus, and the regular. This is a series of labor categories that would dominate British debates around employment and surplus labor from the 1890s.[121] Key to this categorization of different sections of the population with their 'different problems,' and what makes Booth's map different to other systems of representation of the city at the time, is that suggested in the categorization are different methods and propositions of treatment. As such, this work is not simply a matter of classification and statistics; it is equally and also always a strategic operation, contained within which are a series of implicit solutions to already known 'problems.'[122] The instrumentality of this work resides in Booth establishing a set of binary oppositions that together form a strategic distinction between two problems, two target populations and two methods of action. 'The statistical scale thus appears as the combination of these various practical dichotomies, while the cognitive construction, the thought processes behind the scale, is visibly based on a project of social reform.'[123]

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[120] TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 399

[121] The debates of the 1890s concerned the relationship of individuals to the labor market 'and the ostensible reason why an adequate income was not earned' in the context of new divisions and categorizations of populations in major European economies into the deserving and undeserving poor. See WHITESIDE, N. 2007. Unemployment Revisited in Comparative Perspective: Labour Market Policy in Strasbourg and Liverpool 1890-1914. *IRSH,* 52**,** 35-56. See also DESROSIERES, A. 1998. *The Politics of Large Numbers: A History of Statistical Reasoning.* Cambridge: Harvard University Press. These debates were fueled as much by social Darwinism and 'biological degeneracy' as they were by a fear of suffrage being granted to the working class as part of an extension of democracy in the UK. See also WELSHMAN, J. 2007. *Underclass: A History of the Excluded, 1880-2000.* New York: Bloomsbury.

[122] TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 400

[123] Ibid. pp. 401

As Foucault has established in *Discipline and Punish*, the drawing up of 'tables' was one of the great problems of scientific, political and economic technology of the eighteenth and into the nineteenth century.

> 'How one was to arrange botanical and zoological gardens, and construct at the same time rational classifications of living beings; how one was to observe, supervise, regularize the circulation of commodities and money and thus build up an economic table that might serve as the principle of the increase of wealth; how one was to inspect men, observe their presence and absence and constitute a general and permanent register of the armed forces; how one was to distribute patients, separate them from one another, divide up the hospital space and make a systematic classification of diseases.'[124]

Booth's model was clearly that of the natural sciences and their classification tables. He wrote 'without some trustworthy generalization – some ground plan of classification, by which, as in the drawers of a mineralogist's cabinet, details can be classified and seen in their proper place – elaboration is partly thrown away.'[125] For Booth, all science was based on observation and he frequently expressed his distrust of the abstractions of political economy.[126] He also understood that for individual facts to have any meaning, they had to be placed within a complete picture of society, that is, within the multiplicity of people. As Foucault has described, with reference to the operation of the scientific table, each of these were twin operations in which two always-present gestures were at play: in the first instance, distribution, and with it and in the same gesture, analysis; in the second instance, supervision, and with it and in the same gesture, intelligibility.[127]

[124] FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books. pp. 148
[125] BOOTH, C. 1893. Opening Address of Charles Booth, Esq., President of the Royal Statistical Society Session 1893. *Journal of the Royal Statistical Society,* 56**,** 591. In TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 398
[126] TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 398
[127] FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books. pp. 148

1.2.4 Urban Spatial Strategy: The Differentiated Mass

As we've seen, Booth identified eight classes in his map, designated by letters of the alphabet A to H. He had various proposals on how to fix the issue of Class A, the lowest. In various publications and forums he proposed that all charitable aid to the 'lower class' be refused and 'to harry it by constant police repression.'[128] In addition, since class A was seen as 'now hereditary to a considerable extent,' its 'reproduction should be discouraged by separating the children from their parents, and placing them in special pauper schools or in professional schools.'[129] Here, Booth is drawing on debates contemporary to the time regarding the eradication of poverty by the segregation of the sexes in the workhouse. These gave support to Social Darwinist doctrines that, at the time, were moving towards the eugenicist theories of the early 1900s with proposals of the 'sterilizations of the unfit.' [130]

Booth also had clearly articulated and defined within his proposal an urban strategy. The classification system aligned with the solution proposal for demolition and rebuilding 'no sooner do they (Class A) make a street their own, than it is ripe for destruction and should be destroyed… persistent dispersion is the policy to be pursued by the state in its contest with them…'[131] The aim was that the demolition of the slums of Class A would drive Class B into

[128] TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425.
[129] Ibid. pp. 404
[130] Debates around segregation of sexes in the workhouse in a move toward eugenics via Social Darwinism in the early 1900s: Francis Galton, a cousin of Charles Darwin, coined the term 'eugenics' in 1883. It relied on the Greek root meaning 'good in birth' or 'noble in heredity,' see KEVLES, D. 1986. *In the Name of Eugenics.* Berkeley: University of California Press. KEVLES, D. 1999. Education and Debate: Eugenics and Human Rights. *British Medical Journal,* 319**,** 435-438. GALTON, F. 1883. *Inquiries into Human Faculty and its Development.* London: Macmillan. Eugenics was to become a 'science concerned with the improvement of the human stock on the basis of the scientific study of all influences which would give "the more suitable races or strain of blood a better chance of prevailing speedily over the less suitable."' Ibid. in GERODETTI, N. 2005. Biopolitics, Eugenics and the Use of History. *European Consortium for Political Research.* Granada Spain: European Consortium for Political Research. It was therefore understood that the indigent, undeserving poor should not be in a position to have more children. Galton observed that 'those highest in civic worth' produced the fewest children while those 'unworthy' had disproportionately many and were blamed for sliding the nation towards disaster. KLINE, W. 2001. Building a Better Race: Gender Sexuality and Eugenics from the Turn of the Century to the Baby Boom. Berkeley: University of California Press. Mottier argues that though within the realm of 'science,' eugenics was always deeply intertwined with sociopolitical aims. MOTTIER, V. 2000. Narratives of National identity: Sexuality, Race and the Swiss 'Dream of Order'. *Swiss Journal of Sociology,* 26**,** 533-558, MOTTIER, V. 2004. From Welfare to Social Exclusion: Eugenic Social Policies and the Swiss National Order. *In:* HOWARTH, D. & TORFING, J. (eds.) *Discourse Theory in European Politics: Identity, Policy and Governance.* London: Palgrave MacMillan. Gerodetti writes: 'These three recurring elements, namely ideas about selective breeding inspired by Darwin, the idea of physical and mental decline of the population and the hereditary character of mental illnesses in eugenic discourse directly affected ideas about gender, sexuality and notions of normalcy.' GERODETTI, N. 2005. Biopolitics, Eugenics and the Use of History. *European Consortium for Political Research.* Granada Spain: European Consortium for Political Research.
[131] BOOTH, C. (ed.) 1889b. *Labour and Life of the People.* London: Williams and Norgate. Pp. 595 in TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 404

other districts.[132][133] And the worthy poor could be rehoused in purpose-built housing projects of multiple single-family dwellings.

1.2.5 Truth Made Visible

Booth's map was produced in the tradition of things being 'shown' rather than 'said,' bringing together in a graphic format a number of objects or ideas concerning the social as a vision and a totality that he argued had previously been hidden. It thus revealed these things in a 'truth' argued to be 'scientific' in a translation of the systematic table of classification borrowed from the sciences into the spatial graphic instrumentality of the earlier developed National Trigonometric Survey. This linking of urban space and socioeconomic information in graphic space is indicative of a shift in the discursive field of what it was possible to see in the city. Key to this was the transformation from the idea of the social class to that of the statistical class, and from the statistical table to the social, linked to the urban spatial via the graphic

[132] With the 'savages' in Class A out of the way, the analysis of the problem could begin. The designation of Class B as the very poor from Classes C and D as 'poor' was arbitrary. It was not only part of a statistical scale, but *also a means of social diagnosis***.** It was intended in its binary opposition to define a problem and designate a target group; 'to give the poor a chance of improvement, they had to be freed of the presence and of the competition of those who were poorer than they were.' TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 405. Booth wrote of Class B: 'To the rich, the very poor are a sentimental interest: to the poor they are a crushing load. The poverty of the poor is mainly the result of the competition for the very poor (Class B), the entire removal of this class out of the daily struggle for existence, I believe to be the only solution to the problem of poverty.' BOOTH, C. (ed.) 1889b. *Labour and Life of the People.* London: Williams and Norgate. pp 154 in TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 405. For Booth, Class B are incapable of regular work: 'These people, as a class, are shiftless, hand to mouth, pleasure loving, and always poor; to work when they like and play when they like is their ideal.' Booth constructed Class B to designate both a specific group and a general problem, that of irregular employment. While these were traditional designations of the deserving and the undeserving poor, they were reinterpreted on a diagnostic based on the labour market. Here, the issue of the 'excessive number of workers stagnated in industries and in districts where the labour supply was always in excess of demand. It was understood that this permanent surplus of irregular workers had to be removed to allow those who remained in the labour market to work on a regular basis. 'All that B does could be done by C and D in their now idle hours.' Ibid. pp. 406

[133] The initial solution proposed by Booth was labour colonies, a central solution in social debates in the 1880s in the United Kingdom and in Central Europe. BOOTH, C. (ed.) 1889b. *Labour and Life of the People.* London: Williams and Norgate. See also for example DRAGE, G. 1894. *The Unemployed.* London: MacMillan, BROWN, J. 1968. Charles Booth and Labour Colonies 1889-1905. *The Economic History Review,* 21**,** 349-360. DRAGE, G. 1896. *The Labour Problem.* London: Smith Elder. Drage, the Secretary of the 1892-94 Royal Commission on Labor, discussed in *The Unemployed* the deficiencies of colonies without condemning them. Drage 'felt that they had a part to play as a means of dealing with vagrancy and as 'an agency of reclamation' for the permanent surplus of unskilled labor, to supplement the Poor Law and as an improvement in industrial organization. In these suggestions lay the germ of a system of penal and reformative colonies elaborated by later writers.' BROWN, J. 1968. Charles Booth and Labour Colonies 1889-1905. *The Economic History Review,* 21**,** 349-360. pp. 354. Booth renounced the idea of moving such large numbers of people and sometime later, other 'more realistic hypotheses' were proposed, to do with the higher organisation of industry. Booth placed his trust in the development of mechanization and the factory system: 'The more industry became rationalized, mechanized and dependent on fixed capital, the more stable employment would be. Subsequently, casual workers would be forced to adapt, or to disappear.' TOPALOV, C. 1993. The City as Terra Incognita: Charles Booth's Poverty Survey and the People of London 1886-91. *Planning Perspectives,* 8**,** 395-425. pp. 406. pp. 407. Interestingly, one solution came to Booth from dock workers in the strike of 1892: 'Booth claimed that the creation of a general dock union during the strike showed that the real dockers had taken their destiny into their own hands. It was to be hoped that the union would help to keep casuals away and to press for regular work for its members, while the employers for their part would change their outdated hiring practices. With the system of priority lists, dockers would have to accept regular employment, unless they wanted to see the door closed on them forever.'

medium of the map. As a diagnosis and proposition for action in the same gesture, Booth's poverty map is a graphic argument for action contained within which was both the diagnosis of a problem, and a proposition for a solution.[134] Central to the importance of Booth's work is that he redefined the 'social question' by making a series of 'strategic distinctions formalized in scientific language, making it possible at one and the same time to conceive and to deal with it. At its core he placed the residuum, the body of casual workers identified by concerned observers since the middle of the century.'[135] This marks the shift of reforming activity from moralizing to organizing, and the shift of scientific perception from the individual to society as the object of study.

1.2.6 Disease, Order and the Regulation of the City in the Seventeenth and Eighteenth Centuries

It's important here to note that the purpose of this chapter is not to establish the success or failures of philanthropy's strategies in alleviating pauperism, or in judging the depth of understanding of its causes. Rather, what is of interest is what actually was achieved, with all of its failings, such that the instrumentality and inheritance of philanthropy can be registered in its spatial and material logic where it is still informing the contemporary practice of housing.

Charles Booth's comprehensive 1889 poverty map of London is, in one sense, the inheritor of an older tradition of gathering information and accounting for populations as part of the systems developed for containing plague outbreaks in the seventeenth and eighteenth-century city, and the exclusionary practices developed to deal with the problem of the leper. The innovation of Booth's map, as we've seen, comes in the use of scientific perception directed at society as an object of study. But it is space itself that is made malleable by these earlier systems of intervention, and for this reason it is worth considering them in some detail.

[134] EVANS, R. 1997b. Rookeries and Model Dwellings: English Housing Reform and the Moralities of Private Space. *Translations from Drawing to Building and Other Essays.* London: Architectural Association.
[135]

Much has been written about this, including by Michel Foucault, who describes in detail these practices in *Discipline and Punish: The Birth of the Prison*.[136] The emergence of this new way of understanding the city has been covered in much literature, but it is worth briefly exploring again to revisit the sense that through the seventeenth and eighteenth centuries, the urban became known, and that responses to threats to the population, such as disease, took on a spatial and organizational character. By Booth's time, in the late nineteenth century, this was deployed toward the city becoming known via 'society.'

However, before these things were so linked, Foucault describes the city becoming known via disease. He writes that the plague was a form of disorder, both at the same time real and imaginary: its medical and political correlative was the cultivation of discipline, the disciplining and ordering of urban space, or bodies in space, and of organizational systems in the seventeenth and eighteenth century.[137] In *Discipline and Punish*, Foucault describes how the space of the city becomes an increasingly ordered environment, 'observed at every point, where, during the threat of the disease... the slightest movement is supervised,' and all events recorded in order that the chaos of disease be met with order. The disciplinary function 'is to sort out every possible confusion: that of the disease, which is transmitted when bodies are mixed together.'[138]

Foucault uses a seventeenth-century municipal order outlining the required response to a plague outbreak in a French provincial town to illustrate how disease became the occasion on which a multiplicity of spatial, legal and organizational strategies were developed and deployed in the ordering of city space. It stated that there was to be a strict spatial partition put in place: enclosing the town and its outlying districts; a prohibition to leave the town on pain of death; the killing of all stray animals; and the division of the town into distinct quarters, each of which was to be governed by an intendant. Each street was to be placed under the authority of a 'syndic', whose job was to keep the street under surveillance. If the syndic was to leave the street, he would be condemned to death. Everyone was locked indoors by the syndic, who came and locked the doors himself from the outside; he then kept the key with

[136] FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books.
[137] FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books. pp. 198
[138] Ibid. pp. 198

him until the end of the quarantine period, which lasted five to six days. Each resident group within the house was to have made their own provisions. However, for bread and wine, small wooden canals were set up between the street and the interior of the house, allowing each household to receive rations without physically mixing with suppliers or other residents; meat, fish, herbs were hoisted up into the houses on pulleys and baskets. Only intendants, syndics and guards were able to move about the streets and between infected houses, removing corpses.[139] Foucault describes each city segment as becoming an immobile, frozen space where each individual was fixed in their specific place. If they moved, they did so at the risk of contagion, or punishment; in one way or another, the outcome was the loss of life.

Within this regime, a critical part of the response to disease was ceaseless inspection. Roles are hierarchized. There are sentinels at the end of each street, and the city gates have observation posts. Each day the intendant, reporting to the magistrates or mayor, would visit the quarter in his charge. He ensured the syndics had carried out their tasks, and checks through observation that this is indeed the case. Every day, the syndic would go to the street for which he was responsible. He would stop at each house, getting all inhabitants to appear at the windows. He would be required to call out their names and ensure that he has an account for each of them. This is the beginning of a system of permanent registration in the city; 'the name, age, sex of everyone, notwithstanding his condition' was then lodged with the intendant of the quarter, another set of the same details is lodged to the office of the town hall, and finally another to enable the syndic to make his daily roll call. Everything observed during this period was recorded: deaths, illness, complaints, irregularities. The magistrates, in turn, had complete control over medical treatment. There is a centralised registration of the pathological where the relation of each individual to his or her disease and to his or her death passes through the representatives of power.[140]

[139] Ibid. pp. 195. The people doing this work were known as 'crows,' those 'who can be left to die: these are 'people of little substance who carry the sick, bury the dead, clean and do many vile and abject offices.'
[140] Ibid. pp. 197. Five to six days after the quarantine has commenced, the process of purifying the house begins, one house at a time. All inhabitants are to leave the house. All furniture and goods in each room are raised from the ground, after the windows and doors are sealed with wax, perfume is poured around the room and then set alight. Four hours later the residents are allowed to re-enter their homes.

This is the ordering of the city in the face of disorder where, Foucault argues, space critically emerges as a malleable instrument.

> 'This enclosed segmented space, observed at every point, in which the individuals are inserted, in which all events are recorded, in which an uninterrupted work of writing links the centre and periphery, in which power is exercised without division, according to a continuous hierarchical figure, in which each individual is constantly located, examined and distributed among the living beings, the sick and the dead – all this constitutes a compact model of the disciplinary mechanism.'[141]

Part of the response was also the penetration of regulation into even the smallest details of everyday life that importantly and constantly subdivides itself in a regular and uninterrupted way in the pursuit of order. This laid down for each individual his place, his body, his disease and his death, his wellbeing. Foucault has called this a kind of 'capillary functioning of power as it differentiates across a multiplicity of responses, or spaces, of interventions.'[142] The effects of the disease in the city allowed temporal disruption, new laws, new organizations and new hierarchies to emerge through the disrupting of normal routines, hierarchies, organizations and structures. Through this event, laws are suspended, though this is not about 'laws transgressed.' Rather, it was 'the penetration of regulation into even the smallest details of everyday life through the mediation of the complete hierarchy.'[143]

1.2.7 Foucault's Disciplinary Project: Placing Bodies in Space

Françoise Choay argues that by the seventeenth and eighteenth centuries, there is the spread of what Foucault calls the 'disciplinary society' throughout the whole social body.[144] In

[141] Ibid. pp. 197
[142] Ibid. pp. 198
[143] Ibid. pp. 198
[144] CHOAY, F. 1997. *The Rule and the Model. On the Theory of Architecture and Urbanism.* Cambridge, Mass.: MIT Press.

every sector where it is applied, it relies on a spatial organization or reasoning as its fundamental and necessary support.[145] Along with the exclusionary impulse that developed in the city in response to disease as described above, Foucault describes the concurrent coalescence of a disciplinary project evident in Jeremy Bentham's (1748-1832) nineteenth-century panoptic instrument for the placement of bodies in space in a mutual relationship of observation and self-responsibilization. Foucault argues that characterizing discipline's function of distributing bodies in space is a set of spatializing impulses. These include calibrated systems of enclosure; presence and absence, the coding of underutilized or multifunctional spaces 'that architecture left at the disposal of several different uses,'[146] and finally discipline as 'the art of rank' and hierarchy that circulates individualized bodies in a network of relations. To understand these and how they might provide insight into the question of the familial-social mechanism of domesticity, housing, and later mapping of the city by the late nineteenth century, it's worth considering in detail the examples Foucault gives across various disciplines – the military, education and the factory, particularly, and how they coalesce in the figure of the panopticon, and following it, we will argue, in the 1851 model apartment.

1.2.8 Enclosure

The first of the spatial impulses characterising discipline's function as described by Foucault with reference to Bentham's panopticon, is enclosure. On the one hand, this might be the 'confinement of vagabonds and paupers' in their disorder. However, the more insidious and effective deployment of enclosure is the confinement constitutive of specific institutional settings, the colleges or secondary schools, for example, the military barracks, or the factory. On schools, Foucault writes that the monastic model was gradually imposed, where boarding appeared as the most effective regime.[147] Regarding the military, Foucault refers to the

[145] FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books. In CHOAY, F. 1997. *The Rule and the Model. On the Theory of Architecture and Urbanism.* Cambridge, Mass.: MIT Press.pp. 222
[146] FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books. pp. 143
[147] Ibid. pp. 143

barracks. He writes, ‘The army, that vagabond mass, has to be held in place; looting and violence must be prevented; the fears of local inhabitants, who do not care for troops passing through their towns, must be calmed; conflicts with the civil authorities must be avoided; desertion must be stopped, expenditure controlled.’[148] The *French Military Ordinance* of 1719 envisaged the construction of several hundred barracks; there would be strict confinements: ‘The whole will be enclosed by an outer wall of thirty feet, which will surround the said houses, at a distance of thirty feet from all the sides; this will have the effect of maintaining the troops in order and discipline so that an officer will be in a position to answer for them.’[149] On factories and workshops: ‘The factory was explicitly compared with the monastery, the fortress, a walled town; the guardian will open the gates only on the return of the workers, and after the bell that announces the resumption of work has been rung’: a quarter of an hour later no one will be admitted; at the end of the day, the workshops’ head will hand back the keys to the Swiss Guard of the factory, who will then open the gates. The aim is to derive the maximum advantage and to neutralise the inconveniences (thefts, interruptions of work, disturbances and ‘cabals’) as the forces of production become more concentrated; to protect materials and tools and to master the labour force,‘ the order and inspection that must be maintained require that all workers be assembled under the same roof.

> ’As the workshops spread, side by side developed the great manufacturing spaces, both homogenous and well-defined: first the combined manufactories, then, in the second half of the eighteenth century, the works or factories proper; the Chaussade ironworks, for example, occupied almost the whole of the Medine peninsula, between Nievre and Loire.’[150]

[148] Ibid. pp. 143
[149] L’Ordonnance Militaire, IXL, 25 September 1719, in ibid. pp. 142. ‘In 1745, there were barracks in about 320 towns; and it was estimated that the total capacity of the barracks in 1775 was approximately 200,000 men.’
[150] Ibid. pp. 142. In order to set up the Indret factory of 1777, Wilkinson, by means of embankments and dikes, constructed an island on the Loire. Toufait built Le Creusot in the valley of Charbonniere, which he transformed with workers’ accommodation built in the factory itself.’

1.2.9 Presence and Absence

The second of the spatializing impulses characterising discipline's functioning works with a principle of enclosure that is not constant, nor indispensable, nor sufficient itself as the disciplinary machine. Foucault describes, instead, how space is calibrated within this system, 'where each individual has his own place; and each place is individual.'[151] 'Disciplinary space tends to be divided into as many sections as there are bodies or elements to be distributed.' Its aim was to establish 'presences and absences', to know where and how to locate individuals, to set up or interrupt communications, to always be able to see each moment, to supervise the conduct of each individual, to assess that conduct, to judge it, calculate its qualities or merit. In this sense, it's possible to see with Foucault that 'discipline organizes an analytical space' of visibility and of bodies organised in space.[152]

1.2.10 Programmed and Managed Space

In the third instance, Foucault argues that within a disciplinary institution, any space that architecture had left at its disposal and was designated as having several uses, would be gradually 'coded' – this is the rule of functional sites. That is, particular places that were defined as needing supervision, in order that 'dangerous communications' might be broken, in the creation of useful space.'[153] In the context of the factories that appeared in France at the end of the eighteenth century, Foucault writes, 'It was a question of distributing individuals in a space in which one might isolate and map them; but also of articulating this distribution on a production machinery that had its own requirements. The distribution of bodies, the spatial arrangement of production machinery, and the different forms of activity in the distribution of 'posts,' had to be linked together.'[154]

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[151] Ibid. pp. 143
[152] Ibid. pp. 143
[153] Ibid. pp. 143
[154] Saint-Maur Reglement de la fabrique de', B,N. MS. Coll. Delamare, Manufactures III in ibid. pp. 145. He describes the Oberkampf factory at Jouy that he says obeyed this principle. '*It was made up of a series of workshops specified according to each broad type of operation: for the printers, the handlers, the colourists, the women who touched up the designing, the engravers, the dyers. The largest of the buildings, built in 1791, by Toussaint Barre was 110 metres long and had three storeys. The ground floor was devoted mainly to block printing; it contained 132 tables*

1.2.11 Rank and Hierarchy

In the final instance of a spatializing impulse in the distribution of bodies in space as a function of discipline, Foucault argues that discipline is an art of rank; it is not about territory (a unit of domination) or about place (a unit of residence) but about hierarchy. This he understood to be the place that an individual occupies in a classification, the interval in a series of intervals. Rank is a technique for the transformation of arrangements. In the context of discipline, it 'individualizes bodies by a location that does not give them a fixed position, but distributes them and circulates them in a network of relations.'[155] Foucault uses the example of the 'class,' as in education, to illustrate this where, after 1762,

> 'the educational space unfolds; the class became homogenous, it is no longer made up of individual elements arranged side by side under the master's eye. In the eighteenth century, 'rank' begins to define the great form of distribution of individuals in the educational order: rows or ranks of pupils in the class, corridors, courtyards; rank attributed to each pupil at the end of each task and each examination; the rank he obtains from week to week, month to month, year to year; an alignment of age groups, one after another; a succession of subjects taught and questions treated according to an order of increasing difficulty. And, in this ensemble of compulsory alignments, each pupil, according to his age, his performance, his behaviour, occupies sometimes one rank,

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arranged in two rows, the length of the workshop, which had 88 windows; each printer worked at a table with his 'puller', who prepared and spread the colours. There were 264 persons in all. At the end of each table was a sort of rack on which the material that had just been printed was left to dry.' By walking up and down the central aisle of the workshop, it was possible to carry out a supervision that was both general and individual: '*To observe the workers' presence and application, and the quality of his work; to compare workers with one another, to classify them according to skill and speed; to follow the successive stages of the production process. All of these serialisations formed a permanent grid… that is to say, production was divided up and the labour process was articulated, on the one hand, according to the individuals, the particular bodies, that carried it out: each variable of this force – strength, promptness, skill, constancy – would be observed, and therefore characterised, assessed, computed and related to the individual who was its particular agent. Thus, spread out in a perfectly legible way over the whole series of individual bodies, the workforce may be analysed in individual units. At the emergence of large scale industry, one finds, beneath the division of the production process, the individualising fragmentation of labour powers; the distribution of the disciplinary space often assured both.'* Ibid. pp. 145

[155] Ibid. pp. 146

sometimes another… It is the perpetual movement in which individuals replace one another in space marked off by aligned intervals.'[156]

This serial space was a great technical mutation in elementary education, making possible the shift from an older system – whereby each student worked for a few minutes with a master while the rest of the group, heterogeneous, remained idle – to a system where, 'by assigning individual places, it made possible the supervision of each individual and the simultaneous work of all. It made the educational space function like a learning machine, but also as a machine for supervising, hierarchizing, rewarding.' Jean-Baptiste de La Salle theorised about a classroom in which the spatial distribution might provide a whole series of distinctions at once: according to the pupil's progress, worth, character, application, cleanliness and parents' fortune. In this scenario, the classroom formed a single great table, with many different entries, under the watchful 'classificatory' eye of the master teacher. [157]

1.2.12 The Disciplinary Machine, the Panopticon Mechanism

Together, these spatial impulses formed what Foucault in the context of the panopticon but also the clinic, asylum, etc, has described as the 'disciplinary machine': a panoptic machine for the placement of bodies in space in a mutual relationship of observation and self-responsibilization. Much architectural literature that uses Foucault's writing on the panopticon to think about the urban emphasizes one of three things: the first is historical evidence of the diagrammatic in the built, ie. which nineteenth and twentieth-century penitentiaries were constructed and how they do or don't conform to Foucault's ideas.[158] Secondly, writings

[156] Ibid. pp. 147

[157] J-B de la Salle. Conduite des écoles chrétiennes, B.N. Ms 11759 248-9 in FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books. pp. 147. La Salle wrote, '*In every class there will be places assigned for all the pupils of all the lessons, so that all those attending the same lesson will always occupy the same place. Pupils attending the highest lessons will be placed in the benches closest to the wall, followed by the others according to the order of the lessons moving towards the middle of the classroom… Each of the pupils will have his place assigned to him and none will leave it or change it except on the order or with the consent of the school inspector.*' In addition, La Salle argued that things must be arranged that '*those whose parents are neglectful and verminous must be separated from those who are careful and clean; that an unruly and frivolous pupil should be placed between two who are well-behaved and serious, a libertine either alone or between two pious pupils'.*

[158] See for example STEADMAN, P. 2007. The Contradictions of Jeremy Bentham's Panopticon Penitentiary. *Journal of Bentham Studies,* 9. Steadman writes in the introduction to his paper, " Perhaps the best known true panopticons ever constructed were at the Stateville Penitentiary near Joliet in Illinois (Figure 2), where there were five rotundas within the one prison, built between 1916 and 1924. The architect was W. Carbys Zimmerman. All but

following Foucault focus on notions of surveillance, where surveillance is understood to be the act of watching[159] and associated with the rise of the use of CCTV for example in public spaces; and finally, architectural literature utilizing Foucault's idea of the panoptic tend to focus on the idea of the biopolitical, but place it within the realm of the sanatorium or hospital with little or no reference to a conditioning relationship between an emerging spatial practice – an architectural typological practice, and the formation of urban subjects. [160]

Bentham's panopticon is the clearest application of disciplinary power in Foucault's writing. It is predicated on the fundamental idea of the possibility of redemption. It reverses, Foucault argues, the principle of the dungeon, an earlier form of incarceration that was instead formed around the idea of the punishment of the flesh and the irredeemability of man. That it was never built is not of interest here. Developed as an idea in the 1830s and 1840s, the point of considering it here is not to find evidence of its faithful reproduction as a built object in subsequent penitentiaries, such as Stateville Prison in Illinois, USA, built in 1925, or even Pentonville Prison in Kings Cross, London, built on loose panoptic principles in the 1840s.

The panopticon as drawn by Bentham is made up of a circular or annular building with a central circular tower, the walls of which are pierced with wide windows that open outward toward the edge of the circle. The residual peripheral building is comprised of a series of cells, windowed on their outer wall and open facing the internal tower. The effect of the cell being backlit is a condition in which the inmate of each cell is always visible to whomever occupies the tower – a figure that is, in turn, never visible to the inmate. 'They are like so many cages, so many small theatres, in which each actor is alone, perfectly individualized

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one have since been demolished. Stateville was the model in turn for a prison on the Is le of Pines in Cuba, opened in 1931. And that is about it. Meanwhile hundreds of prisons were built across the world throughout the nineteenth century and well into the twentieth, on the general layout of Pentonville, whose plan has a series of straight cellblocks radiating from a central hall All this is odd, since architectural historians and social scientists, most prominent among them Michel Foucault, have attributed enormous influence to Bentham's Panopticon. ….. Why- despite Foucault- was it so rarely copied, and why did radial prisons on the model of Pentonville succeed -at least numerically?"

[159] See for example writing in Human Geography such as KOSKELA, H. 2000. 'The Gaze without Eyes': Video Surveillance and the Changing Nature of Urban Space. *Progress in Human Geography,* 24**,** 243-265. Or GREEN, S. 1999. A Plague on the Panopticon: Surveillance and Power in the Global Information Economy. *Information, Communication & Society,* 2**,** 26-44.

[160] Wallenstein in 2009 goes furthest toward treating the emergence of the practice of architecture within modernity in its relationship to the biopolitical. However still within his writing is the idea of architecture as a reflection of these processes rather then iteratively and instrumentally constituent of them. WALLENSTEIN, S.-O. 2009. *Biopolitics and the Emergence of Modern Architecture*. Cambridge Mass.: MIT Press.

and constantly visible.'[161] Bentham's argument is that the effect of constant but unknown surveillance is the self-responsibilization and internalization of a particular kind of acceptable behavior. Bentham described the panoptic system as 'a way of obtaining from power, in hitherto unexampled quantity, a great and new instrument of government.'[162] Foucault continues that this system 'can be integrated into any function (education, medical treatment, production, punishment); it can increase the effect of this function, by being linked closely with it; it can constitute a mixed mechanism in which relations of power (and of knowledge) may be precisely adjusted, in the smallest detail, to the processes that are to be supervised; it can establish a direct proportion between surplus power and surplus production.'[163] Therefore, we can also see that the panopticon has little to do with contemporary surveillance systems that rely on the CCTV camera. What so many tedious contemporary theories of the failure of public space as a consequence of the oversurveillance of space miss, is that the unidirectional gaze is not the key in the dynamics of power in the panopticon. Rather, it is the space's bidirectional observation and self-responsibilization that is critical and foundational to its functioning – a self-responsibilizing behavior that continues with or without the surveillance. This is the spatial mechanism at work in the diagram of relations in domesticity.

As a portable system beyond the penitentiary, Foucault places the panopticon's operative importance in several distinct categories. The first is as an instrument for cultivating the individual as the 'principle in his own subjection' via the feedback mechanism of observation whereby acceptable behaviors are internalized;[164] this is the very notion of subjectivity within the discursive frame and epistemological specificity of modernity. In addition, the panoptic mechanism inculcates the observer into the instrumentality of the system in a conditional relationship with the observed. It resides, not in the drawing, or in the bricks and mortar of the building, but within this relationship.[165] It isn't separate from the relationship between the individuals held within specific spatialized sociopolitical conditions. And finally, the panoptic mechanism is potentially polyvalent: 'Whenever one is dealing with a multiplicity of individuals

[161] Ibid. pp. 200
[162] Bentham pp. 66 in ibid. pp. 206
[163] Ibid. pp. 206
[164] Ibid. pp. 202
[165] Ibid. pp. 204

on whom a task or a particular form of behavior must be imposed, the panoptic schema may be used.'[166]

In one sense, then, Foucault argues that the disciplinary machine is a thing that can be drawn as a strategic exemplar diagram, as Bentham does with his descriptions of the new panoptic system for penitentiaries. A strategic exemplar diagram is not something necessarily built; rather, it is a yardstick against which all subsequent arguments are made. Bentham's panoptic system is a strategic exemplar diagram. It was a drawing used to illustrate the idea of a system against which we continue to judge the success or failure of all subsequent projects built in its name. The drawings of the panopticon serve as a disciplinary specific strategic diagram illustrating a new kind of reasoning in the nineteenth century that linked social-reform agendas with a new spatial sensibility. It served as a diagrammatic model. The panoptic is a set of sociopolitical relations where the mechanism is a feedback relationship between the subject, who is also an object, and an observer. The strategic exemplar diagram, then, is not so much a representation of these relationships, as it is a continuing incitement to their dynamism.

1.2.13 The 1851 Model Apartment: A Strategic Exemplar Diagram

One is reminded of Minson's observation that the prehistory of the family is as discontinuous from the modern family of the late nineteenth century as the debtors' prison was in Foucault's *Discipline and Punish*[167] from the modern penitentiary. Following on from this, we will propose that it is not a case of the 'family' transforming into different forms through time. Rather, there is a discontinuity between two different categories of the family operative in two different forms of social organisation. We have seen in this chapter how the category of the family lent itself to a liberal politics via the operations of the panoptic mechanism.[168] Foucault argues that

[166] Ibid. pp. 205
[167] Ibid.
[168] DONZELOT, J. 1979. *The Policing of Families.* Baltimore: John Hopkins University Press. Through Minson. MINSON, J. 1985b. *Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics.* London: Macmillan. pp. 200

the panoptic mechanism functions by taking things that are already there and investing from within them in a constant churning process,

> 'it arranges things in such a way that the exercise of power is not added on from the outside, like a rigid heavy constraint, to the functions it invests, but is so subtly present in them as to increase their efficiency by itself increasing its own points of contact.' [169]

The cry of failure, of the failure of the modern family, is the grounds of legitimacy for a constant intervention and recalibration of its spatialized functions.

The first totally coordinated block of apartments, Model Houses for Four Families, was designed by Henry Roberts for the Great Exhibition of 1851 in London, under the patronage of Prince Albert. Prior to the 1840s, domestic architecture reform was seen only as a marginal concern for rural philanthropy. For a writer such as Evans, as the product of the earliest phase of housing philanthropy and, as such, its provision of space and services are just emerging, it still 'represents, as only an exemplary project can, the various ways in which architecture was to be deployed against low-life.'[170]

This 1851 'model apartment' was a two-story block made up of four three-bedroom apartments, each with a separate living space, scullery and internal toilet. Two distinct and critical spatial divisions were established. The first was between families themselves in accessing each individual apartment. The second was between the members of each family within the apartment itself, where it was argued 'the entire groundwork upon which much of the moral and social improvement of the population must be based.'[171]

On consideration of the model apartment, one is immediately reminded of Foucault's division of the disciplinary machine with the distinct spatial strategies of enclosure, presence and absence, programmed and managed space, and rank and hierarchy. Within the apartment

[169] FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books. pp. 206
[170] EVANS, R. 1997b. Rookeries and Model Dwellings: English Housing Reform and the Moralities of Private Space. *Translations from Drawing to Building and Other Essays.* London: Architectural Association Publications. pp. 107
[171] GAVIN, H. 1848. *Sanitary Ramblings: Sketches and Illustrations of Bethnal Green, a Type of the Condition of the Metropolis and Other Large Towns.* London: John Churchill. In Evans pp. 109

itself, the spatial division is finely calibrated. There is enclosure, of the family itself, made distinct from other families in the block and in the neighborhood, but there is also enclosure within the interior of the apartment – the enclosure of the danger of sleep, which by the nineteenth century was sexualized – in bedrooms specific to role, the parental bedroom of discrete authority accessible by a single door, and the gender-specific children separated from each other and in designated spaces, each feeding onto the communal space of mutual observation, the living room. Children's bedrooms are each accessible by a single door leading directly off the living room, allowing for parental surveillance but also, within the enclosure of the bedroom itself, the individual expression of the specific child. As such, conduct is able to be supervised, judged and calculated in its merits and qualities, while conduct and the self are at the same time cultivated by the individual in a self-responsibilization. Each member of the family has a distinct space and each space has a distinct function.

The spaces of kitchen and bathroom, of sanitation and hygiene, are clearly defined in the 1851 apartment, and are contained within it and available for the exclusive use and control of the one family. There is no sharing of these facilities. Finally, rank and hierarchy distribute and calibrate bodies in space as part of a classificatory system: boy child, girl child, mother and father. No longer is everyone living in one room, or are spaces let to individuals from outside the boundary of the modern family. Calibrated space that, as we saw earlier in the chapter, allows for the taking up of these new roles of, for example, mother, in the delayed exercise of dowry, and the taking up of the authority afforded by the position of housewife. This is the modern family in its spatialized network of dynamism: domesticity.

The 1851 model apartments were arranged in pairs around an open staircase. The block could be extended vertically to accommodate as many additional apartments as were needed beyond the four pairs illustrated in the strategic exemplar diagram produced for the Great Exhibition. In terms of enclosure, the open stair was a novel arrangement driven by ventilation that separated family units; families were contained and never crossed each other's threshold

on departure and arrival. In addition, each family was enclosed and separated from each other family within the territorial limits of the apartment itself.

Each space was programmed and managed. Take, for example, the space between apartments; as outdoor space developed in part around arguments regarding ventilation as part of a sanitation and hygiene intervention, this open stairwell is assumed to be public, a kind of neutral space between the territorially defined realm of each family. The result is that it minimises interaction between families, such that there is only very limited contact on entering or leaving the apartment.

1.3.1 Conclusion: The Space of Knowledge; Knowledge of Space

It wasn't until 1889 that the first volume of Booth's *Labour and Life of the People* was republished as the '*Descriptive Maps of London Poverty*'.[172] Its four sheets covered the whole of the metropolitan area. These color-coded the poverty levels of every street and spoke directly to the public in a way that earlier statistical results of the survey had not. Booth's use of the table in his organization of information, in the context of economics, made possible the measurement of quantities and the analysis of movements. In the context of taxonomy, the table as used by Booth had the function of characterizing and reducing individual specifics while also constituting classes and, in addition, excluding the population size within the class. But, in the context of what Foucault calls 'disciplinary distribution,' the table as used by Booth functions to treat the multiplicity itself – by distributing it, and deriving multiple effects from it – allowing both the characterization of the individual as individual, while also performing the ordering of a given multiplicity. Foucault argues that this is the first condition for the 'micro-physics of what might be called a "cellular" power.' [173] This is the foundation of Foucault's ideas of the disciplinary system that, by the nineteenth century, and with institutional exemplars such as the penitentiary, the asylum and the school, he argues is operative in the city. And we will add here, in the housing project, with its organization of individual within

[172] BOOTH, C. 1889a. *The Descriptive Maps of London Poverty*. London.
[173] FOUCAULT, M. 1995 (1977). *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books. pp. 148

family, and families organized within what in the twentieth century as we shall see in the second part of this thesis, emerges as the neighbourhood.

Within the context of this writing, it is clear that the concept of spatialization is used in several ways. The first is in the simple disciplinary and discursively specific sense of 'architectural space' or 'urban space'; that is, the stuff between the walls, the stuff between or positioning the building, the block, the infrastructure, etc. However, in another sense, the notion of spatialization is used following Rajchman's examination of visibility in the writing and thinking of Foucault, where 'knowledge sets up and requires a way of spatializing itself'.[174] That is, knowledge is not simply built up from perceptual evidence or sedimented through a logic of inference, it is not a technical knowledge of things. Rather, knowledge is constituted of a dispersed organization of a constellation of objects, subjects, strategies and modes of enunciation. Within the logic of sedimentation and inference, one would account for the natural histories of the classical order in terms of a new attention to detail – 'when men looked harder and more closely' as an account of the changes that occurred – or in the case of the work of this chapter, the men and women of social reform and nineteenth-century social philanthropy looked more closely at the city. Instead, Foucault argues in *The Order of Things* that it is rather that what people saw was organized in new ways, it was spatialized differently, which is precisely what we see with Booth's poverty map.[175] Likewise, it is not observation that can be used to account for the 'birth of the clinic' and its associated new understandings of illness. Rather, it is the space of disease itself that changes, the place of the individual body where it is located and the institutional space within which such localization occurs.'[176] Rajchman argues through Foucault that it is the construction of a kind of space that allows for observation and also theory to become possible. Rajchman takes this further, arguing that it is the spatial organization of knowledge that makes possible the theory that follows it:

> 'The spatial scheme of a form of knowledge is not only distinct from the theories which occur within it; it often precedes and makes them possible. Thus the singular

[174] RAJCHMAN, J. 1988. Foucault's Art of Seeing. *October,* 44**,** 89-117. pp. 96
[175] FOUCAULT, M. 1970. *The Order of Things.* New York: Pantheon. First published in French as FOUCAULT, M. 1966. *Les mots et les choses: Une archéologie des sciences humaines.* Paris: Editions Gallimard.
[176] RAJCHMAN, J. 1988. Foucault's Art of Seeing. *October,* 44**,** 89-117. pp. 98

> manner in which the general hospital gave mad people to be seen, precedes the elaboration of the classical theories of madness, and the architectural reorganization of prisons precedes the new theory of crime.'

We will add here that the spatial organization of the single-family dwelling and the housing project precedes the animating theories of the modern family, and of community. Rajchman concludes: 'The relation between theory and visualization in knowledge is not fixed or given, as in the Kantian idea of a 'schematism' locked in the recesses of the human soul. It is rather a matter of contingent historical configuration.'[177]

As the catalogue of contemporary housing manuals outlined at the beginning of this chapter illustrate, the housing project can be understood as a large-scale urban intervention in the form of multiple housing units that involve a cluster of associated and interrelated concerns regarding forms of work, home, leisure and transport, in the city. Contemporary understandings of the housing project typically understand it as a piece of urban fabric that, as part of the design process in architecture, is graphically isolated and abstracted from the city around it, experimented on, and then replaced in an urban context to do its work: to have an effect on the city at multiple scales. As this thesis describes, following the crisis in the field during the 1960s in response to the perception that the modern movement had failed in terms of the existing and traditional city, contemporary housing manuals are returning resolutely to the question of how housing can be better deployed to build the city.

Central to contemporary arguments for change in the housing project is the call for dynamism. Contemporary housing manuals, as this chapter explains, argue for dynamism either in the spatial performance of the individual dwelling, such that living space better serves the life-cycle needs of the occupants, or they argue for dynamism in the occupants of the building themselves. Occupants, it is explained, should be encouraged to move more fluidly through the city according to lifestyle, occupying living spaces specific to that particular need: aged care and issues around mobility, the needs of children, single living, etc.

[177] Ibid. pp. 98

Despite their apparent opposition, central to both positions is the discourse of domesticity itself. Whether the call is for dynamic spatial or familial performance, key is the idea that housing is failing, and that predicated on failure, the answer is housing itself: more dynamic, and more responsive to the family who occupies it. Failure is the grounds and legitimacy for intervention. As Donzelot has shown, central to understandings of the single-family dwelling and the modern family is its program of constant rectification as a function within liberal democracy.

This chapter argues that, rather than understand the history of the category of family in its modern form as one of transition, it should instead be seen as totally discontinuous from what went before it, as Foucault has argued the modern penitentiary should be seen as discontinuous from the earlier prison. Instead of asking how one transformed into the other, Donzelot prompts us to ask how the older category of family – the 'unquestionable structure of political authority, government, hierarchy and obedience under the paternalism of' in the case of Donzelot's writing, the Ancien Regime of eighteenth-century France – became designated as a bastion of individual privacy, intense intimacy and freedom from political interference.'

As this chapter has explored, an alternate history of the housing project starts to reveal the sociopolitical instrumentality of the diagram of the single-family dwelling. Central to its function is spatial reasoning itself. Understood as a strategic exemplar diagram within the regime of disciplinary power as outlined by Foucault, the 1851 model apartment by Henry Roberts lays out what's at stake in the emerging modern family spatialized and positioned in the single-family dwelling, and as one of a multiple of apartments in a block. As this chapter shows, the modern family is not the realm of privacy, situated in opposition to the world of work and politics, as is commonly argued. Rather, as we have seen, it can be understood as the most public of spaces through the intervention of the myriad of interventions in the name of the social: medical, educational, economic, and in terms of child care. Nor is the modern family the regime of repression, capitalist ideology and sought liberation that is most commonly argued in Marxist accounts of it. Donzelot shows us that it is a mechanism of

internal differentiation and reconstitution of 'familial personnel' through which the individual held within it took up power in a new constellation of roles that emerged through the second half of the nineteenth century; as Minson has established, it was through the discovery that 'women's place is in the home' that philanthropic strategy played an important role in elevating the social status of working and lower-middle class women as a function of the transformation of marriage from a man's estate into its modern nuclear form.

Central to this, as Foucault outlines in *Discipline and Punish*, is the city as spatially known and accounted for in the first instance, as we saw in the description of the city of disease and leprosy. But space later becomes the ground on which the disciplinary machine functions with it relationships of mutual observation and self-responsibilization between bodies in the service of the biotechnical: the constitutive assembly of the means of judgement, clinical examinations, tests, assessments with their associated norms and normativities.

By the time Booth graphically diagnosed the socioeconomic spatiality of the city with his poverty map – and in the same propositional gesture shows where to demolish large parts of it in readiness for the social solution, in the form of housing and the modern family – he makes visible the new 'truth' of the city.

The 1851 model apartment plan remains the strategic exemplar diagram of housing for the modern family. We may subtract bedrooms, add more living spaces, spread them further apart, give them more air, more space, more light, criticise the plan, pull it apart and propose alternate solutions – yet what we are doing, always, is referring back to this diagram of the sociopolitical organisation of bodies in space in the pursuit of autonomy and self-responsibilization or, put another way, in the mutual cultivation of our domestic and familial subjectivities. Contemporary housing remains within this discursive restraint. The question of transformation, and architecture's contribution via housing to changes in the city and our relationship to it, belongs to the interior of the discipline of architecture itself, as will be outlined in Chapter Two.

DISCIPLINARY INTERIORITY

Architecture’s Disciplinary Value: Organisational and Material Experimentation.

‘We must give up ingrained habits. The first is the tendency to treat knowledge purely as theoretical architectures. For this leads to a general philosophical distinction between a realm of ideas and a realm of action, or within Marxism the distinction between theory and praxis. (for all the Marxist insistence upon their unity, only Althusser advanced the question by insisting that theory was a practice). Once the general distinction is abandoned then it is possible to conceive of knowledge as a practice, and it is possible to treat objects of knowledge as having conditions of existence which are themselves non-theoretical.’

COUSINS, M. & HUSSAIN, A. 1984

2.1 Introduction

Continuity in Architecture versus Dynamic Experimentation

Within contemporary accounts of the housing project there is evident a tension. On the one hand, it is impossible to ignore the kind of continuity apparent in a diversity of work. This is visible, for example, in the recently published housing manuals discussed in Chapter One, where housing projects from throughout the twentieth century are brought together in a new body of work directed at informing practice through exemplar precedent.[1] As we also saw in Chapter One, the strategic exemplar diagram of the single-family dwelling as exhibited at the Great Exhibition in 1851 continues to be the reference diagram for spatializing clusters of individuals at the scale of the modern family.

On the other hand, we're confronted by the transformative capacity of both the discipline of architecture and of the housing project, in the domain of architectural type. This is particularly evident in a narrative history such as Richard Plunz's *A History of Housing in New York City*, where category designations based on time frame and type structure the work, making visible the move from courtyard block to tower in the park, to row house infill, within the specificity of the City of New York.

As we saw in Chapter One, the question of the relationship of the housing project to urban change and building the city is central for the authors of the new catalogue of publications looking at the housing project. The following chapter will explore the relationship between this continuity and repetition on the one hand, and on the other a drive toward transformation in the domain of architectural type. To do this, it will work through the idea of the Typological Burden, a concept first suggested by Kenneth Frampton in his 1973 review of the Bronx-sited Twin Parks housing project in New York City.

[1] See, for example, those publications mentioned in Chapter One: SHERWOOD, R. 1978. *Modern Housing Prototypes.* London: Harvard University Press. PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. HECKMANN, O. 2011. The Sweetness of Functioning is Architecture: On the Use of Floor Plans. *In:* HECKMANN & SCHNEIDER (eds.) *Floor Plan Manual.* Basel: Birkhauser. ROWE, P. G. 1993. *Modernity and Housing.* London: MIT Press. FRENCH, H. 2006. *New Urban Housing.* London: Laurence King Publishing. GIMENEZ, A. & MONZONIS, C. (eds.) 2007. *Collective Housing.* Alboraya Valencia: Editorial Pencil SL. FIRLEY, E. & STAHL, C. 2009. *The Urban Housing Handbook.* West Sussex: John Wiley and Sons Ltd. FERNANDEZ PER, A., MOZAS, J. & ARPA, J. (eds.) 2007. *D-Book: Density, Data, Diagrams, Dwellings: A Visual Analysis of 64 Collective Housing Projects.* Vitoria-Gasteiz: a+t ediciones.

Predicating this thesis and Chapter Two particularly, are quite specific definitions of architecture and knowledge. As we saw in Chapter One, the spatialization of knowledge is a central innovation within modernity. This chapter is concerned with clarifying architecture's relationship to this. It will establish how architecture might be understood as a material and formal discipline, following Foucault and his writing in *The Archaeology of Knowledge*; this is a definition that understands discipline as a practice to be quite separate and distinct from knowledge.[2] The consequences of this are twofold and as a definitional move it opens up two lines of enquiry. The first is in terms of architecture's internal disciplinary functions: What characterizes architecture's interiority, what are its internal terrains of dispute, and with what sort of unity is it held together? The second consequence is in terms of architecture's relationship to its outside, and this opens up a second line of enquiry: What allows a performative reciprocity between architecture's disciplinary interior and its outside, what we will call discourse or knowledge, and what is the transactional ground of that relationship? [3] The first set of these consequences are explored in this chapter, while the second set are unpacked more fully in Chapters Three, Four and Five.

Jeff Kipnis has argued that 'diagrams underwrite all typological theories.'[4] In this sense, the diagram isn't only a notation system that belongs to the graphic realm of architecture's design process. It is also, as we saw in Chapter One and following Foucault, fundamental to structures of knowledge within the epistemological specificity of modernity. It has been argued that these 'disciplinary machines' function in the architectural drawing, institutional forms within urbanism's arsenal of city building, and as a complex sociopolitical arrangement of bodies in space held in a mutual relationship of observation and self-responsibilisation – the asylum, the clinic, the hospital, the penitentiary and, we argue in this thesis, the housing project. Chapter Two will discuss how this 'disciplinary machine' that emerges in various ways throughout the nineteenth

[2] First published in French as FOUCAULT, M. 1969. *L'archéologie du savoir.* The first English translation was FOUCAULT, M. 1972a. *The Archaeology of Knowledge.* London: Tavistock.
[3] I am grateful to Dr Pavlos Philippou for this idea of architecture's 'inflection' between an inside and its outside. This was clarified in an unpublished paper, Type and Diagram (in the Context of Cultural Buildings), 2006, produced as part of the Doctoral Research Group Architectural Urbanism at the Architectural Association, London, led by Professor of Urbanism Lawrence Barth, also with Dr Katharina Borsi. See Borsi for a discussion regarding the insertion of the scale of domesticity into the undifferentiated fabric of nineteenth century Berlin. BORSI, K. 2009. Drawing and Dispute: The Strategies of the Berlin Block. *In:* LATHOURI, M., PERITON, D. & DI PALMA, V. (eds.) *The Intimate Metropolis.* London: Routledge.
[4] KIPNIS, J. 2006. Re-Originating Diagrams. *In:* CASSARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A.

century finds value in architecture's capacity for materialization and organizational experimentation, while recognizing also that it does not belong to architecture.[5]

There are two things to notice in the relationship between discipline and knowledge that this thesis sets up. As this chapter will show, key to the drive to abstract experimentation is architecture's graphic realm: 'Since nothing can enter architecture without having been first converted into graphic form, the actual mechanism of graphic conversion is fundamental,'[6] that is, the drawing and its instrumentality in architecture is critical as writers as diverse as Rowe and Slutzky, Allen, Evans, and Lee and Jacoby have argued.[7]

As this chapter will discuss, an account of design practice via Durand's use of graphic tables in a diagnostic and propositional gesture gives some insight into the functioning of the relationship of negotiation in the drawing as part of the emergence of the discipline of architecture within modernity. However, it leaves open the mechanism of transaction between the inherited material and conventions of the discipline, and the graphic systems of reasoning. This chapter's account of the working of the sign in the theory of Charles Sanders Peirce begins to address this.

The second thing to notice is that the diagram relies on a condition of dispute whereby architectural typology and its relationship to the diagram is generative of material possibility. It is in this relationship that the agency of type resides, and specifically the site and potential of the notion of the typological burden. The question of type's functioning through dispute itself is explored in more detail in the second part of this thesis.

It is important to note at the outset that the aim of this chapter is not to make an account of the genesis of the notion of architectural typology, or the diagram through history; nor is the purpose of this work to constitute a definitive review of definitions and uses of architectural type from the

[5] ALLEN, S. 1998. Diagrams Matter. *Any: Diagram Work,* 23. pp. 17
[6] ALLEN, S. 2000. *Practice: Architecture, Technique and Representation.* Amsterdam: G+B Arts international. In BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City*. London: Architectural Association Publications.
[7] ROWE, C. & SLUTZKY, R. 1964. *Transparency*. Berlin: Birkhauser Verlag, EVANS, R. 1997. *Translations from Drawing to Building and Other Essays.* London: Architectural Association Publications, ALLEN, S. 2000. *Practice: Architecture, Technique and Representation.* Amsterdam: G+B Arts international. In BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications.

eighteenth century through to contemporary times. Equally, the objective of this chapter is not to write a history of ideas, for example, a history of which idea of type was triumphant, and which failed, and why. Writers as diverse as Anthony Vidler, Raphael Moneo, Alan Colquhoun, Werner Oechslin, Sam Jacoby, Nikolaus Pevsner and Chris Lee, have done enormous amounts of work in the past forty years accounting for various notions and uses of architectural type.[8] In addition, this chapter does not attempt to analyze type as a way that architecture has *represented* itself, or in terms of how type can be understood as a *representation* of architectural thought or process. Rather, architectural type will be argued to fundamentally predicate the design process of the discipline of architecture since the nineteenth century, its use not a matter of choice but rather constitutive of the discipline's very agency and operation.

Following on from Frampton's identification of the typological burden through the Twin Parks developments in the Bronx, Chapter Two focuses on a series of housing projects from New York City. This city, of all of the world's cities, has had, over the twentieth century, an enormous amount of intellectual and scholarly energy focused on recording and commenting on its urban and architectural development. It has provided both the aspirational model for those striving toward its image of dynamic modernity, while equally it is held up as the site of modernity's failure. For this reason, a rich seam of primary and secondary literature, and also of built and unbuilt projects, have developed relative to the city. This body of work allows a consideration of the housing project and its transformation, both within the specific context of the city and its unique legal, social, economic and regulatory ecology; but, equally, it provides a rich opportunity to consider the housing project in a more general disciplinary context beyond the specificity of New York.

[8] The primary writers on type that we will use for this thesis are as follows, accounts as to why they are useful will follow in the text: MONEO, R. 1978. On Typology. *Oppositions,* 13.; OECHSLIN, W. 1986. Premises for the Resumption of the Discussion of Typology. *Assemblage,* no.1**,** pp.36-53, BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City.* London: Architectural Association Publications, ARGAN, G. C. 1996. On the Typology of Architecture. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press, VIDLER, A. 1977b. The Third Typology. *Oppositions,* 7, ROSSI, A. 1966. *The Architecture of the City.* London: MIT Press, COLQUHOUN, A. 1967. Typology and Design Method. *Arena,* vol.33, ELLIS, W. 1979. Type and Context in Urbanism:Colin Rowe's Contextualism. *Oppositions,* 18.

2.2 The Housing Project and the City of New York

2.2.1 The Historical Project and the Archive

It is important to make a note regarding methodological approach to evidence and historical material. This thesis will not make an assessment of, or judgment on, the success or failure of any specific housing project in terms of social advantage or disadvantage to the occupants of the building, and/or the project's effect on various existing or new residential communities. This work is not anthropological or sociological, though at times may touch on these disciplines. Such work is, of course, of great value, but it is beyond the boundaries of this thesis. Instead, this chapter, and the thesis more broadly, will first consider how specific housing projects are held up as marking the formal and material transformation of architecture by historical accounts of change in the city. It will then contextualize these projects within wider disputes in urbanism regarding change, taking into account arguments made in Chapter One regarding the sociopolitical function of housing and the question it raises regarding architecture's instrumentality in change. This thesis isn't about using historical evidence in the pursuit of a reconstitution of the past. Rather, it starts from a problem in the present as outlined in Chapter One, and seeks to investigate by means of a case study or case history, asking the question: What is the housing project?

This raises the question of the role of 'evidence.' In the case of historical accounts of housing, evidence is required to be exhaustive. This can be seen in the comprehensive and exhaustive publication that will be considered in more detail in this Chapter, Richard Plunz's *History of Housing in New York*, or in the broader architectural history of the city in five volumes by Robert Stern et al.[9] In this thesis, evidence is instead valued for its intelligibility '*for evidence is related to the problem which is to be investigated*'[10] In this sense, evidence as a case history or a case

[9] PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. See also STERN, R. A. M., FISHMAN, D. & TILOVE, J. 2006. *New York 2000: Architecture and Urbanism Between the Bicentennial and the Millennium.* New York: The Monacelli Press, STERN, R. A. M., GILMARTIN, G. & MELLINS, T. 1987. *New York 1930: Architecture and Urbanism between the Two World Wars.* New York: Rizzoli, ibid., STERN, R. A. M., GILMARTIN, G. & MONTAGUE MASSENGALE, J. 1983. *New York 1900: Metropolitan Architecture and Urbanism 1890-1915.* New York: Rizzoli International , STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.* New York: The Monacelli Press, STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1999. *New York 1880: Architecture and Urbanism in the Gilded Age.* New York: The Monacelli Press.

[10] COUSINS, M. & HUSSAIN, A. 1984. *Michel Foucault.* London: Macmillan Education Ltd.

study as used by Foucault, will never satisfy an historical canon predicated on proof and demonstration. Cousins argues this doesn't discredit it, for the reasons that it operates with its own canon 'that of intelligibility' relative to a history of the present and a problem designated in the present, 'a case history will never adequately instantiate a general proposition, nor will it exhaustively reconstitute a segment of the past.'[11] The question of origins is what distinguishes a case history from historical writing where 'origin' functions as a point from which causality (and often a narrative) can be deployed. 'As a consequence, elements of an historical field borrow their identity from their origins.' [12] This is particularly true of histories of institutions and fields of knowledge. The predicates of 'intelligibility' put this thesis writing at odds with habitual forms of historical explanation in the social sciences, where detail is presented more as an analytical device for clarification, than in forensic terms to 'make a case.' Cousins writes:

> 'The sociological exploitation of historical materials is usually marked by exceptionally strong (historians would usually think reckless or even vacuous) explanatory schemes. Powerful chains of causalities are invoked to show that series of events and institutions may be said to be the effects of the action of a structure. Significant patterns of events are related to so-called underlying causes.'[13]

By contrast, Foucault's analysis sidesteps these issues.

> 'The development of capitalism, the class struggle, the emergence of the nuclear family, rationality, bureaucracy, secularization, etc – these are not wheeled in as the deus-ex-machina of sociological claims, and for a simple reason. No general conception of society is being propounded, and therefore the assignation of general causal capacities and efficacies is simply not at stake.'[14]

[11] Ibid. pp. 3
[12] Ibid.
[13] Ibid.
[14] Ibid. pp. 7

Cousins argues, at one level, that Foucault's analyses are ruthlessly anti-epistemological. In the laying out of the history of the human sciences in *The Order of Things*, or in an account of the emergence of clinical medicine in *The Birth of the Clinic*, or in a history of the changing grids of perception and account of madness in *The History of Madness*, 'all these are constructed by a decisive suspension of the epistemological question of scientificity. They are implacably opposed to histories which tell of the transition from ignorance, error and superstition to the radiant enlightenment of scientific knowledge.'[15]

The analytical work in this thesis, then, is historical and is concerned with social practices, but this thesis is not a history of society. In the end, this work is eminently 'social' in that it will insist on relating forms of knowledge to forms of social organization, and we will in addition relate this to spatial practices that emerge in, and are unique to, the nineteenth and twentieth century as was started be explored in Chapter One. For the purposes of this discussion then, the housing project is not going to be discussed as an institution, as much as it is going to be laid out as the convergence of diverse discursive and non-discursive practices that are treated less as biological organisms with an internal milieu, and instead understood as nodes in a network of spatial practices. This thesis investigation and understanding is predicated on a distinguishing feature of modernity: the capacity for one to be always both the subject and object of knowledge at the same time: The 'reflexive relation of man (the subject of knowledge) to himself (the object of knowledge).'[16] The practice of the housing project and its animating scale-based conditions of family (domesticity) and neighbourhood (community) belong to this diverse discursive terrain. Chapter Two is specifically interested in clarifying the discipline of architecture's relationship to this.

[15] FOUCAULT, M. 1970. *The Order of Things.* New York: Pantheon, FOUCAULT, M. 1973. *The Birth of the Clinic: an Archaeology of Medical Perception.* London: Tavistock, FOUCAULT, M. 1965. *Madness and Civilisation. A History of Insanity in the Age of Reason.* New York: Random House.
[16] COUSINS, M. & HUSSAIN, A. 1984. *Michel Foucault.* London: Macmillan Education Ltd.

2.2.2 The Housing Project and the City of New York: Twin Parks. 1968 – 1975.

Usually evident in historical accounts of the housing project is its typological transformation through time. To get a better sense of how type is used in accounts of change, this chapter will consider the writing of two historians who focus specifically on housing through the period of transformation of the 1960s. Richard Plunz looks specifically at New York in the already mentioned *A History of Housing in New York City*, as does Peter Rowe in *Modernity and Housing.*[17] Rowe's account of the transformation of housing through the twentieth century is positioned in a broader disciplinary context covering both North America and Europe. This chapter will look specifically at both these authors' treatment of change in the housing project through two periods: the advent of the modern movement in the early twentieth century, followed by its reported demise and the claim of 'a return to the existing and traditional city.'

Architectural and urban histories reviewing the City of New York and the architecture of its housing projects hold up the Twin Parks development in the central Bronx – and particularly Richard Meier's 1973 contribution to it, Twin Parks Northeast (TPNe) – as significant exemplars of the shift away from the tower-in-the-park housing projects of the modern movement that dominated the city from the 1930s. The shift has been understood as one toward a finer-grained response to the traditional and existing city that emerged across the field of architecture more generally by the early 1970s.[18]

The Twin Parks Housing Development was made up of four New York State Urban Development Corporation (UDC) funded middle-income housing schemes built in the early 1970s. [19] Worked on by three architectural firms: Giovanni Pasanella (1975) at Twin Parks

[17] ROWE, P. G. 1993. *Modernity and Housing.* London: MIT Press.
[18] Richard Plunz, for example, in his definitive *History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis,* 1990, concludes his critique of TPNe by stating that at the end of the day, it is on the grounds of the profound disjunction between the '*superficial contextualism of its design premise'* and the *'pathology of the context into which the architectural object is placed*' that the housing project can be judged to be a failure. He argues that it is '*the faith placed in [TPNe's] contextualism to cancel the pathologies of large-scale institutionalized housing placed within a poor, racially tense neighborhood*' that underscores a widespread disappointment within the field at the project's failure to have an effect. PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. pp. 330 Romaldo Giurgola was to later describe TPNe as containing '*a perennial eclecticism that never touches anything fundamental*.'
[19] COHEN, S. 1974. Physical Context/Cultural Context: Including It All. *Oppositions,* 2. pp. 15 see also Stern pp. 961, and STEPHENS, S. 1973. Learning from Twin Parks. *Architectural Forum,* 138**,** 56-61. More recent scholarship on Twin Parks includes SCHINDLER, S. & FREEMARK, Y. 2015. Twin Parks. *In:* BLOOM, N. & LASNER, M. (eds.) *Affordable Housing In New York: Triumph, Challenge and Opportunity.* New York: Princeton University Press. SCHINDLER, S. & SPERTUS, J. 2015. Co-op City and Twin Parks: Two 1970s Models of Middle-Class Living in the Bronx. *In:*

Southwest (TPSw); the two Twin Parks Northwest (TPNw) sites undertaken by Prentice & Chan, Ohlhausen (1973);[20] and Richard Meier & Partners (1973) at Twin Parks Northeast (TPNe).[21] The total Twin Parks development comprised 1858 units for middle-income tenants, and was undertaken in conjunction with proposals for low-income housing to be sponsored by a non-profit housing organization, the Twin Parks Association, a collective of various church and civic organizations.[22]

Of the four projects making up the Twin Parks Development, TPNe is the most written about and commented on. In-depth consideration of it will be undertaken in detail in Chapters Three and Four; this chapter will instead address how historical writing has dealt with the project.

2.2.4 Contextualism and the Call for a Return to the Existing and Traditional City

TPNe figures in two very broad architectural histories produced on the city: the first, Plunz's A History of Housing in New York City,[23] specifically concerning housing; and the second, Stern et al's New York 1960, [24] a wider survey of architecture, and of the development of the city, which

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CARAMELLINO, G. & ZANFI, F. (eds.) *Middle-Class Housing in Perspective. From Post-War Construction to Post-Millennial Urban Landscape.* Bern: Peter Lang. SPERTUS, J. & SCHINDLER, S. 2013. The Landscape of Housing: Twin Parks Northwest 40 Years On. *Urban Omnibus*. There is some confusion regarding how many sites and how many architects worked on the Twin Parks development. Plunz and Stern say four architects and five sites. Schindler and Spertus more recently say: 'Designed by six different architects on 12 distinct sites'. This thesis has followed Plunz's account of five sites, four architects.

[20] PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. pp. 292. For further information on the Urban Development Corporation, see Chapter Three.

[21] COHEN, S. 1974. Physical Context/Cultural Context: Including It All. *Oppositions,* 2. pp. 15 see also Stern pp. 961, and STEPHENS, S. 1973. Learning from Twin Parks. *Architectural Forum,* 138**,** 56-61.

[22] Headed by Father Mario Ziccarelli. see STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.* New York: The Monacelli Press. pp. 956.

[23] PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press.

[24] STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.* New York: The Monacelli Press, STERN, R. A. M., FISHMAN, D. & TILOVE, J. 2006. *New York 2000: Architecture and Urbanism Between the Bicentennial and the Millennium.* New York: The Monacelli Press, STERN, R. A. M., GILMARTIN, G. & MELLINS, T. 1987. *New York 1930: Architecture and Urbanism between the Two World Wars.* New York: Rizzoli, STERN, R. A. M., GILMARTIN, G. & MONTAGUE MASSENGALE, J. 1983. *New York 1900: Metropolitan Architecture and Urbanism 1890-1915.* New York: Rizzoli International , STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1999. *New York 1880: Architecture and Urbanism in the Gilded Age.* New York: The Monacelli Press.

stretches across five large publications. Both historians reiterate a claim first made by Stuart Cohen in 1974 for TPNe to be placed in a category of projects labelled 'contextual.'[25]

The term 'contextualism' was first used in the 1960s by a group of students working under Colin Rowe in the School of Architecture at Cornell University. Thomas Schumacher writes, 'In fact, the term originally used by Steven Hurtt and Stuart Cohen was Contexturalism, a conflation of Context and Texture. We were interested in urban texture, what Italians call the tessuto urbano (more literally 'urban fabric') and urban form.'[26] In the later 1970s, writers such as Stern and Frampton put much more emphasis on signification and a relationship to 'ideal types' and the existing city, owing a debt, Nesbitt claims, to Venturi's *Complexity and Contradiction*, and its concern with signification and the differentiated building.[27] Frampton wrote: 'A building should accommodate difficult conditions without concealing the accommodation. The differentiated building synthesizes ideal and circumstantial, deforming to the conditions of the site and accommodating many pressures without losing its Gestalt "imageability."'[28]

There are several important concepts encompassed in the idea of contextualism. Contextualist strategy following Rowe and Koetter in *Collage City* and Cohen's 1974 argument in Physical

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[25] COHEN, S. 1974. Physical Context/Cultural Context: Including It All. *Oppositions,* 2, FRAMPTON, K. 1973. Twin Parks as Typology. *Architectural Forum***,** p.56-61, PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. pp. 330 (SCHUMACHER, T. L. 1971. Contextualism: Urban Ideals and Deformations. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press. FRAMPTON, K. 1973. Twin Parks as Typology. *Architectural Forum***,** pp. 56-61, STERN, R. A. M. 1977. New Directions in Modern American Architecture: Postscript at the Edge of Modernism. *Architectural Association Quarterly* 9**,** 67-68.) (NESBITT, K. (ed.) 1996. *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press. pp. 295) (PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press, STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.* New York: The Monacelli Press.) There are several important ideas that are encompassed in the idea of contextualism. In the first grouping of contextualist strategy following Rowe and Koetter in *Collage City,* (ROWE, C. & KOETTER, F. 1996. Collage City. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press, ROWE, C. & SLUTZKY, R. 1964. *Transparency.* Berlin: Birkhauser Verlag.) Cohen's 1974 argument in *Physical Context/Cultural Context: Including it all*, (COHEN, S. 1974. Physical Context/Cultural Context: Including It All. *Oppositions,* 2.)and Schumacher.(SCHUMACHER, T. L. 1971. Contextualism: Urban Ideals and Deformations. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press) It seems that in its first phase contextualism focused on idea of figural space, that urban solids (building masses) and voids (the space of streets and squares) can be figural – through the use of analytical ground figure plan diagrams as clarifying the form of public spaces and utilizing strategies of infilling, completion and subtraction and replacement. two main strategies response and deformation of ideal types.

[26] SCHUMACHER, T. L. 1971. Contextualism: Urban Ideals and Deformations. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press.

[27] VENTURI, R. 1966. *Complexity and Contradiction in Architecture.* New York: The Museum of Modern Art.

[28] FRAMPTON, K. 1973. Twin Parks as Typology. *Architectural Forum***,** pp. 56-61, STERN, R. A. M. 1977. New Directions in Modern American Architecture: Postscript at the Edge of Modernism. *Architectural Association Quarterly* 9**,** 67-68. NESBITT, K. (ed.) 1996. *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press. pp. 295

Context/Cultural Context: Including it All,[29] focused on the idea of figural space, the idea that urban solids (building masses) and voids (the space of streets and squares) can be figural, through the use of analytical ground-figure plan diagrams as clarifying the form of public spaces and utilizing strategies of infilling, completion, subtraction and replacement. By the 1990s, the term contextualism had become a category taken up by historians such as Robert Stern and Richard Plunz to designate the return, by the late 1960s, to a focus on the fine-grained urban fabric of 'the existing and traditional city.'[30]

TPNe, with its integration of public space, raising of building-to-site ratios and attention to both a fine urban grain and material differentiation, is argued to be representative of this turn away from the modern movement's tower-in-the-park response to the problem of housing, characterized by low building-to-site ratios, enormous size, and architectural objects floating in landscaped parks. TPNe, from within the specificity of New York, is said to represent what was seen as a wider turn, evident in the mid-1960s, toward a smaller-scale, more attentive type of architectural response, which focused on an urban image defined in terms of a return to the existing city. Plunz includes in this category a whole series of buildings in the city: The East Harlem Housing Competition, 1963 (Stromsten, Scofidio and Martorano's unbuilt second-place winning entry); West Village Houses, begun 1961, finally completed 1975; Riverbend Houses, 1967; Battery Park City development, 1968; extensive plan for the redevelopment of the west side of Manhattan, including Westway, 1969-75; and Roosevelt Island new town, 1973.

[29] ROWE, C. & KOETTER, F. 1996. Collage City. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press, ROWE, C. & SLUTZKY, R. 1964. *Transparency.* Berlin: Birkhauser Verlag. COHEN, S. 1974. Physical Context/Cultural Context: Including It All. *Oppositions,* 2.and Schumacher SCHUMACHER, T. L. 1971. Contextualism: Urban Ideals and Deformations. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press

[30] PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press, STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.* New York: The Monacelli Press.

2.2.5 Architectural History and Accounts of Transformation: The Architectural Object as Reflection

For Richard Plunz, the genesis of the return to an idea of the existing city in the late 1960s began much earlier, with the argument of European modernism's first incursions into North America. This first move is exemplified, he argues, by the 1935 Brounn and Muschenheim (B+M)[31] slum-clearance project, held out as evidence of, and marking the opening salvo in, the struggle between imported European modernism and the development of an indigenous courtyard-type apartment block that had been specific to New York City.[32] The B+M project was developed in the early 1930s in association with the Tenement House Department[33] for a fifty-block section of the Upper East Side of Manhattan between East 60th Street and East 78th Street, Second Avenue and the East River; it is cited by Plunz as 'the most literal early interpreters of European functionalism in New York.'

> 'By [1934/35], the barrack 'style' was spreading quickly to more and more questionable applications…. The gigantism aside, this scheme typified the

[31] 1935 is the date given by Plunz for this project however, as this thesis shall explain in detail in later chapters, the Brounn and Muschenheim proposal appeared in 1934, part of a New York State Housing Authority competition for the clearance and rebuilding of a smaller 16-block site at the same location. B+M expanded this subsequently to 50 blocks and took it around the city as an unsolicited proposition for change. pp. 220 PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press.

[32] It's important to note that prior to the B+M proposal and Plunz's claim for it being the first Zeilenbau-inspired housing project in the United States, there had been the influential and significant Modern Architecture International Exhibition at the Museum of Modern Art in 1932. This exhibition then travelled to cities across the US, including Philadelphia, Los Angeles, Hartford, Cleveland, Milwaukee, Rochester, Toledo, Cambridge and Worcester, with the express aim of spreading the message of modern architecture. The exhibition was divided into two distinct parts: Architecture, and Housing. The section on architecture was organized by Henry-Russell Hitchcock and Philip Johnson, and included the work of Frank Lloyd Wright, Walter Gropius, Le Corbusier, J.J.P. Oud, Mies van der Rohe, Raymond Hood, Howe & Lescaze, Richard Neutra and the Bowman Brothers. The smaller section on housing was organized by Clarence Stein, Henry Wright, Catherine Bauer and Lewis Mumford, all members of the Regional Planning Association of America (RPAA). This section contained photographs of several German and Dutch housing estates, and the only American example it used was the Radburn, New Jersey, project carried out by the RPAA. See M.O.M.A 1932. *Modern Architecture International Exhibition.* New York: Arno Press for the Museum of Modern Art.

[33] The Tenement House Department was set up to reduce the duplication of the application of tenement housing laws which between 1867 and 1900 were administered by a diversity of government bodies and agencies: Department of Health, Bureau of Buildings, Fire Department and Police Department. The Tenement Housing Department's remit was to work in three directions: 'structural, sanitary and sociological.' (MURPHY, J. J. 1915. The Tenement House Department. *Proceedings of the Academy of Political Science in the City of New York,* 5**,** 44-46. pp. 44). It had jurisdiction over all new multiple dwellings via the submission of plans for approval prior to commencement of construction – ventilation, light, fireproofing, fire egress and sanitation were all checked. It carried out inspections to do with the correct use of sanitation and fire escape systems. Tenement-house definition by 1915 Tenement House Department Commissioner John Murphy: 'Any building or part thereof which is occupied as the residence of three families or more living independently of each other and doing their own cooking on the premises.' (ibid. pp. 44) this includes apartment houses, flat houses and 'all other houses of a similar character'. On writing in 1915 there was 104,000 registered legal tenement houses occupied by 4.25m people.
This reflects the definition given in the 1867 Tenement House Act, stating that a tenement was 'any house, building, or portion thereof, which is rented, leased, let, or hired out to be occupied or is occupied, as the home or residence of more than three families living independently of one another and doing their own cooking upon the premises, or by more than two families upon a floor, so living and cooking and having a common right in the halls, stairways, yards, water-closets, or privies, or some of them.' (PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. pp. 167)

> manner in which the new European work came to be misapplied in the United States. The Zeilenbau form, which had evolved in Europe as a suburban housing type for relatively low densities, was applied to vastly different contexts in New York City.[34]

In Plunz's account of change in the city, B+M's 1934/35 project plays the role of early warning in the writing; an indication of a direction of things to come. He accounts for the success of the new building form in terms of its 'affirmation of the potential for renewal of the capitalist system along liberal humanitarian lines' from within the depths of the great depression of the 1930s.[35] Of the ten chapters constituting Plunz's survey of housing projects from the eighteenth through to the late twentieth century, seven are fixed in the twentieth century. As such, the B+M project is placed by Plunz within what he argues is a larger ideological struggle between the economic, political and social arguments understood to be reflected in the architectures of European modernism which first appear in New York in the 1930s, and the contextually specific and mostly indigenous garden-apartment perimeter block-type architectures which had been in play in the city in various forms and densities since the early decades of the twentieth century. Such a struggle is located by Plunz in terms of the agency and omnipotence of the architect and planner themselves. It is played out through their biographies and predilections: locally born-and-bred Frederick Ackerman and William Bollard, who 'looked to the rich heritage of the 1920s upon which to build the new social vision,'[36] and as such promoting the garden apartment and perimeter block through their involvement with the New York City Housing Authority (NYCHA) versus Muschenheim, educated at the Vienna Academy of Fine Arts, and with his Zeilenbau-inspired proposal who is seen to come from a very different place. In this narrative struggle between characters, the architectural object itself is positioned as a mute reflection of these external events.

[34] PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. pp. 219
[35] Ibid. pp. 219
[36] Ibid. pp. 219

On the other hand, rather than a straight evidence-led history of housing, Peter Rowe in *Modernity and Housing*[37] presents a more complex set of philosophical accounts of the transformation. The central thesis of his publication is the question: 'If we are modern, as we otherwise seem to be, the question of the architectural accompaniment to this modern condition still seems conspicuously unresolved.'[38] Rowe's investigation concerns what seems to be the obvious relationship between architecture understood as completed object, and its representational source, in this case what Rowe refers to as the 'modern condition'. The objective of the publication is to clarify more appropriate architectural articulations of such a condition, leaving aside the kinds of nostalgia attributed to the contextual or the postmodern.

Rowe defines the modern period as being of 'the modern technical orientation.' He argued that it '*was shaped and is continued by three complementary processes':*

> 'A technological way of making things, a technocratic way of managing things, and a technical way of interpreting people and their world… there was, and continues to be, a persistent transformation in the technological fabric of our lives, in which there appear to have been three rather distinct episodes.'[39]

He goes on the stress that while these three periods are often portrayed as monolithic, they are, in fact, more distributed and less aligned. The first is the early Industrial Revolution (late eighteenth to early nineteenth century). Marked by the development of steam power, mechanization, urbanization and product economies of price and, according to Rowe, typified by the development of the factory system), the second was the second Industrial Revolution (from the late nineteenth century.) This was defined by an emphasis on mass production, mass consumption and the search for economies of scale, defined by the development of the corporation. The third was the continuing emergence, according to Rowe, of an emphasis on business and technical arrangements based on flexible production and individualized consumption (sited by Rowe at the beginning of the 1970s with the energy crises of 1973 and

[37] ROWE, P. G. 1993. *Modernity and Housing.* London: MIT Press.
[38] Ibid. pp. 2
[39] Ibid. pp. 5

1980, and the kind of technological transformations in terms of control and transmission devices).

Structuring his survey are three broad themes that are organized into categories understood to traverse 'the modern period.'[40] These themes are then collected into two temporal frames – before the modern movement, and after the modern movement. These are then explored through six specific projects, each of which provides from within the specificities of time and place the evidential support for the broader categorization outlined above. For the decade 1920-30 in the chapter entitled Modernity on the Rise, Rowe examines three projects: Sunnyside in New York; Römerstadt in Frankfurt am Main, Germany; and Kiefhoek in Rotterdam, Netherlands. In the second time frame, the decade 1970-1980, titled Modern Housing in Crisis and Transition*,* he considers: the Byker redevelopment in Newcastle upon Tyne, UK; Villa Victoria in Boston, US; and the Malagueira Quarter in Évora, Portugal.

Each of the three broad organizational categories that traverse the rise and fall of modernity is used as both a theme of modernity, in addition to being a representational designation to which specific architectural exemplars reviewed in the book are understood to reflect in some way. The first of these categories is what is referred to as the rise of 'modern' techniques of production and orientation. Rowe argues that out of this emerged a simultaneous compression of the experience of time, and an expansion of a universal experience of space. The consequences of this architecturally are understood to include the recognition of local and traditional building practices specific to time and place, where 'a return to traditional forms, evoking the past, was used to break the hegemony of the here and now.'[41] The second of the categories concerns the emergence of an emphasis on a subject-centered reason and relativism, replacing what was described as metaphysical foundations.[42] Rowe argues that this gives rise to the issue of representation in architecture where there is an oscillation between the use of abstract forms – the problem of providing an authentic architectural expression, and the search for semiotics and architectural meaning. The third and final category is concerned with

[40] Ibid. pp. 12,13
[41] Ibid. pp. 33
[42] ibid.pp. 3

the emergence of housing as a social practice. Out of this come questions such as the definition of normative building programs, issues of standardization and the conditions and demand for diversity in response.

These time frames are then separated and organized within the writing by a defining disjunction. What is described as a 'crisis and transition' from one to the other which Rowe argues leads to a reformed modernism.[43] The publication then concludes with the projection of seven categories of consequence for any future architectural engagement in housing; a collection of philosophical oppositions articulating lessons learned through the pursuit of housing in the two organizing time frames that might begin to inform an appropriate architecture for the 'modern condition'.

As can be seen here, for Rowe, the modern movement failed because it failed to reflect a modern technic of production, and the rise of subject-centered reason and relativism, and it failed to move beyond structuralism and a normative building program. For Plunz, on the other hand, the rise and fall of the modern movement and the subsequent reactionary move to the contextual can be accounted for in terms of the biography of the architectural actor, which becomes a vehicle in a narrative regarding a larger ideological struggle between economic, social and political arguments. Such a struggle predicates a wider argument within Plunz's writing regarding different images of the city. For Plunz, it is the pre-modern city of convivial community and contextually specific and realized form, attentive to detail and need, versus a city characterized by a pathology of institutionalized housing, a city which becomes, in Plunz's terms, increasingly inattentive to need or specificity.

Regardless of their differences, however, regardless of the complexity with which historical evidence is deployed, or the calibration of argument around the modern technical apparatus as is the case of Rowe's writing, what Plunz and Rowe have in common in their account of the transformation of the housing project is an understanding of the architectural object as a reflection of a series of events and forces external to it. As Rowe said: 'If we are modern, as we otherwise seem to be, the question of the architectural accompaniment to this modern condition

[43] See Modernity and Housing: Part Three *Modern Housing in Crisis and Transition*, Chapter Four *Reformed Modernism* ibid.pp. 264.

still seems conspicuously unresolved.'[44] Within this understanding, the architectural object has limited or no agency in the conceptual transformation of the context into which it is placed, the city itself, and yet we know from Chapter One that the institutions of modernity have a constitutive role in both subjectivity but also a kind of sociopolitical definition. The following parts of this thesis, and Chapter Three particularly, will unpack how one might think differently about this agency and relationship.

2.3 Architectural Typology

2.3.1 Architectural Typology: Descriptive Tool and Category Designation in Judgment

Kenneth Frampton in his 1973 critical review of the four Twin Parks projects, Twin Parks as Typology, suggests a way through this understanding of the mono-directionality of object as reflection of things external to it. He presents quite a different reading of the architectural object, using architectural type in a very different way to that used by either Plunz or Rowe.

Frampton uses architectural type in two distinct ways in his review. In the first instance, type is an organizing principle, providing both the ground for a critical categorization of the projects in his writing, while also allowing the establishment of a comparative terrain for a judgment between the projects. Frampton works through the specifics of each unique project within a series of category designations established on the grounds of a critique of the modern movement. These include density, social differentiation, context and meaning, and involve the strategies deployed with regard to site development given the similarity of density, and mix of each project; the social differentiation developed of public and private space in each project; the attitude taken in each project to existing context (integration or differentiation); and finally the compositional devices deployed, the massing and formal configurations, to 'express the generic idea of housing.'[45]

[44] ibid.pp. 2
[45] FRAMPTON, K. 1973. Twin Parks as Typology. *Architectural Forum*, p.56-61. pp. 56

One can see this, for example, in Frampton's description of Pasanella's Twin Parks Southwest scheme as relying on a 'point of departure' found in Le Corbusier's Unité d'habitation in Marseilles. This is a move, Frampton argues, exemplified in a broad programmatic and formal correlation. The project consists of housing with associated daycare and community facilities housed in four slab blocks ranging from five to nineteen stories, where public open space between buildings is mediated at ground level by piloti-flanked foyers.

For Meier's Twin Parks Northeast project, Frampton claims the reference to be a more complex critique of the redent blocks of Le Corbusier's Radiant City project of 1922. Meier's seven and sixteen-storey slab blocks occupy part of three city blocks and are set back from the street, rather than sitting perpendicular to it, as is found in the Corbusian model. Meier's blocks are deformed, turning to face it, running parallel to and aligning themselves with what remains of an existing street frontage. Frampton argues that this is a critique of the Corbusian plan where, with the shift in alignment with the street frontage and the paying of close attention to the gridiron armature of the city, the interior of the block of Twin Parks Northeast is opened up. The building mass, Frampton claims, is used with precision, as a device to frame and enclose public space. [46][47]

The grounds for these comparative moves and category distinctions are predicated on a reference to the modern movement, and are founded on the then-pervasive understanding by the discipline of the city in all of its formal, structural and material complexity and richness, as the site of the modern movement's failure. By 1973, architectural type, with its suggestion of structural and historical continuity, was presented as one of several possible solutions to the paralysis that accompanied this perception of failure. Writing earlier in the 1960s, Saverio Muratori's revisionist thinking had already initiated much of the search for a solution via architectural type. Muratori wrote: 'The idea of type as a formal structure demonstrated a

[46]PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. pp. 297. Meier himself wrote that his Twin Parks Northeast project was *'not an architecture of isolated structures.'* MEIER, R. 1976. *Richard Meier, Architect.* New York: Oxford University Press. pp. 129, 132, 133.

[47] Plunz paraphrasing Jane Jacobs in reference to its relationship to an existing fabric around it, that is the scale of the local context, typically understood to be that which '*orthodox modernism had removed from cities.' PLUNZ, R. 1990. A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis. New York: Columbia University Press.* pp. 289

continuity among the different scales of the city… types were seen as generators of the city, and implicit in them were the elements that defined all other scales.'[48] Frampton's first use of type, and his critical positioning of the Twin Parks project also forms part of this wider attempt to reposition architecture relative to the urban. Here there was understood to be a continuity between architecture and urbanism as part of a search for a solution to the perceived failure of the modern movement in the 1970's.

2.3.2 Type Understood as Image: Vidler and The Third Type

Before clarifying Frampton's second, more productive, use of type in his review of Twin Parks, it's worth considering how this impasse in the field in the 1970s both cultivated a particular use of type and where it failed. As part of this wider review of the field and the search for new relationships between architecture and the city, Anthony Vidler also wrote extensively on type. In the 1977 essay The Third Typology, he proposed within architecture that there had been three definitions of type since the late eighteenth century.[49] The first of these was that of the late eighteenth and early nineteenth-century rationalists, Quatremère de Quincy and Abbe Marc-Antoine Laugier, among others.[50] To Vidler, this was a use of type predicated on metaphor and a reference to the imitation of nature.

The second use was that of the 'functional machines of architecture,' what he argues emerged in the second half of the nineteenth century. Not only the architecture of the early modern movement, Le Corbusier's machine aesthetic and house as 'machine for living,' for example,

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[48] MONEO, R. 1978. On Typology. *Oppositions, 13*, MURATORI, S. 1960. *Studi per una operante Storia Urbana di Venezia.* Rome: Istituto Poligrafico dello Stato. pp. 35 in BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City.* London: Architectural Association Publications.

[49] Vidler's The Third Typology was widely published when first released in 1977, and has subsequently been widely republished in architectural anthologies making accounts of this period: VIDLER, A. 1977b. The Third Typology. *Oppositions,* 7, VIDLER, A. 1977a. Commentary. *Oppositions,* 8**,** 37-41, VIDLER, A. 1978. The Third Typology. *In:* KRIER, L. & CULOT, M. (eds.) *Rational Architecture: The Reconstruction of the European city.* Brussels: Editions des Archives d'Architecture Moderne. VIDLER 1998 (1977). The Third Typology. *In:* HAYS, K. M. (ed.) *Architecture Theory Since 1968.* Cambridge, Mass.: MIT Press, VIDLER, A. 1996 (1977). The Third Typology. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press. See also more recent writing from Vidler. VIDLER 2011. *The Scene of the Street and Other Essays.* New York: The Monacelli Press.

[50] Vidler also mentions Viollet-le-Duc VIDLER, A. 1996 (1977). The Third Typology. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press. pp. 289.

but equally Jeremy Bentham's earlier factories and new school programs such as those outlined in Chapter One. Vidler wrote that, 'a vision of Taylorized production, of a world ruled by the iron law of form supplanted the spuriously golden dream of neo-classism. Buildings are to be no more and no less than machines themselves, serving and moulding the needs of man according to economic criteria.' [51]

What the first two types had in common for Vidler was an appeal to an external 'nature,' either to origins in the natural world, or the 'natural law' of rational and industrial production. Vidler wrote that it was this appeal that served to

> 'legitimize architecture as a 'natural' phenomenon and a development of the natural analogy that corresponded very directly to the development of production itself. Both typologies were in some way bound up with the attempts of architecture to endow itself with value by means of an appeal to natural science or production, and instrumental power by means of an assimilation of the forms of these two complementary domains to itself.' [52]

However, with the third category of type, Vidler identified in the architecture of the 1960s and 1970s a reference to the existing, traditional city as architecture's locus of concern. According to Vidler's category designation, the architecture of the Third Type looked for reference to the discipline of architecture's own internal content; it worked with '*Columns, houses, and urban spaces, while linked in an unbreakable chain of continuity.*'[53] The architecture of the Third Type referred only 'to their own nature as architectural elements, and their geometries are neither naturalistic nor technical but essentially architectural.'[54] Unlike the first two types, which Vidler claims made an account of themselves by reference to a 'nature' outside of themselves, for Vidler the work of the Third Type referred to here 'is no more nor less than the nature of the city itself, emptied of specific social content from any particular time and allowed to speak simply of

[51] VIDLER, A. 1977b. The Third Typology. *Oppositions,* 7.
[52] Ibid.
[53] VIDLER 1998 (1977). The Third Typology. *In:* HAYS, K. M. (ed.) *Architecture Theory Since 1968.* Cambridge Mass.: MIT Press.
[54] VIDLER, A. 1978. The Third Typology. *In:* KRIER, L. & CULOT, M. (eds.) *Rational Architecture: The Reconstruction of the European city.* Brussels: Editions des Archives d'Architecture Moderne.

its own formal condition,' seeking content and an account of itself from within its own history.[55]

Thirty years on from Vidler's influential publication, the categorizing of the field of architectural practice into three uses of type, Barth argues, seems to have done less to initiate a new consensus in the field of design practice as a contribution to deployable methodologies, and instead has simply worked to clarify points of dispute.[56] As Barth writes of Vidler's account, 'in hindsight, it did little to… freshen project-driven research. If anything, it probably provided a new codification and justification for an existing conservative tendency.'[57] Type, for G.C. Argan, an Italian neo-rationalist who belonged to Vidler's Third Type, was linked to iconography. It was to be 'read more in relation to the way they signify the ideal affinity with content, rather than for their reasoned relation to material experimentation.'[58] Oechslin later identifies that this turns the projective difference between the model and the type into 'one simple historical or geographical contingency.'[59]

In addition, Barth argues, the resurgent focus on type during this period was undone by the provisional subordination of typological description and classification to the urban plan.[60] This can be seen particularly in an emphasis on figure-ground studies and perspective drawings of iconic urban spaces,

> 'via a consistent visual imagery translated smoothly across scales, architecture and the urban became linked… While types were understood as active generators of the city, we might also notice that that they were constrained to produce the image of the city.' [61]

[55] VIDLER, A. 1996 (1977). The Third typology. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press.
[56] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City.* London: Architectural Association Publications.
[57] Ibid.
[58] Ibid.
[59] ARGAN, G. C. 1963. On the Typology of Architecture. *Architectural Design,* 33**,** 564-565. ARGAN, G. C. & RYKWERT, J. T. Ibid. ARGAN, G. C. 1996. On the Typology of Architecture. *In:* NESBITT, K. (ed.) *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995.* New York: Princeton Architectural Press. OECHSLIN, W. 1986. Premises for the Resumption of the Discussion of Typology. *Assemblage,* no.1**,** pp.36-53.
[60] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City.* London: Architectural Association Publications.
[61] Ibid. pp. 158 The work of Leon Krier, for example. Or that of the founders of the Chicago-based Congress for New Urbanism, 1993: Peter Calthorpe, Andres Duany, Elizabeth Moule, Elizabeth Plater-Zyberk, Stefanos Polyzoides.

By the late 1970s, type in the work of the 'new urbanists' – so influenced by the Italian Tendenza and Italian neo-rationalists like Argan, the original architects of the Third Type identified by Vidler – becomes calcified into the image of a thing, the image of the traditional and existing city. Type, as it is understood here, contributes little in the end to either the discipline's understanding of its own capacity for experimentation and transformation, or the formal definition of the discipline of architecture itself in its capacity to effect change.

2.3.3 The Typological Burden: Trajectories of Experimentation

It is on this ground of experimentation and iterative instrumentality that Frampton's second use of type is useful for this thesis. Frampton suggests a different use altogether. In addition to describing the successes of the Twin Parks housing projects through the utilization of type established through reference to familiar modern-movement precedents, as we've seen, Frampton also lists the apparent failures of the projects with a different kind of observation of the operations of type. He argues that in using Le Corbusier's Unité as a typological model, Meier, while addressing many previously problematic issues in the housing project generally, has inherited in this building what might be understood as still 'unresolved spatial elements': the piloti-flanked arcades of the ground floor of the building. Frampton asks:

> 'To what purpose do you assign the space under the pilotis?... The problem posed by the pilotis… is integral to the original model. Even in Le Corbusier's idealized version of a city on piles floating above a continuous park space, the problem remains. What would the inhabitants of the Ville Radieuse have done with these continuous arcades?... This is the typological burden, so to speak… Its corollary, as far as pragmatic planning is concerned, is that the designer can never find enough public program to occupy the volume created below the building mass.'[62]

[62] FRAMPTON, K. 1973. Twin Parks as Typology. *Architectural Forum*, p.56-61. pp. 58

The designation 'burden' suggests Frampton is uncomfortable with his observation of the operation of type in this instance. One way of accounting for this would be to dismiss the presence of the typological burden, the unprogrammed spaces of the piloti-flanked arcades, as a failure in terms of the conventional modernist dichotomy of function versus form, or form versus content, where form always follows function, where with an 'absence of public program to occupy the volume created below the building,' there is a failure to account for the logic of these residual spaces in the building.

To make this argument, however, would be to miss the suggestion of transformation in Frampton's observation. Where Frampton sees failure, we will argue is the ground for evidence of type as fundamental to the operation of design process. This is change that is only visible in a trajectory of experimentation, and evident only in a series of projects: Le Corbusier's Ville Radieuse and Unité d'habitation, the B+M project, and Twin Parks Northeast, for example. Here, change isn't something visible, static and singular in the unique object of architecture. Understood as such, the burden is not so much failure as it might be understood as evidence of a dynamic site of still unresolved organizational experimentation and therefore projective potential.

Frampton's second use of type suggests a way through what in the typological work of the neo-rationalists becomes a constraint: the requirement to produce an image of the city. Equally, he is able to move away from the kind of descriptive and classificatory use of type subordinated to an urban plan, and registered through the figure-ground drawing and the kind of iconic urban perspective we associate with the work of typology of the new urbanists, for example. Instead, we have a sense, in Frampton's identification, of the 'typological burden' of type understood as a verb, not a noun. This is architectural type as a process and practice of thinking in groups, as a process of reasoning.[63]

2.3.4 Type and Design Process: Ideology, Discipline, Discourse

[63] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City*. London: Architectural Association Publications. pp. 158

To consider type in this way challenges the modern movement's account of its own design process. Alan Colquhoun, writing in 1967, had already identified a tension embedded in modern-movement accounts of design process between two apparently contradictory ideas.[64] On the one hand, design process was described in terms of biotechnical determinism, the gathering of all known data. On the other, and often when biotechnical accounts reached their limits, accounts of design process defaulted to an attribution of free expression and/or the hand of the genius architect/artist, where it was ideology, Colquhoun argued, that filled the void.[65] In the 1972 publication *Five Architects*, Colin Rowe reiterated this idea with a reference to a positivist conception of fact, or science used by architects in an account of design process, which he argued was usually followed by a reference to a Hegelian concept of manifest destiny. Rowe writes that there is the assertion that 'when these two conceptions are allied, when the architect recognizes only "facts" and thus, by endorsing "science," becomes the instrument of "history," only then a situation will infallibly ensue in which all problems will vanish away.'[66] Colquhoun's earlier writing on type had formed part of a wider project problematizing representation where form was understood to persist on the grounds of its iconic or representational meaning. This thesis will leave aside the question of representation, noticing only that what the modern movement enabled architecture to do is to both signify and instrumentalize in the same gesture.[67]

For Colquhoun's argument regarding design process to be useful for this thesis, however, it is also necessary to put to one side the notion of 'ideology' as the critical element inhabiting and informing the decision-making process in the coming into form of the architectural object, and to notice instead the central constitutive role that spatial reasoning has played in the episteme of modernity. As we have seen, it is space itself (rather than industrial technology) that is one of the unique innovations of the modern episteme, meaning that architecture as a spatial discipline has had a unique instrumentality in the formation of knowledge; this idea will be developed in

[64] Alan Colquhoun developed the first theories of architectural typology to appear in English. See COLQUHOUN, A. 1967. 'Typology and Design Method'. *Arena,* vol.33. See also COLQUHOUN, A. 1972. Displacement of Concepts in Le Corbusier. *Architectural Design,* 43**,** 220-243.
[65] COLQUHOUN, A. 1967. 'Typology and Design Method'. *Arena,* vol.33.
[66] ROWE, C. 1972. Introduction to Five Architects. *In:* HAYS, K. M. (ed.) *Architectural Theory Since 1968.* Cambridge, Mass.: The MIT Press. P79
[67] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications.

more detail in the second half of this chapter through an account of the early use of typology in the eighteenth century. In *The Archaeology of Knowledge*' Foucault defined 'episteme' as 'a system of control in the production of discourse, fixing its limits through the action of an identity taking the form of a permanent reactivation of the rules.'[68] In this context, 'discourse' is a term interchangeable for Foucault with discursive formation. It is understood to refer to an historically constituted knowledge and the practice of that knowledge. Clearly, to speak of discourse is not to speak of knowledge understood as simply built up from perceptual evidence, and sedimented through a logic of inference. It is, rather, knowledge as practice, as an anonymous set of rules and regulations governing the dispersal, proliferation, co-existence and mode of existence of a group of statements operating across four distinct yet interrelated levels: that of the object, the enunciative modality, the concept and the strategy. Together, if one can identify the rules and conditions governing their dispersal, these levels of operation form a kind of provisional unity, where unity is simply a regulated differentiation and is, by definition, discourse. We will argue in this thesis that one of these provisional discursive unities of operation is urbanism, or the specific discourses of domesticity, or neighborhood.

We might understand material and formal disciplines to be practices such as architecture, but Kipnis has also argued we should include, but not limit the list, to: 'kingdoms of practice (e.g. science, art, mathematics); modes of practice (e.g. music, visual arts, literature, physics, chemistry, number theory, integral equations); medium specificity (e.g. painting, sculpture, writing, quantum gravity, astronomy); genre within any particular medium (e.g. within writing: philosophy, poetry, literature, journalism; within music: art music, hard rock, folk, alternative, blues); and individual works.'[69] Disciplines in Foucault's account provide the material means in the activation of the rules of discourse where it is possible to describe the rules, not as part of the sum of knowledge or characterized by a general style, but in their divergence. He writes, 'The episteme is not a sort of grand underlying theory; it is a space of dispersion, it is an open

[68] See FOUCAULT, M. 1972b. The Discourse on Language. *The Archaeology of Knowledge.* London: Tavistock pp. 215
[69] KIPNIS, J. 2006. Re-Originating Diagrams. *In:* CASSARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A. p196

and doubtless indefinitely describable field of relationships.'[70] The practice of a discipline such as architecture, then, is the continuous and permanent reactivation of the rules of discourse through its own particular material and formal specificity. Our thesis here is that one continual reactivation is the practice of the housing project.[71] Kipnis acknowledged this when he observed that 'the five points collaborate at Savoye to erase the privileged status of the ground that architecture before it so strived to reinforce, transforming it into but one datum among many, including rooftop and floor plan. It works for me and on me, but I can understand why others just see a nice-looking house.'[72]

In choosing this quote, our argument here is not to suggest that Kipnis is a structuralist. Defined as a discipline with such a specific relationship to an outside, the nature of that relationship and architecture's agency for change becomes a central question. Architecture's disciplinary usefulness is to be found in its capacity for organizational experimentation – for an experimentation that is constantly moving toward and testing the elasticity of the rules of discourse given to it. Kipnis has argued in the essay Re-originating Diagrams that architecture exists on a spectrum of practice from service professional to speculative architect. What differentiates the poles of this field is not the material on which it works, but an expectation that architecture 'can be a directed instrument of change.'[73]

'It is possible that speculative architecture produces something like a directed politics, but not as an instantiation of an ideal concept of the political, but as an original political effect specific to architecture, irreproducible by any other medium and irreducible to any other terms.' [74] Regardless of which end of the spectrum the architect sits, what can be worked on, what can be said, is already determined by the discourse toward which she or he is called.

We return to Colquhoun's suggestion of the space constituting design process as inhabited by a reference to precedent or type, where type is understood as function and as a practice that

[70] FOUCAULT, M. 1991 (1968). Politics and the Study of Discourse. *In:* BURCHELL, G., GORDON, C. & MILLER, P. (eds.) *The Foucault Effect: Studies in Governmentality (with Two Lectures by and an Interview With Michel Foucault).* London: Harvester Wheatsheaf.
[71] See, for example, Kipnis' argument as part of a discussion around the diagram. KIPNIS, J. 2006. Re-Originating Diagrams. *In:* CASSARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A. pp. 196
[72] Ibid. pp. 194
[73] Ibid. pp. 193
[74] Ibid. pp. 194

involves '*a knowledge of past solutions applied to related problems, and that creation is a process of adapting forms*.'[75] As Colquhoun shows, neither of the positions presented by the modern movement in an account of design process makes a satisfactory description that can clarify the kind of tension evident in the housing project between a continuity and repetition, that also acknowledges the discipline's claim to constant innovation and change. Colin Rowe has argued that it is the strange ground on which architecture stands. There is a claim to infinite transformation, yet what the contemporary housing manuals outlined at the opening of this chapter demonstrate, is actually infinite repetition. To make this even stranger, the field holds an idea that 'any repetition, any copying, any employment of a precedent or a physical model is a failure of creative acuity is one of the central tenets of the modern movement.' [76]Contemporary discourse still holds the idea that repetition establishes convention, and that repetition leads nowhere, and that contemporary architecture must be opposed 'to the dictatorship of the merely received.'

To explore this in more detail, for Colquhoun, the essence of the functional doctrine of the modern movement wasn't that beauty or order or meaning are unnecessary, but rather that those engaged in such a pursuit believe that those qualities can no longer be found in the deliberate search for final forms. Form instead becomes simply a transparent and logical process whereby the 'operational needs and operational techniques'[77] required in a project are brought together. This biotechnical determinism suggests architectural form as something achieved without the conscious interference of the designer 'but as something that was nonetheless postulated as his ultimate purpose:' [78] Colquhoun argues that in this understanding, the assumption is that once all the known data regarding a problem has been collected, the coming into form of the architectural object is the consequence of a transparent process of acquisition and sedimentation. However, as Yannis Xenakis has demonstrated in a discussion regarding Le Corbusier's Philips Pavilion for the 1958 Brussels World's Fair, where mathematical calculations were used to determine the form of the enclosing structure, 'that

[75] COLQUHOUN, A. 1967. Typology and Design Method. *Arena,* vol.33. 49
[76] ROWE, C. 1972. Introduction to Five Architects. *In:* HAYS, K. M. (ed.) *Architectural Theory Since 1968.* Cambridge, Mass.: The MIT Press. pp. 79
[77] COLQUHOUN, A. 1967. Typology and Design Method. *Arena,* vol.33.
[78] ibid. pp. 45

calculation provided the characteristic form of the structure but that after this, logic no longer operated and the compositional arrangement had to be decided on the basis of intuition.'[79]

The contradiction for Colquhoun arises with the retrospective justification of this move to form in terms of intuition: the intuitive genius of the architect/author. Moholy-Nagy deployed this justification in the context of the Institute of Design in Chicago, when we wrote in the 1960s,

> 'the training is directed toward imagination, fantasy and inventiveness, a basic conditioning to the ever-changing industrial scene, to technology in flux… The last step in this technique is the emphasis on integration through a conscious search for relationships… The intuitive working mechanics of the genius give a clue to this process… The unique ability of the genius can be approximated by everyone.'[80]

Despite this, Maldonado argued in 1966 that the space between data and the coming into form of the architectural object is not occupied by intuition, but rather knowledge of and reference to a 'typology of architectural forms in order to arrive at a design solution.'[81] Here, 'creation is a process of adapting forms derived either from past needs or from past aesthetic ideologies to the needs of the present.'[82] One is reminded of Alan Colquhoun's argument in the essay Displacement of Concepts in Le Corbusier regarding a kind of translation of form in the work of Le Corbusier in the development of his Five Points of Architecture. The design process is described by Colquhoun as an act of overturning a series of neoclassical spatial relationships and forms: the pediment, the ground, vertical structure expressed on the façade, a floor plan defined by load-bearing elements, and the use of the roof in the pursuit of form as part of the design process.[83] There is no hand of the intuitive genius, but rather a very careful consideration and digestion of the field of inherited historical objects of architecture, and a translation of these as part of a reasoned projection of new forms.

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[79] Xenakis in Colquhoun, at a seminar at Princeton in 1966. My emphasis. ibid.pp. 46
[80] Moholy-Nagy in Colquhoun 1967:46
[81] Maldonado at a seminar at Princeton in 1966, in COLQUHOUN, A. 1967. Typology and Design Method. *Arena,* vol.33. pp. 43. For Maldonado this was provisional only, in fact he understood it as 'a cancer in the body of the solution' but one that designers followed nonetheless. Despite Maldonado's protestation and the belief that such a handicap as type would eventually be overcome 'a*s our techniques of classification become more systematic.'*
[82] Ibid. pp. 47
[83] COLQUHOUN, A. 1972. Displacement of Concepts in Le Corbusier. *Architectural Design,* 43**,** 220-243.

2.3.5 Diagrammatic Typology: Hannes Meyer and the 1925 Petersschule

There have been several attempts to recover the relationship between architecture and its outside following the general perception in the field by the late 1960s of the collapse in the relationship between architecture and the city. The first of these claims that architecture is the material manifestation of ideology where architecture read via structuralism can be understood through the opposition between semiotics and materiality or content and materiality. The second claim is through history, where an evolutionary and narrative survey of the history of a specific type of architecture, housing, for example, in the work of Plunz, might provide a way out of the impasse. We've seen in this chapter the problems of that way of reading architecture. The first of these responses, however, can be seen through the work of Manfredo Tafuri, Aldo Rossi, G.C. Argan and members of the Italian Tendenza, and following Frederic Jameson in his writing, particularly in the publication *Marxism and Form*.[84] It is K. Michael Hays, however, who tries to recover materiality in an attempt to find a way out of the opposition between materiality and semiotics pursued by the deconstructivist/ Derridean theory dominant at the time of this writing, that we might begin to find a way through. It is worth considering his account of Hannes Meyer's Petersschule in some detail, acknowledging both the structuralist and Marxist framing of his work.[85]

[84] CIUCCI, G., DAL CO, F., MANIERI-ELIA, M. & TAFURI, M. 1980. *The American City: From the Civil War to the New Deal.* London: Granada. TAFURI, M. 1968. *Theories and History of Architecture.* London: Granada. TAFURI, M. 1980a. *Architecture and Utopia.* Cambridge: MIT Press. TAFURI, M. & DAL CO, F. 1976. *Modern Architecture.* Milan: Faber & Faber/Electa. TAFURI, M. 1980b. *The Sphere and the Labyrinth. Avant-Gardes and Architecture from Piranesi to the 1970s.* London: MIT Press. JAMESON, F. 1971. *Marxism and Form: Twentieth Century Dialectical Theories of Literature.* Princeton, N.J..: Princeton University Press, JAMESON, F. 1972. *The Prison House of Language: A Critical Account of Structuralism and Russian Formalism.* Princeton, N.J.: Princeton University Press. JAMESON, F. (1982) 1985. Architecture and the Critique of Ideology. *In:* OCKMAN, J. (ed.) *Architecture, Criticism, ideology.* Princeton, N.J.: Princeton Architectural Press. ROSSI, A. 1966. *The Architecture of the City.* London: MIT Press, ROSSI, A. 1981. *A Scientific Autobiography.* London: MIT Press. ARGAN, G. C. 1963. On the Typology of Architecture. *Architectural Design,* 33**,** 564-565.

[85] This thesis is an attempt to move away from the question of architecture understood as reflection or representation in an acknowledgement of the problems and limitations of both structuralist and Marxist framing predicating the work of theorists such as Hays. While it is beyond the scope of work of this thesis to fully explore this, to get a better idea of what these problems are we might first turn briefly to Frederic JAMESON, F. 1971. *Marxism and Form: Twentieth Century Dialectical Theories of Literature.* Princeton, N.J.: Princeton University Press. Jameson and his publication Marxism and Form which opens with a brief description of Adorno's prolific cross-disciplinary engagement and production. (JAMESON, F. 1971. *Marxism and Form: Twentieth Century Dialectical Theories of Literature,* Princeton, N.J.: Princeton University Press) This included philosophy with his Hegelian critique of phenomenology and existentialism, through musical criticism and as advisor to Thomas Mann during the writing of Doctor Faustus, as a literary critic and as a practicing sociologist who worked on monumental publications such as Authoritarian Personality: an Investigation of Anti-Semitism, through to reviews of the 'culture industry' and of Popular Music (ibid.). For Jameson,

As a way of beginning, a brief description: the Petersschule appears in Hay's publication Modernism and the Post-Humanist Subject as a set of competition drawings, the first of which is a section and axonometric model from 1926.[86] Another set of later, modified drawings from 1927 appears on the following page and includes sections, elevations, plans and axonometric projections.

One can see from these competition drawings that the form of the Petersschule is broken into three distinct masses: a block of classrooms, attached toilets, and a structure, lower and held away from the other two, containing ancillary services for the school. Large exterior play decks are cantilevered off the northern façade of the building. These are connected to classrooms on the first and second floors. Classrooms on the third and fourth floor have access to various roof terraces as play space. The cantilevered decks are held off the building to allow maximum light

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Adorno's willingness to range across such a wide terrain of cultural phenomenon is more than simply intellectual curiosity. If we're to follow Jameson, despite the disciplinary specificity of all these pursuits, it is a particular understanding of their relationship within the context of Marxism's obligation to both maintain the integrity of the object under examination as an independent entity while also 'transcending the limits of specialized analysis' (ibid.Jameson 1971:4) which allowed such phenomenal breadth of scholarship. For Jameson, constrained within the structure of Marxism is a presupposition of the 'movement from the intrinsic to the extrinsic' from the specificity of the object out toward the larger unifying force or event understood to always be the reality behind it. Marxism as a conceptual apparatus, then, and as a practice always 'involves the jumping of a spark between two poles, the coming into contact of two unequal terms, of two apparently unrelated modes of being' in the implied reconciliation of the specificity of the object with the generality of its larger socio-economic reality (Jameson 1971:4). This, then, is the form of Marxism found in the title of Jameson's publication and equally the mechanism which allowed Adorno's specific investigations which are in turn totalized within the extrinsic. If we return to Hays' use of representation, it is the particular embedding of a structuralist pursuit of the notion of 'superstructure' within the kind of Marxist form outlined above which marks the amplified condition of a work like Modernity and the Post-Humanist Subject. If we understand 'superstructure to be the larger unifying force or event understood to be the reality behind an object, which, although it was not established as a notion in any depth by Marxism ('We must, I think, take [Levi-Strauss] seriously when he declares that his work is designed 'to contribute to that theory of superstructures which Marx Barely sketched out'). LEVI-STRAUSS, C. 1966. *La Pensee Sauvage*. Paris: Librairie Plon. LEVI-STRAUSS, C. 1966. *La Pensee Sauvage,* Paris, Librairie Plon. pp. 173 in JAMESON, F. 1971. *Marxism and Form: Twentieth Century Dialectical Theories of Literature.* Princeton, N.J.: Princeton University Press. JAMESON, F. 1971. *Marxism and Form: Twentieth Century Dialectical Theories of Literature,* Princeton, N.J. Princeton University Press. pp. 102) For structuralism, superstructure becomes the vehicle for the pursuit of a philosophy of models constructed on an analogy with language. (a further clarification on the notion of superstructure in terms of Marxism and its taking up by structuralism from Jameson: 'It is certainly the case that for the most part Marxism itself has conceived of ideology only in the crudest fashion as a type of mystification of deliberate class distortion, and has failed to provide a really systematic exploration of superstructures. On the other hand, the constitutive feature of an apprehension of superstructures lies, as we have shown elsewhere (in Marxism and Form especially, pp. 4-5) in the mental operation by which the apparently independent ideological phenomenon is forcibly linked back up with the infrastructure, by which the false anatomy of the superstructure is dispelled, and with it the instinctive idealism which characterizes the mind when it has to do with nothing but spiritual facts. Thus the very concept of the superstructure is designed to warn us of the secondary character of the object it names. The term is designed to point beyond its reference towards that which it is not, towards that material and economic situation which is its ultimate reality.' JAMESON, F. 1972. *The Prison House of Language: A Critical Account of Structuralism and Russian Formalism.* Princeton, N.J: Princeton University Press. JAMESON, F. 1972. *The Prison House of Language: A Critical Account of Structuralism and Russian Formalism,* Princeton, N.J., Princeton University Press. Pix.) He continues that its privileged object is thus seen as the unconscious value system or system of representations which orders social life at any of its levels, and against which the individual, conscious social acts and events take place and become comprehensible.' Jameson 1972:101, 102. Here, 'there is a presumption that all conscious thought takes place within the limits of a given model and is in this dense determined by it.'

[86] HAYS, K. M. 1992. *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer.* London: MIT Press.

penetration into the ground-floor gym and playground. Hays argues that 'the entire arrangement of the basic units in this competition can be explained in terms of the maximizing of the area for outdoor recreation and the amount of light penetrating into the building, these coupled with the methods of technical construction'.[87] Meyer himself writes that 'the school is raised as far as possible above the ground to a level where there is sunlight and fresh air… and all the flat roofs of the building are assigned to the children for recreation, providing a total area of 1250 sq meters of sunny space away from the old town.'[88] The old town referenced here is the urban context into which the project is speculatively placed. The building is sited on the eastern periphery of the inner city wall of Basel, adjacent to the Peterskirche. One can see in both sets of drawings, the building aligning itself with the western street line, leaving over half of the eastern part of the site free at the ground level for play areas. Entry into the building is from this western street, visible from the square in front of the church, where a sequence of glazed and open stairs wraps around the northern side of the building.

We might see from this first set of 1926 drawings a building framed with an 'undressed standardized concrete structure' standing on eight columns (pilotis) with roof terraces and projecting, cantilevered play terraces. In this sense of structure, massing and cantilever, we can see Hays draw an evolutionary trajectory for the Petersschule through Le Corbusier's 1920-22 Maison Citrohan; Lissitzky's 1925 cloud-hanger 'Wolkenbügelhochhaus' high-rise in Moscow; and N.A Ladovsky's 1925 Studio Restaurant project suspended from a cliff over the sea. Hays draws the ground for such a grouping – a school, a single-family house, a restaurant and a high-rise residential building, in terms of volumetric typology and their ability to be mass-produced. If we look carefully at the images Hays provides of the four projects, we can see present in all the projects the heavy cantilevered form – like the Petersschule with it splay decks cantilevered off the northern façade, both the Ladovsky project and the cloud-hanger high-rise are composed of cantilevers. In the high-rise project, one rectangular volume is laid horizontally and placed asymmetrically onto a single heavy vertical foot, as a result cantilevering significantly to one side of the vertical volume onto which it bears. Even the Maison Citrohan

[87] Ibid. pp. 106
[88] Ibid. pp. 118

has a cantilevered balcony at first-floor level wrapping around the building. The restaurant project is, of all the projects, the purest expression of the principle cantilever. Constituted of what appears to be a physical impossibility, with its slender, almost cable-like members projecting out over the sea, it is less volumetric and more conceptual.

What's interesting in Hay's grouping is that it works as typological categorization, interested only in the disciplinary specific formal and volumetric convergences of the projects. There is no reference made to the diverse diagrammatic conditions – education, domesticity (both single-family and high-density multiple-occupancy) and restaurant that type carries and into whose service type is called. Typically, it is the diagram that is first proposed as the organizing principle of a categorization of typological objects: Pevsner's *A History of Building Types*[89] in 1976, for example, or Frank's *Ordering Space: Types in Architecture and Design* in 1994.[90] Even work like Plunz's *A History of Housing in New York City*[91] from 1990 is ordered through such a principle.

Why is that, what is Hays arguing? In comparing Le Corbusier with Meyer, Hays states that for Le Corbusier, technology is understood in the received terms of hierarchy, affect and mechanization which work to reinforce a distinction between the value of industrialization versus the practice of art, reliant as it is on the intuitive genius of the architect where one is always aware of the creative authorial hand in the drawings and in the completed object.

On the other hand, Hays argues that Meyer understands his work to have an entirely different relationship to technology, one predicated on a fundamentally different account of design process. The movement and moment between data and the form of the architectural object is not occupied by or accounted for in terms of the gesture of the intuitive 'genius' architect, as we saw Colquhoun dismiss earlier. This distinction between the practical technical and the artistic is refused, and the architect seen rather as a kind of pilot involved in a design process, always negotiating the twin terrains of technique and materiality, always involved in a transformation of

[89] PEVSNER, N. 1976a. *A History of Building Types.* Princeton, N.J: Princeton University Press, PEVSNER, N. 1976b. *A History of Building Types.* London: Thames and Hudson.
[90] FRANK, K. A. & SCHNEEKLOTH, L. H. (eds.) 1994. *Ordering Space: Types in Architecture and Design.* New York: Van Nostrand Reinhold.
[91] PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press.

both practice and, at the same time, the inhabitation of a set of inherited programmatic diagrams, like those explored in Chapter One. Hays achieves this distinction between the two architects through the definition of Meyer's working method, that is, in Meyer's use of the twin notions of materiality and technique. To briefly outline these, Hays argues for the projective and constitutive force of Meyers' materiality. For Meyers, knowing and doing are both practices and forms of production: 'How we know the world is thought together with how we can change the world.'[92] As such, materials are purged of symbolic meaning. They are not understood as representative of technology or industry, as Hays argues is the case for Le Corbusier. They speak both in terms of an aesthetic pleasure and, in rhetorical terms, as projective statements of what might be, constitutive rather than representative. Instead of meanings, they have specific forms. The Petersschule is described in terms of 'steel framework resting on eight columns… steel-framed hopper-type windows, aluminum-sheet doors, steel furniture, halls and stairs covered in rubber flooring.'[93] Volumetric components are conceived of in functional terms where adjacencies are grouped according to use. Hays states: 'Each material is experienced as such, and as infiltrating our everyday lives with new concrete effects of the industrial-image landscape and social field; no distinction can be made between the content and expression.'[94]

Technique, as we understand through Hays, is not for Meyer the gathering up of programmatic and material determinants into a kind of order or style – what as a category or unity would 'allow us to see the content or intentions behind the built work or drawn project' – as image is employed in the service of meaning as in the case of Le Corbusier. Rather, technique for Meyer, Hays argues, is a 'diagramming of potentials for occupation.' We can see this in the description of the Petersschule outlined above, in the relationship of the 'inseparable constructive [cells] of the school building,' the classrooms, the play areas and the toilets; in the relationship that these set up between spaces, and in their placing of the subject as both object to be organized and subject with the capacity for moral transformation.

[92] HAYS, K. M. 1992. *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer.* London: MIT Press. pp. 108
[93] Ibid. 110
[94] Ibid. 110

Here, Hays firmly places Meyer's project within the working of architectural urbanism. Integral to his work, Hays argues, is the diagnostic and propositional nature of the project which, through such a diagramming of potentials for occupation, always reveals the present order as unsatisfactory, physically and socially, and proposes a response as a possible way out.'[95] We have seen in the earlier description of the building, how, as a set of cellular spaces at the scale of the individual child, the competition project raises the level of occupation of the building high above the existing city-street level to 'where there is sunlight and fresh air… sunny space away from the old town.' The project, in proposing the solution, in the same gesture diagnoses the problem and sectionally reorganizes the workings of the city through this vertical stacking of cellular rooms with their adjacent outdoor spaces and the introduction of a provision for cars in the space created below as a consequence.

In this sense, we will agree with Hays that the Petersschule is projective; that the design process is one which involves a kind of conditioned piloting rather than intuitive genius, as part of an endless series of adjustments in the direction of a projected future and the subject always about to be which uses a reorganization of or a 'refunctionalization of existing forms'.[96] But we would have to say that with the Maison Citrohan, Le Corbusier is also working with the same process of reasoning as we agreed earlier in this chapter and via Colquhoun. While such an opposition in an attempt to recover materiality is clearly productive for Hays, and his writing will continue to be productive for us here, we will place the two projects together on the terrain of process. In these two categories of technique and materiality, one is reminded of the disciplinary specific material and formal pursuit found in typology's workings understood through Colquhoun. They are akin to Hays' deployment of the notion of materiality, for example, as it would be simple to claim that technique as something like the diagram. What's of use for us here is Hays' recognition of the presence of the diagram in the workings of the discipline (type) and the potentialities of the material and formal practice of the discipline, that is type, to affect the diagram, to act in a conditional transformative and inflective capacity.

[95] Ibid. 107
[96] Ibid. pp. 84

2.4 The Site of Experimentation, Architecture's Graphic Realm and Scientific Methodology

2.4.1 Jean-Nicolas-Louis Durand and Type v. Typology

Type, then, is both immanent to, and definitional of, the architectural design process within modernity. We will argue here that the process of typological reasoning within the graphic realm, the drawings of architecture's disciplinary practice coalesced out of the practices of science in the eighteenth century. To understand this in more detail, it is necessary to consider several of the central writers and typological operators of the eighteenth century.

In contemporary writings about architectural type and typology, Antoine-Chrysostome Quatremère de Quincy (1755-1849) is usually held up as the originator of its use, with the 1784-85 publication of *Dictionnaire historique d'architecture*.[97] While it is true that Quatremère 'explicitly and formally introduced the idea of type into architectural theory,'[98] as part of this thesis investigation into the relationship between type and design method, we will agree with Antoine Picon when he argues that it was Jean-Nicolas-Louis Durand (1760-1834), writing twenty years later, who clarified the use of 'type', not as imitative as Quatremère had, but rather with Durand it becomes possible to see an operative notion of architectural typology.[99] Type becomes in Durand's work the verb typology, a process of graphic reasoning directed toward the systematization of a design method. This emerges, we will argue, as part of the constitution of the discipline of architecture itself, within and as part of epistemological transformations that coalesced into modernity where, as we've seen, the discourse of space and spatial reasoning emerge together. As was argued in Chapter One via a question of visibility in the writing and thinking of Foucault, during this period 'knowledge sets up and requires a way of spatializing

[97] Quatremère DE QUINCY, A. C. 2000. *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère de Quincy.* London: Papadakis Publisher. Quatremère DE QUINCY, A. C. 1837. *An Essay on the Nature, the End and the Means of Imitation in the Fine Arts.* London: Smith, Elder and Co. See also Quatremère DE QUINCY, A. C. 1985. 'Architecture' and 'Character' in Tanis Hinchcliffe, 'Extracts from the Encyclopedie methodique d'architecture'. *9H,* 7**,** 25-39. For examples of histories that make this claim, see Vidler VIDLER, A. 1987. *The Writing of the Walls: Architectural Theory in the Late Enlightenment.* London: Butterworth Architecture. VIDLER, A. 1977b. The Third Typology. *Oppositions,* 7. MONEO, R. 1978. On Typology. *Oppositions 13*, OECHSLIN, W. 1986. Premises for the Resumption of the Discussion of Typology. *Assemblage,* no.1**,** pp.36-53.

[98] LEE, C. C. M. 2012. *The Fourth Typology: Dominant Type and the Idea of the City.* Degree of Doctor, TU Delft.

[99] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute.

itself'.[100] That is, knowledge is not technical and it's not simply built up from perceptual evidence or sedimented through a logic of inference. Rather, knowledge is constituted of a dispersed organization of a constellation of objects, subjects, strategies and modes of enunciation. What men saw during this period was organized in new ways and spatialized differently.[101] As we saw in Chapter One, Rajchman argued through Foucault that it is during this time that the construction of a kind of space that allows for observation, and also in the same gesture allows theory to become possible*:* the spatial organization of knowledge makes possible the theory or account of that space that follows it. This accounts for the singular manner in which the general hospital gave mad people to be seen, and precedes the elaboration of the classical theories of madness, and the architectural reorganization of prisons precedes the new theory of crime.[102] Knowledge, Foucault argues, is a contingent historical configuration, rather than a matter of looking more closely. This, of course, has huge consequences for how we understand the typological burden as space under experimentation prior to the designation of content.

As distinct from Durand, Quatremère's earlier work relied on a Vitruvian notion of the imitation of nature which understood type to be something more like a 'preexisting germ' or an 'imaginative model,' 'a kind of nucleus around which the developments and variations of forms applicable to the object have coalesced and coordinated themselves.' For Quatremère, the type was derived from no general system; rather, it was understood as a primitive essence in a Vitruvian sense.[103] As already stated, the intention of this chapter is not to make claims for the origins or genesis of the concept or use of particular definitions of architectural type; rather it is to note tendencies within the field. Durand's significant body of work supports the search for an understanding of type as the 'name given to an effort to understand and systematize a formal and organizational intelligence'[104] a kind of immanent native intelligence to the disciplinary practice of architecture that emerged during this time. It is also important to note that in

[100] RAJCHMAN, J. 1988. Foucault's Art of Seeing. *October,* 44**,** 89-117. pp. 96
[101] FOUCAULT, M. 1970. *The Order of Things.* New York: Pantheon. First published in French as FOUCAULT, M. 1966. *Les mots et les choses. Une archéologie des sciences humaines.* Paris: Editions Gallimard.
[102] RAJCHMAN, J. 1988. Foucault's Art of Seeing. *October,* 44**,** 89-117. pp. 98
[103] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 48 For other writing on Quatremère and type, see also LAVIN, S. 1992. *Quatremère de Quincy and the Invention of the Modern Language of Architecture.* Cambridge, Mass.: MIT Press. Lavin approaches Quatremère's use of type in terms of language and in relationship to Classicism.
[104] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City.* London: Architectural Association Publications. pp. 4

examining the work of Durand here, the point is not to place him in opposition to Quatremère de Quincy.[105] Rather, it is to see how the discipline of architecture in the eighteenth century coalesces and is constituted through the operation of type internally, just as it is instrumentalized by discursive formations that reside external to it and call it into the service of the new institutional forms that were examined in Chapter One, such as prison, clinic, asylum, housing project.

2.4.2 The Précis 1803: Composition

Durand is known for two publications. The first was the *Recueil et parallèle des édifices de tout genre anciens et modernes, remarquables par leur beauté, par leur grandeur, ou par leur singularité, et dessinés sur une même échelle* from 1799-1801 (known as the Recueil), the second was a later two-volume publication, *Précis des leçons d'architecture données à l'École polytechnique* from 1802-05 (known as the Précis).[106] The Recueil is a catalogue of historical precedent and a review of the history of architecture, the Précis a summary of the lectures that Durand gave at the École Polytechnique, the graphic portion of which was finally published in 1821. The Précis was meant as a tool in the teaching of architecture at the Polytechnique, where Durand was an academic, architectural theorist and Substitut de l'Administrateur de la Police in 1796 with responsibility for second-year courses in the architecture program. The initial release of the Précis came in two parts: Volume One focused on the principles and mechanics of composition; and Volume Two contained highly generalized analyses of different classes of buildings.[107]

The term 'composition' is central to the Précis, and is key to understanding the operative concept of architectural typology. It wasn't a reference to painting; Durand rejected the use of

[105] LAUGIER, M.-A. 1977 (1753). *An Essay on Architecture.* Los Angeles: Hennessey & Ingalls.
[106] DURAND, J.-N.-L. 1802-5; rev. ed. 1817-19; reprint of rev ed. 1985. *Précis des leçons d'architecture données à l'École polytechnique.* Paris. Durand's other earlier publication was DURAND, J.-N.-L. & LEGRAND, J.-G. 1799-1801; reprint 1842. *Recueil et parallèle des édifices de tout genre anciens et modernes, remarquables par leur beauté, par leur grandeur, ou par leur singularité, et dessinés sur une même échelle.* Paris: Chez l'auteur. English title: Collection and Parallel Edifices of All Kinds, Ancient and Modern. (1799-1801)
[107] Durand's other earlier publication was DURAND, J.-N.-L. & LEGRAND, J.-G. 1799-1801; reprint 1842. *Recueil et parallèle des édifices de tout genre anciens et modernes, remarquables par leur beauté, par leur grandeur, ou par leur singularité, et dessinés sur une même échelle.* Paris: Chez l'auteur. English title: Collection and Parallel Edifices of All Kinds, Ancient and Modern. (1799-1801)

pictorial effects, washes and perspective in his teaching of systematic graphic techniques in the school.[108] Rather, composition in this context was the name given to an analytical method that set out procedures that made it possible to both decompose objects, and in the same graphic gesture, to set those component parts out in an order that enabled easy generation. This is important to clarify: Durand's idea of composition involved decomposition and equally and in the same operation, recomposition.[109] As a method, it stands in a straight line of descent from the early scientific analytical methods defined by Locke, Condillac and Condorcet.[110]

Durand wrote in Volume One of the Précis:

> 'Before disposing any edifice, before combining and assembling its parts, the parts must first be known. And they, in their turn, are combinations of other parts that may be called the elements of buildings, such as walls, openings, supports both engaged and detached, raised foundations, floors, vaults, and so on. First of all, therefore, these elements must be known.'[111]

In composition, the architect takes the definition of the whole as a starting point and ends up with the constituent elements of the building. This was the exact reverse required of an architectural apprenticeship at the time. In the older system, the apprentice takes the elements

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[108] It should also be noted here that Durand rejected the idea that architecture was 'like a language.' Picon argues that 'while there is not lack of linguistic reference in the Précis – as when its author likens the wealth and variety of the production of architecture to that of the figure of speech… All the same, his linguistic analogies remain on a superficial level – hardly surprising if we recall that, in rejecting the symbolic dimension, Durand has precluded himself from treating architecture as a system of signs analogous to a language.' Picon concludes that his approach in the Précis has nothing in common with the work of the Ideologues but its methodological framework. PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 36. For ideologues, see DESTUTT DE TRACY, A.-L.-C. 1801-03. *Elements d'ideologie.* Paris: Didot.; PICAVET, F.-J. 1891. *Les idéologues : essai sur l'histoire des idées et des théories scientifiques, philosophiques, religieuses, etc. en France depuis 1789.* Paris: F. Alcan.; MORAVIA, S. 1974. *Il pensiero degli Ideologues: Scienza e filosofia in Francia (1780-1815).* Florence: La Nuova Italia.

[109] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 36 See also LUCAN, J. 2012. *Composition, Non-Composition: Architecture and Theory in the Nineteenth and Twentieth Centuries.* Oxford: Taylor & Francis Group Ltd.

[110] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 36 Locke (1632-1704); Condillac (1715-80) and Condorcet (1743-94). This is not surprising given that the early years of the École Polytechnique were a focal point of the formulation and transmission of scientific and technological knowledge where the curriculum included mathematics, mechanics, physics and chemistry, far ahead of the teaching of architecture.

[111] DURAND, J.-N.-L. 1802-5; rev. ed. 1817-19; reprint of rev ed. 1985. *Précis des leçons d'architecture données à l'École polytechnique.* Paris. Vol 1 pp. 88 introduction quoted in LUCAN, J. 2012. *Composition, Non-Composition: Architecture and Theory in the Nineteenth and Twentieth Centuries.* Oxford: Taylor & Francis Group Ltd.

of a possible building and builds up. In Durand's method, one implies the other – graphic analysis, the critical pulling apart of an existing condition, is inseparable from synthesis – the recombination and projection of a new condition. 'Durand's method is analytical in its simultaneous manipulation of composition and decomposition.'[112] However, the method is also analytical in a second sense:

> 'Analysis, as conducted by scientists and engineers, is not only designed to unravel the skein of operations that lead from simple to complex: it also has the purpose of arranging problems in a sequence to avoid confusion. In calling for the composition of elevations to be subordinated to that of the plan, Durand's method establishes the autonomy of each relative to the other.'[113] [114]

2.4.3 The Coalescence of the Discipline of Architecture

Durand's new methods of analysis and synthesis via the practice of composition emerged during the post-revolutionary period of the second half of the eighteenth century, when there were transformations in the patterns of patronage of architecture. The architect was now required to demonstrate competence rather than rely simply on relationships. This, in turn, enabled and cultivated a point of differentiation between architects and engineers.[115] [116] Boullée, for whom Durand worked, was one of a number of architects whose work can be seen to respond to this new field of problems in trying to identify more fundamental components on

[112] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 42
[113] Ibid. pp. 42
[114] Ibid. pp. 44. The fruitfulness of Durand's method lies in a potential for wider application. It reappears in the École des Beaux-Arts, where there is a kinship between the composition set out in the précis, and those that later became the core of teaching at the Beaux-arts system – there is the primacy of the floor plan, the importance of defining the primary and secondary axes of the project; but also the disconnection of the plan from the elevation and of the architectural form from construction.
[115] The argument I would like to make here is that Durand's method is constitutive of architecture's understanding of what the discipline is and does, rather than it reflecting changes to a set of transformations external to the practice of architecture. Having said that, however, the challenge from engineering is real, as is the fact of the much larger epistemological shifts in liberal democracy toward modernity that are marked by the French Revolution.
[116] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 23

which to rebuild the discipline of architecture. For Boullée, this involved the sensations produced by elementary forms and volumes and the functional elements of architecture.

In addition, during the late eighteenth century, there was a move to, on the one hand rationalize public commissions of architecture, while on the other to diversify private ones. In the first instance, during this period, the notion of the monument was replaced by facility – *l'équipement* – schools, courthouses, bourses and markets were facilities with functional objectives. These soon took over from the monumental imperatives of the assertion of sovereignty and became the staple of the architect's work.[117] In addition, there was a diversification of the architect's private work, which took two forms: some programs such as great townhouses or hotels for aristocratic or bourgeois clients became more and more complex; undermining the traditional hierarchies of architecture, 'their planning underwent a process of refinement, confronting architects with new problems.[118] Also, there was a proliferation of speculative programs in private work including the first buildings designed for rental in the context of the new practice of real-estate speculation. In this new field of problems, contemporary architects were both searching for new disciplinary tools with which to respond, but at the same time, constituting the problem field as they deployed those tools. [119] Picon notes that Durand is 'challenged' to develop other ways of working in response to, and we will add here, as part of a cultivation of, constitutive transformations in the nature of commissions in architecture and the relationship of the architect to the clients that also occur during this period. [120][121]

[117] Picon references FORTIER, B. 1978. Logiques de l'équipement, notes pour une histoire du projet. *Architecture-Monument-Continuite,* 45**,** 80-85. For more information on the idea of l'équipement and the concept of public facilities. Footnote n.27 Picon pp. 57

[118] ELEB-VIDAL, M. & DEBARRE-BLANCHARD, A. 1989. *Architectures de la vie privée, maisons et mentalités, XVIIe-XIXe siècles.* Brussels: Archives d'Architecture Moderne. In Picon ftnt 28 pp. 57

[119] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 19. By the 1770s and Laugier's reference to the primitive hut where type is a reference back to primitive origins, Picon argues there was left too great a gulf between itself and the kind of challenges of contemporary building described above, a gulf too wide to allow the whole discipline of architecture to be reformed on the basis of a single archetype.

[120] Ibid. pp. 36. Durand's *Précis* inherited from the eighteenth century ideologues a methodological framework that balanced on the hypothesis that the sciences and the arts are never anything other than combinations of elements. The starting point of primitive and original parts that moved 'from simple to the composite, from the known to the unknown,' was a project that was begun by the Revolutionary architects, Picon argues. Durand had been apprentice to Boullée. While it is clear that it is the methodological framework that is the commonality with the Ideologues of the 18th century, one of Emile Kaufman's key Revolutionary identities. According to Emile Kaufman, the revolutionary architects were Boulléee, Ledoux and Lequeu. While Picon notes that Kaufman's categorization of the Revolutionary architects is problematic in terms of the actual commitment of the group to the French Revolution, or any coherency of political ideas, they were interested in a revolution from tradition. KAUFMANN, E. 1952. Three Revolutionary Architects, Boulléee, Ledoux and Lequeu. *Transactions of the American Philosophical Society,* 42**,** 431-564. In PICON, A. 2000.

It's possible to see evidenced in Durand's graphic tables both a description of these new commission types and client relations but, equally, it's possible to see the table as constitutive of this transformation in building types and relations in its reformulation of the field.[122] To grasp Duran's typological method via composition, we need to consider the system of classification of buildings that governs the organization of Volume Two of the Précis, based on the distinction between public and private, which Picon argues may be likened to the distinction between scientific classes – mammals, birds, reptiles, etc – in the life sciences.[123]

> 'Public buildings are subdivided according to purpose: temples or religious buildings; palaces, public treasuries, government facilities; buildings devoted to knowledge – colleges or observatories, economic life; markets, bourses, fairs; theatres, world of entertainment; baths and hospitals that of hygiene and health; prisons and barracks close the sequence. There are no factories. Private building, divided between town and country – urban houses and apartments on one side; villas, farms and hostelries on the other. While in another dimension, Durand also describes individual rooms within a dwelling – in a straight line of descent from eighteenth-century treatises on architectural planning.'[124]

However, equally essential to the transformations in science during this period was a shift in understandings of the world of elements as static, towards a study of processes. Roger writes, 'If there is an order in the world, it is no longer an order of structures, the structures that are classified by taxonomists. It is an order of the 'operations' of nature, an order of processes that permit life and its endless renewal, an order of the forces that animate the living world and of

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From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 15

[121] It is beyond the scope of this thesis to take up in any detail the constitutive role of Durand's systematic graphic systems in the emergence of a consolidated discipline of architecture by the middle of the nineteenth century, however, this would be very interesting work to do. PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 16

[122] LEE, C. C. M. 2012. *The Fourth Typology: Dominant Type and the Idea of the City.* Degree of Doctor, TU Delft. Unlike Quatremère, Durand never uses the term type or typology in his Précis, however, there is no doubt that his approach is typological.

[123] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 45

[124] Ibid. pp. 45

the laws that govern them.'[125] It is through descriptive geometry that it becomes possible to see the emergence of an emphasis on operations and processes in the practice of architecture in a more recognizable disciplinary form, where there is inseparable from the analytical ideal a process of decomposition followed by rational recomposition.[126] 'At the École Polytechnique, descriptive geometry was taught through a reasoned succession of operations: projection, the construction of tangent straight lines and planes, the plotting of curves of intersection. Durand's proposition in the Précis, with its horizontal and vertical combinations, its divisions of the square, and its serial composition, is basically very close to this.'[127] So, while it seems that the elements of architecture presented in the Précis are arbitrary, in fact, they stand at the intersection of two principles: one is utility, where utility is understood as inherited social convention; the second is 'operation,' where the operation initiates the architectural project, *where the aim is to simplify the process of invention*.[128]

2.4.4 The Square Grid: Repetition and Transformation

While not the first to use the square grid, Durand made it an instructional tool in his teaching, and in practice.[129] Making students do their composition on squared paper is a practice entirely consistent with Durand's dislike for 'illusionistic renderings;' that is, perspective views or geometric drawings in the pursuit of composition. 'If "to project a building is to solve a problem," the student is far better off without the ambiguities that tend to attach themselves to issues of dimensioning, or to the search for quasi-pictorial relief effects.' [130]

The first part of the Précis is a catalog of stylized elements, Durand's aim being not to survey all available examples in their variants, but to define a repertoire 'that affords sufficient

[125] Jacques Roger in WILLIAMS, L. P. (ed.) 1997. *Buffon: A Life in Natural Science.* Ithaca: Cornell University Press.pp. 130 This was a 'momentous epistemological shift', historian of science Jacques Rogers argues.
[126] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 40
[127] Ibid. pp. 40
[128] Ibid. pp. 40
[129] Picon references here Italian engineer and architect Bernardo Vittone in his Istruzioni elementary of 1760. See ibid. pp. 41
[130] Ibid. pp. 41

combinations to answer human needs in society.'[131] '*The syntactical level' begins with the parts of buildings: porches, vestibules, staircases, rooms and courtyards.*' The making malleable of these is the first stage in the study of composition. The square grid makes it possible to carry the standardization, initiated with the elements one stage further, and to introduce the concepts of the alignment and the axis, which later emerge as crucial.

Oechslin describes the original 1803 diagram that appears on the frontispiece of his publication as this:

> 'In nine vertical columns, basic geometric figures and their variants are presented with an array of transformations according the criterion of analogy. The first four columns deal with the simple square, the square divided into thirds, into fourths, and the square subdivided into doubled symmetry; the next two columns are for the horizontal and vertical rectangle; two more present the circle and semicircle; while the last column takes a composite figure (subdivided square with an inscribed semicircle) as a starting point. The variations in the first column suggest an ordered, that is, systematic, sequence according to pattern: square, open square, open square on two sides; halved square; twice halved square; combined open and divided figure; combined figure open on two sides and subdivided; figure open on all sides and twice subdivided.'[132]

While the cascade of variations is not without a visible rigorous logic, it's not carried through in the other columns with the same clarity and coherency. The reason for this is not inability but rather as Oechslin points out, an early conforming to the possible and reasonable architectural outlines that can be anticipated.[133] The intensity of this 'anticipation' is not revealed in the careful and rigorous additions of complexity in the figures, but where they leap. The

[131] Ibid. pp. 41
[132] OECHSLIN, W. 1986. Premises for the Resumption of the Discussion of Typology. *Assemblage,* no.1**,** pp.36-53. pp. 50
[133] Ibid.

complication of geometric form runs from the top left of the table down to the bottom right of it. 'There the figures are found that both follow and anticipate typical architectonic outlines (predominantly of the academic-wealthy stamp) and are immediately intelligible and verifiable as 'architectonic'). The later graphic clarifications make this more clearly apparent. The decisive point in this is, Oechslin argues, that even while arguing for the clarification of the discipline of architecture on purely typological grounds, and within a process based methodology,

> 'Durand maintains the connection with precise, historically contingent objects, which was regarded as given at the time and thus placed at his disposal, clearly in sight. On the other hand, the design method was intended in fact to lead to concrete results, which in their turn constituted the history of architecture.'[134]

The process is then always diagnostic. In its choosing of an appropriate historical object, it is also at the same time propositional in that it was always intended to lead to concrete results and innovations that in turn constituted architecture's history.

The contrast between the 1802 publication and the 1813 publication is striking. In the first and more abstract of the geometric tables, there is visible the process of the 'very genesis in stages of the architectonic/geometric typologies,'[135] in a Euclidean sense of a search for the foundations of architecture, while equally and at the same time, there is the 'bow strung for history with its concrete objects and actualizations.'[136] Durand, in his 1802 table of the second Volume of the Précis is concerned with clarifying the relationship in architecture between a concrete (historically) existing catalogue of precedents he provides, and the *general form* based on the universal laws of geometry.[137] Oechslin points out that what appears to be a 'purely Euclidean development of a form' that sits within the mainstream of contemporary attempts at classification during this period, and that was extremely popular since the eighteenth century, turns out instead to be 'a very carefully developed attempt to legitimize more complex

[134] Ibid. pp. 51
[135] Ibid. pp. 46
[136] Ibid. pp. 49
[137] Ibid. pp. 46 Oechslin's emphasis.

architectonic configurations.'[138] Even in the simplest of these forms, it's possible, Oechslin argues, to make out the architectonic thought behind them. By 1813 and the release of a revised edition of the table, the simple pure geometric figures and their architectonic correlates in the form of fully developed 'types' are presented together in the same illustration, leaving no doubt.

For Oechslin, the 'theory of figures' as outlined by Durand in his Précis forms a 'court of appeal' between the rigor of the Précis and its methodological systematics, and the history of architecture as Durand describes it in his earlier Recueil.[139] Picon argues that, 'It is as if the architect's cultural background were surfacing in spite of him, in response to all those many problems that cannot be reduced to a combination of horizontal and vertical elements.'[140] Key to the relationship of the Précis and the Recueil was development of a standardization of measure, and of the means of graphic representation that allowed Durand to work on the Recueil's documentation of existing historical material. The Recueil was published with the intention of making available to the designing architect the discipline's history, such that one could work formally on it. And 'this had to be done so that both comparability of forms and applicability of concrete design work were always guaranteed in the process of reducing them to the essentials (that is, in representing typological diversity).'[141] Typology evident in design practice through Durand does not replace creativity but, Oechslin argues, lays out 'more demanding conditions and premises' for it. Importantly, this always involved a concern for defining the remaining freedom of the designer, within the boundaries of an unavoidable relationship to societal actualizations and indispensable historicity. Durand's method 'guarantees the artist the ability to

[138] Ibid. pp. 46
[139] OECHSLIN, W. 1986. Premises for the Resumption of the Discussion of Typology. *Assemblage,* no.1**,** pp.36-53. It is from the Revolutionary architects, Boullée in particular, (Durand was apprenticed to Boullée) that Durand begins with the idea of an 'inventory' of 'primitive and original parts' without which it would have been difficult to progress 'from the simple to the composite, from the known to the unknown' as Durand has made an account of his own method at the beginning of Volume Two of the Précis. DURAND, J.-N.-L. 1802-5; rev. ed. 1817-19; reprint of rev ed. 1985. *Précis des leçons d'architecture données à l'École polytechnique.* Paris. In PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. Though as Picon states: 'There is nothing genuinely 'primitive' about the list of elements that Durand presents to his students. It is a list that refers to the architectural production of his own time and to its conventions.' Ibid. pp. 38. These elements in the Précis are confined to the basic architectural ingredients of foundation, walls, detached supports, floors, vaults, roofs. The orders are included under the heading 'detached support' though Durand makes it clear that they are not essential.
[140] PICON, A. 2000. From 'Poetry of Art' to Method: The Theory of Jean-Nicolas-Louis Durand. *In:* PICON, A. D., JEAN-NICOLAS-LOUIS.) (ed.) *Precis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture.* Los Angeles: Getty Research Institute. pp. 41
[141] OECHSLIN, W. 1986. Premises for the Resumption of the Discussion of Typology. *Assemblage,* no.1**,** pp.36-53. pp. 51

function effectively and the possibility of affecting society and in this way passes on to him a precisely defined role.'[142] Oechslin concludes his account of type by arguing that any resumption of a discussion on architectural typology will by no means be a reductive model of architectural invention, as critics have indicated. On the contrary, we must perceive it as an intelligently developed construct in which 'the link is ensured between the systematic and the historical or conventional (and therefore always societally oriented limitations of architecture in their reciprocal dependence.)'[143]

2.5 Negotiating with the Outside: The Transactional Space of Architecture

2.5.1 The Transactional Work of Architecture's Graphic Realm

We have seen with Durand the very practice of architecture itself has been constituted in its modern form via the taxonomic methodology of science, where the diagnostic and propositional graphic gesture of the design process is argued by Oechslin to form a court of appeal between the inherited objects of architecture's disciplinary history, and a move into a projective future. To recognize that nothing can enter architecture without having been first converted into graphic form is to re-engage a significant body of work in the field of the last thirty years that has focused on the architectural drawing.[144] The question of how Oechslin's court of appeal functions sits with the question of drawing itself.

In speaking of the drawing, Stan Allen has noted the impossibility of an accurate transcription of vision as the fundamental starting point to any discussion about representation and drawing. If, then, there is only an incomplete mapping of perception by geometry, and if vision by necessity operates through the social, any history of representation becomes a history of the mediation of forms of the social through forms of representation: the difference between vision and

[142] Ibid. pp. 52 Picon argues that the 'self-evident interaction with these conditions has been lost to the architect in the new mythos of the unbound desire for invention… This myth leaves the architect wholly at a loss, so that architecture is then surrendered ever more completely to accidents and to forces foreign to architecture itself.'
[143] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City*. London: Architectural Association Publications.
[144] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications, EVANS, R. 1997. *Translations from Drawing to Building and Other Essays.* London: Architectural Association Publications, ALLEN, S. 2000. *Practice: Architecture, Technique and Representation.* Amsterdam: G+B Arts international.

visuality.[145] Any work of representation then, architectural drawing included, is a series of provisional strategies, necessarily intangible and abstract, that work to negotiate difference within the gap between these two conditions. Projective drawing, then, is not a thing in itself, Allen points out, but the relationship between things. Its internal relationships are not fixed, but can be endlessly reconfigured. 'It follows that the exercise of representation in architecture always necessitates an active effort of geometrical imagination, a mental and intellectual projection, like the translation of musical notation, to synthesize these always multiple and incomplete representations.'[146]

Fundamental to the relationship between architecture and its outside is the operation of repetition and singularity through material resistance in representation. As Barth asks, with what does architecture respond to its outside: geometry, form, structure? While each of these is key to the disciplinary functioning of architecture, each is too reductive to adequately account for how the field of architecture engages. Barth claims that architecture responds through representation, by 'understanding or diagramming its material resistance to alteration and emergence,' and its capacity for integrating and organizing matters and functions.[147] Central is the relationship between repetition and singularity, or, between continuity and transformation. Or one might even say, between thresholds of particular material organization and elasticity – exactly what we saw in the typological burden – the iterative testing through a trajectory of projects of the material organization, resistances and elasticity of the ground.

In support of this idea, in a much-repeated claim, Jeffrey Kipnis argued that 'diagrams underwrite all typological theories', in a statement that linked Durand with Deleuze's writing on Francis Bacon.[148] The diagram in this context is understood to work to constitute and organize decision-making fields where diagram is the 'collective name given to the patterning of materials and functions that cluster around reasoned reflections in a domain of action and

[145] ALLEN, S. 2000. *Practice: Architecture, Technique and Representation.* Amsterdam: G+B Arts international. pp. 12 See also EVANS, R. 1995. *The Projective Cast: Architecture and its Three Geometries.* London: MIT Press.
[146] ALLEN, S. 2000. *Practice: Architecture, Technique and Representation.* Amsterdam: G+B Arts international. pp. 12
[147] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City*. London: Architectural Association Publications.
[148] KIPNIS, J. 2006. Re-Originating Diagrams. *In:* CASSARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A, BARTH, L. 2003. Diagram, Dispersal, Region. *In:* MOSTAFAVI, M. & NAJLE, C. (eds.) *Landscape Urbanism: A Manual for the Machinic Landscape.* London: Architectural Association Publications, BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City*. London: Architectural Association Publications.

experimentation.'[149] Clearly, it is also important to note that this use of the notion of diagram is a different inflection and temporality to the term as it was used in Chapter One, with the idea of the strategic exemplar diagram. There, diagram designated the sociopolitical patterning of bodies in space in, for example, the Panopticon, or in domesticity, such as with the model apartment that preceded the generalized outlay of the single-family dwelling and the modern family by the middle of the twentieth century. If we accept, however, as we have seen in this thesis, that space precedes meaning, with the idea of the diagram as function in diagrammatic typology that we are using here, diagram has no content. It is simply a function that, as Rajchman suggested, precedes content and theory or even interpretation,[150] where Foucault has argued that interpretation 'is the violent or surreptitious appropriation of a system of rules, which in itself has no essential meaning… The development of humanity is a series of interpretations.'[151] So, the diagram here is that which mobilizes a lateral field of governmental reason (as found in the condition of domesticity, for example) while at the same time, it 'generates the punctual tactics of function and spatiality' in the well-defined areas of architecture's disciplinary practice and technical knowledge.[152]

What is the work of the diagram? Deleuze and Guattari argue that the diagram as a function is not physical, corporeal or semiotic, 'it does not function to represent even something real, but rather constructs a real that is yet to come, a new type of reality.'[153] For Barth, the function of the diagram is to 'lend structure and consistency to the ways specific material constellations or media, such as architecture, address a general field of problems, issues and practices;' we will claim in this thesis that that field is the discursive field of urbanism.[154] Of course, it is important

[149] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications. pp. 159
[150] Foucault writes: 'In interpretation were the slow exposure of the meaning hidden in an original, then only metaphysics could interpret the development of humanity. But if interpretation is the violent or surreptitious appropriation of a system of rules, which in itself has no essential meaning, then the development of humanity is a series of interpretations.' FOUCAULT, M. 1977. Nietzsche, Genealogy, History. *In:* RABINOW, P. (ed.) *The Foucault Reader: An Introduction to Foucault's Thought.* London: Penguin Books. pp. 87
[151] Foucault reacted with a very strong negative when asked if he was a structuralist. Yet the critique of structuralism continues to dominate much contemporary review of his work, which is unfortunate – though with quotes like this it is easy to see why. It is beyond the scope of this thesis to mount a defense of Foucault against the claim of structuralism ibid. pp. 87
[152] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City.* London: Architectural Association Publications.
[153] DELEUZE, G. & GUATTARI, F. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia.* Minneapolis: University of Minnesota Press.
[154] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications. pp. 159

to note that the discourse of urbanism cannot be defined or instrumentalized by a single technical discipline such as architecture – nor can architecture only be the tool of any single discursive field. It is, however, architecture's particular disciplinary density and autonomy that serves well its capacity to respond to the complexity and plurality demanded by urbanism.[155] As the mirror and tool of thought, the diagram provides the abstract means of thinking about organization.[156] Allen identifies that the 'variables in an organization diagram include both formal and programmatic configurations: space and event, force and resistance, density, distribution and direction. In an architectural context, organization implies both program and its distribution in space, bypassing conventional dichotomies of function versus form, or form versus content.'[157] Implicit in the diagram's operation are multiple functions over time and space which are subject to continual modification. Here, any abstraction is instrumental in proliferating content, rather than embodying, or content being embedded in it. As such, and as predicating architecture's design process within modernity, such a practice of architecture locates itself between the actual and virtual. With this in mind, the following chapter will discuss the mechanism of graphic conversion between architecture's disciplinary interior and its exterior;[158] what Allen calls the transactional character of architecture.[159]

2.5.2 Charles Sanders Peirce: A Theory of Signs

Charles Sanders Peirce's theory of signs begins to suggest how one might think through the nature of this transaction. It is possible to see evident in Durand's tables the presence of multiple operations of the sign. The drawings are icons, as an image of the object, as well as

[155] Ibid. pp. 159
[156] ALLEN, S. 1998. Diagrams Matter. *Any: Diagram Work,* 23. pp. 16
[157] Ibid. pp. 16
[158] This conversion is never smooth, there is distortion in the 'transposition,' dependent on the resistance or specificity of each medium. Allen references Kipler here and a theory of transposition over translation, with its connotations of linguistics and meaning. 'In operations of transposition, conversions from one sign system to another are performed mechanically, on the basis of part-to-part relationships without regard for the whole. In the same way, diagrams are not 'decoded' according to universal conventions, rather, the internal relationships are transposed, moved part by part from the graphic to the material or the spatial, by means of operations that are always partial, arbitrary, and incomplete. The impersonal character of these transpositions shifts attention away from the ambiguous, personal poetics of translation and its associations with the weighty institutions of literature, language and hermeneutics.
A diagram in this sense is like a rebus. To cite Kittler again: 'Interpretive techniques that treat texts as charades or dreams as pictures have nothing to do with hermeneutics, because they do not translate.' The diagram brings the logic of matter and instrumentality into the realm of meaning and representation, and not vice versa. 'Rebus is the instrumental case of res: things can be used like words, words like things.' ibid. pp. 17
[159] Ibid. pp. 19

being indexical: they indicate a 'legible tension' in their constitution as part of the process of working through the tabular format of repetition and differentiation.[160] For Barth, what's interesting about this is that both typology and the diagram depend upon the possibility of this double reading in the abstraction of Durand's signs. 'This is not to suggest that all typological reasoning depends upon the understanding of architecture registered by Durand in the early nineteenth century;' on the contrary, there have been regular reviews, updating and reorientations of abstraction and organization throughout the twentieth century, as we saw with Hays' account of Meyer. What's useful in all of this is finding a conceptual apparatus that can link a relationship between an autonomous domain of material practice such as the discipline of architecture, and its outside, the discursive social and political content architecture is required to negotiate and which gives the otherwise flaccid discipline of architecture traction.[161]

Use of the concept 'symbolic' here is not to be confused with semiotics or Derridean notions of meaning. Rather, it comes through Peirce (1839-1914) and the context of his development of a general theory of signs, 'his semiology.'[162] Vidler reports that for Peirce, all thinking took place with signs. Signs stood in for or represented a thing, serving to 'convey knowledge of some other thing.' A sign, therefore, always has an object, and it always excites in the mind an idea of that object . [163] Signs then are tools for thinking with.

Within Peirce's theory there are three kinds of sign, each of which acts by inciting in the mind, by different means, an idea of the object; therefore, there is a degree of interpretation involved.[164] The point in examining Peirce's theory of signs is not to further refine the idea, but

[160] This 'legible tension' is not the same as *Allen's identification of the use of translation in the concept of the Index in contemporary practice, where In recent practice, the concept of the index has been brought into play as a means of encoding information about the site or its history(site forces) through process based operations of tracing and geometric transformation (contiguity) interpretation and translation figure deeply in all of these procedures*.' What we're speaking about here with INDEX is something different again. Ibid. pp. 18

[161] Here, the work differs to someone like Argan, who 'moved in the opposite direction in linking type to iconology. Types, he believed, should read more in relation to the way they signify their ideal affinity with content, rather than for their reasoned relation to material experimentation.' What this does, Barth argues, and what Oechslin later points out, is turn the projective difference between the model and the type into one of simple historical or geographical contingency. Rather than being a discursive reflection on the capacities of architecture, type in this instance and use becomes a 'mundane catalogue of options in relation to particular conditions. Barth argues that this accounts for Argan's failure to have type contribute very much to the problem of either formal definition or the discipline's experimentation.

[162] PEIRCE, C. S. 1893-1913. *The Essential Peirce. Selected Philosophical Writings. vol. 2.* In VIDLER, A. 2006. What is a Diagram Anyway? *In:* CASARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A.

[163] VIDLER, A. 2006. What is a Diagram Anyway? *In:* CASARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A.

[164] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City.* London: Architectural Association Publications. pp. 161

to notice that there is a tension between different signs in how they incite in the mind an idea of the object via a likeness, or equally and sometimes at the same time, how they incite in the mind an idea of the object 'through registering the material forces that drive their formation.' [165]

The first sign of Pierce's is the Icon. It is most like its object, 'a sign which stands for its object because as a thing perceived it excites an idea naturally allied to the idea that object would excite.'[166] Most icons are likenesses: a painting, for example, or by some definitions a photograph, or an audio recording. The second of the signs is the Index. It has no resemblance to its object, but retains, instead, material evidence of the object's passing that points back toward it. 'An index stands for its object by virtue of a real connection with it, or because it forces the mind to attend to that object:'[167] a footprint in the sand, for example; Peirce uses the example of a barometer showing temperature; or, others have given the example of a photograph, understood in this instance in terms of a material trace through light rather than as a likeness (so it can exist in either category).[168] The third sign is the Symbol. While index and icon are non-declarative signs, the symbol 'is a sign naturally fit to declare that the set of objects, which is denoted by whatever set of indices may be in certain ways attached to it, is represented by an icon associated with it.'[169]

For Peirce, the diagram is not an index or a symbol, but rather it is a special kind of icon.[170] There are three kinds of icons: those properly called image or 'hypoicons:' for example, paintings, they resemble their objects. In the second instance, there are those icons that resemble the character of their objects through parallelism, what Peirce calls 'images.' And finally there are those icons 'that mark out the internal and external relations of their objects in a more abstract way, analogously.'[171] The diagram within this definition, Barth argues, 'is

[165] Ibid. pp. 161
[166] PEIRCE, C. S. 1893-1913. *The Essential Peirce. Selected Philosophical Writings. vol. 2.* In Vidler pp. 2
[167] VIDLER, A. 2006. What is a Diagram Anyway? *In:* CASARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A.
[168] Here there is a discrepancy between Vidler's positioning of the photograph and Allen's positioning of the photograph. While Vidler puts the photograph in the category of Icon on account of its likeness, for Allen, following Susan Sontag's account of photography in terms of the materiality of the trace embodied in the photograph, the photo is an INDEX. See BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City*. London: Architectural Association Publications. pp. 161
[169] PEIRCE, C. S. 1893-1913. *The Essential Peirce. Selected Philosophical Writings. vol. 2.* In Vidler pp. 2
[170] VIDLER, A. 2006. What is a Diagram Anyway? *In:* CASARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A.
[171] Ibid. pp. 19

particularly useful for thinking because of the way that [diagrams] filter out less important information and focus on key relationships.'[172] Diagrams, to Peirce, '*were essential elements… because they captured a certain state of dynamic things in such a way that their relationship could be observed*.'[173] Abstraction is the key to this; and understanding that the image is not final or complete but rather an incitement for the consideration of additional repetitions and differentiations. Peirce argues that 'the diagram suppresses a quantity of details, and so allows the mind more easily to think of the important features.' The diagram doesn't produce a catalogue of endless possibilities; this testing and clarification, in fact, requires reason and attention. 'One diagram leads to others, as if in a chain reaction, incorporating new elements along the way and forming something like a composite field of linked relationships;'[174] Something not unlike Durand's rudimentary tables. As Vidler states, diagrams are both the instrument of thought, and the mirror of thought;[175] they allow a clarifying of thought which then allows one to respond to 'outside conditions or premises of the medium one is working with… They are graphic indications of a reasoned order occasioned by the intersection of material environments.'[176] We have also agreed, following Durand, that if architectural typology deals with the material of architecture's disciplinary history, the diagram does not point toward this internal history of the discipline, rather, it turns outward. It signals possible relations of matter and information in a transactional relationship between interior and exterior.

The diagram, unlike the expressive drawing, provides no depth of meaning beyond its surface. 'As it, in itself, displays the formal features of its object, it substitutes for and takes the place of its object.' Vidler points out that this is why Peirce sees the diagram as avoiding 'the distinction between the real and the copy,' a distinction which Peirce claims disappears completely in the diagram. 'The question it raises: is it a real object or is it a copy of a real object?' makes it an instrument of suspended reality, an instrument of and for utopia, or what we might agree is

[172] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications. pp. 35
[173]. In ibid. Peirce, the son of a Harvard Professor of Mathematics and Astronomy, and he himself trained in philosophy and chemistry, had an interest in trying to capture the communicative intersection of general and technical reasoning
[174] Ibid. pp. 162
[175] VIDLER, A. 2006. What is a Diagram Anyway? *In:* CASARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A.
[176] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications. pp. 162

simply the constant projection of other, better, possible futures.[177][178]

An architectural plan is not a representation of knowledge, no matter the degree to which it is obliged to engage and assimilate a constellation of technical and reflective knowledges, it is not a picture of another thing, it is instead an instrument. Barth has argued that if the diagram is one kind of icon, 'the architectural drawing in distinction, inclines to all three readings of the sign: as an index as material registration, in terms of the symbol as declarative, and as an icon as diagram.'[179] The architectural drawing reinforces a sense of immediate presence between the subject and the likeness of some object (the icon, which might be very useful for designation) while as another form of icon, the architectural drawing can tend to specify relational sets (the diagram, useful for interrogation and experimentation). In addition, as an index, the architectural drawing encourages us to take note of conditions, forces, and agencies that stand behind the formation and selection of architectural material.[180]

If the diagram, then, is always the instrument and mirror for thought, and also in the same moment, 'that which mobilizes a lateral field of governmental reasoning' already always

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[177] The use of the concept and term 'utopia' here is unhelpful, we will instead agree that there is an epistemologically based drive within 'modernity' that includes architecture's disciplinary specific diagnostic and propositional gesture dependent on and made through the graphic realm. This gesture is always asking the question 'What is the city?' rather than making a statement – as such, it is always involved in a projection.

[178] As Stan Allen has written, 'A diagrammatic practice… locates itself between the actual and the virtual and foregrounds architecture's transactional character.' ALLEN, S. 1998. Diagrams Matter. *Any: Diagram Work,* 23. pp. 6
It is 'relatively indifferent to the specifics of individual media. It privileges neither the durability of architecture's material effects nor the fluidity of its informational effects. Inasmuch as it does not insist on historically sanctioned definitions of architecture's disciplinary integrity, it is, in principle, open to information from architecture's outside…'ibid. pp. 16

[179] Allen argues slightly differently here regarding the definition of the architectural drawing with reference to Peirce's theory of signs. Allen claims that the architect's customary way of working can be classified according to the 'well-known categories of sign established by C.S. Peirce' where '*Plans and elevations function like icons (according to similitude) while the notations that accompany them are symbols (based on the rule of convention). In recent practice, the concept of the index has been brought into play as a means of encoding information about the site or its history(site forces) through process based operations of tracing and geometric transformation (contiguity) interpretation and translation figure deeply in all of these procedures*. ' Allen writes that '*by contrast, the move away from translation to a diagrammatic practice based on transposition, and the resulting bypass of the interpretive mechanism, is consistent with Deleuze and Guattari's description of the functioning of the diagram, which also evades conventional semiotic categories: 'Diagrams must be distinguished from indexes, which are territorial signs, but also from icons, which pertain to reterritorialization' and from symbols, which pertain to relative or negative deterritorialization.'* DELEUZE, G. & GUATTARI, F. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia.* Minneapolis: University of Minnesota Press. Quoted in ALLEN, S. 1998. Diagrams Matter. *Any: Diagram Work,* 23. pp.18
For the purposes of this paper, we will not be taking into account Deleuze and Guattari's position regarding the diagram, following Vidler's lead when he states that: 'We have to remember that all of Deleuze's re-readings of philosophers – Kant, Bergson, Nietzsche, Foucault – are in effect reformulations; like the diagrams of which he speaks endlessly, previous philosophical maps are there to be redrawn, their boundaries erased and their topographies disturbed. 'It was Deleuze, who, precisely in his study of Foucault, who adumbrated a theory of the diagram that was at once, more generalized and more evolutionary, if one can use that word, than in Foucault's own, historically specific, example. For Deleuze, Foucault's contribution was to have identified what he termed the 'cartographic' character of the diagram. For Deleuze, the panoptical diagram generalized, was the specific prison diagram generalized to an entire society' VIDLER, A. 2006. What is a Diagram Anyway? *In:* CASARA, S. (ed.) *Peter Eisenman: Feints.* Milan: Skira Editore S.p.A.

[180] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building types and the City.* London: Architectural Association Publications.

present,[181] it is reliant on spatial and formal abstraction as the thing that makes possible its transference to the discursive urban field.

> 'Abstraction permits the strategic consideration of generalized functions and relations. The virtue of this capacity on the terrain of urban dispute is twofold. On the one hand, it divorces diagnosis from the question of immediate interests, that game of advantage among polarized and immobile camps, and links it to the broader field of knowledge and professional competence by which the urban comes to be a reasoned and governable domain. Here, diagnosis enacts the engagement between strategic function and stratified knowledge that Foucault explored under the couplet power/knowledge. Secondly, it introduces the line by which the exemplary may be brought to bear upon the singular case. The question of the local decision is dispersed onto the wider field of urban reason, where it may be treated as a case.'[182]

2.5.3 A Note on the Indexical and the Work of Eisenman

As abstraction the architectural drawing is not like code or like language to be translated. It doesn't categorize, generalize and purify what would otherwise remain on a higher conceptual plane; it doesn't point toward form withdrawn from matter. As we've established it is not a representation of thought. It is, instead, thought's mirror and its instrument. But the drawing is also potentiality; a potentiality situated within a differentiated field of serial opportunities where the plane of the drawing is never blank and awaiting the hand of the heroic omnipotent architect. Rather, the abstraction of the architectural drawing is already always full of 'transformable possibilities.'[183] Here, one is reminded of Deleuze's description of the diagram as the already always-full canvas in his discussion of Francis Bacon. Where the objective of the

[181] BARTH, L. 2003. Diagram, Dispersal, Region. *In:* MOSTAFAVI, M. & NAJLE, C. (eds.) *Landscape Urbanism: A Manual for the Machinic Landscape.* London: Architectural Association Publications. pp. 33
[182] Ibid. pp. 33
[183] RAJCHMAN, J. 1995. Another View of Abstraction. *Journal of Philosophy and the Visual Arts,* No 5**,** 16-24. pp. 18

artist in this instance isn't the addition of material onto a ready blank canvas, the tabula rasa, but instead it is a process of scraping away all that is already always there.[184]

But this is not the same as exploiting the capacity of the indexical to record the process of design in a way that locks the architect into the 'evidential structure of the index.' This is a condition that can only point backwards to the operations of design and the private language of architecture, rather than opening up the interior of the discipline to its exterior.

Evans notes that this tendency covers a whole range of thinking in architecture and design process, where there has been an explanation given of the formal characteristics of a building in terms of fictional movement – as a metaphoric reference to the indexical, ie. the shifted grid; scaling and folding surfaces; the implication of narrative time, for example.

> 'Any time we see work that justifies itself by reference to the history of its design process – interrogations of the body, representations from the late 1980s, architectural deconstruction, which understood form as the record of a violent collision; Liebeskind's memory traces; the mapping projects of the 1990s or even today, the persistent student habit of explaining work by retracing the design process – we are in the territory first mapped by Eisenman in the seventies with his investigations of the index.'[185]

Allen's complaint, and we will agree here, is that this work has become ossified into a rigid formula. Far from its original intention to rethink architecture's procedures, it has invariably become simply an indication back in time, to the event of the design process and the hand of the author.' A closed circle results, in which the means of interpreting things are recycled as the

[184] DELEUZE, G. 2003. *Francis Bacon, the Logic of Sensation.* Minneapolis: University of Minnesota Press. For the purposes of this paper, we will not be taking into account Deleuze and Guattari's position regarding the diagram, we'll follow Vidler when he states that: '*We have to remember that all of Deleuze's re-readings of philosophers – Kant, Bergson, Nietzsche, Foucault – are in effect re-formulations; like the diagrams of which he speaks endlessly, previous philosophical maps are there to be re-drawn, their boundaries erased and their topographies disturbed. It was Deleuze, who, precisely in his study of Foucault, who adumbrated a theory of the diagram that was at once, more generalized and more evolutionary, if one can use that word, than in Foucault's own, historically specific, example. For Deleuze, Foucault's contribution was to have identified what he termed the 'cartographic' character of the diagram. For Deleuze, the panoptical diagram generalized, was the specific prison diagram generalized to an entire society*.' Rather than pursuing a theory of the diagram, this paper's focus is on understandings of architecture's disciplinary specificity and its relationship to its outside.

[185] ALLEN, S. 2006. Trace Elements. *In:* DAVIDSON, C. (ed.) *Tracing Eisenman.* London: Thames & Hudson. pp. 63

model for making things. These operations work effectively to interrogate the means of representation, which are foregrounded in the process, but are powerless to engage any material not already implicated in the hermetic procedures of design.'[186] The outcome is entirely self-referential, it slows architecture down, locks it into an unresponsive posture incapable of addressing the transforming demands of the exterior, the urban, toward which it is called.

Ironically, this procedure is most often linked in contemporary architecture's move toward the digital, where new technologies have promised an architecture more adaptive and responsive to change. The digital environment 'allows the designer to treat architecture as fluid matter that simulates movement and growth.'[187] But in the capture of the image of a dynamic process, the objects themselves lose their instrumentality in any way other than as visual metaphors. While this work contains an entirely different visual and aesthetic language to that of Eisenman's, this reference to process is the same as his explorations 30 years ago, where, 'like trace elements left for a detective to analyze, these artifacts point back to their own origin, freezing a moment in time and evoking a chain of reconstructive interpretation.'[188]

2.6 **Conclusion**: **The Dynamism of The Typological Burden: Material and Organizational Experimentation**

As has been explored, within the housing project there is evident a tension. On the one hand, we're confronted by its transformative capacity in the domain of type as indicated by Frampton in his account of the typological burden; a domain which is very broad and which works toward a proliferation of difference via a native intelligence and drive to experimentation. On the other hand, it's impossible to ignore the kind of continuity illustrated in an account such as Richard Plunz's History of Housing from within the specificity of New York, or what is even more

[186] Ibid. pp. 63
[187] Ibid. pp. 63
[188] Ibid. pp. 65

apparent in the work of someone like Roger Sherwood in his 1978 publication Modern Housing Prototypes. [189]

This thesis is working with very specific definitions and separations of the notion of discipline and that of knowledge. The consequences of this are twofold and it opens up two lines of enquiry. The first is in terms of architecture's internal disciplinary functions. Architecture's interiority is characterized by material and organizational experimentation; what is its internal terrain of dispute, and with what sort of unity is it held together. The second consequence and line of enquiry is in terms of architecture's relationship to its outside. What allows a performative reciprocity between architecture's disciplinary interior and its outside; what is the transactional ground to that relationship.[190] As we've seen, the graphic realm of architecture, the architectural drawing itself, is the transactional ground of this relationship.

Typology, this thesis argues, operates as an immanent force that cuts through the interiority of architecture.[191] It interrelates a series of otherwise disparate problematizations that cover issues of organization, materiality, structure and spatiality. Used here, this thesis doesn't understand typology as belonging to the architectural object, as is the case in most understandings of type where, historically and particularly in aspects of its use in the 1960s, typology has been widely understood as a static grid of specification that utilizes a tabular graphic format to classify objects driven by a taxonomic imperative. Instead, we understand type as a process of reasoning. It has an abstract spatial and organizational specificity that inflects, and is in turn inflected by, a strategic and manifold field external to it and in which a series of diagrams are

[189] SHERWOOD, R. 1978. *Modern Housing Prototypes.* London: Harvard University Press.

[190] I am grateful to Dr Pavlos Philippou for this idea of architecture's 'inflection' between an inside and its outside. This was clarified in an unpublished paper titled *'Type and Diagram (in the context of cultural buildings)'* 2006 produced as part of the Doctoral Research Group Architectural Urbanism at the Architectural Association, London led by Professor of Urbanism, Lawrence Barth also with Dr Katharina Borsi. See Borsi for a discussion regarding the insertion of the scale of domesticity into the undifferentiated fabric of the 19th century Berlin Block BORSI, K. 2009. Drawing and Dispute: The Strategies of the Berlin Block. *In:* LATHOURI, M., PERITON, D. & DI PALMA, V. (eds.) *The Intimate Metropolis.* London: Routledge.

[191] See PHILIPPOU, P. 2007 (March). Type, Diagram and Urban Change: or the Instrumentality of Architecture for Urban Change. Architecture Association, School of Architecture. Phd Seminar 2006-07: The Architecture of Urban Change Led by Prof. Lawrence Barth, with Katharina Borsi and Tarsha Finney. To make this claim is to reference architectural writers and thinkers as diverse as: COLQUHOUN, A. 1967. 'Typology and Design Method'. *Arena,* vol.33, ARGAN, G. C. 1963. On the Typology of Architecture. *Architectural Design,* 33**,** 564-565, OECHSLIN, W. 1986. Premises for the Resumption of the Discussion of Typology. *Assemblage,* no.1**,** pp.36-53, VIDLER, A. 1977b. The Third Typology. *Oppositions,* 7, FRAMPTON, K. 1973. Twin Parks as Typology. *Architectural Forum***,** p.56-61, LEE, C. & JACOBY, S. (eds.) 2007. *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications, MONEO, R. 1978. On Typology. *Oppositions 13*, BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications, LEE, C. C. M. 2012. *The Fourth Typology: Dominant Type and the Idea of the City.* Degree of Doctor, TU Delft.

operative.[192] As we've seen, key to this drive to abstract experimentation is architecture's graphic realm. An account of design practice via Durand's use of graphic tables in a diagnostic and propositional gesture gives some insight into the functioning of this relationship of negotiation and the emergence of the discipline of architecture itself. However, it leaves open the mechanism of transaction between inherited material and conventions and the graphic systems of reasoning.

[192] PHILIPPOU, P. 2007 (March). Type, Diagram and Urban Change: or the Instrumentality of Architecture for Urban Change. Architecture Association, School of Architecture. Phd Seminar 2006-07: The Architecture of Urban Change Led by Prof. Lawrence Barth, with Katharina Borsi and Tarsha Finney.

PART II

THE SPECIFIC CONTEXT:

The City of New York, the Housing Project and Architecture's Disciplinary Negotiation

INTRODUCTION

As we have seen in this thesis and particularly in Chapter Two, understanding the housing project as simply a reflection of a series of things external to it – those economic, social or political forces, for example, to which change is so often attributed in accounts of architectural history and the history of housing in the city – fails to adequately account for architecture's relationship to the city. Furthermore, such accounts do not assist in clarifying where architecture's capacity and agency is in the transformation of the city and, particularly, transformation on the occasion of housing.

In a broader field of architectural and urban theory and practice, architecture's relationship to the city is a key theme. We might see this in the catalogue of housing projects published since 2000, for example, as outlined in Chapter One; or it was evident these same years in the renaming of graduate programs of study within architecture schools to include the 'urban.'[1] Architecture's relationship to the urban is one that bears upon questions of its disciplinary autonomy, as we saw in Chapter Two. It is related to ideas of architecture's agency in the change and transformation of the city, as this thesis has discussed, and to the very possibility of architecture's discipline-specific and unique material politics, as Chapters One and Two have begun to outline. Indeed, recent years have seen a plethora of publications addressing architecture's relationship to the city, seeking to understand seemingly uncontrollable urban growth as a network of flows and infrastructures, or as an aggregation where architecture and the urban form an unquestioned, apparently natural continuity.[2] However, neither the descriptions of the complexities of the city,

[1] One might look at the Architectural Association, for example, by 2005, regardless of the scale at which a program worked, each declared in its title a relationship not just to architecture but to the city: M.A. program in Urbanism and the City; the M.Arch Design Research laboratory (DRL) changed its name to Architecture and Urbanism (DRL); and Landscape Urbanism, which emerged as a significant force in the early 2000s.

[2] An example of cities understood as networks of flows and infrastructures might be much of the work of an urban geography. HARVEY, D. 1990. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change.* Oxford: Blackwell. HARVEY, D. 1996. On Planning the Ideology of Planning. *In:* CAMPBELL, S. & FAINSTEIN, S. (eds.) *Readings in Planning Theory.* London: Blackwell. KNOX, P. & TAYLOR, P. (eds.) 1995. *World Cities in a World System.* Cambridge University Press. SASSEN, S. 2007. *A Sociology of Globalization.* London: W.W. Norton. SASSEN, S. 2002. Locating Cities in Global Circuits. *Environment and Urbanization,* 5. CASTELLS, M. 1996. *The Rise of the Network Society.* London: Blackwell. CASTELLS, M. 1977. *The Urban Question: A Marxist Approach.* London: Edward Arnold Publishers Ltd. CASTELLS, M. 1989. *The Informational City.* London: Blackwell. SASSEN, S. 2005. The Global City: Introducing a Concept. *The Brown Journal of World Affairs,* Winter/Spring XI. SASSEN, S. 2006. *Cities in a World Economy.* New York: Columbia University. For the city as aggregation see ALEXANDER, C. 1964. *Notes on a Synthesis of Form.* Cambridge, Mass.: Harvard University Press. ALEXANDER, C., ISHIKAWA, S. & SILVERSTEIN, M. 1977. *A Pattern Language: Towns, Buildings, Construction.* New York: Oxford University Press. And The Doorn Manifesto, edited by Peter Smithson in 1968, *Team 10 Primer.* Cambridge, Mass.: MIT Press, which states: 'THE DOORN MANIFESTO 1.

nor the insistence on architecture's formal autonomy as some sort of language, articulate architecture's precise relationship to the urban.

Chapter One of this thesis outlined accounts of the emergence of spatial reasoning in the city as part of the techniques of liberal governmentality and the organizing of populations of people in the liberal metropolis in the eighteenth and nineteenth century within the emerging epistemological conditions of modernity. This followed closely Françoise Choay's identification of the unique discourse of space specific to this time. Chapter Two then explored how architecture's disciplinary skillset, via typology, might be understood to operate relative to a mode of spatial reasoning that predicates its usefulness to that condition. Chapters One and Two together showed that with an iterative and conditional autonomy, architecture's discipline-specific material and formal skills deployed toward organizational experimentation is always instrumental as both a field of thought and, at the same time, as one of action: the diagnostic and propositional gesture predicating the design process itself and reliant on the architectural drawing. The proposition underwriting this thesis is that, understood as a discipline, architecture's relationship to the discursive practices of the city can be clarified such that its limited autonomy to affect transformation can be understood, and the difference between novel churn and real transformation better seen. Within the realm of the practice of housing, with its heavily burdened diagrammatic condition and inherited set of sociopolitical relationships, real generalized transformation is difficult to achieve.

The second part of this thesis, then, is concerned with the specific and unique political, legislative, economic and non-discursive conditions into which this generalized discursive reasoning is deployed and deformed in an iterative and conditional relationship with the practice of the housing project. As was stated in the Introduction, the conditions and context through which this is explored are those specific to the City of New York in the twentieth century. Here, it is possible to see the more general practice of the housing project unfold in three specific directions. In the first

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It is useless to consider the house except as a part of a community owing to the interaction of these on each other. 2. We should not waste our time codifying the elements of the house until the other relationship has been crystallized. 3. "Habitat" is concerned with the particular house in the particular type of community. 4. Communities are the same everywhere. (1) Detached house-farm. (2) Village. (3) Towns of various sorts (industrial/admin./special). (4) Cities (multifunctional).'

instance, via the constitutive function of the dispute around centralization and decentralization in cities in the early twentieth century, and the role of scale in placing clusters of urban problems in the nineteenth and twentieth century: domesticity, neighborhood and the metropolitan region, for example. In another direction, in Chapter Four, the typological burden is explored as evidence of experimentation via an examination of the ground as both strategy within urban reform and, at the same time, as object within architecture's discipline-specific formal and material experimentation. Finally, in Chapter Five, this is considered in terms of the instrumentality of the coming into form of the housing project via disputes around notions of blight and the consequent definitional transformation of public benefit within the Fifth Amendment of the United States Constitution concerning the conditions of the physical taking of property by the state.

The housing project understood as a practice is not only informed by these disputes and transformations, but is iteratively and, in the other direction, instrumental in those transformations. This, then, raises a series of questions regarding architecture's specific material political agency – a politics unique to architecture and concerned with conceptual definitions of the city and of we, its urban and domestic subjects.

Central, also, to the second part of this thesis and its three chapters, are the various ways that notions of conceptual stability to our understanding of the city can be seen. In Chapter Three, this argument will be made through a consideration of the instrumentality of scale via the public authority in the transformation of understandings of the size of the city. Initially, this occurred via transport infrastructure and the nationalization of rail as part of the work of the public authority, but equally, and later, from the late 1920s, through the development of housing projects in the City of New York. Public authorities in the state of New York were established as mechanisms that could link questions of spatial arrangement and governmental procedure across uncooperative jurisdictional boundaries; such was the case with the Port Authority of New York and New Jersey. Initially, this was asked via the problem of the rail and port-freight network; by 1934 and the formation of the New York City Housing Authority (NYCHA), this question – what size is the city? – was being asked on the occasion of the coming into form of the housing project. It will be argued here that the successful work of operators such as Robert Moses and Lewis

Mumford, two urban actors significant in the development of the City of New York and typically understood to be in opposition to each other is, in fact, an understanding of this conceptual, definitional openness to the urban. That the process of design as a diagnostic and propositional gesture immanent to the discipline of architecture as discussed in Chapter Two is always about the conceptual transformation of the city itself.

ITERATIVE INSTRUMENTALITY: THE CONDITIONS OF EXPERIMENTATION

THE CONCEPTUAL INSTABILITY OF THE CITY: Size, Scale and Urban Governance New York City, 1920-60

'The city of modern architecture (it may be called the modern city) has not yet been built. In spite of all the good will and good intentions of its protagonists, it has remained either a project or an abortion; and, more and more, there no longer appears to be any convincing reason to suppose that matters will ever be otherwise.'

ROWE, C. & KOETTER, F. 1978

3.1 Introduction

Retrospective Readings of the City, from the Ville Radieuse to New York City
The Urban Context Understood as Continuous and Stable

Rowe and Koetter's influential 1978 publication *Collage City*[1] opens with the juxtaposition of two images (image 1). The first is a black-and-white photograph of Le Corbusier's Ville Radieuse, the unrealized Radiant City masterplan from around 1924. Next to it is placed the image of a built and unnamed housing project from mid-century New York City. In positioning these two images together, the authors ask the reader to see a direct causal link between them, where visible in the built outcome of one is the tragedy of the original model in the other. Equally clear and, at the same time, in the model of Ville Radieuse, is the inevitability of the later finished and built project and its consequences for the city.[2] What Rowe and Koetter present to us here is a lineal relationship between the two objects of architecture. Each is clearly accountable with reference to the other through time, and there is the assumption that the context of the city into which the mobile object of architecture is placed remains conceptually stable, from Le Corbusier's proposition for the Tower in the Park in the 1920s, to the publication of *Collage City* itself in 1978.

This chapter will question this conceptual stability. By the mid-1970s and the publication of *Collage City*, there was a pervasive and well-documented critical impulse that dominated the field of architecture and urbanism to see the traditional and existing city as the site of the modern movement's failure. This is demonstrated in the quotes at the opening of this thesis chapter and in Rowe and Koetter's publication; their argument regarding the two objects of architecture is premised on this. Evident in a diversity of architectural writing from Rossi's *The Architecture of the City,* to Koolhaas in *Delirious New York*, it can be seen particularly in history's treatment of the tower-in-the-park type housing solution that came to dominate housing

[1] ROWE, C. & KOETTER, F. 1978. *Collage City.* London: MIT Press.
[2] BARTH, L. 2007. The Complication of Type. *In:* LEE, C. C. M. & JACOBY, S. (eds.) *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications.

provision and urban transformation in cities like New York from the late 1930s through to the 1970s.[3] Koolhaas had, prior to 1978, argued forcefully, as if anyone needed more convincing, that urbanism in the City of New York had collapsed sometime in the mid-1960s. For Koolhaas, the dynamic and experimental pattern and logic described in the concept of Manhattanism with its 'culture of congestion' was at its most powerful between 1890 and 1940, and was finished by the 1964 World's Fair, 'source and subject (having) passed into premature senility before its 'life' was completed.'[4] Koolhaas was throwing wide open something Jane Jacobs had proclaimed as early as 1961 with *The Death and Life of Great American Cities*.[5] For Jacobs, the city, remarkable and instructive as the site of everyday life, was failing under the weight of infrastructural intervention from idealistic urban-planning professionals, architects, and 'the advice of women's magazines and Sunday supplements.'[6]

In 1983 Robert Stern et al. embarked on the monumental five-part historiographical documentation of New York's architecture and urbanism, the last of which, *New York 2000*, was produced in 2006.[7] In *New York 1960* (1995), the authors argued that

> 'After 1960 the physical fabric of the city would never be the same again… After 1960, as the city began to become in reality what Le Corbusier, thirty-five years before had conceived and designated as a vertical garden city, one in which generously scaled open areas would 'in fact make the city itself one vast garden,' the camaraderie of street and neighborhood life, so long the glue that kept the city's social fabric together, began to harden and dry, tearing apart the fabric of daily life.'[8]

[3] ROSSI, A. 1966. *The Architecture of the City.* London: MIT Press, KOOLHAAS, R. 1978. *Delirious New York.* Rotterdam: 010 Publishers.
[4] KOOLHAAS, R. 1978. *Delirious New York.* Rotterdam: 010 Publishers.
[5] JACOBS, J. 1961. *The Death and Life of Great American Cities.* New York: The Modern Library.
[6] Ibid. pp. 13
[7] STERN, R. A. M., FISHMAN, D. & TILOVE, J. 2006. *New York 2000: Architecture and Urbanism Between the Bicentennial and the Millennium.* New York: The Monacelli Press, STERN, R. A. M., GILMARTIN, G. & MELLINS, T. 1987. *New York 1930: Architecture and Urbanism between the Two World Wars.* New York: Rizzoli, STERN, R. A. M., GILMARTIN, G. & MONTAGUE MASSENGALE, J. 1983. *New York 1900: Metropolitan Architecture and Urbanism 1890-1915.* New York: Rizzoli International , STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.* New York: The Monacelli Press, STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1999. *New York 1880: Architecture and Urbanism in the Gilded Age.* New York: The Monacelli Press.
[8] STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.* New York: The Monacelli Press. pp. 9

As we saw in Chapter Two, in these writings and in the histories particularly, there is identified an historical rupture. It is established on the grounds of scale, density and abstraction through type-based category designations such as tower in the park, and what is understood to be in response, contextualism – a finer-grained, low-scale response to the existing and traditional city. Here, the architectural object, understood as reflection, is catalogued and processed in a series of ruptures and formal successions marking transformation: indigenous courtyard type, to tower in the park, to contextual, fine-grained response. In this succession, what is argued is a return of attention by the late 1960s to the existing and traditional city. What we will question in this thesis work is the idea of return. Return to something existing and traditional, a city that has been sitting quietly, waiting, in spite of architecture's operations. Instead, this thesis will argue that there is a conceptual transformation in what we understand the city to be which emerges as an effect of architecture's operations, not because of its failures.

3.1.1 Twin Parks, The Bronx 1969-74

To do this, the following chapters will take up in more detail the two projects that historians typically position at either end of this rupture, the Brounn and Muschenheim slum-clearance proposal of 1934/35, and Richard Meier's Twin Parks Northeast project in the Bronx, completed in 1973. Both were outlined briefly in Chapter Two in terms of their treatment in historical accounts of transformation of housing in the City of New York.

Before considering Twin Parks in detail, it is worth establishing a brief familiarity with the other projects in the Twin Parks cluster. As has already been outlined, the Twin Parks Housing Development was made up of four[9] middle-income housing schemes funded by the New York State Urban Development Corporation (UDC) and built in the early 1970s (Image 2).[10] Worked

[9] There is some confusion in the literature regarding how many sites comprised Twin Parks, and how many architects worked on the Twin Parks development. Plunz and Stern say three architects, four sites. Schindler and Spertus (SCHINDLER, S. & SPERTUS, J. 2015. Co-op City and Twin Parks: Two 1970s Models of Middle-Class Living in the Bronx. *In:* CARAMELLINO, G. & ZANFI, F. (eds.) *Middle-Class Housing in Perspective. From Post-War Construction to Post-Millennial Urban Landscape.* Bern: Peter Lang.) writing more recently say six architects, twelve sites. This thesis has followed Plunz's account of four sites, three architects.

[10] For accounts of the Twin Parks Development contemporary to its opening see COHEN, S. 1974. Physical Context/Cultural Context: Including It All. *Oppositions,* 2. pp. 15; STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.* New York: The

on by three architectural firms: Giovanni Pasanella at *Twin Parks Southwest (TPSw),* 1975*;* the two *Twin Parks Northwest (TPNw)* sites undertaken by Prentice & Chan, Ohlhausen, 1973; and Richard Meier & Partners at *Twin Parks Northeast (TPNe),* 1973. The total Twin Parks development comprised 1858 units for middle-income tenants, and was undertaken in conjunction with proposals for low-income housing to be sponsored by a non-profit housing organization, a collective of various church and civic organizations, The Twin Parks Association.[11]

Twin Parks Northwest (TPNw) was smaller than the other three projects in the group (Image 3). It experimented with a perimeter block type that had been common in the City of New York in the 1920s. Here, however, it is deformed by Prentice & Chan, Ohlhausen, and used to negotiate the level change at Webster Avenue in conjunction with the curve of East 184th Street (Image 4).

Twin Parks East (TPE), on the intersection of Southern Boulevard, Prospect Avenue, and East 187th Street in front of the Bronx Zoo, was the first of two projects in the Twin Parks development undertaken by Giovanni Pasanella. It is composed of a pair of twin high-rise slab buildings, one raised on a podium in which is situated a high school. On the opposite side of the street, the other tower is raised on pilotis. Both slab buildings are placed on a diagonal to Southern Boulevard and the park, and work to mark the entrance to the Bronx Zoo.

The third project is *Twin Parks West* (TPW), also by Pasanella. It is situated further down Webster Avenue, and is constituted of five sites on which have been constructed a series of high-rise slabs. In this project, most attention seems to have been paid to the interior articulation of stepped duplex sections. These are achieved through a complex interlacing of simplex and

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Monacelli Press. pp. 961, and STEPHENS, S. 1973. Learning from Twin Parks. *Architectural Forum,* 138**,** 56-61. More recent scholarship on Twin Parks includes SCHINDLER, S. & FREEMARK, Y. 2015. Twin Parks. *In:* BLOOM, N. & LASNER, M. (eds.) *Affordable Housing In New York: Triumph, Challenge and Opportunity.* New York: Princeton University Press. SCHINDLER, S. & SPERTUS, J. 2015. Co-op City and Twin Parks: Two 1970s Models of Middle-Class Living in the Bronx. *In:* CARAMELLINO, G. & ZANFI, F. (eds.) *Middle-Class Housing in Perspective. From Post-War Construction to Post-Millennial Urban Landscape.* Bern: Peter Lang. SPERTUS, J. & SCHINDLER, S. 2013. The Landscape of Housing: Twin Parks Northwest 40 Years On. *Urban Omnibus*.

[11] Headed by Father Mario Ziccarelli. see STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.* New York: The Monacelli Press. pp. 956.

split-level duplex apartments, which separate living and sleeping spaces by a half-level change. As a consequence, within the interior of the building, sixty percent of the corridor is eliminated with lifts stopping only every two-and-a-half floors. Pasanella talks of wanting the apartments to be like interlocking houses, not at all like the tenements or even new-build apartments.

3.1.2 Twin Parks Northeast (TPNe). Richard Meier & Partners, 1973

Twin Parks Northeast by (TPNe) by Richard Meier & Partners was built for 523 families and located across three irregular blocks between 183rd Street and the Bronx Zoo. With a site coverage of fifty-three percent, as opposed to the typical post-WWII tower-in-the-park site coverage of something around ten percent, the project is composed of two L-shaped blocks and one U-shaped block of six stories anchored to the south and northwest of the site by two 16-storey towers (Image 5). The first of these towers is on the corner of E183rd Street and Southern Boulevard overlooking the Bronx Zoo.

The second tower is on the corner of Crotona Avenue and Garden Street and overlooks the new public plaza space created within the arms of the blocks and with the closure of Grote Street (Image 6). Between these towers, the six-storey infill slab blocks create a scalar and material mediation with the surrounding and existing tenement blocks and row houses, and are clad in the same kind of jumbo brown brick as much of the surrounding urban fabric. At the street, the blocks both follow and reinforce an existing street wall (Image 7). The UDC's jurisdiction as a public authority to override local zoning and planning laws enabled the project to be built right to the periphery of the site on E183rd Street, Prospect Avenue and Garden Street.

But at times, the blocks also break with the existing street pattern, such as at the intersection of what was Grote Street and Prospect Avenue, opening the site and its new open spaces to the neighboring fabric. Contained within the blocks are a series of public plazas flanked by permeable, piloti-defined public arcades at the bases. The major public space is created with the closure of Grote Street between Prospect and Crotona Avenues, defined by new blocks to

the east and west, and to the north by the retention of existing structures. Careful attention has been paid to material articulation and subtle level change to create a hierarchy of spatial differentiation across the site, from the public space of the road and pavement to the semi-public spaces of the new plaza, through to the semi-private spaces of the piloti-flanked arcades contained within, at the entrance to the apartments above (Image 8). Behind the arcades is located the additional support program for those housed in the project and for those around it: community spaces, commercial spaces and parking (Image 9). The apartments themselves are simple and rectilinear. The large windows provide rhythm and fenestration detail on the exterior of the building, and on the interior provide additional light and access to views. (Image 10)

3.2 The City Always About to Become: Robert Moses and the New York City Housing Authority

Twin Parks Northeast was produced through the vehicle of a newly formed public authority, the Urban Development Corporation. As will be discussed in this chapter, the public authority played a very particular role in early twentieth century negotiations in New York City in terms of new infrastructure across uncooperative jurisdictional and administrative boundaries and as part of a constitutive dispute regarding decentralization and an ongoing questioning of the size of the city. In 1934, the New York State Legislature had passed the Municipal Housing Authority Act, creating the first public authority directed specifically at housing: the New York City Housing Authority (NYCHA). This Act amended the 1926 State Housing Law that permitted municipalities to form local authorities to develop housing projects. These would be financed by the sale of municipal bonds or by federal funds.[12] One of NYCHA's first moves was the 1934 competition for the slum clearance and new housing proposal for sixteen blocks of the Upper

[12] In his book Slums and Housing, James Ford pointed out a very critical difference between the State Housing Law of 1926 and its amendment by the Municipal Housing Authorities Law of 1934. Both laws were intended to promote production of housing for low-income families, but their definition of this type of housing differed significantly. The 1926 law defined low-income housing by placing upper limits on the average monthly rentals per room: Manhattan $12.50, and $11.00 elsewhere in the city. The 1934 law placed no limitation on rent, but instead emphasized 'low-cost,' implying that reduction in construction costs would be passed along to tenants in terms of reduced rents. See 'FORD, J., MORROW FORD, K., THOMPSON, G. N., PHELPS STOKES, N. & FUND, P.-S. 1936. *Slums and Housing, with Special Reference to New York; History, Conditions, Policy.* Cambridge, Mass.: Harvard University Press. referenced in PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. pp. 208

East Side of Manhattan. This site formed the base for what Brounn and Muschenheim were to work up into a fifty-block proposal by 1935. (Image 11)

Contemporary literature looks back on these projects, astounded at the courage and scale of their ambition. The question of transformation and change in the city and within the specificity of New York has been raised more recently by Hilary Ballon and Kenneth T. Jackson in the introduction to their 2007 publication *Robert Moses and the Modern City: The Transformation of New York,* released to coincide with a series of three New York City-based exhibitions celebrating the achievement of the 'Power Broker', New York bureaucrat and urban planner Robert Moses.[13] As the many newspaper articles and journal reviews of the publication and exhibitions point out, the objective of Ballon and Jackson's work has been to examine change as part of a contemporary response to a perceived loss of will in terms of visionary, large-scale planning and development in cities generally, and specifically in New York.[14] 'Since the 1980s, Moses's reputation has been rising,' they write, 'propelled by a fear that New York can no longer execute ambitious projects' such as the parkways, expressways, housing projects and recreational facilities that typify his interventions in, and dominance of, the city in the mid-twentieth century.[15] Twin Parks – with its distribution across the breadth of the Bronx, with its role as surgical intervention into building up and supporting an existing neighborhood and urban fabric rather than demolition, and with its site coverage and higher density – is argued to be a reaction against the period when Moses ruled the city.

The texts constituting Ballon and Jackson's later 2007 publication claim for themselves a territory of revision as a corrective gesture to the mythology surrounding Robert Moses concretized in Robert Caro's definitive 1975 Pulitzer Prize-winning biography *The Power*

[13] The Power Broker is the name often colloquially given to Moses and from which the title of Caro's biography is drawn. CARO, R. 1974. *The Power Broker: Robert Moses and the Fall of New York.* New York: Alfred A. Knopf. Ballon and Jackson published an edited collection of essays to go with three exhibitions in New York in 2007: BALLON, H. & JACKSON, K. T. 2007d. Introduction. *In:* BALLON, H. & JACKSON, K. T. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton & Company. The exhibitions were BALLON, H. & JACKSON, K. T. 2007b. *Exhibition: Slum Clearance and the Superblock Solution.* Wallach Art Gallery, Columbia University, BALLON, H. & JACKSON, K. T. 2007c. *Exhibition: The Road to Recreation.* The Queens Museum of Art, BALLON, H. & JACKSON, K. T. 2007a. *Exhibition: Remaking the Metropolis.* Museum of the City of New York.

[14] See for example GOLDBERGER, P. 2007. Eminent Dominion: Rethinking the Legacy of Robert Moses. *The New Yorker*. POWELL, M. 2007. A Tale of Two Cities. *The New York Times*, May 6th 2007. See also the more recently published review MENNEL, T. 2011. A Fight to Forget: Urban Renewal, Robert Moses, Jane Jacobs and the Stories of Our Cities. *Journal of Urban history,* 37**,** 627-634.

[15] BALLON, H. & JACKSON, K. T. (eds.) 2007e. *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton & Company. pp. 66

Broker: Robert Moses and the Fall of New York,[16] a publication that remains remarkably unchallenged forty years later. Moses, with his ability to manage opposition and navigate complex legislative and governmental constraints has become, the authors argue, 'a symbolic figure in discourse about the future of the city, its capacity to think and build big.'[17] Caro attributes Moses' skill in city-building to an almost sheer force of personality, political ruthlessness and a carefully honed set of professional skills – spatial, legal and political.

In opposition to this, the revisionist accounts gathered by Ballon and Jackson begin to step sideways from Caro's 700-page socio-political study. For each category of achievement established by Caro and used as a vehicle in *The Power Broker* to refine the notion of the omnipotence of the figure of Moses, Ballon and Jackson's edited collection of essays set themselves the task of opening questions, dragging the figure of Moses away from Caro's claim of responsibility for the 'fall of New York'. Marta Gutman in the essay Equipping the Public Realm: Rethinking Robert Moses and Recreation reviews Moses's equipping of the city toward recreation, for example, the remarkable legacy he left for neighborhoods across the city; the very communities Caro claims Moses to have trampled or ignored.[18] Owen D. Gutfreund in the essay Rebuilding New York in the Auto Age: Robert Moses and His Highways discusses Moses' skill at appropriating the talent of others in the pursuit of a vision of a city opened to the possibility of the motor car, road transport and a regional existence. Gutfreund's focus is on Moses' visionary grasp of what was required to position the city as a modern metropolis, enabling it to 'thrive in the auto age.'[19] Ballon argues for Moses' effectiveness in the pursuit of Title I federal funding to get for the city a comprehensive public-housing program in the essay Robert Moses and Urban Renewal: The Title I Program.[20] And the essays continue: Martha Biondi addresses Caro's accusations of Moses' racism in his allocation of facilities and services

[16] CARO, R. 1974. *The Power Broker: Robert Moses and the Fall of New York.* New York: Alfred A. Knopf.
[17] BALLON, H. & JACKSON, K. T. (eds.) 2007e. *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton & Company. pp. 66
[18] GUTMAN, M. 2007. Equipping the Public Realm: Rethinking Robert Moses and Recreation. *In:* JACKSON, K. T. & BALLON, H. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton & Company.
[19] GUTFREUND, O. D. (2007) Rebuilding New York in the Auto Age: Robert Moses and His Highways. IN BALLON, H. & JACKSON, K. T. (Eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York, W.W. Norton & Company. pp. 86.
[20] BALLON, H. 2007. Robert Moses and Urban Renewal: The Title I Program. *In:* BALLON, H. & JACKSON, K. T. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton & Company.

across the city, Robert Fishman repositions Moses amidst his defeats, challenging the notion that Moses always won; always trampled on the 'little people'. [21]

However, there is retained within most of the essays two basic assumptions that we might agree impede any further examination of the question of change and transformation in the city beyond Moses. The first is the figure of Moses himself as central, omnipotent and autonomous actor/agent, who in turn becomes the organizing principle within the historical narrative. The second is understandings of the urban context into which an actor like Robert Moses and his projects are positioned. Most of the writings retain an idea of the urban as something fixed relative to the always mobile architectural object inserted into it. It is as if there was an innate, internal hierarchy to the relationship of the two, where architecture is understood as something mobile, operating and residing on a vast and immobile urban context.

It is Joel Schwartz in his posthumously published essay Robert Moses and City Planning who goes furthest in Ballon and Jackson's edited collection toward raising a challenge to either of these understandings of Moses.[22] He asks of Caro's account,

> 'How could a consummate villain have had his measures adopted in the first place, or tolerated for so long by the city that worshipped Fiorello La Guardia? How could a city celebrated for vibrant neighborhoods allow their ravaging? Where was the powerful left wing? Where were the strong unions? And where was the city's intelligentsia? Where were these feisty people in the 1930s or, for that matter, in 1943, when Moses fashioned the prototype for bulldozer redevelopment, middle-income Stuyvesant Town? Supporters of this Metropolitan Life Insurance Company project included corporate interests, real-estate boosters, and a good many civic reformers, who welcomed the company's reconstruction of a tenement district along modern lines. But

[21] BIONDI, M. Ibid.Robert Moses, Race and the Limits of an Activist State, FISHMAN, R. Ibid. Revolt of the Urbs: Robert Moses and his Critics.
[22] SCHWARTZ, J. Ibid.Robert Moses and City Planning. W.W. Norton & Company. See also the following for more detailed accounts of Moses from Schwartz: SCHWARTZ, J. 1993. *The New York Approach: Robert Moses, Urban Liberals and Redevelopment of the Inner City.* Columbus: Ohio State University Press.

> decisive support also came from the city's left wing, who chose to ignore the destruction of a blue-collar neighborhood.[23]

In his account that follows, Schwartz both dispenses with the figure of Moses, placing his achievements within a more dispersed landscape of dispute regarding centralization versus decentralization, while also pursuing questions concerning understandings of the city and contemporary city building in an essay exploring the relationship between comprehensive planning and Moses' surgical opportunism. Here, the usual antagonism between left and right that is used to construct accounts of historical events is diminished; instead, the constitutive agonism of the dispute itself emerges as productive.

In developing his argument, Schwartz utilizes a divergence between Robert Moses' understandings of the city as he outlines it relative to a possible project site in Astoria, Queens, and the development practices of an organization like the NYCHA. Schwartz quotes Moses at length as he describes his identification of possible development sites for the city:

> 'I have been looking at Astoria for many years – knew it when it was still quite a flourishing place with fine big houses facing Hell Gate and the East River. Then smaller houses and apartments of various kinds were built. Then came our Triborough Bridge, the folding up of the ferry and the decay of community. Today there is an opportunity to acquire a large tract at low cost, to build a bulkhead out into the river with a park and esplanade along the waterfront, to wipe out some pretty poor buildings, a few fairly good ones, and to build on native land. There can be a really first-rate housing plan here with small ground coverage and three or four-storey buildings. If there is such a thing as drawing people out of certain poor neighborhoods to better ones, it can be done here.[24]

[23] SCHWARTZ, J. 2007. Robert Moses and City Planning. *In:* BALLON, H. & JACKSON, K. T. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton & Company. pp. xvii

[24] Moses quoted in ibid. pp. 132. Neither the original source nor date of the quote are cited. Schwartz passed away during the final development of his paper. His wife and the editors of the publication completed it posthumously on his

Moses explains here that he has been observing the spatial and social transformation of the neighborhood of Astoria for some time, changes that have come about as the result of a series of infrastructural interventions, the Triborough Bridge, for example, that have had an effect on the occupant demographics of what were once upper-middle-class houses along the river. As a consequence, land values have fallen, leading to new opportunities in terms of land acquisition at affordable prices for housing providers, and creating 'better neighborhoods' as a result. In his account, Moses gives a sense of 'drawing people' out of one kind of neighborhood into new, what he understands to be 'better,' ones. There is a sense in his writing that populations of people are malleable rather than naturally-occurring milieus, of arguments being made for the creation of new housing projects with better amenities on the occasion of new work, the projection of a better possible future.

In contradiction, Schwartz argues that the NYCHA describes desirable sites for new housing project developments as being dependent on 'self-contained' stands of pre-existing slum housing preferably ten blocks in length, with an already existing framework that can provide a 'suitable provision for social life and recreation.'[25] This was an already and in-place existing amenity and population to be identified, preserved and built up. For the NYCHA, it was a requirement for the site to have had a long relationship with an existing social settlement. This is quite different to Moses' projective position and to the role in his work of the continual proposition of other possible futures in the creation of social settlements and populations of people from new.[26]

While there is a general agreement at this time of what a unit of stability looked like in the city and what should be aspired for, the neighborhood – and we will look at the neighborhood unit as it was released in the 1929 Regional Plan in more detail later in this chapter – this agreement is not the same as the city understood as conceptually stable. Schwartz demonstrates for us

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behalf. As a result there are some details such as quote dates and clear attributions that have not been able to be properly identified and verified, including this one. Based on details in the quote, one has to assume it was made by Moses sometime after the completion of the Triborough Bridge in 1936, the main infrastructural intervention in the neighborhood – and which was not able to use eminent domain to condemn and purchase property for the Queens side landing of the bridge – instead it used land reclamation into the river. The transformations that Moses is describing occur as a consequence of this, and of the closing of the ferry linkages from Astoria to Manhattan.

[25] Ibid. pp. 131 uncited NYCHA quote.

[26] Ibid. pp. 131

two quite distinct positions regarding intervention in the city in his comparison of Moses' operation with that of NYCHA: the city as known and fixed, to be rehabilitated based on models of neighborhood with reference to existing and past patterns of occupation as demonstrated by the NYCHA; versus the city as unknown, always about to become, the city as site of operation understood as constantly in a state of dynamic flux to be opportunistically and surgically intervened in, as is evident in Moses' thinking.

3.3 Constitutive Terrains of Dispute:

The Centralizing/Decentralizing City and the Myth of Comprehensive Planning in 1920s New York City

On one level, the operational tactics of the bureaucrat and planner Robert Moses seem to be in distinct opposition to a writer and thinker such as Lewis Mumford, who was as equally active in the City of New York during the same period. Moses, with his surgical opportunism in terms of the city is generally placed on one side of an ideological fence by accounts of the period, while Mumford's lifelong appeal to the practical importance of a regional overview acting as predicate to regional restructuring, decentralization and community planning, is positioned on the other side.

Dal Co has argued that the difference between the two can be found in the difference between a concern with *the city region* on the one hand, and on the other, the idea of *a city within a region*. The former requires massive restructuring of the existing city, while according to Dal Co, the latter requires relatively surgical and minor interventions into an existing city, strategically placed and localized in effect.[27] Regardless of this difference, what both these actors had in common was a constitutive role in a dispute concerned with the centralization and decentralization of the city, and in their work we can see a sense of the conceptual instability of the city and its possibility of transformation. We shall discuss Mumford's views on planning in

[27] DAL CO, F. 1980. From Parks to the Region: Progressive Ideology and the Reform of the American City. *The American City: From the Civil War to the New Deal.* London: Granada. pp. 254

more detail below, prior to that, however, it is useful to understand more of the context in which Robert Moses was operating.

Partly as a consequence of his road-building, a widely understood criticism of Moses was that he was not a supporter of city planning. This argument is often made as part of an account of his surgical opportunism, which can be seen exercised during his period as parks commissioner.[28] This is a widely-made judgment, Schwartz argues, formed largely as a result of Moses' relentless attacks on 'the long-haired planners' and 'his ridicule of their collectivist vision.'[29] It can be seen to have been established as a consequence of a series of conflicts in the 1960s, particularly with urban writers and critics and the community groups that galvanized around them, such as was widely reported with Jane Jacobs, over the expressways and large housing projects that 'threatened' Greenwich Village in the 1960s.[30] It is also evidenced, it is argued, in conflicts with advocates of comprehensive planning such as Lewis Mumford and the Regional Planning Association of America (RPAA); and on account of what Caro argues was Moses 'hijacking of city planning into a vehicle for personal power.'[31]

However, one might also ask: was planning in New York City in the 1920s ever as 'comprehensive' as claimed by critics such as Caro? Schwartz approaches the question of planning during this period very differently in his account of Moses. While he acknowledges that Moses was 'a creature of his time,'[32] Schwartz argues that this is not the same as agreeing with commentators like Caro, who insist that by the 1930s, Moses had 'muscled his way to control

[28] SCHWARTZ, J. 2007. Robert Moses and City Planning. *In:* BALLON, H. & JACKSON, K. T. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton & Company.
[29] Ibid. pp. 130 See also Moses' description of planners in his publication MOSES, R. 1970. *Public Works: A Dangerous Trade*. New York: McGraw Hill.
[30] This conflict is understood to such a degree by mainstream contemporary culture in New York that an opera is reportedly being produced about the conflict between Moses and Jacobs, a collaboration between composer Judd Greenstein and director Joshua Frankel in collaboration with Pulitzer Prize-winning poet Tracy K. Smith. http://www.fastcodesign.com/3029308/slicker-city/robert-moses-vs-jane-jacobs-a-saga-fit-for-the-opera accessed 17.10.15. In fact, Mennel claims Moses only very rarely acknowledged Jacobs, on one of very few occasions writing of her: 'Jane Jacobs isn't really worth refuting. She has the Architectural Forum following and the professional critics with her, but nobody with any experience or responsibility is impressed by such captious owl dropping. If you were to submit a specific inescapable problem to people of this sort you would catch nothing but nostalgia. La Jacobs doesn't know this metropolis or any other. In an examination on facts she would not get 40 percent. After all, you must start with knowledge, not cyanide.' Robert Moses to Sidney W. Davidson, September 19 1962 in MENNEL, T. 2011. A Fight to Forget: Urban Renewal, Robert Moses, Jane Jacobs and the Stories of Our Cities. *Journal of Urban history,* 37**,** 627-634. P631. See also MENNEL, T., STEFFENS, J. & KLEMEK, C. (eds.) 2007. *Block by Block: Jane Jacobs and the Future of New York.* New York: Municipal Art Society of New York and Princeton Architectural Press.
[31] Caro goes as far as making the claim that Moses' position 'destroyed whatever contribution the discipline might have made to the public good and led to… the fall of New York.' SCHWARTZ, J. 2007. Robert Moses and City Planning. *In:* BALLON, H. & JACKSON, K. T. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton and Company. pp. 130
[32] Ibid. pp. 131

city planning'[33] and that it follows that there was a certain omnipotence to his actions.[34] Schwartz establishes that city planning in New York, particularly in the 1920s, was much less a real tangible ideal 'than it was unreachable in most American cities, and certainly beyond the grasp of New York.'[35] The amalgamation of the five boroughs of the city had only happened in 1898. It wasn't until 1934 that the city had any kind of governmental planning mechanisms with jurisdiction across all boroughs; therefore, Schwartz argues, there was simply no comprehensive city planning to muscle in on and control prior to this.

3.3.1 Moses and the Tradition of the New

Ballon and Jackson's 2006 edited collection of writing on Moses was not the first attempt to retrieve him from under the weight of *The Power Broker*. An earlier Long Island Studies Institute conference in 1988 on the occasion of the centenary of his birth focused on examining Moses' work as a planner and a builder, with specific reference to Long Island. Caro, invited to the event, stated in his remarks that he hoped that participants would not forget 'Robert Moses, planner of the built environment, was a dreamer and... a visionary, a very courageous idealist.'[36]

Marshall Berman wrote of Moses' interventions into the Bronx in terms of roads and highways.

> 'It is easy to dwell endlessly on Moses' personal power and style. But this emphasis tends to obscure one of the primary sources of his vast authority: his ability to convince a mass public that he was the vehicle of impersonal world-historical forces, the moving spirit of modernity. For forty years, he was able to pre-empt the vision of the modern. To oppose his bridges, tunnels, expressways, housing developments, power dams, stadia, cultural

[33] Ibid. pp. 131
[34] Ibid. pp. 130
[35] Ibid. pp. 130
[36] KRIEG, J. P. (ed.) 1989. *Robert Moses: Single-Minded Genius.* Interlaken, New York: Heart of the Lakes Publishing. pp. 14

centers, was – or so it seemed – to oppose history, progress, modernity itself. And few people, especially in New York, were prepared to do that.'[37]

Moses' educational background and training in governmental reform placed him central to the Progressive Era politics of the first decades of the twentieth century,[38] with its idea of disinterested scientific management in government, particularly in terms of efficiency at a state and city level, and management understood as distant from what was argued to be the compromised politics for formal elected office.[39] While concerned with democratic reform, progressive politics during this period was also equally focused on eliminating the perception of the corruption of politics, and finding mechanisms for responding to the modernization and industrialization of cities in a way that was distanced from the potential for that corruption – via an appeal to scientific truth in bureaucratic administration.

Having completed a doctorate in 1914 at Columbia University examining the British Civil Service, by 1919 Moses was the state reconstruction commissioner tasked with reorganizing government in a way that directly reflected this research work, in addition to later reports into government and the state of New York, written as a Bureau of Municipal Research staffer from 1915. The report recommendations included the consolidation of 187 state-based agencies: state departments, bureaus, boards, committees and commissions, many with overlapping functions, in terms of taxes particularly, into sixteen departments.[40]

Leonard has written of the transformations of the Progressive Era and the establishment of independent governmental agencies staffed and advised by experts like Robert Moses, that were 'charted to be specifically free of political influence, employing a permanent civil service

[37] BERMAN, M. 1982. *All that is Solid Melts into Air: The Experience of Modernity.* London.: Simon and Schuster
[38] Moses' educational background was a B.A Yale 1909; a B.A Oxford University with Honours in Jurisprudence and an M.A in 1911 and finally a PhD Columbia University 1914. KRIEG, J. P. (ed.) 1989. *Robert Moses Single-Minded Genius.* Interlaken, New York: Heart of the Lakes Publishing. pp. 9
[39] 'The heart of progressivism was the ambition of the new middle class to fulfill its destiny through bureaucratic means.' LEONARD, T. 2015. Progressive Era Origins of the Regulatory State and the Economist as Expert. *History of Political Economy,* 47. pp. 50
[40] Walter Lippmann called this 'one of the greatest achievements in modern American politics' in KRIEG, J. P. (ed.) 1989. *Robert Moses Single-Minded Genius.* Interlaken, New York: Heart of the Lakes Publishing. pp. 36- and in CARO, R. 1974. *The Power Broker: Robert Moses and the Fall of New York.* New York: Alfred A. Knopf. pp. 262

rather than political appointees.'[41] He writes that the arrival of this group, what he labels as the 'fourth branch,' signaled

> 'a shift in political authority within the state, moving power from the courts and parties to the new regulatory agencies of the executive, and from politicians and partisans to bureaucratic experts, who represented themselves as objective scientists above the political fray, administering progress *for the good of all*.' [42]

The architects and framers of the fourth branch defined progress through an emphasis on the goals of justice, efficiency, national unity, conflict reduction, and investigation and regulation by independent government agencies supervised by a vanguard of scientific experts dedicating themselves to the public good. This was a process of administration, rather than accountable but potentially corrupt politics. The work of this progressive transformation was less a set of well-defined goals than it was a practice. It was a bureaucratic approach to governance institutionalized in administration predicated on a familiar social-reform agenda. These are the conditions and context that Moses was operating in.

By 1924, Moses was the Long Island state park commissioner in an environment where parks were seen as 'a new pattern of social progress.' The role of commissioner allowed him to strategically place parks within a wider set of operations far outside of the jurisdiction of park bureaucrat, and primarily at his discretion.[43] The park was no longer a passive recreational space, but an active leisure space – reflected in the new creation of parks such as Orchard Beach and Jones Beach – but equally in new access demands in terms of roads and transport to these new and existing amenities and spaces of leisure away from the city.

During the early 1920s the mobility of people around the metropolis became increasingly problematic. There was not a single major thoroughfare through Brooklyn, for example; the modern requirement for the increasing movement of goods and people was becoming impossible. Between 1910 and 1920, New York's population increased from four-and-a-half

[41] My emphasis LEONARD, T. 2015. Progressive Era Origins of the Regulatory State and the Economist as Expert. *History of Political Economy,* 47. pp. 50
[42] Ibid. pp. 50
[43] Albany Reporter in CARO, R. 1974. *The Power Broker: Robert Moses and the Fall of New York.* New York: Alfred A. Knopf. pp. 169

million to nearly six million; by 1932 it was almost seven million.[44] Vehicle registration was at nine million in 1920; this increased to twenty million by 1930.[45] Moses' relationship with parks allowed him to became a prodigious road builder as part of a response to these issues. He was responsible for a significant number of parkways initially and, following their success, eventually for a series of extensive expressways: the Interborough; Grand Central, Belt, Van Wyck; Prospect, Clearview, Brooklyn-Queens, Gowanus, Whitestone, Northern State, Wantagh State, Meadowbrook, Long Island, Southern State, Major Deegan, Bruckner and Cross-Bronx, plus the Hutchinson River Parkway, West Side Highway, FDR Drive, Henry Hudson Parkway and Harlem River Drive. Roads mattered in this period. During the 1930s, Moses created 225 new parks, three major new bridges linking the boroughs of New York (the Triborough Bridge, Henry Hudson Bridge, and the bridge on the Marine Parkway), an additional fifty miles of arterial highway, plus 225 new playgrounds in urban areas. With the exception of the playgrounds, these new infrastructural elements were all happening on the edge of the city, or skirted around the edge of urban areas, such as the Henry Hudson Parkway, which utilized the water's edge, minimizing its impact on existing buildings.

3.3.2 Context/Dispute: Decentralization versus Centralization.

However, despite the lack of any comprehensive plan or planning agency, and only limited mechanisms for cross-jurisdictional action in the city, by the 1920s there was a general, constitutive and well-coalesced dispute in the City of New York regarding the relative merits of decentralization. This drove, predicated and underpinned decision-makers moves such Moses'. As a dispute it was alive in the literature of planners such as the RPAA and the RPA, as it was within the bureaucratic functioning of the newly-formed fourth branch of state and city administration.

[44] The actual figures were 1910-20: 4,766,883 to 5,620,048, and by 1932: 6,930,446. WRIGHT, G. 1981. *Building the Dream: A Social History of Housing in America.* New York: Pantheon Books.
[45] Ibid. pp. 207

For the first two decades of the twentieth century, debates and investigations by reformers, social scientists and progressive planners were dominated by two correlative subjects – metropolitan spatial patterns on the one hand, and housing conditions on the other. This focus was based on a whole series of interrelated changes in the city ranging from new communication and transportation technology to the aggregation of industry, housing and leisure. The 1920s saw the growth of finance capital in Wall Street, and the completion of subway routes to Brooklyn, Queens and the Bronx, all of which profoundly affected how New Yorkers saw their city and its future.[46] In 1910, one in eight New Yorkers, or 530,000 people, occupied the dense tenements below 14th Street. By 1930 this figure had dropped to only one in 25; only 250,000 people remained. Between 1922 and 1929 over 400,000 units of housing were built in the city, a fifteen percent surge in the city's housing supply – but subsidized garden apartments near transit lines in Brooklyn, the Bronx and Queens brought a collapse to the Lower East Side of Manhattan as aspirational families moved out.[47] There was an expectation from Manhattan property owners of a spread of the skyscraper district north into this emptying tenement district, but they needed public action to speed the rescue as their tenements emptied out.[48] Advocates of metropolitan rationalization such as the New York Building Congress, and the Committee of the Regional Plan of New York and its Environs (RPNY) encouraged these expectations of assistance.[49] For example, the Building Congress – organized by mortgage bankers and builders to get the construction industry through the recession of 1920-21 debated how industry could work with government to create the transport and commercial facilities needed for Manhattan's successful functioning. [50]

Evidencing this dispute around decentralization is the competition brief from the New York City Housing Authority (NYCHA) out of which the 1935 Brounn and Muschenheim slum-clearance proposal for the Upper East Side of Manhattan was developed. As we saw in Chapter Two, this

[46] SCHWARTZ, J. 1993. *The New York Approach: Robert Moses, Urban Liberals and Redevelopment of the Inner City.* Columbus: Ohio State University Press.
[47] Ibid. pp. 98
[48] JACKSON, A. 1976. *A Place Called Home*. Cambridge, Mass.: MIT Press. Chapter 12; LAIDLOW, W. 1922. Statistical Sources for Demographic Studies of Greater New York, 1920. New York: Census Committee. Pxxi SCHWARTZ, J. 1984. Tenement Rehabilitation in New York City in the 1930s. *Conference on the History of Low Income Housing in New York City.* Columbia University, New York: Columbia University.
[49] SCHWARTZ, J. 1993. *The New York Approach: Robert Moses, Urban Liberals and Redevelopment of the Inner City.* Columbus: Ohio State University Press. pp. 27
[50] Ibid. pp. 27 led by architect Robert D Kohn, with firms such as George A. Fuller and Starett Brothers and Eken, mortgage bankers such as Bowery Savings Bank president Henry C. Bruere, and trade publishers such as F.W Dodge,

project emerged out of a smaller site put forward as a qualification competition by NYCHA. The project was written and supervised by Frederick Ackerman, who had been technical director at the NYCHA, and who was an associate of Wright and Stein and the RPAA, assisted by a committee of architects nominated by the New York Architectural Society. The competition called for the clearance of sixteen blocks of slums and for their rebuilding as six superblocks and a large area for parks, a school, and a community building.[51]

Brounn and Muschenheim, who had entered the qualification competition, then developed their proposal from the original sixteen blocks into the larger fifty-block proposal for the site as an unsolicited proposition for change that they then took to various agencies in the city in a bid for support for the project to be realized (Image 12).

The original competition brief dated 18 June 1934, outlined the 'Program of Competition for Qualification of Architects.'[52] It indicates that the project was understood to form part of a response to the effects of a centralizing/decentralizing movement at work in the city for at least twenty years prior to the competition itself. The brief states

> 'The Problem: For some two decades the centrally located residential areas of our cities have been decreasing in population and falling rapidly into conditions of decay and obsolescence. It was assumed that the larger part of these areas would be required for commercial and industrial use; and they have been so zoned. Notwithstanding the rapid expansion of industry and commerce during this period, the demand for commercial and industrial space failed to measure up to this assumption. The indications are that a movement toward decentralization is

[51] Pommer claims this competition was conceived as preliminary to the design of Williamsburg Houses at Brooklyn, the largest and most costly of the PWA projects. POMMER, R. 1978. The Architecture of Urban Housing in the United States During the Early 1930s. *Journal of the Society of Architectural Historians,* 37**,** 235-264. pp. 239 for more information on the 1934 qualification competition, see FORD, J. 1936. *Slums and Housing.* Cambridge, Mass.: Harvard University Press, FORD, J., MORROW FORD, K., THOMPSON, G. N., PHELPS STOKES, N. & FUND, P.-S. 1936. *Slums and Housing, with Special Reference to New York; History, Conditions, Policy.* Cambridge, Mass: Harvard University Press.

[52] Competition brief in folder WM:Job 41. Folder 3:20 from Muschenheim Archive, Avery drawing and Archive Collection, Columbia university New York

already under way and that these blighted areas may, therefore, never be needed for other than residential use.'[53]

The crux of the wider and long-engaged debate centered on the agglomeration versus dispersion of the city, where questions of spatial pattern overlapped a considerable degree with an ongoing examination of tenement housing, overcrowding and housing affordability. We can position both the 1974 Twin Parks project examined in Chapter Two, and the 1935 B+M slum-clearance proposal within this ongoing context of dispute, and as part of an ongoing trajectory of work at many scales, as we have seen in the work of Moses. It was a composite response, a reasoning concerned with contemporary spatial patterns and the perceived disadvantage of urban life – the city of blight: the tenement block with its congestion and overcrowding and the continual centralizing/decentralizing flux of the city.

In 1934 Moses was appointed to the position of parks commissioner, where he was given five-borough authority for the first time. Though he had been involved in parks, as we have seen, since the 1920s, and had argued for a 'unified and comprehensive' approach at the scale of five boroughs, and had been operating at such a scale, it was not until this appointment that he received governmental mandate to take such an approach.[54] Regardless of mandate, however, Moses had always worked at that scale with the means that he had. In 1924, a decade before his appointment as parks commissioner, he had drafted two new administrative positions that he took up: the chairmanship of the State Council of Parks and that of the Long Island State Park Commission – utilizing a precedent set by the Westchester Parks Commission the year before, the new positions wouldn't allow him to comprehensively plan, or to even build highways, but they would allow him to build scenic routes and access roads within parks. In the first instance, then, his road-building took the form of the parkway: a means of transport designed for leisure, for a family outing on the weekend. These were ribbon-like parks with landscaped roads within them. Commercial traffic, including public transport, was barred from

[53] Competition brief in folder WM:Job 41. Folder 3:20 from Muschenheim Archive, Avery drawing and Archive Collection, Columbia university New York See also N.Y.C.H.A 1934. *New York City Housing Authority: Competition.* New York: New York City Housing Authority.

[54] SCHWARTZ, J. 2007. Robert Moses and City Planning. *In:* BALLON, H. & JACKSON, K. T. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton and Company. Schwartz 2007:131, Moses uncited The amalgamation of the five Boroughs of New York did not happen until 1898.

using these roads, the intention was that they were for families getting away from the city for the day. The parkway system opened up huge areas of Long Island for access to New York's residents, accompanied by a state park scheme. Moses didn't have access to the State Highway Department or the Federal Bureau of Public Roads to do this, such that he could outlay regional transport infrastructure for the city in response to the problem of congestion in the 1920s. Instead, he worked with what he had access to, which it turns out was considerable. Driven by the Progressive Era ideals of public service outlined previously, and as part of a response to the dispute around decentralization, as parks commissioner, Moses could designate a road a parkway and fund it with park money. The Bronx River Parkway was the earliest precedent for the parkway. It was proposed in 1906, was under construction from 1916 and opened in 1923. So, in addition to the building of Jones Beach State Park, for example, came the regional parkways linking it and ensuring access: the Southern State Parkway in 1927, Wantagh State Parkway in 1929, Ocean Parkway and the first major sections of the Northern State Parkway in 1930, and the Meadowbrook State Parkway in 1934.

The next major road infrastructure Moses undertook was the loop roads around the island of Manhattan. Initially by combining Parks money with New Deal money in the 1930s, it became possible through the use of tolls and autonomous standalone agencies to build, own and operate, and maintain new facilities. These operated in much the same way as special legal structures and as special administrative bodies, which would have the autonomy and the flexibility and durability needed to achieve his goals. Moses used revenues collected by toll-gathering agencies to obtain construction loans, pay for initial planning stages of potential future projects and eventually secure additional borrowing that funded subsequent projects.

> 'At first, he [Moses] could take only an incremental approach to growing this toll-fed revenue machine. For example, the [1936] Henry Hudson Memorial Bridge was initially built as a single-decked span because lenders were uncertain if toll revenues would be sufficient to repay the cost of a more expensive structure. As soon as the first phase was opened and the toll receipts flowed in predictably,

Moses could borrow the additional money needed to complete the second level of the bridge.'[55]

At its conclusion, the list of parkways and bridges built by Moses using these mechanisms included the Interborough Parkway in 1934, Saw Mill Parkway in 1935, Henry Hudson Memorial Bridge and Grand Central Parkway in 1936, West Side Highway and Marine Parkway and Bridge in 1937, Henry Hudson Parkway in 1938, Bronx-Whitestone Bridge in 1939, Belt Parkway in 1940, Cross Island Parkway and Long Island Expressway in 1940, and Hutchinson River Parkway in 1941. This infrastructure-building followed no comprehensive planning, and was certainly opportunistic and surgical in its intervention. Like zoning during this period, it was taken up by local communities. Hundreds of communities independently 'took up zoning' in response to local concerns to protect local interests against things like gas stations, oil tanks and apartments. One can see this in operation in the move by local civic group the Fifth, Sixth and Seventh Avenue Merchants Association, which organized zoning to protect the Ladies' Mile from garment workers moving in.[56] This, then, was in no way comprehensive planning, nor was it in any way strategically focused or coordinated.

However, what it makes evident is that despite the sustained efforts of organizations such as the Regional Plan Association (RPA/RPNY) and the Regional Planning Association of America (RPAA)[57] throughout the 1920s, and certainly prior to the early 1930s, any planning initiatives operating at the scale of the city, such as zoning or parks and highways, as we've seen, were not the consequence of an holistic approach to planning, but more likely the result of narrow,

[55] SCHWARTZ, J. 1993. *The New York Approach: Robert Moses, Urban Liberals and Redevelopment of the Inner City.* Columbus: Ohio State University Press. P89 See also GUTFREUND, O. D. 2007. Rebuilding New York in the Auto Age: Robert Moses and His Highways. *In:* BALLON, H. & JACKSON, K. T. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton & Company.
[56] SCHWARTZ, J. Ibid.Robert Moses and City Planning. W.W. Norton and Company.
[57] These two organizations will be discussed in more detail in this chapter, but to clarify, the Regional Plan Association (RPA/RPNY) was associated with the Russell Sage Foundation, and produced the Regional Plan of New York and its Environs between 1929 and 1931. The Regional Planning Association of America (RPAA) was associated with Lewis Mumford among many others, and the primarily British-based Garden Cities movement. It produced the Survey Graphic, a single edition of a journal that was influential. The primary dispute between the two groups was concerned with metropolitan spatial patterns and the expansion of the city; though in practice there is a huge amount of movement between them and overlap in participation.

locally situated and argued specialties such as 'traffic control, sewage or tenement reform.'[58] While in no way comprehensive nor strategically focused, as we've seen with Moses' incremental approach to the transformation of parks into parkways with funding for roads, it was nevertheless underpinned by a constitutive dispute and an argument concerned with the merits of decentralization.

3.3.3 Lewis Mumford and the Regional City

Into this dispute can equally also be positioned Lewis Mumford and the work of the Regional Planning Association of America (RPAA). It is often argued that in opposition to the operational tactics of bureaucrat and planner Robert Moses, was Mumford's understanding of the practical importance of a regional overview acting as predicate to regional restructuring, decentralization and community planning. This has been written about many times, particularly with regard to Mumford's relationship to the progressivist RPAA organization, and the notion of the survey graphic as vehicle for the proliferation of ideas concerning educational, health, cultural, leisure, industrial, commercial and infrastructural concerns in the city.[59]

Lewis Mumford (1895-1990) was an urban planner, historian, sociologist and architectural critic.[60] In a sense, Mumford's strength was in his work as a generalist working across a range of academic disciplines, writing for both the academic and the general press as a journalist, contributing to publications as diverse as The Dial, The Freeman, The American Mercury, The New Republic, The Journal of the American Institute of Architects, and The New Yorker, where he wrote critical reviews and commentary on cities, art and architecture.[61]

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[58] SCHWARTZ, J. 2007. Robert Moses and City Planning. *In:* BALLON, H. & JACKSON, K. T. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton and Company. Schwartz 2007:131

[59] WOJTOWICZ, R. 1998a. *Lewis Mumford and American Modernism: Eutopian Theories for Architecture and Planning.* Cambridge, Mass.: Cambridge University Press. pp. 115

[60] Evidence of the breadth of his influence and contribution to American cultural life through the mid twentieth century can be found in his receipt of the National Book Award for The City in History in 1961, the Presidential Medal of Freedom in 1964 and the National Medal of the Arts in 1986 MUMFORD, L. 1961. *The City in History.* New York: Harcourt, Brace + World.

[61] For writings on Mumford see particularly MILLER, D. L. (ed.) 1995. *The Lewis Mumford Reader.* London: University of Georgia Press. MILLER, D. L. 1992. Lewis Mumford: Urban Historian, Urban Visionary. *Journal of Urban History,* 18. And HUGHES, A. C. & HUGHES, T. P. 1990. *Lewis Mumford: Public Intellectual.* Oxford: Oxford University Press. See WOJTOWICZ, R. (ed.) 1998b. *Sidewalk Critic: Lewis Mumford's Writings on New York.* New York: Princeton Architectural Press. For a collection of Mumford's writing in the New Yorker. See also WOJTOWICZ, R. 1998a. *Lewis*

Mumford, a founding RPAA member in 1922, became spokesperson for the loosely-run organization whose membership hovered at around twenty core individuals.[62] These included Clarence Stein, secretary; Henry Wright, Frederick Ackerman, and Benton MacKaye; also Robert Kohn, John Bright, Henry Klaber, Frederick Bigger, Alexander Bing, writer Edith Elmer Wood, and Catherine Bauer, who joined as executive secretary in 1931. The RPAA lobbied business and government in the interest of the regional city being understood as an antidote to metropolitan congestion. From the beginning, the RPAA provided an emerging alternative to the cosmetics of the City Beautiful Movement that had dominated planning through the late nineteenth and early twentieth century and which was particular to North American architecture.

Beyond housing, the broader mission of the RPAA was to promote the 'regional city.' An idea developed as a collaboration between a wide group of actors, the RPAA's regional city was essentially a combination of Patrick Geddes' regionalism[63] and Ebenezer Howard's garden city. From the beginning, the RPAA was linked to the British Town Planning Federation and the Britain-based International Garden Cities and Town Planning Federation.[64] The issue of the integration of nature was key to this group's thinking, particularly with reference to the

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Mumford and American Modernism: Eutopian Theories for Architecture and Planning. Cambridge, Mass.: Cambridge University Press. For correspondence with Patrick Geddes see MUMFORD, L. 1995. The Geddesian Gambit. *In:* NOVAK, F. G. (ed.) *Lewis Mumford and Patrick Geddes: The Correspondence.* London: Routledge, NOVAK, F. G. 1995. *Lewis Mumford and Patrick Geddes: The Correspondence.* London: Routledge. See the following for the use of Mumford's ideas in recent environmental planning publications: WOJTOWICZ, R. 1998a. *Lewis Mumford and American Modernism: Eutopian Theories for Architecture and Planning.* Cambridge, Mass.: Cambridge University Press. For a bibliography see NEWMAN, E. S. 1971. *Lewis Mumford: A Bibliography.* New York: Harcourt Brace Jovanovich. For writings by Mumford on New York specifically see: MUMFORD, L. 1932a. The Plan of New York I. *New Republic,* 15 June**,** 121-126, MUMFORD, L. 1932b. The Plan of New York: II. *New Republic,* 22 June**,** 146-154. See also LUBOVE, R. 1963. *Community Planning in the 1920s: The Contribution of the Regional Planning Association of America.* Pittsburgh: University of Pittsburgh Press.

[62] MEYERS, A. A. 1998. Invisible Cities: Lewis Mumford, Thomas Adams and the Invention of the Regional City, 1923-29. *Business and Economic History,* 27.

[63] Patrick Geddes, 1854-1932, Scottish biologist who moved into the newly constituted discipline of sociology and thinking about cities. Geddes studied biology in London under Darwin's champion Thomas Henry Huxley, which it is argued influenced his thinking in terms of Darwin's evolutionary arguments and their application to society and its organization in cities. He took posts as Professor of Botany at the University College Dundee (1889-1919) and then as Professor of Sociology and Civics at Bombay University (1920-23) and via research in Palestine, Mexico and India See particularly GEDDES, P. 1915. *Cities in Evolution: An Introduction to the Town Planning Movement and to the Study of Civics.* London: William & Norgate.. For more on Geddes see particularly GEDDES, P. 1904. *City Development: A Study of Parks, Gardens, and Culture-Institutes. A Report to the Carnegie Dunfermline Trust.* Bourneville Birmingham: The Saint George Press, LAW, A. 2005. The Ghost of Patrick Geddes: Civics As Applied Sociology. *Sociological Research Online,* 10, MUMFORD, L. 1995. The Geddesian Gambit. *In:* NOVAK, F. G. (ed.) *Lewis Mumford and Patrick Geddes: The Correspondence.* London: Routledge, NOVAK, F. G. 1995. *Lewis Mumford and Patrick Geddes: The Correspondence.* London: Routledge, WELTER, V. M. 2002. *Biopolis: Patrick Geddes and the City of Life.* London: MIT Press.

[64] WOJTOWICZ, R. 1998a. *Lewis Mumford and American Modernism: Eutopian Theories for Architecture and Planning.* Cambridge, Mass.: Cambridge University Press. pp. 117

ibid. pp. 117

relationship of the region to Garden City ideas.[65] While there is much writing that attributes Geddes with the first use of the notion of 'region,' we will argue in this thesis that his use of it does not contain the discursive sociopolitical and spatial reasoning that is diagrammed and generalized by the later publication of the 1929 *Regional Plan of New York and its Environs*.

The RPAA's most influential forum for its ideas on regionalism was the May 1925 issue of *Survey Graphic*, a magazine launched in 1921 initially as a supplement to *The Survey*, becoming a separate publication in 1933. The 1921 release coincided with the meeting in New York City of the International Town, City and Regional Planning and Garden Cities Congress.[66] In the opening essay of *Survey Graphic*, Mumford released his ideas about the fourth migration, an idea concerned with making an account of metropolitan congestion in the early twentieth century. He argued that the first wave of migration was the initial trek across the North American continent by early settlers; the settlement of these pioneers in factory towns; their subsequent removal to the nation's large financial centres such as New York City; and now the fourth migration out of the congested metropolis where new technology would allow a great population dispersal stretching from coast to coast, the railroad supplemented by the automobile and the airplane, with telephone and radio and electrical power to the countryside. [67]

The RPAA during this time was involved in the development of Sunnyside Gardens in Queens, and Radburn, New Jersey, both garden suburbs influenced by a study undertaken in 1924, when Clarence Stein and landscape architect Henry Wright travelled to the UK to meet with Ebenezer Howard and Sir Raymond Unwin, and saw Letchworth Garden City (1903-04) and Hampstead Garden Suburb (1905-07). Both projects were working-class housing seeking the

[65] Benton MacKaye, a key member, was a conservationist best known for the creation of the Appalachian Trail.
[66] WOJTOWICZ, R. 1998a. *Lewis Mumford and American Modernism: Eutopian Theories for Architecture and Planning.* Cambridge, Mass.: Cambridge University Press. pp. 116. See also CHAMBERS, C. A. 1971. *Paul U. Kellogg and the Survey: Voices for Social Welfare and Social Justice.* Minneapolis: University of Minnesota Press. The congress attracted many influential thinkers from abroad – including Howard, Unwin Barry Parker, Charles B. Purdom, Walter Curt Behrendt and Ernst May. RPAA members Stein, Wright, Ackerman and MacKaye all wrote essays for the Survey Graphic, along with Alfred E. Smith, Governor of the State of NY, and Purdom, the financial director of Welwyn Garden City. WOJTOWICZ, R. 1998a. *Lewis Mumford and American Modernism: Eutopian Theories for Architecture and Planning.* Cambridge, Mass.: Cambridge University Press. pp. 118
[67] WOJTOWICZ, R. 1998a. *Lewis Mumford and American Modernism: Eutopian Theories for Architecture and Planning.* Cambridge, Mass.: Cambridge University Press. pp. 118. See also MUMFORD, L. 1976b. Regional Planning. *In:* SUSSMAN, C. (ed.) *Planning the Fourth Migration: The Neglected Vision of the Regional Planning Association of America.* Cambridge, Mass.: MIT Press. MUMFORD, L. 1976a. Regions - To Live In. *In:* SUSSMAN, C. (ed.) *Planning the Fourth Migration: The Neglected Vision of the Regional Planning Association of America.* Cambridge, Mass.: MIT Press. MUMFORD, L. 1989. Introduction. *In:* STEIN, C. (ed.) *Toward New Towns for America.* Cambridge, Mass. see also STEIN, C. 1976. Dinosaur Cities. *In:* SUSSMAN, C. (ed.) *Planning the Fourth Migration: The Neglected Vision of the Regional Planning Association of America.* Cambridge, Mass: MIT Press.

ideal population densities in community planning. The Journal of the American Institute of Architects regularly featured articles by the RPAA, and during the 1920s several members were on the American Institute of Architects' Committee on Community Planning, increasing the RPAA's influence.

> 'The regional city was to be a new, almost entirely self-sufficient urban form, closely integrated with both the surrounding agricultural hinterlands and the outlying primeval wilderness. In this way, the regional city could take every possible advantage of its site, climate and natural resources. The inhabitants of the regional city were its most important resource and local languages, customs, folkways, literature and other aspects of cultural identity would flourish there as well. Via efficient transportation links, the regional city would be connected to other new or revitalized cities, creating the evenly dispersed network of 'social cities' that Howard had envisioned.'[68]

Ebenezer Howard's garden-city movement, as we saw in Chapter One, emerged out of a wider social reform project in the nineteenth century that sought to remove populations of people from congested urban centers, particularly of industrial London, to satellite towns which it was argued could combine the attributes of both the town and the country. These garden cities would be procured through a combination of philanthropic land speculation and collective land ownership, including housing and industrial workplaces.[69] While being limited to 32,000 residents, these centers were anchored by a central city of 58,000 people around which they clustered, separated by green space and connected by transport. As Howard wrote,

> 'Each inhabitant of the whole group, though in one sense living in a town of small size, would be, in reality, living in and would enjoy the advantages of a great and most beautiful city; and yet all the fresh delights of the country… would be within a very few minutes ride or walk. [70]

[68] WOJTOWICZ, R. 1998a. *Lewis Mumford and American Modernism: Eutopian Theories for Architecture and Planning.* Cambridge, Mass.: Cambridge University Press.
[69] MEYERS, A. A. 1998. Invisible Cities: Lewis Mumford, Thomas Adams and the Invention of the Regional City, 1923-29. *Business and Economic History,* 27.
[70] HOWARD, S. E. 1962 (1902). *Garden Cities of To-morrow.* Cambridge, Mass: MIT Press.

From this statement, it is evident that the garden-city proposal combined a pattern of physical, economic and cultural elements spatially arranged, as many of the plans produced in the late nineteenth century were starting to do. Tony Garnier's 1917 Cité Industrielle, for example, did this, though its focus was primarily on the workplace and its relationship to home, industry and agriculture.[71] Or the much earlier 1860 plan from Ildefons Cerdà for the extension of Barcelona; here, the simple division of the city into an infrastructural system allowing the differentiation of movement, along with the division of plan into a repeated octagonal urban block and courtyard-based housing. In one sense, Cerdà's plan is more like the earlier 1811 Commissioners' Grid for New York City, a simple infrastructural division for the differentiated movement of freight and people, though in Cerdà's plan there is the inclusion of blocks of courtyard housing as part of the spatial relations. However, none of these earlier plans, including the garden city, contain the more complex scale-based socio-spatial clusters of distinct and interrelated but unaligned scales of single-dwelling, neighborhood and metropolitan region that are evident by the time of publication in the late 1920s.

3.3.4 The Metropolitan Regional Plan of New York and its Environs, 1929

At the same time that the Regional Planning Association of America was being established, the newly influential Russell Sage Foundation was funding a rival organization, the New York-based Regional Plan Committee, later known as the Regional Plan Association (RPA/RPNY).[72] The RPA was New York's planning think tank during this period, supported by corporate funds and research staff studying patterns of regional growth to bolster Manhattan real estate, smooth interregional transport and cultivate stable neighborhoods. Its research was predicated on the understanding that Manhattan was in transformation as the city decentralized, trading factories for the office towers that coordinated the region's productivity.[73]

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[71] Tony Garnier, Une Cite Industrielle, 1917 See GARNIER, T. (1918) 1989. *Une cité industrielle: étude pour la construction des villes.* New York: Princeton Architectural Press, VIDLER, A. 2011. The Modern Acropolis: Tony Garnier from La Cite antique to Une cite Industrielle. *In:* VIDLER (ed.) *The Scene of the Street and other Essays.* New York: The Monacelli Press.

[72] The Russel Sage Foundation was established in 1907 to fund and publish research into the social sciences for 'the improvement of social and living conditions in the United States.' http://www.russellsage.org/about accessed 05.10.15. For an early history of the Russell Sage Foundation GLENN, J. M., BRANDT, L. & EMERSON ANDREWS, F. 1947. *Russell Sage Foundation 1907-1946.* New York: Russell Sage Foundation.

[73] KANTOR, H. A. 1983. Charles Dyer Norton and the Regional Plan of New York. *In:* KRUECKEBERG, D. A. (ed.) *The American Planner; Biographies and Recollections.* New York: Methuen.

The argument made by the RPA for a metropolitan region involved a very different set of principles and constellation of actors than that being made for the regional city by the RPAA and Lewis Mumford.[74] The difference between these two organizations has been argued to be the difference between metropolitanism on the one hand, versus a profoundly anti-metropolitan urgency evident in what is called the RPAA's communitarianism, on the other.[75] Meyers, for example, writes:

> While [the RPA] sought to rationalize, reinterpret and reinforce the cultural and economic hegemony of New York City as a regional and national center, Lewis Mumford [the RPAA] called for the dismemberment of the metropolitan 'city of the dead' in favor of a web of small-scale 'satellite cities.'[76]

However, despite their apparent differences, what we are interested in with this thesis is the operation of these organizations in dispute and its constitutive nature, where through a dispute around decentralization, the socio-spatial scale of the metropolitan region emerges and is generalized by the 1930s as the size at which one asks a series of specific questions about the city.

The most significant output of the RPA in the late 1920s was the influential 1929 research publication, the *Regional Plan of New York and its Environs*. Ten volumes of survey and two of plan, it was the result of ten years of research work carried out by an organization of 150 researchers, and produced with over $1 million dollars in funding.[77] Unlike the RPAA, the RPA had the involvement and the backing of business across the City of New York. It drew upon generalized understandings of city function in terms of the relationship between work, home, leisure and transport, the role of government in activism for the city – which we will look at

[74] The story of the metropolitan region, it is argued, began when key Chicago Plan figure Charles Dyer Norton moved to New York in 1911 and began petitioning the city for a regional plan with Manhattan borough president George McAneny. When McAneny was defeated in 1916, Norton turned to the Russell Sage Foundation, becoming its trustee and treasurer. In 1921 the foundation announced its support for a new planning study. Ibid. BOYER, M. C. (ed.) 1983. *Dreaming the Rational City.* Cambridge, Mass.: MIT Press. P181 in SCHWARTZ, J. 1993. *The New York Approach: Robert Moses, Urban Liberals and Redevelopment of the Inner City.* Columbus: Ohio State University Press. pp. 27
[75] MEYERS, A. A. 1998. Invisible Cities: Lewis Mumford, Thomas Adams and the Invention of the Regional City, 1923-29. *Business and Economic History,* 27. pp. 293
[76] Ibid. pp. 293
[77] BIANCO, M. J. 2001. Robert Moses and Lewis Mumford: Competing Paradigms of Growth in Portland, Oregon. *Planning Perspectives,* 16**,** 95-114.

further in this chapter in terms of the role of agencies such as the public authority – and it cultivated new understandings through its graphs and drawings of the relationship between space, and the functioning of an advanced industrial economy.[78] When published, it included a separate volume of drawings titled the *Graphic Regional Plan*. Volume I, the initial volume released in 1929, was followed in 1931 by Volume II, titled *The Building of the City*.[79] Volume I covered issues such as regional integration through the linking of city, suburbs and surrounding rural areas by the development of freight and passenger railroads, highways and mass transit. It proposed a regional land-use strategy and parks system, and advocated for the first time the comprehensive use of zoning in the distribution of population and industry – particularly in areas such as the Lower East Side of Manhattan, in the argument for the reduction of population density and the reconciliation of land-use conflicts – while equally promoting suburban development on the metropolitan edges of the city.[80]

The publication of the *Regional Plan of New York and its Environs* was significant in several ways. In the first instance, the plan was constitutive, based on a graphic regional survey that covered the economic base, land use and transportation, land values and housing. In several of these fields, it virtually invented new fields of analysis.[81] It made visible for the first time – in drawings that linked space, governance and socio-demographic data – new ways of seeing the city in line with the kinds of city mapping discussed in Chapter One. For example, Robert Murray Haig's classic analysis of patterns or locations of economic activities makes visible in a diagnostic/propositional gesture the size of the scale of the metropolitan region.[82] The key to understanding the city as a piece of 'productive economic machinery,' he argued, was to

[78] MEYERS, A. A. 1998. Invisible Cities: Lewis Mumford, Thomas Adams and the Invention of the Regional City, 1923-29. *Business and Economic History,* 27. pp. 293
[79] BROMLEY, R. 2001. Metropolitan Regional Planning: Enigmatic History, Global Future. *Planning Practice and Research,* 16**,** 233-245. pp. 234
[80] Zoning had been in use up to this time in a local ad-hoc way, in an attempt to negotiate conflicts over land use, but not at the scale of the region.
[81] SUTCLIFFE, A. 1984. *Metropolis 1890-1940.* London: Mansell.
[82] See HAIG, R. M. 1927. Major Economic Factors in Metropolitan Growth and Arrangement. *The Regional Survey of New York.* New York: Russell Sage Foundation. And The Regional Plan, Vol.1. Major Economic Factors in Metropolitan Growth and Development In SUTCLIFFE, A. 1984. *Metropolis 1890-1940.* London: Mansell. pp. 19-44

understand the competition for space, which caused some activities to displace others according to their relative need for a central location.[83]

In the second instance, the *Regional Plan of New York* was the first plan to consider a very large city, specifically New York City, in relationship to its region, across jurisdictional boundaries regardless of governance systems in place on site.

Finally, evident in the Regional Plan of New York is multi-scalarity. Not only is the metropolitan region presented as a proposition in response to the question, what is the size of the city, but the loosely associated but not fully aligned scale-based clusters of neighborhood unit and single-family dwelling are key organizing principles in the plan's understanding of the city.

3.4 The Public Authority: Space, Governance and Establishing the Size of the Scale of the City

The 1929 *Regional Plan of New York and its Environs* wasn't the first linking of space and governance across unlinked and uncooperative jurisdictional boundaries into what in this publication becomes known as the metropolitan region. Such questions were already being asked via the agency of the public authority in New York that emerged in the first decades of the twentieth century. In a sense then, the Regional Plan isn't the first event in the imagining of the metropolitan regional city, but it is the first evidence that the scale is generalized.

Authors such as Bromley place the genesis of the New York Regional Plan with John Claudius Loudon's Hints for Breathing Places for the Metropolis,[84] where Loudon proposed a growth model for London with the concentric rings of neighborhoods separated by green belts. Equally, Bromley argues that Frederick Law Olmsted, the landscape architect of Central Park in Manhattan and Prospect Park in Brooklyn, in his proposal for a metropolitan regional park

[83] HAIG, R. M. 1927. Major Economic Factors in Metropolitan Growth and Arrangement. *The Regional Survey of New York.* New York: Russell Sage Foundation. 'This is a natural and healthy process, but it is the task of the planner – through zoning – to take account of what the economist would now call negative externalities.' 'Unless zoning is fully and skillfully applied, it is entirely possible for an individual to make for himself a dollar of profit, but at the same time cause a loss of many dollars to his neighbors and to the community as a whole, so that the social result is a net loss… Zoning finds its economic justification in… forcing each individual to bear his own expense.'
[84] LOUDON, J. C. 1829. Hints for Breathing Places for the Metropolis. *Gardener's Magazine,* 5.

system, was an early precursor for the notion of metropolitan regional thinking.[85] While these plans are important, they do not contain the same complexity or generalized spatial and scale-based reasoning in terms of a comprehensive multi-scalar approach to the new size of the city, the metropolitan region.

Criticism of the Regional Plan of New York in more recent publications reviewing this period of the city's development dismiss it as having had no governmental mandate and little 'grassroots participation.' Bromley, for example, argues that, overall, 'the historic Regional Plan of New York and its Environs promoted no major and dramatic change in the region, and it is very difficult to disentangle what the plan produced from what would have happened anyway.'[86] However, as we've seen, in 1929 there was no comprehensive planning agency operating in the city. Instead, the plan's instrumentality was in its transformation of ways of seeing the city. While never formally implemented, it went on to influence decision-makers significantly, with many of the ideas within taken up in non-comprehensive ways by a number of agencies and government organizations. It can be seen that Moses' opportunistic use of parkways so far in excess of the jurisdiction of his role of parks commissioner was driven by his Progressive Era belief in the role of scientific management and the role of bureaucracy, despite the absence of a comprehensive plan. As a broad document produced by a coalition of business, civic and philanthropic leaders, many of its recommendations were implemented:[87] by the Port Authority of New York and New Jersey; the Triborough Bridge and Tunnel Authority; and the City of New York, as well as by the states of New York, New Jersey and Connecticut; in addition, many of the 1400 governments controlling village, municipal, county, school, sewer and water provisions that Robert Wood had described in 1961 as constituting the political economy of the metropolitan region of New York, equally took it up.[88] Through the constitutive dispute around decentralization illustrated in the operations and arguments made by two conflicting regional operators such as the RPA and the RPAA, the fact that the plan was not formally implemented as legislated policy is not the

[85] OLMSTED, F. L. 1870. *Public Parks and the Enlargement of Towns.* Boston: American Social Science Association.
[86] BROMLEY, R. 2001. Metropolitan Regional Planning: Enigmatic History, Global Future. *Planning Practice and Research,* 16**,** 233-245. pp. 234
[87] Ibid. pp. 234
[88] WOOD, R. C. 1961. *1400 Governments: The Political Economy of the New York Metropolitan Region.* Cambridge, Mass.: Harvard University Press. In BROMLEY, R. 2001. Metropolitan Regional Planning: Enigmatic History, Global Future. *Planning Practice and Research,* 16**,** 233-245. pp. 234

decisive factor. Rather, the Regional Plan of New York and its Environs is evidence of a generalized multi-scalar spatial reasoning where the question of the size of the scale of the city is under review through the 1920s and emerges out of dispute itself.

To make Caro's argument, then, that Moses took control of planning in the 1920s, is clearly to misunderstand the nature of planning prior to the publication of the Regional Plan in 1929 and the absence of any comprehensive planning mechanism. Positioned on such terrain of dispute around the question of centralization versus decentralization of the city, where both the architectural object is understood as mobile, as are understandings of the urban context into which it is placed, the autonomy and agency usually attributed to the figure of Robert Moses or to that of Lewis Mumford, in terms of urban transformation, start to appear less defined, less sharp. With the retreat of these figures in an account of the city's transformation during this period, it is the constitutive dispute that remains central.

3.4.1 Special Autonomous Agencies: The Port Authority of New York and New Jersey, 1917

One of the mechanisms for addressing the question of governance of space and of the city from the late 1910s was the public authority. It emerged around 1917 in the United States as a way of reconciling an endless and ongoing tension within the US Constitution between the requirements for competition in business, and the need for cooperation to run infrastructure at a regional and national level across often uncooperative jurisdictional boundaries and in the absence of any comprehensive planning.[89] In practice, the public authority fundamentally linked space with a continual questioning of the size of the scale of the city through issues of governance in an attempt to resolve this conflict, and can be seen to be the precursor to planning documents such as the New York Regional Plan setting the scale for such work in a way more profound than, say, Bramley's suggestion of Louden's 1829 plan for London.

[89] REVELL, K. D. 2003. *Building Gotham: Civic Culture and Public Policy in New York City 1898-1938.* London: The John Hopkins University Press , REVELL, K. D. 2000. Cooperation, Capture and Autonomy: The Interstate Commerce Commission and the Port Authority in the 1920s. *Journal of Policy History, Cambridge University Press,* 12**,** 177-214.

The first of the United States public authorities was concerned with transport infrastructure. The Port Authority of New York, which emerged between 1917 and 1921, was a mechanism for gaining jurisdiction over an area of contested and uncooperative governmental or private administration (the railroads, in the Port Authority's case), where it was perceived that issues of regional or national importance were at stake. However, we shall see in this chapter that the work of the public authority soon spread from this to include use of the housing project.

The initial institutional structure of the Port Authority of New York was modeled on the United Kingdom's Port of London Authority, named after the Act of Parliament that spelled out its powers with the statement: 'Authority is hereby given…' The Port of London, the first of its kind, had been established in 1908 as a self-funding public trust established by the Port of London Act to govern the port with responsibility to overseeing the Thames Estuary and its extension into the Kent/Essex Strait, thereby covering multiple local government jurisdictions. Its remit was to establish a cooperative management system that had until that point been unable to be established.[90]

In the United States, the 1920s saw a huge increase in pressure on national infrastructure; there was a forty percent increase in gross domestic product, with equivalent leaps in productivity, profits and wages, along with increased demands in the infrastructure and national transport systems through the 1910s that began to process such a growth in production.[91] The Port Authority was created 'as a kind of empty vessel, into which various ideas for interstate cooperation on transportation issues might be tossed, and allowed to incubate.'[92] Initially, the intention was that a public authority was set up around a single project or problem:

> 'Each [public authority] had been established to construct and operate one, and only one, public improvement, a single isolated bridge or tunnel or sewer system, to issue only enough bonds to pay for the construction of that improvement, and

[90] DOIG, J. W. 2001. *Empire on the Hudson: Entrepreneurial Vision and Political Power at the Port of New York Authority*. New York: Columbia University. pp. 11. See CARO, R. 1974. *The Power Broker: Robert Moses and the Fall of New York*. New York: Alfred A. Knopf.
[91] REVELL, K. D. 2000. Cooperation, Capture and Autonomy: The Interstate Commerce Commission and the Port Authority in the 1920s. *Journal of Policy History, Cambridge University Press,* 12**,** 177-214. pp. 180
[92] DOIG, J. W. 2001. *Empire on the Hudson: Entrepreneurial Vision and Political Power at the Port of New York Authority*. New York: Columbia University. pp. 11

only bonds with a fixed expiration date and, when that date arrived – or sooner, if revenue was collected faster than expected – to pay off the bonds, eliminate all tolls or fees, turn the improvement over to the city and go out of existence.'[93]

The Port Authority's emergence in 1917 was linked to increasing concern from merchant groups that the private companies responsible for the movement of freight via rail through the Port of New York and New Jersey could not manage the scale and demand of operations into the future in a way that functioned at the scale of the nation.[94] Revell describes how

'Those inefficiencies arose from the fact that the Hudson River separated steamship terminals along the Manhattan shoreline from transcontinental railway terminals in New Jersey (only the New York Central Railroad had a direct freight rail connection to the city via the old Hudson River Railroad on the west side of Manhattan).'[95]

Revell's description gives one a sense of what was at stake in the failure of this connection point. He continues*:*

'To move freight between New York piers and New Jersey rails, the railroads employed an armada of ferries and rail barges, converting the harbor into a giant floating railroad yard: on an ordinary day, between 1500 and 2000 freight cars waited on barges in the slips in lower Manhattan for transport across the Hudson. The movement of freight through the port was thus slowed by crowded Manhattan streets, the tracks of the New York Central Railroad (which, when occupied by freight cars, formed a barrier between city streets and railroad shipping facilities), jammed Manhattan piers, occasional foul weather and the sheer volume of harbor traffic.'[96]

[93] CARO, R. 1974. *The Power Broker: Robert Moses and the Fall of New York.* New York: Alfred A. Knopf. pp. 616
[94] REVELL, K. D. 2000. Cooperation, Capture and Autonomy: The Interstate Commerce Commission and the Port Authority in the 1920s. *Journal of Policy History, Cambridge University Press,* 12**,** 177-214.
[95] Ibid. pp. 177.
[96] Ibid. pp. 187

This description shows the scale of consequence at stake with the failure of infrastructural systems both with the ports and railroads in New York and New Jersey, but also with national consequences. With the crisis and pressure created around World War I, the inadequacies exposed by this competition environment in the context of infrastructure were highlighted.[97] Revell describes how, in 1917, 'Trains from the Midwest began filling the freight yards on the New Jersey shoreline, causing traffic managers to hold cars in Buffalo and Pittsburgh, then Detroit and Chicago.' Conditions at the Port of New York and New Jersey gradually brought the entire nation's freight system to a virtual standstill.[98] Confronted with a transportation system paralyzed, President Woodrow Wilson federalized the railroads on 26 December 1917.[99] In March 1918 Congress passed a Federal Act limiting federalization to twenty months following the cessation of WWI hostilities.[100] The New York, New Jersey Port and Harbor Development Commission, created under these conditions by the Interstate Commerce Commission in 1917, became the single Port Authority of New York in 1921.

The open character of the public authority as it developed allowed it to continue to respond to technological transformations and changes as they emerged. Take, for example, the consequences of car and truck freight systems challenging rail's dominance over passenger and goods movements in and out of the city; or the later advent of air travel and freight on the operation of the city. The public authority as a mechanism was able to constantly extend its territory of operation. Understood and trusted, it was to be part of the disinterested operation of 'Progressive Era ambitions for scientific public administration.'[101]As a vehicle for administration that embodied Progressive Era ambitions, it was understood that the Port Authority would 'reshape a region for the people, while remaining removed from the vulnerabilities of democratic accountability.'[102] As we saw earlier in this chapter, this idea was predicated on a 'Progressive

[97] On top of this, 1917 was an unusually harsh winter, which, when combined with the resumption of unrestricted submarine warfare by Germany directed at retarding the already slow movement of ships in and out of the harbor, incited urban decision-makers to action.
[98] REVELL, K. D. 2000. Cooperation, Capture and Autonomy: The Interstate Commerce Commission and the Port Authority in the 1920s. *Journal of Policy History, Cambridge University Press,* 12**,** 177-214. pp. 187
[99] Federal control was limited to 21 months after the end of hostilities when in March 1918 Congress passed the Federal Control. Ibid. Ftnt pp. 208
[100] Ibid. Ftnt pp. 208
[101] SCHWARTZ, J. 1993. *The New York Approach: Robert Moses, Urban Liberals and Redevelopment of the Inner City.* Columbus: Ohio State University Press.
[102] Ibid. pp. 677. Three individuals whose careers embodied the Port Authority's progressive legacy: Julius Henry Cohen; Othmar H. Ammann, 'the audacious bridge builder whose spans, completed on time and under budget, gave the

Era confidence that expert public administration, carefully insulated from politics as usual, could shape and even command the environment.'[103]

The autonomy of the public authority, its power, as it has been critiqued, particularly in the context of the Port Authority of New York, came from a requirement that authorities be financially self-supporting following an initial funding investment in the form of a bond issue from the state. The Port Authority floated its first bond issue in 1926, and was financially successful by 1931.[104] It was the burden of this requirement for financial self-sufficiency that led the Port Authority, in the end, to work out a way of liberating individual bond issues and enabling them to roll from one project to the next, carrying debt – thus also ensuring the Authority's autonomy from democratic oversight. This was one of the major criticisms of Robert Moses' chairmanships of the Triborough Bridge and Tunnel Authority during the 1950s and 1960s – Moses stood down from position of chair in 1968 – and continues to be a criticism of the functioning of the vast network of public authorities operational in the United States today.[105]

Authority its earliest revenue flow' pp. 677; and Austin J. Tobin, 'the wily combative chief executive from the 1940s through the 1960s who tangled with Moses, Franklin D. Roosevelt and nearly everyone else who threatened the Authority's entrepreneurial freedom, its ability to energize the port and its resources.' pp. 677

[103] DOIG, J. W. 2001. *Empire on the Hudson: Entrepreneurial Vision and Political Power at the Port of New York Authority.* New York: Columbia University. In SCHWARTZ, J. 2001. Review: Empire on the Hudson: Entrepreneurial Vision and Political Power at the Port of New York Authority by Jameson W. Doig. *Political Science Quarterly,* 116**,** 677-679. P678 While in practice it led to the creation of a career civil service system in national, state and local government. Three individuals whose careers embodied the Port Authority's Progressive Legacy were Julius Henry Cohen; Othmar H. Ammann, 'the audacious bridge builder whose spans, completed on time and under budget, gave the Authority its earliest revenue flow;' and Austin J. Tobin, 'the wily combative chief executive from the 1940s through the 1960s who tangled with Moses, Franklin D. Roosevelt and nearly everyone else who threatened the Authority's entrepreneurial freedom, its ability to energize the port and its resources.'

[104] In 1931 the Port Authority of New York took over running the New Holland Tunnel from New York and New Jersey; Authority general counsel Julius Henry Cohen devised a new kind of bond, persuading bankers who held outstanding bonds to accept the new one in their place. Caro wrote that Cohen was 'a staunch believer in the Progressive ideals of public service.' He 'midwifed' the Authority's birth in the port compact of 1921, and directed its first mission, a 'comprehensive plan' for the harbour's railroad infrastructure. Spectacular near collapses in the early 1930s – where early Port Authority projects failed to earn enough to meet interest and amortization payments on bonds – threatened the very existence of the Authority. See Caro.

[105] CARO, R. 1974. *The Power Broker: Robert Moses and the Fall of New York.* New York: Alfred A. Knopf.pp. 677 pp. 617 Initially, Cohen asked the bankers that the replacement bond issue be for an unspecified project – making the Authority entirely financially self-sufficient and liberated from democratic oversight. The bankers refused this, making it a requirement that the replacement bond be for a named project, therefore based on information regarding its risk. Under Cohen's original plan*,'the individual bond issue would be combined into a single general issue supported by the revenues from all Port Authority enterprises, a move which would allow use of the Holland Tunnel surpluses to bail out such money losers as its two bridges connecting Staten Island with New Jersey*.' The new issue, Cohen proposed, would be 'open ended,' enabling the Authority to use any overall surplus to finance new projects. See also the following for contemporary accounts of the Public Authority in the United States: EDITORIAL. 2004. Everybody Wants Reform. *New York Times*, February 28 2004, EDITORIAL. 2009. New York's 'Shadow Government' debt rises to $140 billion. *The Post Standard*, September 02 2009, HEVESI, A. G. 2004. Public Authority Reform: Reining in New York's Secret Government. Albany, New York: New York State, Office of the State Comptroller.

3.5 Housing as Metropolitan Regional Infrastructure

Special Autonomous Agencies: The New York City Housing Authority.

As we've seen, the first public authority directed specifically at the creation of housing in the city of New York was created in 1934 with the New York City Housing Authority (NYCHA). One of its first acts was the holding of a competition for a sixteen-block site on the Upper East Side of Manhattan, what would become for Brounn and Muschenheim a proposition for the clearance of fifty blocks of old and new-law tenement buildings in an unsolicited proposition for the transformation of this part of the city in 1935. This was never built, but it and the competition entries for this 1934 event held by the NYCHA have been recorded in publication, and provide a fascinating insight into organizational experimentations through architectural drawing, into the constitutive components of neighborhood as it is understood during this period.

Clarence Perry's Neighborhood Unit diagram, published with the 1929 *Regional Plan of New York and its Environs*, presented the constitutive parts of neighborhood in a strategic exemplar diagram: community facilities at its core, church, school, park, with housing around it bounded by high streets flanked with shopping, all within a 400-metre walkable diameter in any direction from the centre (Image 13). The core of the instrumentality of the Neighborhood Unit is to be found in the organizational and formal scale based spatial frame it sets for a continual critique of, and experimentation with, the relationship between home, work, leisure and transport, and as part of understandings within progressive politics of democratic participation and engagement. As a diagram it can be seen to be deployed most clearly into suburban expansion in developments such as Radburn, New Jersey, as equally as it can be seen at work in the reasoning behind large housing projects deployed later to reorganize cities such New York in the middle of the twentieth century – projects such as Stuyvesant Town (1943), Brownsville Houses in Brooklyn (1948) and the earlier unbuilt Braun and Muschenheim slum clearance proposals.

The Neighborhood Unit has been in one sense then key to our ability to argue, on the occasion of housing, for benefit and shared amenity, for a better possible future for populations of people

in cities that sit inside its boundaries, but also importantly, for those within its influence and beyond its boundaries in the existing urban fabric around the intervention. As a strategic exemplar diagram, the NU is an incitement to thought, it demands that we ask the question: what size is the scale of neighborhood and its animating internal condition of community, what and where is its influence.

The first public presentation of what would later become the diagram of the NU and published as part of the 1929 *Regional Plan of New York and its Environs*, was given by Clarence Perry to the National Community Centre Association and the American Sociological Society in Washington on December 26, 1923.[106] Titled "A Community unit in city planning and development," the presentation reflected a long association Perry had had with both the Playground and Recreational Association of America where he was a field officer with the responsibility to investigate how public schools might be used after hours for social and civic purposes.[107] As a member of the community centre movement some time later, Perry is quoted as saying "Every Schoolhouse a community capital and every community a little democracy."[108] Perry's experience with this group provided the ground for experiments with the socially planned neighborhood. During the late nineteenth century and at the same time that urban theorists such as Ebenezer Howard were developing novel spatial links between economy, the social and the natural world through planning,[109] there was also emerging ideas via the social sciences that provided new theoretical links between social relations and interaction and the physical environment of cities and towns. The Chicago School sociologists such as Robert Park and Ernest Burgess produced a significant body of literature bringing together the idea of constituting culture through the relationship of community and geography in a move that was fundamentally spatial.

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[106] DAHIR, J. 1947. *The Neighoburhood Unit Plan: Its Spread and Acceptance.* New York: Russell Sage Foundation.
[107] BIRTLES, T. G. 1994. *Origins of the Neighbourhood Unit as a Twentieth Century Urban Residential Planning Ideal: A Tribute to Clarence Perry.* Belconnen: University of Canberra.
[108] 1934. *In:* SELIGMAN, E. R. A. (ed.) *Encyclopedia of the Social Sciences.* London: Macmillan.
[109] HOWARD, S. E. 1898. *To-morrow, A Peaceful Path to Real Reform.* London: Swan, Sonnenschein and Co.
HOWARD, S. E. 1962 (1902). *Garden Cities of To-morrow.* Cambridge, Mass: MIT Press.

Evident in the development of the Neighbourhood Unit is the kind of spatial reasoning that this thesis has identified with Choay's argument regarding the characteristics of modernity. Through Perry's involvement in local politics and social science as outlined briefly above, the Neighbourhood Unit emerges as a sophisticated socio-political spatial reasoning constitutive of architectural urbanism's tools for building the city. The Neighbourhood Unit, like domesticity, is an socio-political spatial instrument that through the twentieth century has formed a key part of liberal governmentality's reasoning. Like domesticity, it doesn't act to crush populations as part of self governing, or that act in spite of populations, rather we can understand that, through the linking of social space, the family, education and neighborhood through something like the Neighbourhood unit, in fact we self govern through them. Isen Osborne and Rose have argued that this instrumentality is according to a knowledge of the 'truth' of the city – the truth of community and neighborhood produced through the new discipline of the social sciences.[110] Its possible to see then, contained within the NU and at its core, is 'the ideal of an immanent political sociability."[111] The Neighborhood unit's value then is not in its existence as an actual built object but rather in its usefulness as a measure. It "can be thrown up against any existing urban actuality as a principle for its critical rectification"[112] and this is how we continue to use it today in planning. Here politics is not government and its acts and laws and functions, the economy or morality for example, but rather government and liberal governance is understood as the art of governing or what has been referred to as the 'conduct of conduct.'[113][114] It is a way of doing things, or acting on the action of individuals '"taken either singly or collectively, so as to shape, guide, correct and modify the ways in which they conduct themselves."[115] It "consists of various instruments and rationalities assembled to link the power of the state, the regulation of

[110] ISIN, E. F., OSBORNE, T. & ROSE, N. 1998. Governing Cities: Liberalism, Neoliberalism and Advanced Liberalism. *Urban Studies Programme, Working Paper No. 19.* Toronto: York University. pp. 2
[111] ibid.
[112] ibid
[113] BARRY, A., OSBORNE, T. & ROSE, N. 1996. *Foucault and Political Reason: Liberalism, Neoliberalism and Rationalities of Government.* London: UCL Press.
[114] FOUCAULT, M. 1979. On Governmentality. *The History of Sexuality.* London: Allen Lane.
FOUCAULT, M. 1991 (1978). Governmentality. *In:* BURCHELL, G., GORDON, C. & MILLER, P. (eds.) *The Foucault Effect: Studies in Governmentality with Two Lectures and an Interview with Michel Foucault.* London: Simon and Schuster International Group.
[115] BURCHELL, G. 1996. Liberal Government and Techniques of the Self. *In:* BARRY, A., OSBORNE, T. & ROSE, N. (eds.) *Foucault and Political Reason: Liberalism, Neoliberalism and Rationalities of Government.* London: Routledge.

populations, and a 'pastoral' power which addressed itself to the conduct of those who recognized themselves as subjects."[116]

Within the graphic realm of architecture's disciplinary agency, the instrumentality of the diagram of the Neighbourhood unit is as an incitement to critical and diagnostic reflection and action. This is evident in the 1934 NYCHA competition out of which the later 1935 B+M project emerged. Here we see in a catalogue of projects, the organizational experimentation with these constituent parts. For example, Burnett C. Turner's entry creates a kind of arcade of retail to the northwest corner of the site, with community facilities centralized, and horizontal slab blocks of housing running east-west, opening the site to the tenement blocks around it (Image 14). Clarence Stein's proposal creates small courtyard blocks, again with retail on the northwest corner tucked within housing, and again forming one side of the centralized community open space (Image 15). John W. Ingle's project, on the other hand, evenly distributes retail facilities around the perimeter of tightly packed east-west-running slab blocks, with centralized open spaces belonging to minor neighborhood groupings, in addition to the large central open space, this time offset to the east (image 16).

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[116] BARTH, L. 1998. Michel Foucault. *In:* STONE, R. (ed.) *Key Sociological Thinkers.* London: Macmillan Press.
BARTH, L. 2003. Diagram, Dispersal, Region. *In:* MOSTAFAVI, M. & NAJLE, C. (eds.) *Landscape Urbanism: A Manual for the Machinic Landscape.* London: AA Publications.

Interestingly, the NU was not only deployed in the Anglo-speaking world. Lu (LU, D. 2006. Travelling Urban Form: The Neighbourhood Unit in China. *Planning Perspectives,* 21**,** 369-392.) reports that it was taken up broadly in Asia during the first half of the twentieth century. She reports that it was implemented in Republican China prior to 1949 by Japanese colonial planners in the organization of cities such as Changchun and Datong in the 1930s. Following this in the late 1940s Chinese planners initiated proposals for several major cities based on the neighborhood unit. These were finally completed after the 1949 Revolution(Lu, 2006). Socialist planners also experimented with several competing residential planning ideas during the 1950s: The micro district known as the *xiaoqu* in Chinese and *mikrorayon* in Russian. Equally and outside of China, it is worth noting some of the more influential evolutions that the concept has gone through.– Lucio Costa's late 1950's Superquadras for example, developed and implemented as part of the Brasilia master-plan. Here, Costa's innovation is in challenging the size of the scale of neighborhood with four superquadras making the equivalent of a NU, arranged in an overlapping pattern where retail concentrations are situated EL-DAHDAH, F. (ed.) 2005. *CASE: Lucio Costa Brasilia's Superquadra.* London: Prestel
(el-Dahdah, 2005, Gorovitz, 2005, Gilbert, 1963) . GILBERT, H. 1963. The Neighbourhood Unit, Principle and Organic Theory. *Sociological Review,* 11**,** 165-207.
GOROVITZ, M. 2005. Unidade de Vizinhanca: Brassilia's "Neighbourhood Unit". *In:* EL-DAHDAH, F. (ed.) *Lucio costa: Brasilia's Superquadra.* Berlin: Prestel Verlag.
The superquadra is connected to the city via the positioning of public services on the margins, rather than at the core. This connects the services to a reservoir of user via primary and secondary road networks rather than simply remaining internal to each NU. Costas innovation was to challenge and question the size of the scale of neighborhood with the superquadra which is much denser than the original model, up to 12,000 people.
Lu acknowledges the taking up of the NU concept in China as involving "multiple associations, mediated practices, successive discursive conversations and ad hoc pragmatic decisions" adding that its 'domestication' by China "was a continual process of translating, taking, selecting, combining and reinventing" rather than a direct borrowing of ideas from 'The West' as is often argued in accounts of the NU as a kind of cultural imperialism or colonialism. What is interesting to this paper is simply the idea that urban spatial reasoning as a key part of liberal democratic techniques of governance was as active in these cities, as it was in the cities of North America, the UK and Australia. While cultural difference matters, modernity's unique use of space as a discursive practice is operational regardless.

As a catalogue of projects from a single competition in 1934, each of these entrants can be seen to reason with a very tightly framed problem of constituents of neighborhood. However, when compared to a trajectory of housing projects in the City of New York continuing on through the 1930s, into the 1940s, and up to the late 1960s with the development of Twin Parks Northeast, it's possible to see that while these components remain in play, it is the question of size that is at stake: the size of the scale of neighborhood. By 1971 and Co-Op City, the size of the housing project and its claim for neighborhood has radically expanded, just at the moment when Twin Parks Northeast takes on the same size of city, but with a different kind of distributed urban intervention.

Underwriting this experimentation is a consistent questioning concerned with the scale at which it is possible to achieve a stable social life in the city, which has fairly consistently been reasoned about in terms of crises throughout the twentieth century. A couple of years after the NYCHA competition, Tracy Auger, writing for the Proceedings in Joint National Conference on Housing in Chicago, outlined what she understood neighborhood to be:

> 'What does a wholesome community structure look like, and how does one lay out a housing site to approximate it? … Sir Ebenezer Howard and Clarence Perry give us the first lead. Before [undertaking] site design, we must begin with a unit of urban life that is capable of maintaining itself...[117] Howard set up the Garden City as a type of metropolitan unit that could survive as a well-rounded healthy community uninfluenced by the ups and downs of urban life round it. Perry carried the same idea into the internal structure of cities in his neighborhood unit, a residential cell capable of building up a community's life… capable of resisting tendencies to depreciation and disintegration.'[118]

What is interesting about this quote is the idea of the city as needing stabilizing interventions, as being, in a sense, always on the verge of collapse, the answer being 'a unit of urban life capable of maintaining itself;' the stabilizing influence of the scale of neighborhood.

[117] As opposed to the city which has been problematized as being always on the verge of collapse.
[118] 'Some minimum standards in site planning for low-cost housing' in Proceedings in Joint National conference on Housing in Chicago in 1936 in Hise 1997:30

Robert Park at the Chicago School of Sociology wrote ten years earlier in the publication *The City*, in an essay titled Suggestions for the Investigation of Human Behaviour in the Urban Environment:

> 'It is important to know what are the forces which tend to break up the tensions, interests and sentiments which give neighborhoods their individual character. In general, these may be said to be anything that tends to render the neighborhood unstable, to divide and concentrate attentions upon widely separated objects of interest.[119]

The Chicago School of Sociology, opened in 1892, was the first such school in the United States. The core was formed by the work of Robert Park, Ernest Burgess and Louis Wirth, and heavily influenced both the RPAA and the RPA in their thinking about the neighborhood. They pioneered the study of 'human ecology,' the 'scientific' study of the 'orderly and typical grouping of [the city's] population and institutions,' according to what they argued were the natural laws of group behavior and urban growth.[120] Meyers argues that 'Park and his collaborators set out in the early 1920s to turn the profession of sociology from the study of society as a collection of individuals, into an ameliorative science that saw the social group as an organic unit capable of being controlled through the benevolent manipulation of the urban environment.'[121] Isen, Osborne and Rose describe the work of the Chicago School as being about the constitution of moral neighborhoods understood to be in an unstable equilibrium.' Unlike zoned infrastructure, these moral neighborhoods are understood to be in an unstable equilibrium. Isin, Osborne and Rose argue that 'the task… is to restore their homogeneity and allow the realignment of spatial and moral zones – to return the city to its promise of happiness.' He then suggests that one ask the following questions:

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[119] PARK, R. E. 1925. The City: Suggestions for the Investigation of Human Behaviour in the Urban Environment. *In:* PARK, R., BURGESS, E. & MCKENZIE, R. (eds.) *The City.* Chicago: The University of Chicago Press. pp. 8 see also PERRY, C. A. 1929b. The Neighborhood Unit. *The Regional Survey of New York.* New York. And PERRY, C. A. 1929a. Neighborhood and Community Planning: Regional Plan of New York and Its Environs. New York: Committee on Regional Plan of New York and Its Environs.

[120] PARK, R. E. 1925. The City: Suggestions for the Investigation of Human Behaviour in the Urban Environment. *In:* PARK, R., BURGESS, E. & MCKENZIE, R. (eds.) *The City.* Chicago: The University of Chicago Press. See also PARK, R. E. 1915. The City: Suggestions for the Investigation of Human Behaviour in the Urban Environment. *American Journal of Sociology,* 20**,** 577-612. And MEYERS, A. A. 1998. Invisible Cities: Lewis Mumford, Thomas Adams and the Invention of the Regional City, 1923-29. *Business and Economic History,* 27. pp. 294

[121] MEYERS, A. A. 1998. Invisible Cities: Lewis Mumford, Thomas Adams and the Invention of the Regional City, 1923-29. *Business and Economic History,* 27. pp. 294

'What part of the population is floating? Of what elements, ie. races, classes, etc, is this population composed? How many people live in hotels, apartments and tenements? How many people own their own homes? What portion of the population consists of nomads, hobos, Gypsies?'

The New York State Urban Development Corporation (UDC)

By the time Twin Parks was conceived in the mid-1960s, the continuing dispute around decentralization and the emptying of the city was ongoing. Authors such as Schindler and Freemark argue that this represents a rethinking of policies to accelerate the production of mixed-income, mixed-race housing on vacant or underused infill sites in the Bronx, in particular. This area had suffered from disinvestment and, they argue, was 'transforming rapidly from largely Italian-American communities into ones of Puerto Ricans and African Americans.'[122] If the tower-in-the-park site coverage typically sat around ten percent, the Twin Parks development returned its site coverage to around fifty percent,[123] slightly more than the 35 percent site coverage being driven by the housing division at the Public Works Administration in New York in the early 1930s, as it developed housing in response to the Great Depression, and in the pursuit of construction as a way of creating both jobs and low to medium-income housing.

The New York State Urban Development Corporation (UDC), the commissioning and procuring authority of the Twin Parks development in the Bronx, was a public authority established in the 1960s to bring together new housing and infrastructure. The UDC was an attempt, Lawer argues, for the state to deal with the continuing 'urban crisis' of decentralization and urban blight in the 1960s, the consequence of the ongoing flux of the centralizing/decentralizing city that from the 1920s, as we have seen, had led to the development of the regional city through the exercise of certain governmental powers, and the resumption of certain responsibilities that had

[122] SCHINDLER, S. & FREEMARK, Y. 2015. Twin Parks. *In:* BLOOM, N. & LASNER, M. (eds.) *Affordable Housing In New York: Triumph, Challenge and Opportunity.* New York: Princeton University Press. pp. 226, 227
[123] 53 percent in the case of Twin Parks Northeast See PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press.

previously been ceded to local government.[124] As we've seen, the public authority was established for this very reason: to operate across uncooperative jurisdictional boundaries in the negotiation of tensions within the constitution, between the need for competition in business in the provision of services in the city, with the need for cooperation to run infrastructure and the provision of social services such as housing.[125]

In the three decades 1950–80, New York City lost 800,000 people from its population, Chicago 600,000, Detroit 465,000, Philadelphia 400,000, and St Louis 400,000.[126] The UDC was created as a 'public benefit corporation' 'for the purpose of carrying out development programs that will increase low and moderate-income housing, help alleviate unemployment, revitalize industry and expand community facilities.'[127]

The UDC could undertake residential, industrial land-use, and civic projects anywhere in the state of New York, not just within the city. As a consequence, it very quickly became a meta-framing agency for hundreds of subsidiary corporations that were involved in renewal projects that were entirely argued in terms of economic activity, rather than housing.[128]

The Twin Parks project was initiated with a 1966 survey undertaken by a group of architects and planners, the Twin Parks Study. It identified underused sites for new interventions in the form of housing, as well as existing buildings for rehabilitation, not unlike the Brounn and Muschenheim proposal but without the expectation of eminent domain or the priority on slum

[124] LAWER, N. 1970. New York State Urban Development Corporation: An Innovation. *Public Administration Review,* 30**,** 636-638. P636. The UDC was governed by a board of nine directors and five private citizens appointed by the governor, and four state officials serving ex-officio (ie. by virtue of their existing positions as state official). The governor also appoints the chair, who was Robert Moses, and the president and CEO.

[125] Unlike the first public authority in 1921, the UDC was granted extensive powers. The Corporation, its lessees and successors were exempt from municipal permit-granting powers and certificates of occupancy; its properties were tax-exempt. It could: condemn and clear land and relocate the displaced; sue and be sued; purchase, lease, sell or mortgage property; and exercise and perform its powers and functions through one or more subsidiary corporations, to which it could transfer money property or projects. While it was bound by statute to 'work closely, consult and cooperate with local elected officials (and give consideration) to local and regional goals and policies as expressed in urban renewal, community renewal and local comprehensive land use plans and regional plans,'no municipality had the power to alter any of the UDC's plans, drawings or specifications for any project.' The Corporation had the discretion to override local laws, ordinances, codes, charters and construction codes, its most controversial power. It could also issue up to $1bn in revenue bonds, to borrow against the unused portion of the state Housing Finance Authority's bond authorization to finance mortgages for low and middle-income housing. See ibid.

[126] JACKSON, K. T. 1985. *Crabgrass Frontier: The Suburbanization of the United States.* New York: Oxford University Press.

[127] LAWER, N. 1970. New York State Urban Development Corporation: An Innovation. *Public Administration Review,* 30**,** 636-638. p636

[128] Two resources are lacking in the UDC that a normal renewal agency would have: It doesn't have nonrenewable funds with which to write down land costs, ie. to take a loss, in the transfer of a site to a redeveloper at a cost less than the public agency's cost of acquiring, clearing and improving the site. And it does not have available funds for housing subsidies, forcing reliance on meager federal subsidy appropriations.

clearance. Schindler and Freemark wrote that, 'The Twin Parks effort was motivated by the desire to bridge the Puerto Rican, black and Italian communities. In part, it attempted to do so through quality urban design and the provision of a variety of dwellings'[129] – operating, though, through a kind of distributed urbanism, rather than with the expectation of full site control.

3.6 Establishing All that Can Already be Said: Scale

As was outlined in the opening of this thesis, the question of how the city is built on the occasion of housing is a resurgent question in the field, evidenced by an expanding catalogue of new publications looking at multi-residential housing precedents from throughout the twentieth century. Common in contemporary demands for change and transformation in cities that come as part of this, is the call for densification, or 'density done better.' We see this in Australian, UK and US cities such as New York, where there is often a call made for greater density around transport hubs – transit-oriented development, what is typically a cluster of retail, commercial and medium to high-density housing development astride, around or aside a rail/bus/tram interchange. The wider argument in this move is that the city is simply the sum of its parts, albeit a complex sum constituted of flows and fluxes and networks of movement and infrastructure. Here, density is a kind of aggregation of information, whereby one moves smoothly from the smallest unit of the city to the largest whole. In this line of reasoning, scale is understood through an idea of accumulation and aggregation. The house, for example, as it fits snuggly within a Russian-doll set of expanding collectives: a single house to the block, to the neighborhood unit, to the district, to the quarter, and on to the metropolitan region; a kind of Matryoshka urbanism. But as this thesis has been asking, is the link between architecture and the urban to be made on such a smooth and unproblematic surface?

When we speak of scale within the field of architecture, it is not always clear whether we are speaking of objects of a certain size, the relationships between objects or, in fact, something quite different. To speak of objects of a certain size we might be referring to a category of

[129] SCHINDLER, S. & FREEMARK, Y. 2015. Twin Parks. *In:* BLOOM, N. & LASNER, M. (eds.) *Affordable Housing In New York: Triumph, Challenge and Opportunity*. New York: Princeton University Press.

projects marked by the size of budget or size of development: the scale of the $10 million commercial building, for example, versus a small residential building. This is a category of project that is marked and defined by the need for a particular type of project management, a specific set of capacities from a building contractor, a very particular constellation of consultants: hydraulic, structural and electrical, for example.

Or we might speak of the size of the object or project itself relative to either its context or the user: the challenge of the 'domestic scale,' for example; the 'human scale' laid out by Le Corbusier with his modular man, and reiterated by Jane Jacobs in her 1961 call for the reintroduction of the fine-grain scale of the street, *The Death and Life of Great American Cities;* or the challenges of the 'urban scale' in the development of a site the size of Brounn and Muschenheim's 1935 proposal for fifty blocks of cleared Manhattan slum. Scale here designates a size-based category and grouping based on common characteristics.

But the term 'scale' is also used to refer to a relationship between objects. For instance, our Russian doll of accumulated information found in the linkage of house to block, and on. Saverio Muratori indicated that scale was like this when he wrote in the late 1950s that, 'Implicit in [architectural type] were the elements that defined all other scales.'[130] For Muratori, architectural types, the single house or the urban domestic block, for example, were understood as the generators of the city, a remedy for the large footprint, grand-gesture infrastructural elements carved into European cities following World War II. For Muratori, and later in the 1960s for Aldo Rossi and the Italian Tendenza movement he belonged to, as we saw in Chapter Two, type was a consistent element; a kind of question posed and *translated across scales that smoothly linked architecture and the urban*: from the house, through the block, through to the urban district and metropolitan region. Type for this generation of serial thinkers quite quickly became image-based and static, particularly when picked up by the North American and UK-based New Urbanists, as was argued in Chapter Two. However, within Muratori's writing is the suggestion of a kind of multi-scalar reasoning at work, an idea later picked up by Chris Lee and Sam

[130] MONEO, R. 1978. On Typology. *Oppositions 13*. pp. 35.

Jacoby in their writings in Typological Formations: Renewable Building Types and the City,[131] and one that we have been exploring in this chapter.

To consider this more carefully, this thesis argues that one needs to examine the site of architecture's operation. As was discussed in Chapter One – as Robin Evans first pointed out in Translations from Drawing to Building, and as Stan Allen later reiterated – architecture is one of only a select few of the arts that does not work directly on its material; that is, on the architectural object itself.[132] Instead, it works indirectly, relying on an intermediary notational system. Architecture's terrain of engagement is primarily the graphic realm, as was argued in Chapter Two; or, as Marina Lathouri has argued, to speak of scale one needs to speak about this terrain of drawing. In the 2006 publication A Document of Scales and/or Engagement, Lathouri argued that questions of scale are related to the question of the city through systems of representation.[133]

So, how do we understand scale? Most writers on architecture and the city, Lathouri argues, understand the city as a gradient, an aggregation of things organized in a series of interrelated scales defined by production and notation systems, and manufacturing clusters. Here, as we have seen, 'scale is almost used as a substitute for the term size,' where one scale moves smoothly in an aggregation to the next scale/size.

One important aspect of scale is its role as a notational convention that sets the relationship between the drawing and the proposed object via predetermined dimensional designations: 1:20, for example, or 1:100, or 1:10,000. However, to leave scale defined as simply this is too reductive and misses the graphic work and reasoning of architecture that is *not* interested in the re-presentation of the building. Architectural graphic reasoning is not about producing an image of a finished building, one that will be constructed exactly as it appears in the drawing. Rather, the graphic realm of architecture's reasoning is involved in the critical, diagnostic and projective

[131] LEE, C. & JACOBY, S. (eds.) 2007. *Typological Formations: Renewable Building Types and the City.* London: Architectural Association Publications.
[132] See EVANS, R. 1986. Translations from Drawing to Building. *In:* EVANS, R. (ed.) *Translations from Drawing to Building and Other Essays.* London: Architectural Association Publications. And ALLEN, S. 2000. *Practice: Architecture, Technique and Representation.* Amsterdam: G+B Arts international. pp.1-30
[133] BASAR, S. & BORSI, K. (eds.) 2006. *A Document of Scales and/or Engagement.* London: AUSP Cluster Architectural Association, LATHOURI, M. 2006. The Modern Genealogy of the Urban Scale. *In:* BASAR, S. & BORSI, K. (eds.) *A Document of Scales and/of Engagement.* London: AUSP Cluster Architectural Association Publications. No page numbers given.

work of proposition; which is posed as a kind of question in the drawing: What is the size of the city, or what is the the size of the scale of neighborhood, for example.

By the early decades of the twentieth century, as this chapter has shown, it is possible to see established the scale of the metropolitan region as a general reasoning. Like 'the well-defined logic of the family home' that, as Borsi has demonstrated, had inserted itself into the undifferentiated urban field of Berlin by 1907, it is possible to see another scale-based logic of the metropolitan region generalized by 1917 through an examination of the federalization of the national rail network in response to the problems of the governance of the Port of New York and New Jersey.[134] By the time the metropolitan region was documented in the Regional Plan of New York and its Environs in 1929, this scale in the city was already evident as a spatial reasoning at work through many agencies at many levels of government and in private enterprise regardless of the absence of any comprehensive plan; it didn't need to be formalized in an implemented and implementable plan.[135]

Take also, for example, the slum-clearance competition entries for the New York City Housing Authority (NYCHA) sponsored competition of 1934, what was to be extended in 1935 by the firm Brounn and Muschenheim into the fifty-block clearance proposal. Neither of these proposals were ever built, but competition entries, on account of their repetitive seriality, are an interesting way of considering this questioning of the drawing and of scale.

The first-round competition involved the proposed demolition of just sixteen blocks of old and new-law tenement buildings on a site stretching from East 60th Street between Second Avenue and down to the East River.[136] If we consider these competition drawings published by the NYCHA on the completion of the earlier competition, it's possible to see in this set of four proposals the aggregation of arguments about home, work and leisure across the city, the quarter and within the block. Each proposal stakes a claim on a field of dispute around light, air and access into new dwellings and into blocks in cities that, in the 1930s, were choking under

[134] BORSI, K. 2009. Drawing and Dispute: The Strategies of the Berlin Block. *In:* LATHOURI, M., PERITON, D. & DI PALMA, V. (eds.) *The Intimate Metropolis.* London: Routledge. pp. 149
[135] BROMLEY, R. 2001. Metropolitan Regional Planning: Enigmatic History, Global Future. *Planning Practice and Research,* 16**,** 233-245.
[136] Plunz 1990:221 for descriptions of the project see Plunz 1990 and N.Y.C.H.A 1934. *New York City Housing Authority: Competition.* New York: New York City Housing Authority.

very high density. At the scale of the domestic unit, this is via room division and structural systems. At the scale of the block, this is façade organization and block layout. At the scale of the neighborhood, this argument is made through connectivity and amenity made and given to existing peripheral fabric.

Suggested by this group of drawings is the idea that each scale attempts to resolve a predesignated complex and layered set of problems, and contained within each scale is a high degree of embedded intelligence. Scale, then, isn't about a neat Matryoshka doll fit. It certainly isn't about a kind of nesting. It is, in fact, the very opposite. Instead, each scale poses problems that are irreconcilable to others. The constellation of sociopolitical problems literally drawn out and posed at the scale of the block are quite distinct to those of the individual dwelling with its matrix of concerns around the family and the individual, and which call on particular issues via education, healthcare, hygiene and economics, as we saw in Chapter One. If we return to the 1934 competition entries, each proposal can be seen to work to test an inherited set of urban diagrams, digesting and reorganizing urban elements such as the grid and the street that it supports. Here, scale is instrumental, it is something more like a mode of operation; architecture's material and formal skill set relies on this capacity for multi-scalar reasoning where *there is no smooth link between the individual architectural object and the urban.*

One is reminded in this discussion of scale of Foucault's description of the notion of concept in terms of discursive knowledge in The Archaeology of Knowledge.[137] Here, concept doesn't designate a class of objects or a category where one is interested in condition of possibility. In common sense usage of concept, one might even say it is understood to designate 'a set of matching or coordinated items' where to conceptualize is 'the action or faculty of conceiving in the mind or of forming an idea or notion of anything,' an act linked to imagination. Hobbes wrote, 'All evidence is conception and all conception is imagination, and proceedeth from sense.' In nineteenth-century philosophy, to gain a conception of a thing, Coleridge wrote, is 'bringing any given object or impression into the same class with any number of other objects or impressions by means of some character common to them all' as part of a process of knowing

[137] FOUCAULT, M. 1972. *The Archaeology of Knowledge*. London: Tavistock.

an object where, ‘conception… expresses the act of comprehending or grasping up into unity the various qualities by which an object is characterized.’[138]

For Foucault, in distinction, the notion of concept designates a coalescence of rules for the organization of dispute, where one is interested in laws of coexistence: a concept might be the rules of formal construction, for example; rules of rhetorical practice; rules that define the internal configuration of a text; those that establish modes of relation and interference between different texts; or, we will argue, rules that establish the size within a spatial reasoning, toward which issues cluster concerning the specific relationships between work, leisure, transport and home at the scale of the metropolitan region. Or, as we saw in Chapter One, within the single-family dwelling of the modern family, the scale of domesticity defines everything that can be said about the relationship between mother, father and each gender-specific child in a network of sociopolitical dynamism.[139]

Such rules are not embodied in things. What makes it possible to delimit the group of concepts – as disparate as they appear to be – is how these various coalescences are related to one another: the way orderings of populations in relation to the triad work/leisure/home are linked to a spatial reasoning at a multiplicity of scales, which is linked to how new graphic potentialities relate to a coalescence of statements regarding the ground, for example.

Lawrence Barth takes this further, arguing that the language of the analysis of scale can never be confused with the language of the experience of scale. Scale understood as a concept already always defines all of what can be said about it. As a concept, scale is a coalescence of rules for the organization of dispute, the dispute around decentralization at the scale of the metropolitan region, for example. The already in-place laws of coexistence for that dispute define what can be said. Therefore, the language of experience of scale can not allow one to test or project in, for example, a design context, whether in practice, or in the educational studio context. Scale itself already has defined the language one is able to choose to describe the experience: ‘It is a concept [in this instance, each scale] that determines the relevant

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[139] FOUCAULT, M. 1972. *The Archaeology of Knowledge*. London: Tavistock. p79 See also COUSINS, M. & HUSSAIN, A. 1984. *Michel Foucault*. London: Macmillan Education Ltd.

experiential and analytical kinds of languages you would even use.'[140] Therefore, the language of analytics and the language of experience have to be separated if one is to know more about what is possible, in domesticity or the housing project.[141] One cannot speak about the experience of domesticity in order to analyze domesticity; the language of analytics has to recognize the impossibility of speaking outside of the laws of coexistence. This, of course, has enormous consequences for how we approach the question of transformation in the housing project. How does one approach domesticity or the neighborhood if it is not possible to speak about the concept as an experiencing subject?

[140] Barth in BASAR, S. & BORSI, K. (eds.) 2006. *A Document of Scales and/or Engagement.* London: AUSP Cluster Architectural Association Publications.
[141] Barth goes on to say: 'We just have to find some set of instruments that will allow us to carry on the conversation, knowing that there would always be these tendencies to try to justify analysis on the basis of accumulated experience or immediate experience and always work against that.' In ibid.

A SITE OF EXPERIMENTATION AND TRANSFORMATION: THE GROUND

OBJECT AND STRATEGY

4.1 Introduction: Sites of Transformation

As we saw in Chapter Three, scale functions discursively and diagrammatically in the drawing to organize clusters of related but unaligned problems constituted through dispute. In the context of this thesis, we are particularly interested in constitutive disputes around domesticity, or the complexities of work, leisure, home and transport at the scale of neighborhood. In one sense, scale is a graphic convention; we can say that scale is both a re-presentation of an object, and a representation of sets of relationships. Scale is often claimed to involve extension and aggregation – the room to the residential unit, the residential unit relative to a collective, the collective as a neighborhood; as a quarter; as constitutive of a metropolitan region. Predicating this argument is the idea that the relationship of architecture to the urban is one based on type; the urban, the consequence of the aggregation and sedimentation of singular units of architectural type; the city, a thing knowable if one knows its bits and parts – a legacy of the critique of the modern movement of the 1960s and 1970s which redefined the city in terms of type, as we saw in Chapter Two.

But the urban is more than this; scale appears to carry something with it. Scale defines the experiential and analytical languages we use to approach an urban problem: the language of care, and nurture of the 'domestic,' versus the language of public interface and community engagement at the scale of the 'neighborhood' most evident in Perry's exemplar 'Neighborhood Unit,' suggesting that this notion of type as sedimentation is not quite correct.

Foucault never wrote specifically about the urban, however; his reading of the dense and complex fields of positivity in medicine, economics and the human sciences suggests an idea of the urban where a diversity of architectural projects can be placed on a terrain of negotiation and dispute. Here, scale is something more like reasoned organization on a trajectory within a repeatable series – in this instance, the housing project, as we've seen, with the Brounn and Muschenheim project and with Twin Parks Northeast. We can see in these two projects a spatial research continuity where scale digests and reorganizes urban elements such as the

grid and the street it supports, working to test an inherited set of urban diagrams; a testing dependent on a transactional and indexical graphic realm. If we stay with Foucault, each critical gesture is both diagnostic and propositional; the architectural object providing, with its coming into form via a reflection on its material and formal possibilities, the opportunity for a critique of the subject, a process which is part of a constant projection of who it is that we want to become. This suggests a politically-charged design method present throughout the twentieth century which brings into closer proximity design and action. To continue with this logic, one can suggest that urban change is not the consequence of the effect of a series of external forces, social, economic or political, which are alienated from architecture and yet to which it is understood to respond, and which it reflects. Instead, urban change is produced in part though architecture's material and organizational reformulations, where neither term remains stable: neither the object under question, the city, nor the urban subject of the critique – the 'we' that comes about as a consequence.

4.2 The Burden of Type: Ongoing Trajectories of Experimentation and Transformation

As was discussed in Chapter Two, Rafael Moneo in his 1978 essay On Typology argued that architecture is not only described by type as a reference to precedent and as part of a critical descriptive project and process of judgment, but is also produced through type as part of its own design process and process of reasoning.[1]

As this thesis work has argued, at the time that Moneo was writing, the question of architecture's role and agency in transformation and change in the city was under review. The field of architecture and urbanism was dominated and partially paralyzed by a perception that the modern movement had failed, particularly in terms of the deployment of the tower-in-the-park housing type and its relationship to urban-renewal objectives. The question being consistently asked was, where is architecture's agency to affect change in the city?

[1] MONEO, R. 1978. On Typology. *Oppositions, 13*.

Some years before Moneo was writing on type, as has already been outlined in this thesis, Kenneth Frampton also called on type in an Architectural Forum review of the 1968-73 Bronx-sited Twin Parks Housing Development. As we saw in Chapter Two, Frampton used type in two distinct ways.[2] In the first instance, type was a descriptive tool and an organizational mechanism deployed in the cultivation of a terrain of judgment. Frampton uses type in his review of the four projects that made up the New York State Urban Development Corporation (UDC) middle-income housing scheme in the service of categorizing and organizing a critical description of the housing projects where type is understood as visible in the singular instance of the individual object, and with reference to a series of modern-movement exemplar precedents that provide evidence in an argument for continuity. Here, type can be understood as the image of a prior solution to similar problem, visible in the singular work of architecture.

But, as we also saw, Frampton suggested type be understood in a second, quite different way. He asked of the Twin Parks Housing Projects, 'To what purpose do you assign the space under the pilotis?'[3] As we have argued in this thesis, what is revealed in the apparent banality of Frampton's identification of the lifting up of the building, is the ground itself.

Frampton's use of architectural typology in this second form – of type as spatial and organizational reasoning and his identification of the typological burden – opens up a reading of type not as an image visible in the single object, but rather as a trajectory of research and experimentation, where type is an iterative process of reasoning that can only be understood through a series of projects, a catalogue of prior solutions to similar problems. Frampton's identification of the lifting up of the building revealed the ground as the site of such a trajectory of research and experimentation.

The following chapter will speculate in more detail on an alternate account of the transformation of the housing project in the context of both New York and this understanding of architectural type. This is an alternate history that acknowledges both the inherited discursive and generalized conditions of domesticity, neighborhood and metropolitan region that the discipline

[2] FRAMPTON, K. 1973. Twin Parks as Typology. *Architectural Forum*, p.56-61.
[3] Ibid. pp. 58.

of architecture was called in to serve as they emerged in the late nineteenth and early twentieth century, while equally acknowledging the specificity of the non-discursive context of the City of New York. Architecture's semi-autonomous and iterative spatial and formal reasoning and instrumentality operates between these two conditions, as we shall see.

Chapter Three outlined how the scale-based strategic exemplar diagrams of domesticity and neighborhood cluster related but unaligned problems. In what follows, we will examine architecture's disciplinary capacity to operate iteratively in the other direction, to push back on the discursive material it is called in to materialize, in this instance, in the service of the object of the ground. Here, then, 'the typological burden' identified by Frampton isn't understood to be an aberrant failure of functionalism. Instead, we will argue that the 'burden' is evidence of a sustained trajectory of experimentation operating through a process of repetition and transformation. Contrary to accounts of rolling ruptures in the field through the twentieth century, this begins to suggest both a different continuity, but also where the limited autonomy and agency of the discipline of architecture is to effect change, and the conditions and diagrams to which it is called.

4.3 The Ground as Strategy Within Urban Reform and Urban Renewal

The tower-in-the-park housing projects of mid-twentieth-century New York, such as the 1935 B+M scheme, have been criticized on the grounds of scale, density, site coverage and for their destruction of the Manhattan grid and street system. As we have seen if the tower-in-the-park site coverage typically sat around ten percent, the Twin Parks development returned its site coverage to around fifty percent, slightly more than the thirty-five percent site coverage being driven by the Housing Division at the Public Works Administration in New York in the early 1930s. It is against all these issues that projects such as Twin Parks Northeast are held, as representing a return to 'the traditional and existing city.' (Image 17)

As we saw in Chapter Three, all that remains of the B+M proposal is a series of graphic documents held as part of the Muschenheim Archive at the Avery Drawing and Archive

Collection at Columbia University, the project's brief appearance in a couple contemporary journals, and its reproduction as part of histories of the city and its housing, for example Plunz's 1990 publication.[4] The graphic documents in the Avery collection are a series of photographic reproductions of the three original A1 proposal panels. These include plans, perspectives and axonometric studies including a spectacular floating perspective through a series of repeated horizontal blocks. In addition, the archive has within it developmental sketches and calculations regarding floor-to-site ratios, density calculations, initial zoning studies and other supporting documentation. As we have seen, the project grew out of an earlier 1934 New York City Housing Authority (NYCHA) sponsored competition for a significantly smaller 16-block part of the same site.[5] (see images 11+12)

As such, the later and developed group of drawings call forward a dense collection of interests. The documents are clearly for display as a series of panels and, one has to assume, therefore, discussion, and as instigators of debate. They consist of both written statements and drawn proposals and diagrams. There are textual calculations regarding density on the site both before and after the proposed works; land-value speculations and rental-return calculations both before and after the project is completed; and an accompanying argument regarding financing and mortgage structures. There are written statements regarding additional open-space amenity in the form of parks and playgrounds. And there are diagrams that propose a specific aggregation of use within the possible triad of work/home/leisure: a skin of commercial space faces Second Avenue and the commercial world of the tenements to the east of the site. In the center of this, and facing Second Avenue in a block between 67th and 68th Streets is a community building, pushing the scale of consideration off the exact boundaries of the fifty-block site, and toward a larger scale that responds to the wider urban quarter, arguing for amenity to a neighbourhood and context far in excess of the boundaries of the site itself. The proposed housing blocks mold and sculpt space, utilizing the void of the park to pull the river into the site in the west, or the void to lend amenity to the east.

[4] Ibid.
[5] Plunz doesn't distinguish clearly between the B+M 1935 proposal and this earlier competition; which makes me think that the smaller site is incorporated into the larger site. This needs to be clarified. Plunz 1990:221. See N.Y.C.H.A 1934. *New York City Housing Authority: Competition.* New York: New York City Housing Authority.

Some time before the advent of what Plunz argues was the arrival of European modernism in North America, the ground as a site of experimentation within urban reform can be seen to emerge through the rationalization of the tenement building in the pursuit of production, construction and material efficiency, together with a challenge to the gridiron armature of the 1811 New York State Commissioners' Plan itself in the pursuit of rationalized and improved access to services, sanitation, light and air (Image 18). By the first decades of the twentieth century, this was aided, as we saw in Chapter Three, through the structuring of new relationships between urban governance and the space of the city via agencies such as the public authority, predicated as it was on the question of the size of the scale of the city.

For example, the question of the 25x100ft lot that constituted the 1811 plan, and questions of housing, were amalgamated at the scale of the urban block through the second half of the nineteenth century.[6] As we saw in Chapter Three, the so-called 'Commissioners Grid' that had originally been used to divide up the island of Manhattan, unlike the later 1929 Regional Plan of New York and its Environs, had been less a set of instructions for building the city, and more a simple infrastructural statement of movement paths involving rivers, roads and freight, and an as-yet undifferentiated urban population. While the 1811 plan is important, it does not contain the same complexity or generalized spatial reasoning in terms of a comprehensive multi-scalar approach to the metropolitan region that is evident by the time the first of the New York authorities, the Port Authority, is experimenting with questions of governance and space around 1917, or certainly by the time the Regional Plan of New York and its Environs is published in 1929, generalizing as it does both the scale of the neighborhood unit and that of metropolitan region at the same time.[7] As we saw in Chapter Three, there was a series of plans that emerged during the late nineteenth century that took on elements of this reasoning; Ildefons Cerdà's plan of 1860 for the extension of Barcelona, for example, was one. Here, the simple

[6] The typical Manhattan urban block: 200x600ft.
[7] Committee on the Regional Plan of New York and Its Environs 1929. The Graphic Regional Plan: Regional Plan of New York and its Environs, Vol. 1. New York: Regional Plan, JOHNSON, D. A. 1996. *Planning the Great Metropolis: The 1929 Regional Plan of New York and Its Environs.* London: E&FN Spon, PERRY, C. A. 1929. Neighborhood and Community Planning: Regional Plan of New York and Its Environs. New York: Committee on Regional Plan of New York and Its Environs. See also SCHWARTZ, J. 1993. *The New York Approach: Robert Moses, Urban Liberals and Redevelopment of the Inner City.* Columbus: Ohio State University Press.

division of the city into an infrastructural system allowed for the differentiation of movement throughout, along with the division of plan into repeated octagonal courtyard-based urban blocks. In one sense, Cerdà's plan is more like the earlier 1811 plan for New York City; a simple infrastructural division, however, now with a suggestion of a relationship to housing and its form with the courtyard block, becomes critical. Tony Garnier's later 1917 Cité Industrielle introduced a more complex relationship between the relationships of home and work, and the even more complex relationships set up by Howard with the Garden City. This diagram anticipated the more complex scale-based socio-spatial clusters of single-dwelling, neighborhood and region that are evident by the time of the publication of the *Regional Plan of New York and its Environs* in 1929.

Experimentation around the strategic configuration of the tenements at a critical mass across the urban block was already well under way by the 1870s. For example, in 1877 Nelson Derby proposed a tenement using four adjoining 25x100ft lots, allowing for a building organized around a larger internal courtyard by combining all the air shafts, making solar access and ventilation work harder (Image 19). In 1878, the influential magazine Plumber and Sanitary Engineer had already called for a tenement-house design competition where competitors were asked to consider a repeatable 25x100ft gridiron lot with an emphasis on improving ventilation, sanitation and fireproofing (image 20). By 1901 there were only a few efficient tenement plans remaining that worked in single-lot increments. Now, only on triple lots could efficiency be obtained. This effectively eliminated both the control of the housing market by small-scale developers who had built at high density on a lot-by-lot basis while also establishing the urban block as the size of intervention. By 1879, legislation required internal light wells in a plan configuration that became known as the 'dumbbell.' In its repeatable logic, the dumbbell was predicated on a reasoning at a scale larger than the individual lot. It is a repeatable principle in the constitution of the whole block, and therefore also across a larger section of the city.

At the same time, the gridiron itself comes into question (image 21). From the 1870s, there were many proposals to break up the grid to allow service alleys, mews and other access ways into its core. Frederick Law Olmsted and J.J.R. Cross proposed the provision of service alleys, while

Edward T. Potter made several proposals in 1878 for the introduction of east-west mews into the gridiron blocks giving better light, solar gain and ventilation to dwellings, as well as addressing sanitation and hygiene concerns. By 1917, the primacy of the gridiron itself was fundamentally overturned with the placing of buildings off the geometry of the grid in the pursuit of light and air. With the wall of the street no longer maintained as a continual façade, the resulting 'sawtooth' plan produced a multiplicity of entry spaces at ground level adjacent to the street, with space from the interior of the block pushed out to the street (image 22). By 1919 the full urban block was called into the service of the development, and in a proposal for the New York State Reconstruction Commission, fourteen U-shaped buildings were placed around the perimeter of the block, leaving a large communal interior garden between them.

By the first decades of the twentieth century, the internal park as open space or play paradise is common practice within the interior of the urban block, as can be seen exemplified in the 1917 project for housing on West 146th Street of the Open Stair Dwelling philanthropic organization. (Image 23) Also significant is Hubert, Pirsson and Company's 1890 proposal for a perimeter block with an entire ground floor devoted to commercial space, and the 1900 proposal for a perimeter block with the provision of an internal park to be bought and maintained by the City of New York.[8] (Image 24) Rogers' 1915 proposal for model dwellings on West 44th Street shows the interior massing of buildings placed within the blocks reduced to two floors, which were to house a library to serve residents. The late 1910s and the 1920s saw a great proliferation of experiments into the social organization of apartment blocks as communities of interest. In some instances, these buildings were designed for specific groups: the Jewish Needle Workers Union, the Amalgamated Clothing Workers Union, the Full-Fashioned Hosiery Workers Union, for example, or, through the provision of shared space, the 1932 Hillside Homes, in the Bronx. This is particularly evident in the large housing projects of the 1920s and 1930s that, it has been

[8] PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis.* New York: Columbia University Press. pp. 112. Plunz claims this is the first suggestion of actual practical government involvement in the provision of housing.

argued, worked to 'domesticate' the newly arrived immigrant workers from militant left-wing environments in Europe as is the case of the 1920s, or after the great depression in 1929. [9]

For urban-renewal and reform advocates to make arguments about the health, sanitation and hygiene benefits, the economic benefit, efficiency and material costs of the tenement at the scale of the lot and block meant that a constellation of interests, real estate developers, economists, doctors, health workers, educationalists, architects and planners, were thinking about the complex economic, health and hygiene ecology at the metropolitan-regional scale of the city at the same time. Before the *Regional Plan of New York and its Environs* was published in 1929, and the scale of the metropolitan region was generalized with it, all of these groups had been operating in a multi-scalar way for a considerable amount of time. To experiment with models for a replicable system for the tenement house that functioned beyond the scale of the single 1811 lot, and instead appropriating the entire block, was also always to ask, in the same gesture, questions of how such a system would proliferate at larger city-quarter scales. So to return to the criticism of the Regional Plan as being never formalised and therefore somehow less effective, what this shows is that its formalisation is irrelevant. The substantial multi-scalar reasoning that it is evidence of, is already at work in planning.

Through this multi-scalar coupling, questions of space and governance emerged in the city together via a strategy of the opening up of the ground via the question of housing. Critical to this, of course, is the architectural drawing itself as we saw in Chapter Two, the transactional zone between architecture's experimental drive and these external knowledge sets.

4.4 Constituting the Ground: Architecture's Disciplinary Experimentation

In the same moment that the ground coalesces as a strategy within urban reform, it is also emerging as an object of architecture's disciplinary focus, of its material and formal experimentation. As we have seen, the lot and building block are reorganized and amalgamated into a unit that is both thinkable at the scales of the urban block and of the city, at once and in

[9] Ibid.

the same gesture. And we will return to this, and the idea of the superblock.

At the same time, however, it is also possible to see the interior of the dwelling itself differentiate into the now familiar hierarchies of domesticity. (Image 25) The Plumber and Sanitary Engineer competition in 1878 for the design of a new tenement shows not only a differentiation of the external envelope of the building and its relationship to the boundary of the lot but, equally, the drawings from individual competition entrants begin to show a differentiation in the internal layout of the rooms of the dwelling spaces themselves. The exterior envelope of the tenement begins to align itself with the internal layout of the apartment as it differentiates itself toward the hierarchies of domesticity: kitchen, internal bathroom, living room, smaller child's bedroom and larger parents' bedroom. Prior to this, rooms had simply been rooms, undifferentiated in size or prior to occupation, in function; something more like Katharina Borsi's description of the undifferentiated urban field of the Berlin block before domesticity's insertion of itself.

Vertical circulation becomes an issue and is moved from the interior of the block to an adjacent position on the exterior of the building. The next question is to do with the centralization of vertical circulation, or its splitting. Does it sit next to a light well, or is it split to either of the short-side boundaries? Efficiency dictates that if the stair is split, apartments have their own privy. If the stair is centralized, privies are shared by occupants on a floor and centralized and rationalized around the vertical movement systems, thereby raising the question also of construction and material efficiency. However, if the stairwell is centralized, despite these efficiencies of movement and sanitation, valuable light and ventilation space is lost.

By 1901, living rooms and bedrooms are now clearly delineated in a hierarchy of size, the kitchen as a site of specific activity and function is delineated in the plan, and the limits of each self-contained apartment are clear. For the first time, the modern family, as identified by Jacques Donzelot, is clearly outlined in the drawing in what had been an undifferentiated urban field, and it is evident as an operative scale.[10]

[10] DONZELOT, J. 1979. *The Policing of Families.* Baltimore: John Hopkins University Press.

While the perimeter block has existed for some time in the city, it is not until around 1900 that the now opened ground of the block becomes the site of architecture's organizational experimentations into collective life. As Borsi has argued in her review of the emergence of domestic space out of the undifferentiated urban block in Berlin during the same period, once we have carved out the domestic realm of the modern family from what had been the undifferentiated interior of the building, it is almost as if we immediately turn our attention back to the issue of collective life.[11] Here, the question of the spatial performance of the block and its internal differentiation becomes linked to questions of stable collective life at the scale of what was known by 1929 as the neighborhood unit.[12]

This is particularly evident in the NYCHA competition of 1934 in which 26 teams, deployed onto the same cluster of superblocks, arranges and rearranges the constitutive elements of community life. However, at the same time that B+M are lifting their buildings up off the ground, the Hillside Houses in the Bronx, completed in 1932, excavate below the building to create basement apartments. As a way of dealing with how the buildings hit the ground, the blocks included basement units, which were accessed by walking down one-half story from the main entrance. The sides of these units opposite the stair were above ground level, where French doors led to private gardens enclosed by planting.[13]

4.4.2 The Architectural Challenge of the Superblock

The superblock became a standard unit of size in the development of the City of New York by the 1920s. Take, for example, the NYCHA competition in 1934 calling for the clearance of sixteen blocks of slum on the Upper East Side, and the creation of six superblocks and an area for a large park, a school and community building.[14]

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[11] BORSI, K. 2009. Drawing and Dispute: The Strategies of the Berlin Block. *In:* LATHOURI, M., PERITON, D. & DI PALMA, V. (eds.) *The Intimate Metropolis.* London: Routledge.
[12] COMMITTEE ON THE REGIONAL PLAN OF NEW YORK AND ITS ENVIRONS 1929. The Graphic Regional Plan: Regional Plan of New York and its Environs, Vol. 1. New York: Regional Plan, JOHNSON, D. A. 1996. *Planning the Great Metropolis: The 1929 Regional Plan of New York and Its Environs.* London: E&FN Spon.
[13] 2004. Report: Public Housing in the United States 1933-49. Washington DC: United States Department of the Interior National Park Service. pp. 21 See also WRIGHT, H. 1935. *Rehousing Urban America.* New York: Columbia University Press. See particularly pp. 82-83
[14] FORD, J. 1936. *Slums and Housing.* Cambridge, Mass.: Harvard University Press, FORD, J., MORROW FORD, K., THOMPSON, G. N., PHELPS STOKES, N. & FUND, P.-S. 1936. *Slums and Housing, with Special Reference to New*

Clearly, Twin Parks as a distributed urban-renewal project of four sites strategically placed across the Bronx is a critique of the superblock. As a distribution of infill and careful reconstruction of existing blocks, it is evidence of a response to the challenge of the superblock. Colquhoun argued that the superblock was a dilemma for architecture by the 1960s, particularly in terms of its performance as a vehicle for housing,[15] the question being, how does one reconcile the size of the development of chunks of the city with architecture's prior experience of how to develop the city? Colquhoun argues that the problem of the superblock – and with it the concept of the 'designed whole' – is a fact of the 'modern capitalist state' of the twentieth century. We will disagree with the emphasis on capitalism here, arguing instead, as this chapter shows, that the scale of neighborhood becomes, by the 1960s, the main weapon in city building's arsenal – bringing together a dense constellation of interests in the face of decentralisation, blight and the collapse of the centre of cities. The problem for architecture is that, as the consequence of the amalgamation of lots and small plots through the nineteenth century, there were few typological precedents for developing at that scale. Colquhoun references the representational buildings of the Renaissance, or the lot-to-block transformation undertaken in terms of the production of a metonymic set.

Colquhoun argued that by the 1970s the architect had to either rely on a cybernetic model of randomness as a way of articulating architectural identity at the scale of the superblock, as seen, for example, in the work of Safdie in Habitat 67,[16] or it had to invent a vocabulary which in some degree refers to the traditional language of architecture.

York; History, Conditions, Policy. Cambridge, Mass.: Harvard University Press. N.Y.C.H.A 1934. *New York City Housing Authority: Competition.* New York: New York City Housing Authority. COMMITTEE ON HOUSING AIA NEW YORK CHAPTER 1938. *The Significance of the NYCHA.* New York: American Institute of Architects New York Chapter. This competition was the basis on which the NYCHA was going to select architects for the round of projects financed by loans from the PWA, the first being the architect for the Williamsburg Houses project at Brooklyn.

[15] COLQUHOUN 1971. The Superblock. *In:* COLQUHOUN (ed.) *Essays in Architectural Criticism: Modern Architecture and Historical Change.* London: MIT Press.

[16] Built by Moshe Safdie as a pavilion for the 1967 World's Expo in Montreal, it developed out of his thesis project at McGill University. Habitat 67 comprises 354 identical prefabricated concrete forms arranged in combinations to create 158 dwelling units in its original configuration. It has subsequently had that number reduced to 146 as units have been amalgamated by residents. It is up to twelve stories high. The project was originally financed by the Canadian Federal Government, but in 1985 the tenants formed a limited partnership and purchased the building from the Canada Mortgage and Housing Corporation. See SAFDIE, M. 1974. *For Everyone a Garden.* Cambridge, Mass.: MIT Press.

An amalgam of these two positions was Ralph Erskine's Byker Wall housing[17] in Newcastle upon Tyne, Colquhoun argued that there is a 'contrived randomness' to the project combined with architectural elements such as balconies, windows and porch entries that reference the vernacular of that part of England. He argues that 'this scheme is highly 'sensitive;' it appears to steer between the monotony of systems-built high-rise housing and the kitsch of projects like Port Grimaud.'[18] However, rather than being the equivalent of a traditional ensemble whereby the basic housing set is culturally determined and the individual choice of the architect is relegated to matters of detail, the entire project is instead an individual concept. 'As such, it belongs to the tradition of 'total design,' which the superblock has inherited from the Renaissance via the transformations which took place during the eighteenth and nineteenth centuries.'

> 'In the first case, the result achieves randomness but fails to provide the signifying set which alone could provide this randomness with meaning. In the second case, the architect's choice of traditional elements, and the degree of literalness or generality with which he treats them, must always remain to some extent arbitrary.'[19]

> As we have seen, by the early 1920s, the object of the ground is firmly established as a site of organizational investigation and experimentation. At this time, the edge-forming building block leaves the perimeter of the urban block in search of alternatives. Here, one can see that to strategize open recreational space and parkland at the scale of the urban block, one also had to have an understanding of how parkland worked at a citywide scale. As the urban block emerges as a scale in the city, so too does the metropolitan region. It is established by the time of the publication of the decade-long research contained within the Metropolitan Regional Plan of New York and its

[17] Byker Wall by Ralph Erskine, 1969-82. Replaced 1200 Victorian houses on a site designated unfit for human habitation in 1953. Demolition began in 1966. Byker, Newcastle upon Tyne, England. Grade II listed in 2007.
[18] COLQUHOUN 1971. The Superblock. *In:* COLQUHOUN (ed.) *Essays in Architectural Criticism: Modern Architecture and Historical Change.* London: MIT Press. pp. 102
[19] Ibid. pp. 102

> Environs in 1929. With its publication of the strategic exemplar diagram of the neighborhood unit, the constitutive elements of balanced neighborhoods were established in a graphic dynamic tension between housing, work, leisure space and transport. The occasion of the housing project was the opportunity via the design process to add or subtract the elements required to create this.[20] As this chapter shows, the idea of community embodied in neighborhood, which is generalized by the 1920s, was formulated as much by the typological transformations of the tenement and the gridiron with its resulting blocks through the late nineteenth century, as it was by the reform and urban development that sought cohesion and dynamism.

The dispersed field of the urban on which the new spaces of buildings classified as contextual were constituted, such as Twin Parks Northeast, is also the ground in which we ask the question anew on the occasion of each new housing project: What is the city? This suggests that the very emergence of these spaces and processes of the city – the objects, strategies and concepts – such as the ground and the housing project itself, are linked in discourse by what we might call 'the terrain of the urban' and what might be described as 'a vast dispersion with its own immanent laws and regularities'.[21] From this point of view, the very beginning of our concepts of what the city or housing is can be seen as having been established upon this discursive terrain. Here, the process of formal and spatial exploration responds to and cultivates the same terrain from which the reading of the city as the site of the modern movement's failure has emerged.

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[20] In addition, as early as 1918 several proposals were challenging the prevailing new-law tenement dumbbell plan itself, involving a shifting of courtyards and opening up of space for light, air and ventilation into individual apartments. Here, the courts are shifted from the edges running between lots to the center front and rear of the 70x100ft lot. With only a slight reduction in site coverage, it achieved significantly increased light and air access to the buildings. At the ground level, the front courtyard is raised, and becomes a lightly planted amenity for occupants. With the pursuit of larger lot sizes, such exploration of the ground became more explicit, for example Henry Atterbury Smith's 1917 'open stair' dwellings between West 146th and 147th Streets. It comprised four blocks, one in each corner of the lot, with a park and playground occupying a 100x200ft site between running street to street, with a 48 percent lot coverage.

[21] This definition of urbanism as discourse follows Foucault's account of discourse in FOUCAULT, M. 1972. *The Archaeology of Knowledge.* London: Tavistock. While Foucault never speaks directly about the urban, this reading was developed as part of a doctoral research group between 2004-07 at the Architectural Association, London, convened by Lawrence Barth, with Dr Katharina Borsi and Dr Pavlos Philippou.

4.4 Conclusion:

New Urban Subjects/New Urban Space: The Diagnostic and Propositional Gesture of the Design Process

We return to Frampton's review of the Twin Parks projects. In one sense, the review is simply restating Alan Colquhoun's challenge to the discipline of architecture in his 1967 essay Type and Design Method.[22] Colquhoun argued that the modern movement's own account of architecture's coming into form was positioned uncomfortably between two equally inadequate ideas: as the outcome of data, or what Colquhoun called biotechnical determinism, and as shaped by the hand of the architect as intuitive genius. For Colquhoun, both these accounts fell short, leaving the final process of decision-making unresolved. He argued, instead, that it is architectural type understood as a reference to precedent that was at work in the design process, between data and form, a reference to past solutions to similar problems in a process of repetition and transformation both diagnostic and projective of other possible futures with each move. This is very clear in the account made above of the transformation of the object of the ground and in its strategic use within urban renewal and reform. Given the longer trajectory of the problem of the ground we have just discussed, this raises two issues. The first is the issue of continuity and the rareness of real transformation. This is clearly at odds with accounts of rupture and change that define and structure most historical accounts of the housing project. The second is the uncoupling of form and function evident in the typological burden, where architectural experimentation precedes meaning. Rather, what we see is an iterative material and directed politics to the coming into form of the housing project that is both transformative of our understanding of what the city is, and in the same moment, of who we are as urban subject.

[22] COLQUHOUN, A. 1967.Typology and Design Method. *Arena,* vol.33.

ITERATIVE INSTRUMENTALITY: THE CONDITIONS OF EXPERIMENTATION

Blight, Physical Takings and Constitutional Definitions of Public Use

5.1 Introduction

Public Use, Economic Benefit and Transforming Definitions of 'The Public'

As we saw in Chapter Three, there is a continual ongoing tension in the United States regarding the source of the provision of low and medium-income housing. During the late 1940s a conservative alliance of building, real estate, banking and chamber of commerce organizations emerged that opposed funds for public housing on the grounds of it being 'a "socialistic" intrusion into the private market.'[1] In opposition to this group and on the other political side, there was a liberal coalition that included the Truman Administration, social welfare groups, trade unions, housing organizations, and the US Conference of Mayors, who insisted that public housing was essential to any urban revival.[2] Cities needed public housing, their leaders argued, to redevelop the slums and alleviate the postwar housing shortage.[3] As both sides had supporters in Congress, there was a relentless process of lobbying and counter-lobbying that stymied efforts to pass a comprehensive postwar housing bill until the 1949 Federal Housing Act. [4]

There is an irony to this conflict, given the use at the time of eminent domain, or what is also referred to as the forced acquisition of land. There is a long-held axiom in the United States, agreed by both sides of the conflict outlined above, that 'the government cannot take the property of one person and give it to another.'[5] However, Pritchett points out that in the context of eminent domain and its use in slum-clearance and urban-renewal projects, including highways and expressways, through the twentieth century this principle has 'frequently been honored in the breach' in United States.[6] From the 1930s, eminent domain became a central

[1] VON HOFFMAN, A. 2000. A Study in Contradictions: The Origins and Legacy of the Housing Act of 1949. *Housing Policy Debate, Fannie Mae Foundation,* 11. pp. 307
[2] Harry S. Truman (1884-1972), 33rd President of the United States (1945-53) having served as Roosevelt's Vice-President for 82 days.
[3] VON HOFFMAN, A. 2000. A Study in Contradictions: The Origins and Legacy of the Housing Act of 1949. *Housing Policy Debate, Fannie Mae Foundation,* 11. pp. 307
[4] GELFAND, M. I. 1975. *A Nation of Cities: The Federal Government and Urban America 1933-1965.* London: Oxford University Press. DAVIES, R. O. 1966. *Housing Reform During the Truman Administration.* Columbia: University of Missouri Press.
[5] PRITCHETT, W. E. 2003. The 'Public Menace' of Blight: Urban Renewal and the Private Uses of Eminent Domain. *Yale Law and Policy Review,* 21. pp. 2
[6] Ibid.

mechanism in the acquisition of land in the name of slum clearance and as a response to 'blight', the production of housing and, by the 1940s, urban renewal, as a way of linking housing with infrastructure.

By the 1960s, critique of the use of eminent domain became the ground on which much of the criticism of transformation in the city during the middle of the twentieth century was carried out. From Jane Jacobs' protest response to the road infrastructure and demolition of old and new-law tenement buildings on the Lower East Side of Manhattan, to architecture's own understanding of the city at this time. Jacobs wrote, for example, that

> 'people who get marked with planners' hex signs are pushed about, expropriated, and uprooted much as if they were the subjects of a conquering power. Thousands upon thousands of small businesses are destroyed, and their proprietors ruined... Whole communities are torn apart and sown to the winds, with a reaping of cynicism, resentment and despair that must be heard and seen to be believed.'[7]

Through to the writing of Robert Caro on Robert Moses, and Marshall Berman's accounts of the transformation of the city during this period with the arrival in 1953 of the Cross-Bronx Expressway. Berman writes:

> 'At first we couldn't believe it; it seemed to come from another world. First of all, hardly any of us owned cars: the neighborhood itself, and the subways leading downtown defined the flow of our lives. Besides, even if the city needed the road – or was it the state that needed the road? (In Moses' operations, the location of power and authority was never clear, except for Moses himself.) They surely couldn't mean what the stories seemed to say: that the road would be blasted directly through a dozen solid, settled, densely populated neighborhoods like our own; that something like 60,000 working-and lower-middle-class people, mostly Jews, but with many Italians, Irish and Blacks thrown in, would be thrown out of their homes. The Jews of

[7] JACOBS, J. 1961. *The Death and Life of Great American Cities.* New York: The Modern Library. pp. 5

> the Bronx were nonplussed: could a fellow-Jew really want to do this to us? (We had little idea of what kind of Jew he was, or of how much we were all an obstruction in his path.) And even if he did want to do it, we were sure it couldn't happen here, not in America. We were still basking in the afterglow of the New Deal: the government was *OUR* government, and it would come through to protect us in the end. And yet, before we knew it, steam shovels and bulldozers were there, and people were getting notice that they had better clear out fast.'[8]

There is a commonly held belief that eminent domain is a power inherent in sovereignty – that the Federal Government of the United States, and each individual State, has always had the power to condemn and take land from individuals in the interests of state and federal infrastructure and housing projects such as those described above. In fact, the federal government did not assert its power of eminent domain in its own name in its own courts until 1875.[9] Part of the lead-up to this, and on the occasion of court challenges to the use of eminent domain, was the clarification of the definition of sovereignty itself, an evolving definition of responsibilities. With this also came a clarification of the grounds of legitimacy for the state taking the property of one citizen for the benefit of many or all under the Fifth Amendment. This chapter, then, is an examination of the transformation of the concept of public use itself, along with notions of sovereignty, on the occasion of the housing project in the city. Evident in this process is an iterative relationship of the housing project to transformations in definitions of public benefit that in turn transforms how we conceptually understand the city.

5.1.1 Housing, the Public Authority and Slum Clearance.

As we saw in Chapter Three, the Urban Development Corporation (UDC), the vehicle through which the Twin Parks projects were developed, was created by New York State legislature in

[8] BERMAN, M. 1982. *All That is Solid Melts into Air: The Experience of Modernity.* London: Simon and Schuster pp. 292
[9] Kohl v. United States, 91 U.S 367 (1875).EDITORIAL 1949. The Public Use Limitation on Eminent Domain: An Advance Requiem. *Yale Law Journal,* 58**,** 599-616. pp. 599. Shibboleth: 'a custom, principle, or belief distinguishing a particular class or group of people, especially a long-standing one regarded as outmoded or no longer important' http://www.oxforddictionaries.com/us/definition/american_english/shibboleth 03.11.13

1968 as a public authority. As we also saw, it was in 1934 that the first public authority directed specifically at housing, the New York City Housing Authority (NYCHA), was established. It was based on the public-authority model established with the Port Authority of New York and New Jersey around 1917, to run rail and port infrastructure. As has been discussed, this first American public authority was an answer to the problem of how to govern in the face of a regulatory failure in the functioning of the railroads and ports across the uncooperative jurisdictional borders and boundaries of New York and New Jersey. The UDC, similarly, was established to both exercise governmental powers such as eminent domain in the context of an ongoing 'urban crisis' of decentralization and urban blight in the 1960s, and as part of this it was established to resume powers that had previously been ceded to local government.

By the late 1960s, the UDC had substantial power to bring to bear on the issue of design quality in response to issues of urban blight and decay, being able to override local zoning codes and government bodies. In addition to the power of eminent domain, which gave it the ability to condemn land for site acquisition. It also had a degree of financial independence. The authority could issue its own bonds backed by a 'moral obligation' from the State of New York to pay the debt service, and was therefore to a certain degree once removed from constant political scrutiny and accountability – as we saw in Chapter Three with the emergence of the public authority as a vehicle for the development of roads and bridges prior to the NYCHA in 1934.

As a regulatory vehicle, the public authority emerged through the linking of a question of space with a question regarding the size of governance; it fundamentally asked the question: At what size should we govern? As we saw in Chapter Three, with the emergence of the public authority, the size of the scale of the metropolitan region was established as part of an ongoing question posed, in this instance on the occasion of the production of housing: What is the city? Such a question was always asked at multiple scales: that of the housing project itself, the neighborhood, the city district, and, by the late 1920s, the generalized condition of the metropolitan region.[10]

[10] Many contemporary accounts of public authorities in the United States, and those in New York specifically, accuse them of acting as a 'shadow government'. They are cast as organizations acting in concert, made up of unelected boards, carrying $140 billion in debt, and out of the reach of mechanisms of democratic accountability EDITORIAL.

5.1.2 Mid-Century Funding Conditions around the Production of Housing

In the 1930s there was a paralysis in the production of public housing, with a split emerging between slum-clearance advocates and programs, and public-housing programs, with funding cut off for the latter projects by anti-New Deal politicians between 1938 and 1942. However, despite this loss of funding, slum clearance itself continued regardless, deployed as part of an argument in cities regarding 'healthy balanced communities'. And as we have seen it is the Neighbourhood Unit that is the socio-political spatial instrument that is deployed in cities in the interest of the idea of balanced, stable community.

With the passing of the 1949 Federal Housing Act and its Title I program for urban redevelopment that authorized $1 billion in loans to help cities acquire slums and blighted land for public or private redevelopment, this impasse was broken.

Title I, *Slum Clearance and Community Development and Redevelopment* of the Urban Renewal component of the 1949 Federal Housing Act stated that:

> 'The general welfare and security of the Nation and the health and living standards of its people require housing production and related community development sufficient to remedy the serious housing shortage, the elimination of substandard and other inadequate housing through the clearance of slums and blighted areas, and the realization as soon as feasible of the goal of a decent home and a suitable living environment for every American family, thus contributing to the development and redevelopment of communities and to the advancement of the growth, wealth, and security of the Nation.' [11]

Title I also allotted $100 million annually for five years for write down grants covering two-thirds of the difference between the cost of 'slum land' and 'its reuse value.' The act stated that local

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2009. New York's 'Shadow Government' debt rises to $140 billion. *The Post Standard*, September 02 2009. See also EDITORIAL. 2004. Everybody Wants Reform. *New York Times*, February 28 2004. See also REVELL, K. D. 2000. Cooperation, Capture and Autonomy: The Interstate Commerce Commission and the Port Authority in the 1920's. *Journal of Policy History, Cambridge University Press,* 12**,** 177-214.

[11] COMMITTEE ON BANKING AND CURRENCY UNITED STATES SENATE 1949. Summary of Provisions of the National Housing Act of 1949. *In:* SENATE, U. S. (ed.). Washington: United States Government Printing Office. pp. 1

governments had to pay the remaining third, but lightened the burden by allowing them to do so either in cash or in kind, as long as the building also provided public facilities. This is the fundamental linking in legislation of public infrastructure procured on the occasion of housing.[12] Title I connected, for the first time, public housing and its provision with urban redevelopment or renewal.[13] These two issues had been closely related but separate and, at times, disputing and rival areas of reform. Title III of the 1949 Act restarted the public-housing program.[14] It authorized federal loans and grants to build 810,000 new low-rent public-housing units over six years,[15] ten percent of expert estimates of the nation's total housing needs. While Eisenhower was to reform Title I in 1954, and again in 1956, rather than amend it, this was still an endorsement of the concept, which in the end bought the new program time to establish itself. [16] The 1954 Act reform to Title I substituted the term 'urban renewal' for 'urban redevelopment,' to indicate a comprehensive program aimed not only at slums but also at blighted and potentially blighted areas.

> 'Instead of the simple land clearance on which Title I was predicated, the 1954 Act called for rehabilitation and conservation of existing structures, enforcement of building codes, relocation of displaced inhabitants and citizen participation in formulating renewal schemes.'[17]

5.2 Eminent Domain

In the same year that Eisenhower amended Title I, 1954, the Supreme Court of the United States fixed in place the notion of economic benefit as constituting public use within the Fifth

[12] VON HOFFMAN, A. 2000. A Study in Contradictions: The Origins and Legacy of the Housing Act of 1949. *Housing Policy Debate, Fannie Mae Foundation,* 11. pp. 311
[13] Ibid. pp. 299
[14] Established by the Wagner Housing Act of 1937
[15] 10 percent of what experts understood the nation needed. VON HOFFMAN, A. 2000. A Study in Contradictions: The Origins and Legacy of the Housing Act of 1949. *Housing Policy Debate, Fannie Mae Foundation,* 11. pp. 311
[16] US Presidents: Harry S. Truman, 1945-53 (Democrat); Dwight D. Eisenhower, 1953-61 (Republican); John F. Kennedy, 1961-63 (Democrat); Lyndon B. Johnson, 1963-69 (Democrat); Richard M. Nixon, 1969-74 (Republican); Gerald R. Ford 1974-77 (Republican); Jimmy E. Carter, 1977-81 (Democrat); Ronald W. Reagan, 1981-89 (Republican); George H. W. Bush 1989-93 (Republican); Bill Clinton 1993-2001 (Democrat); George W. Bush 2001-09 (Republican); Barack H. Obama 2009 – (Democrat).
[17] VON HOFFMAN, A. 2000. A Study in Contradictions: The Origins and Legacy of the Housing Act of 1949. *Housing Policy Debate, Fannie Mae Foundation,* 11. pp. 313

Amendment of the Constitution, which stated: '...nor shall private property be taken for public use, without just compensation.'[18]

The full text of the Fifth Amendment reads:

> 'No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of war or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; **nor shall private property be taken for public use, without just compensation**.'[19]

The Supreme Court ruling was as a result of Berman v. Parker, a case that challenged the grounds for the forced acquisition of land via eminent domain, as part of an urban renewal program in Washington City by the District of Columbia Redevelopment Land Agency (DCRLA).

The issue of 'just compensation' in the resolution of forced acquisition is a simple matter of land valuation and is seldom the grounds on which challenge is made. Instead, the question rests on definitions of public use or benefit as the grounds of legitimacy for such physical taking of private property by the state.

There has been much written about the machinery of physical takings, about the consequences of the fixing at a Supreme Court level of the relationship between economic benefit and public use. Anxiety about the use of eminent domain has continued to resonate both in US law, and in the imagination of US cities. As recently as 2005, for example, in the case of Kelo v. City of New London,[20] the US Supreme Court ruled that New London's proposed disposition of property

[18] U.S Const. amend V. http://www.law.cornell.edu/constitution/fifth_amendment
[19] U.S Const. amend V. http://www.law.cornell.edu/constitution/fifth_amendment
[20] **Kelo et al. v. City of New London et al.** Certiorari to the Supreme Court of Connecticut, argued 22 February, decided 23 June 2005. 'Kelo' was the first major eminent domain case heard in the Supreme Court since 1984. (Certiorari: A writ that a superior appellate court (or court of appeals – a court having jurisdiction to review decisions of a trial level or other lower court) issues in its discretion to an inferior court, ordering it to produce a certified record of a particular case it has tried, in order to determine whether any irregularities or errors occurred that justify review of the case. It is a device by which the Supreme Court of the United States exercises its discretion in selecting the cases it will review.

qualified as 'public use' within the meaning of the Takings Clause of the Fifth Amendment.[21] In the period that immediately followed this ruling, 22 states made substantial legislative changes to their state-based eminent domain laws to restrict the possibility that there might once again be the exercise of physical takings.[22] Resonating through these reactions was a fear that the machinery of eminent domain that had been particularly active during the middle of the twentieth century in cities across America, but in New York City in particular as part of urban renewal programs, was once again active. It is not the purpose of this thesis to critique the values, successes or failures of the use of eminent domain in the provision of housing and in the urban renewal of cities in America in the twentieth century. Rather, our purpose here is to examine the relationship in a different direction, in terms of how the coming into form of the housing project had an iterative instrumental relationship in transformations in definitions as fundamental as public use and sovereign responsibility. Here, the housing project is understood not as simply reflecting a series of forces external to it, but rather as a practice iteratively instrumental in these transformations.

It is on the grounds of the use of eminent domain in slum clearance that the tower-in-the-park housing projects of the 1940s through to the 1960s are so often criticized. The B+M project is an example of this.

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[21] The Authority v. Muller. Thus the state which created the narrow doctrine of 'use by the public,' New York, has taken the vanguard in its final demolition.'

Kelo v the City of New London 2005

(a) 'Though the city could not take petitioners' land simply to confer a private benefit on a particular private party, see, *e.g., Midkiff,* 467 U.S., at 245, the takings at issue here would be executed pursuant to a carefully considered development plan, which was not adopted 'to benefit a particular class of identifiable individuals,' *ibid.* Moreover, while the city is not planning to open the condemned land–at least not in its entirety–to use by the general public, this 'Court long ago rejected any literal requirement that condemned property be put into use for the … public.' *Id.,* at 244. Rather, it has embraced the broader and more natural interpretation of public use as 'public purpose.' See, *e.g.*, *Fallbrook Irrigation Dist*. v. *Bradley*, 164 U.S. 112, 158—164. Without exception, the Court has defined that concept broadly, reflecting its longstanding policy of deference to legislative judgments as to what public needs justify the use of the takings power. *Berman*, 348 U.S. 26; *Midkiff*, 467 U.S. 229; *Ruckelshaus* v. *Monsanto Co.,* 467 U.S. 986. pp. 6—13.'

(b)'The city's determination that the area at issue was sufficiently distressed to justify a program of economic rejuvenation is entitled to deference. The city has carefully formulated a development plan that it believes will provide appreciable benefits to the community, including, but not limited to, new jobs and increased tax revenue. As with other exercises in urban planning and development, the city is trying to coordinate a variety of commercial, residential, and recreational land uses, with the hope that they will form a whole greater than the sum of its parts. To effectuate this plan, the city has invoked a state statute that specifically authorizes the use of eminent domain to promote economic development. Given the plan's comprehensive character, the thorough deliberation that preceded its adoption, and the limited scope of this Court's review in such cases, it is appropriate here, as it was in *Berman*, to resolve the challenges of the individual owners, not on a piecemeal basis, but rather in light of the entire plan. Because that plan unquestionably serves a public purpose, the takings challenged here satisfy the Fifth Amendment. pp. 13 http://www.law.cornell.edu/supct/html/04-108.ZS.html

[22]http://www.castlecoalition.org/index.php?option=com_content&task=view&id=34&Itemid=119

5.2.1 Case I: Kelo v the City of New London 2005

The B+M project, as we've seen, was intended to address the issue of the density of old and new-law tenements in the city, and issues of the quality of housing through a series of measures that included slum clearance and the radical opening up of the site to the river, and through that, the sharing of light and air with the tenements that sat beyond the site itself and into the density of the city. The drawings produced for the document set make this clear through the inclusion of aerial photos of the Upper East Side of Manhattan that amplify a sense of the incredible population and density levels in the city at this time. As has been described, the city had been in a process of decentralization since the 1910s, with a significant loss of population by the 1930s, and the presence of significant areas of blighted building and urban fabric.

Blight continues to be the grounds on which eminent domain is exercised in contemporary development. In 2005, for example, the Kelo v. City of New London challenge to the designation of eminent domain was dismissed in the Supreme Court on the grounds that economic benefit constituted public use such that the designation of blight could be made.

Blight is a notoriously difficult concept to define. It can be seen to link together arguments around property use, economic benefit, social reform and urban renewal. During the twentieth century it became the grounds on which a hugely diverse group of urban actors with disparate interest in the city were able to come together; the result, this chapter will show, was the transformation of definitions of public use to be predicated on economic benefit.

A brief account of Kelo v. City of New London is useful in understanding the degree to which this mechanism continues to work in the city. New London is in southeastern Connecticut; founded in the seventeenth century, it had a population in the early 2000s of around 25,000 people. It suffered progressive economic decline throughout the late twentieth century and was designated a 'distressed municipality' by 1990. The city's population had declined by almost thirty percent from a high in the early 1960s, following general patterns of decentralization; its unemployment rate was twice the state average by 1998. In January of that year, the state bond commission authorized $5.53 million in bonds to aid New London Development Corporation (NLDC) planning activities in the city's Fort Trumbull area. This was in addition to the

authorization of $10 million in bonds for the eventual creation of a state park.

Pazer, Inc., a multinational pharmaceutical corporation, announced a month after the release of the NLDC aid that it planned to build a $300 million global research facility in New London, on a site adjacent to Fort Trumbull. Shortly afterwards, the New London City Council gave initial approval for preparation of a development plan, and the NLDC began holding community meetings and consultations with property owners and residents. Six alternative plans for the 90-acre project area were considered, with a final plan adopted by the NLDC in early 2000 and subsequently approved by the City Council. It divided the area into seven development parcels. These were to potentially include a waterfront hotel and conference center; marinas for tourist and commercial vessels; a public 'river walk;' eighty new residences; a United States Coast Guard Museum; office and retail space, and 'park support' for the proposed adjacent state park. The development plan as proposed also included the now-closed 32-acre Naval Undersea Warfare Center, a regional water pollution control facility, and approximately 115 residential parcels. It was expected that the proposal would generate between 700-3150 jobs and between $680,544 and $1,249,843 in property tax revenues.

After approving the integrated development plan that was argued would revitalize its ailing economy, the City of New London, through its development agent, purchased most of the property designated for the development for the urban-renewal project from willing sellers. It was then forced to initiate condemnation proceedings when petitioners, the owners of the rest of the property, refused to sell. The petitioners then brought this state court action, claiming that the taking of their properties would violate the 'public use' restriction in the Fifth Amendment's Takings Clause.

The Supreme Court ruled in a 5-4 decision that the city's proposed disposition of petitioners' property qualifies as 'public use' within the meaning of the Takings Clause. This was despite the fact that none of the properties identified to be taken were actually subject to 'blight.' The ruling stated that, given the comprehensiveness of the plans, economic benefit could still be argued as the grounds of public benefit based on benefit as public purpose.

5.2.2 Blight as Productive and Galvanizing Discursive Dispute

If blight continues to be a live issue in city transformation, it has always been a notoriously difficult and slippery term to define. Seventy years before Kelo v. City of New London, the 1932 report from the President's Conference on Home Building and Homeownership argued that a blighted area can be defined as:

> 'One that has become an economic liability to the community. A slum is a residential area where the houses and conditions of life are of a squalid and wretched character and which hence has become a social liability to the community.'[23]

The report defines blighted areas as 'widespread' and that blight

> 'is found in varying degrees of economic weakness, tending to become a slum when the property owners become willing to let out the buildings for uses which are detrimental to the community at large. In some cases, a slum has become economically profitable because of the high rents that can be obtained for improper use, and is no longer blighted according to the definition, but because of this economic strength it is a greater danger to the community.'[24]

Blight involved the linking in arguments for urban renewal, of the issue of housing reform and economic benefit. It was instrumental throughout the twentieth century in its constitutive capacity to link disputing and disparate interests that sat politically in opposition, and allowed them to gain political traction over the problem of urban renewal: housing reformers, local government, real estate interests, local business organizations, and the planning profession. Blight as a common strategic objective, allowed these different groups to pursue a range of interests in the city.

[23] 1932. Slums Large-Scale Housing and Decentralization. *In:* GRIES, J. M. & FORD, J. (eds.) *Publication of the President's Conference on Home Building and Home Ownership. Final Reports of Committees.* New York: John Ihlder. pp. 1, Part 3.
[24] Ibid. Part 2 Section 3

Later descriptions of blight from the 1950s account for its symptoms as being economic deterioration such as declining property value; high incidence of tax delinquency, or low average rents; the existence of social problems, including a high incidence of delinquency and crime; the over-occupancy of dwelling units; and premises not maintained. [25] Blight also affected non-residential properties, characteristics of which included:

> 'Dilapidation and deterioration of structures; inadequate original construction; inadequate basic building utilities and facilities; obsolete or obsolescent building types; improper building location, coverage, and use of land; inadequate or unsatisfactory public facilities or utilities; adverse influences from noise, smoke, and fumes. The symptoms of non-residential blight being economic deterioration, such as growing tax delinquency or migration of firms from the area and premises improperly maintained."[26]

Blighted property is therefore understood to be an economic drain on surrounding fabric; with fears that it has the capacity to spread, it is even described in terms such as 'cancer.' Blight seems to exist in a dangerous precondition to the slum and is understood to be a thing that can be intervened in; it was seen to endanger the future of the city which, if not excised, would spread and destroy it.[27] Quintin writes in 1958 in a Yale Law School Note on the Federal Urban Renewal Program that:

> 'All large and most middle-sized American cities have extensive areas of blight with immediate prospects of these areas spreading. Blight is not restricted to residential neighborhoods but includes commercial and industrial areas as well. It is usually located in central cities, but some suburban communities have blighted areas and the amount of suburban blight will probably increase rapidly. The problem is most acute in the

[25] QUINTIN, J. 1958. Federal Urban Renewal Program. *Yale Law School Faculty Scholarship Series.* New Haven: Yale Law School. P1
[26] Ibid.
[27] BALLON, H. 2007. Robert Moses and Urban Renewal: The Title I Program. *In:* BALLON, H. & JACKSON, K. T. (eds.) *Robert Moses and the Modern City: The Transformation of New York.* New York: W.W. Norton & Company.

> great industrial cities of the East and Midwest and in southern cities with large Negro populations.
>
> Statistical data on the amount of blight is very limited and unsatisfactory. This is due to the difficulty of defining blight, difficulties in quantitatively measuring it, and the insufficient statistical survey work that has been done on the subject. More progress has been made in measuring residential blight than that of a commercial or industrial character. Blight is usually defined in terms of substandard buildings, an area being blighted if it has a high percentage of such buildings.' [28]

The concept of blight emerged as instrumental in the 1920s. As we saw in Chapter Three, the 1920s and 1930s saw two parallel disputes among housing reformers. The first of these concerned a question of what the best mechanisms were for changing the housing and living conditions of the poor. On the one hand, there was a belief in the legislation of tenements as a way of forcing landlords to upgrade and adjust their buildings; private philanthropy and model tenement buildings would then supplement this. On the other hand, there was a different group of reformers who were advocating for the provision of government-funded public-housing programs based on European models of high-quality, low-cost housing. This conflict, then, was between private philanthropy and legislative reform versus fully publicly-funded government housing programs, which, as we saw earlier, continued well into the 1940s. In addition to this, there was a second dispute. It was connected to the first, but concerned with the role of slum clearance in either of these positions. For one group, social workers Mary Kingsbury Simkhovitch and Helen Alfred of New York, with conservative reformers such as Bleecker Marquette of Cincinnati and Bernard Newman of Philadelphia, low-cost housing was to be provided by philanthropy and through the legislation of tenement reform, where it was understood that 'the way to improve the lives of the poor was through housing', and that eliminating slums was essential to achieving this goal. In opposition to this were housing reformers such as Catherine Bauer, and architects Henry Wright and Oscar Stonorov (who

[28] QUINTIN, J. 1958. Federal Urban Renewal Program. *Yale Law School Faculty Scholarship Series.* New Haven: Yale Law School.

were involved in the New York Regional Plan), who believed that good public housing on vacant land at the outskirts of cities would eventually persuade slum dwellers to leave their tenements and relocate, thereby eliminating the need for condemnation and eminent domain proceedings. Either way, blight emerged as the common ground of dispute for these disparate groups.

During this period, slum clearance had great political and public appeal, quite distinct and separate from the question of housing. As we saw in Chapter One, this was supported by powerful constitutive imagery produced by the muckrakers, those realist photographers, photojournalists and writers that worked to 'expose' corruption, scandal, labour and living conditions in business and politics in US and European cities in the second half of the nineteenth century.[29] The dispute regarding blight that emerged out of this was able to constitute and gather around it a range of interests outside of housing reform that started to lend it weight by the late 1930s. So, while there was a split in the 1930s between slum clearance and public housing with funding cut off for the public housing program by anti-New Deal politicians between 1938 and 1942, slum clearance itself continued regardless. It continues to be valued and deployed in cities as part of an argument regarding healthy, balanced communities, developing an intensity and constituency of its own outside of the public-housing movement.

Partly, this was on account of slum clearance being taken up by economic interests such as the National Association of Real Estate Boards (NAREB) who took the lead in the search for a national urban-redevelopment policy. Because members were against public housing on ideological grounds, the belief being that housing projects competed with private business but did not pay taxes and were seen therefore as the 'opening wedge in an eventual takeover of the private housing industry by the government... and undermined the initiative and independence

[29] The term muckraker comes from Bunyan's Pilgrim's Progress 'who could only look downward while holding a muckrake which he used to rake the filth at his feet.' Work included in the category of muckraker included the kind of adventures into the slums of inner urban America seen in the images produced by photographers such as Jacob Riis who chronicled the life of the urban poor in America . New innovations in photography were very important to the effect of muckraking material on the public imagination, as was the willingness of newspapers to publish the material therefore broadcasting the material to a middle class American constituency. In New York City, Jacob Riis chronicled the life of the urban poor, publishing in the 1890s *How the Other Half Lives: Studies Among the Tenements of New York.* With a background in Police reporting on the Lower East Side, he became an advocate and spokesman for the rights of the poor. President Roosevelt, who used the term in a speech in 1906, became an advocate for the poor documented by the muckrakers, he had been a NY police commissioner, and was a friend of both Riss and of Lincoln Steffens, who would become the influential editor of McClure's magazine, that went on to publish many of the images of the urban poor, as well as exposes on political corruption in American Cities.

of American citizens,'[30] its members and executive director Herbert U. Nelson fundamentally believed in 'free enterprise, and sought ways to redevelop the slums that would give full sway to private entrepreneurs.'[31] NAREB campaigned intensively against public housing throughout the 1930s. They were instrumental in convincing a conservative Congress to stop funding the 1937 housing program established under the Wagner Housing Act.[32]

However, at the same time, it was very difficult for private developers during this period to develop tenements. The reasons were complex: the problem of land assembly and the costs associated had been a problem through the late nineteenth century, for urban reformers also. Equally, during the 1920s and 1930s, while inner-city industrial and low-income residential areas might have been unsightly, they were generally profitable. They were typically 'located near city centers and major transportation routes;' these sites were in demand for factories, stores and low-rent residences. In addition there was the added expense of demolition and rebuilding once assembly was achieved. What was needed was a galvanizing argument that allowed for a designation of a problem and the integrated proposition of a solution – 'blight' provided this, uniting private developers, real-estate interests, social reformers, philanthropists and government agencies, all interested in the transformation of the city.

5.2.3 Taking Property: Physical Takings versus Regulatory Takings

The field on which the question of blight was played out was the compulsory acquisition of land or eminent domain as part of slum-clearance programs. As we've already seen, both TPNe and the proposed B+M slum clearance scheme were predicated on eminent domain, and it is on the grounds of the use of forced land acquisition and the removal of tenants that much criticism of

[30] VON HOFFMAN, A. 2000. A Study in Contradictions: The Origins and Legacy of the Housing Act of 1949. *Housing Policy Debate, Fannie Mae Foundation,* 11. pp. 304

[31] Ibid. pp. 304 See also DAVIES, R. O. 1966. *Housing Reform During the Truman Administration.* Columbia: University of Missouri Press. GELFAND, M. I. 1975. *A Nation of Cities: The Federal Government and Urban America 1933-65.* London: Oxford University Press.

[32] VON HOFFMAN, A. 2000. A Study in Contradictions: The Origins and Legacy of the Housing Act of 1949. *Housing Policy Debate, Fannie Mae Foundation,* 11. pp. 304. Soon after its passing, the Housing Act of 1937 experienced political difficulties. From 1938-42 a number of anti-New Deal politicians were elected to Congress and succeeded in cutting off public-housing funding. It was weakened by Nathan Straus – the administrator at the US Housing Authority responsible for initial assistance to local authorities charged with developing 50,000 units of housing – who was an abrasive leader and alienated key staffers and congressmen, resigning in 1942. In addition, WWII intervened, Congress cut off funding for any public low-income housing, utilizing the resources for defense housing only. It was not until the 1949 Housing Act that Congress agreed to fund any more public housing. ibid pp. 303

tower-in-the-park housing is made. Eminent domain, or the physical takings of land from an individual for 'public use' under the Fifth Amendment of the US Constitution, is always predicated by the question:

> 'Under what federal and state constitutions, by what criteria should we determine that a governmental action is a "taking" of property that requires compensation to the owner, as opposed to an ordinary regulation to which property owners must submit?'[33]

An ordinary regulation may be understood as, for example, a zoning law that changes the value of a property, or a change in the status of unimproved land, its protection as a wetland area by an administrative environmental conservation agency, an agency that then has no responsibility to compensate the private property owner for lost value. Much attention in scholarly writing has been paid to regulatory taking and whether or not 'efficiency and justice require the government to compensate property owners for regulatory takings.'[34] This makes sense in a social, cultural and political context obsessed with property rights and individual freedoms and their erosion.[35] It also makes sense when one considers the question of what constitutes property rights. Some have argued that rather than property rights being a total right, instead it should be understood as a bundle of minor rights that collectively give an individual sole use rights. This accounts for why the minor erosions of that bundle might be seen as such a cause for concern.[36]

This is in contrast, however, to the form of taking whereby the government, state or federal, exercises its power of eminent domain and is able to compel a property owner to give up a property for 'public use' in return for compensation. The question is always on what grounds the state can 'compel;' what the grounds of legitimacy are that the state claims when it takes.

Here, the question of 'just compensation' as an opportunity to challenge physical takings is not controversial. It is generally established on the grounds of market value and quickly resolved.

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[33] ROSE, C. M. 1996. Book Review: Takings, Federalism, Norms. *Yale Law School Faculty Scholarship Series,* Paper 1810.
[34] ULEN, T., S. 2009. Book Review: Regulatory Takings: Law, Economics and Politics; Compensation for Regulatory Takings: An Economic Analysis with Applications. *University of Wisconsin Press: Land Economics,* 74.
[35] PRITCHETT, W. E. 2003. The 'Public Menace' of Blight: Urban Renewal and the Private Uses of Eminent Domain. *Yale Law and Policy Review,* 21.
[36] Ibid.

Instead, the question regarding the grounds on which government can claim legitimacy in the context of condemnation and reattribution of resources is the focus of continual court challenge where the question is: is the government violating the Public Use Clause of the Fifth Amendment to the United States Constitution which states: '...nor shall private property be taken *for public use,* without just compensation.'[37] The question, then, of by what definition constitutes 'public use' is key, and is where blight is instrumental as a concept.[38]

The grounds for the evolution of jurisprudence in the field of constitutional law has been the continual redefinition of this concept of 'public use' or 'public benefit' on the occasion of physical takings. As we have seen, definition involves asking on what grounds a government can claim legitimacy in the context of that taking and with this come a concomitant evolution of notions of sovereign responsibility. [39]

5.3 Eminent Domain, Sovereign Responsibility and Constitutional Meaning

5.3.4. The early use of Eminent Domain: Establishing Sovereign Responsibility

As already stated, It is a commonly held belief that eminent domain is a power inherent in sovereignty – that the federal government and the states have always had the power to condemn and take land from individuals. The Yale Law Journal (YLR), however, argues that 'despite the shibboleth that eminent domain was an "inherent attribute of sovereignty", the federal government did not assert its power of eminent domain in its own name in its own courts until 1875[40] with Kohl v. United States, 91 U.S 367 (1875). Until the limitations of the Fifth Amendment on federal takings were applied to the states under the Fourteenth Amendment in 1896[41], state takings had not been generally reviewed in the federal forum.[42] The YLR states

[37] U.S Const. amend V (my emphasis added).
[38] PRITCHETT, W. E. 2003. The 'Public Menace' of Blight: Urban Renewal and the Private Uses of Eminent Domain. *Yale Law and Policy Review,* 21. pp. 2
[39] HARTOG, H. December 1987. The Constitution of Aspiration and "The Rights That Belong to Us All". *The Journal of American History,* 74**,** 1013-1034. pp. 1013 Abraham Lincoln in Address to the Young Men's Lyceum of Springfield, Illinois January 27, 1838 LINCOLN, A. 1967. The Perpetuation of our Political Institutions. *In:* CURRENT, R. (ed.) *The Political Thought of Abraham Lincoln.* Indianapolis: Prentice Hall Professional Technical Reference. In HARTOG, H. December 1987. The Constitution of Aspiration and "The Rights That Belong to Us All". *The Journal of American History,* 74, 1013-1034. pp. 1013
[40] EDITORIAL 1949. The Public Use Limitation on Eminent Domain: An Advance Requiem. *Yale Law Journal,* 58**,** 599-616. pp. 599.
[41] The Fourteenth Amendment (Amendment XIV) to the United States Constitution was adopted on July 9, 1868, one of

that, initially, the only limitation placed on the rare exercise of eminent domain was the payment of just compensation. In fact, 'this requirement was written into the federal and a few state constitutions, but was so generally accepted as a principle of 'natural law' that a number of early state constitutions omitted it. They argue that this same 'higher justice' considered eminent domain justified for the 'public "good", the public "necessity" or the public "utility."'[43]

As government activity expanded – the definition of these terms became key for property-owners threatened with expropriation who attempted to show that the proposed takings were for projects unrelated to the public good.[44] Equally, the increasing pressure of industrialization on the country generally led to the courts seeking to limit the exercise of eminent domain in the interest of protecting private property through clarifying definitions of 'public use.' By the mid-nineteenth century, the definition of public use was becoming narrower. A distinction was drawn between a purpose beneficial to the public and a purpose in which the public had a 'right of use.'[45] Initially, however, 'the indirect contribution to the prosperity of the entire community resulting from activities from which only some individuals would profit was not sufficient to justify the exercise of eminent domain.'[46] Instead, it was necessary that the public have a right to use whatever facility was the outcome of the designation of eminent domain – for which the property was subject to.

This distinction was intended, they argue, to not only be consonant with commonsense understandings of the meaning of the term 'public use' – that is, 'a public use exists when the

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the Reconstruction Amendments. It addresses citizenship rights and equal protection of the laws, and was proposed in response to issues related to former slaves following the US Civil War. The amendment was bitterly contested, particularly by Southern states, which were forced to ratify it in order to regain representation in Congress. The Fourteenth Amendment, particularly its first section, is one of the most litigated parts of the Constitution, forming the basis for landmark decisions such as *Roe v. Wade* (1973), regarding abortion, and *Bush v. Gore* (2000), regarding the 2000 presidential election. It applies to the actions of all state and local officials, but not to those of private parties.The second, third, and fourth sections of the amendment are seldom, if ever, litigated. The fifth section gives Congress enforcement power. The amendment's first section includes several clauses: the Citizenship Clause, Privileges or Immunities Clause, Due Process Clause, and Equal Protection Clause. The Citizenship Clause provides a broad definition of citizenship, overruling the Supreme Court's decision in *Dred Scott v. Sandford* (1857), which had held that Americans descended from African slaves could not be citizens of the United States. The Privileges or Immunities Clause has been interpreted in such a way that it does very little.The Due Process Clause prohibits state and local government officials from depriving persons of life, liberty, or property without legislative authorization. This clause has also been used by the federal judiciary to make most of the Bill of Rights applicable to the states, as well as to recognize substantive and procedural requirements that state laws must satisfy.'

[42] YLR accounts for this in terms of prior to the adoption of the federal and early state constitutions, government rarely needed privately owned land. 'the abundance of unimproved and unoccupied private lands made the few instances of government acquisition relatively painless.'

[43] EDITORIAL 1949. The Public Use Limitation on Eminent Domain: An Advance Requiem. *Yale Law Journal,* 58**,** 599-616. pp. 601

[44] Ibid. pp. 601

[45] Ibid. pp. 601

[46] Ibid. pp. 603

public uses something' – but it was also hailed as the test that would remove the question 'from the realm of speculation.'[47] This left in place many questions: What proportion of the public must have a right to use; what about payment for the privilege of using the thing for which eminent domain was deployed; and 'where public utilities took property by eminent domain, would not private individuals alone – the stockholders – profit directly from the taking?'[48]

The YLR claims that by the beginning of the twentieth century, there had developed a massive body of case law at the state level.

> 'Irreconcilable in its inconsistency, confusing in its detail and defiant of all attempts at classification. The exceptions became so wide and so numerous that the 'use by the public' test was no longer an important impediment to the requirements of transportation, mining and agricultural enterprises, nor, for that matter, to the needs of industry at large.'[49]

Having developed in the state courts, only gradually thereafter did the federal bench begin to make significant contributions. Prior to 1875, the usual procedure had been for a state to condemn property and turn it over to the federal government.[50] This reflected the relationship between the states and the federal government as one of delegated authority.[51] The fundamental political difference in the character of the state and federal governments was that each individual state was a complete sovereign, except for those powers taken from it by the Constitution. The federal government, on the other hand, is a government only of delegated powers and authority. So while there was an enormous body of case law built up in the state courts regarding eminent domain and the use of the Public Use Clause at a state level, it didn't hold in the changed political context of the federal government and its Supreme Court system. It

[47] Ibid. pp. 603
[48] Ibid. pp. 604
[49] Ibid. pp. 606
[50] The first case establishing the federal government's eminent domain power was Kohl v. United States, 91 U.S 367 (1875). Until the limitations of the Fifth Amendment on federal takings were applied to the states under the Fourteenth Amendment in 1896, state takings had not been generally reviewed in the federal forum. This changed in the last decade of the nineteenth century.
[51] American revolution 1775-1783 constitution 1787

became necessary, therefore, for federal courts to determine what limitation the doctrine of public use placed on federal takings. [52]

Two streams of enquiry appear simultaneously in early federal condemnation cases in which the question of public use was raised. The first was a question of whether the use is a public one; the second was whether the federal government has the constitutional power to condemn for the proposed public use.[53]

On the second of these issues, that of constitutional power, the Supreme Court in early cases implied such power as part of those expressly delegated to the United States by the Constitution, that is, by the states. In a 1949 editorial, the YLR argued that, 'More recently, a lower federal court paraphrased this to mean that the United States has the power to condemn' when it is necessary and proper to do so in its carrying out of federal powers.[54]

The expressly delegated powers with which the federal government's exercise of eminent domain has historically operated amongst, have included: the commerce power, the power to raise armies, and the power to legislate for the District of Columbia, ie. Washington. A consequence of this definitional challenge was that questions emerged from the federal jurisprudential work regarding public use, as part of a definition more broadly of what, in fact, the transforming role of the United States federal government was. This is evidenced in a case regarding Native-American land claims from 1939. In this instance, the federal government had to first prove or establish that it had the constitutional power to act as guardian of native people, such that it could, in fact, then act in their interest – a profound question of sovereign definition and responsibility with significant consequences beyond simply the issue of a specific land claim. The question of public use came second in this equation, with the conclusion that 'it is a public use if the project comes within the purview of federal power.'[55]

[52] EDITORIAL 1949. The Public Use Limitation on Eminent Domain: An Advance Requiem. *Yale Law Journal,* 58**,** 599-616.609
[53] Ibid. pp. 610
[54] 'The right of the United States to condemn land is recognized when it is necessary and proper to do so in carrying out its federal powers' United States v. 4,450.72 Acres of Land, Clearwater County, State of Minnesota, 27 F sup. 167, 174 (D. Minn. 1939) in ibid. pp. 611
[55] Ibid. pp. 611

5.3.4 Excess Condemnation and Arguments for Economic Benefit.

During the 1940s there had been a tendency in the lower federal courts to blend the two limitations of public use and constitutional power into one issue, where questions of definitions of sovereignty on the one hand were brought together with issues of blight, to counter the threat looming from excess condemnation. Excess condemnation was a way of ameliorating the costs of a project. In practice, it was the taking of more property than was actually necessary for the creation of public improvement, and then subsequently selling or leasing the surplus land.[56] It provided a method of controlling the development of an area immediately surrounding a public improvement, while the condemner could sell or lease any excess subject to any restrictions that he/she deemed desirable.

> 'Furthermore, since the compensation which the condemnor pays for the acquisition of the property is generally considerably less than the value of the property after the creation of the improvement, the profits thus realized aid in defraying the cost of the improvement itself.'[57]

This economic advantage made excess condemnation very popular among states and cities. The courts occasionally outlawed it on the grounds of it 'violating the requirement that the taking must be for a public use,' not on the grounds of a broad conception of 'public use', but rather on the narrow test as to whether the public had a 'right to use,'[58] while between 1935 and 1949, no court ruled against the technique of excess condemnation. The rejection of 'excess condemnation' as a consequence of the 'use by the public' test remained a risk and a difficulty for development interests in the city – there was a risk associated with a reliance on the unstable definition of 'use by public' – and it is in the challenge of this in the courts that a further refining of 'public use' emerges. The Yale Law Review wrote in 1949:

> 'The expanding social philosophy of the present century has brought in the state courts an almost complete abandonment of the 'use by the public' test. Symptomatic are the housing and slum-clearance cases of

[56] Ibid. pp. 606
[57] Ibid. pp. 607
[58] Ibid. pp. 607

> the last decade. In 1937, Congress enacted a housing statute, which granted federal subsidies to states that would condemn slum areas and construct homes for the use of families that could not otherwise afford them. Eminent domain was, of course, necessary to execute this program. Since, however, the dwellings for which the eminent domain power was to be employed were for the use of only those individuals who would lease them, such acquisitions could well have run afoul of the 'use by the public' test. But 22 state courts of last resort have endorsed the takings as being constitutionally unobjectionable, following the lead of the New York Court of Appeals in New York City Housing.[59]

Housing and urban redevelopment and reform had been understood to be separate events and projects up until the 1940s. However, by 1945, the support for urban redevelopment and housing together had gathered political momentum, and its logic via the dispute of blight, which seems to be so self-evident in the early decades of the twenty-first century, was just coalescing. Following President Roosevelt's death, President Truman embraced Roosevelt's Economic Bill of Rights, and requested that Congress pass a set of domestic reforms that included urban redevelopment and housing together – this came in the form of the Wagner-Ellender-Taft (W-E-T) Bill.[60] The welfare of the people, its preamble declared,

> '...required the nation to remedy the housing shortage, eliminate substandard housing through clearance of slums and blighted areas, and provide as soon as feasible 'a decent home and suitable living environment for every American family' through housing production and the development and redevelopment of local communities.'[61]

[59] Ibid. pp. 607
[60] Senator Taft issued his subcommittee's report the same year that Truman came into the Presidency, 1945, and joined with Democratic Senators Robert Wagner and Allen J. Ellender to propose a comprehensive housing bill. VON HOFFMAN, A. 2000. A Study in Contradictions: The Origins and Legacy of the Housing Act of 1949. *Housing Policy Debate, Fannie Mae Foundation,* 11. p304 *When the Republicans won control of Congress in 1946, the bill was renamed the Taft-Ellender-Wagner (T-E-W) Act,*
[61] Ibid. pp. 307

Case II: Parker v. Berman 1954

Legal scholars writing on urban transformation and the role of eminent domain, such as Pritchett, argue that the 1954 Berman v. Parker ruling was the final outcome of a 'careful, sustained effort by advocates of urban renewal to shape the jurisprudence of eminent domain.' He argues that from the early 1920s through to the 1940s, renewal advocates developed their argument that cities were in crisis and that only major changes in property law could prevent urban decline.'[62] Pritchett argues that these claims were used to 'secure the right to condemn property and to turn it over to others who could use it more appropriately,' the consequence of which was a transformation in the meaning of the Public Use Clause within the Fifth Amendment of the US Constitution.

The final fixing in the United States Supreme Court, the highest court of appeal, of definitions of physical takings as public benefit predicated on economic benefit and linked via the notion of blight was made in 1954 in a Supreme Court ruling in the case of Berman v. Parker.[63] In this instance, two business owners (Max Morris, department store, and Goldie Schneider, hardware store) were affected by a proposal by the District of Columbia Redevelopment Land Agency (DCRLA) to clear and redevelop the southwest quadrant of Washington City. [64] The DCRLA was to acquire the land and the buildings on it, demolish them and transfer the cleared land to the Bush Construction Company.[65] This was despite the fact that none of the properties identified to be taken were actually subject to 'blight.' In fact both were successful businesses, Morris's hardware store in particular had been in the family for generations.

Up until this time, challenges to physical takings or eminent domain had only occurred in the lower courts, the consequence being that any jurisprudential testing of definitions of 'blight' linking economic benefit to public benefit were fixed in one state jurisdiction only, but not in all jurisdictions. This left an enormous amount of room for the jurisprudential case law to build up in

[62] PRITCHETT, W. E. 2003. The 'Public Menace' of Blight: Urban Renewal and the Private Uses of Eminent Domain. *Yale Law and Policy Review,* 21. pp. 1
[63] *Berman v. Parker*, 348 U.S. 26 (1954).
[64] The fact that it is the district of Columbia is significant. The expressly delegated powers with which the federal exercise of eminent domain has been allied have included the commerce power, the power to raise armies, and the power to legislate for the District of Columbia.
[65] BEVERIDGE, G. 1952. Suit Challenges Slum Program for Southwest. *Evening Star*, December 27 1952, BEVERIDGE, G. 1953. Fund to Press Project B Fight in Court Sought. *Evening Star*, November 17 1953. In PRITCHETT, W. E. 2003. The 'Public Menace' of Blight: Urban Renewal and the Private Uses of Eminent Domain. *Yale Law and Policy Review,* 21. pp. 1

contradictory ways within state courts, allowing precedent-based arguments between state courts and subsequent rulings in any direction, ie. there was no agreed definition of 'public benefit' tested and fixed within jurisprudential law and with regard to the Fifth Amendment.

The consequence of this for advocates of urban development was risk: a challenge to eminent domain could go either way. This made land acquisition difficult and risky; affecting real-estate interests as much as it affected social housing advocates and providers. But with risk also comes great gain, it also meant that the grounds of legitimacy on which one could make a claim for physical takings were effectively open for dispute and definitional challenge: blight is the solution to this.

5.3.1 Constitutional Meaning: Transformation versus Conservation

There are important constitutional implications to the claim of a violation of public benefit on the occasion of a challenge to eminent domain that are worth exploring in detail. Predicating this thesis is the idea that the Constitution itself is definitionally unstable, that it evolves in meaning as it is tested in multiple forums such as the state and Supreme Court system. Hartog describes a conflict between two definitions of US constitutional history[66] – one predicated on conservation, where quoting Abraham Lincoln in 1838, he argues that Americans understand themselves to be

> 'under a government of a system of political institutions, conducing more essentially to the ends of civil and religious liberty, than any of which the history of the former times tells us… Theirs was the task (and nobly they performed it) to possess themselves, and through themselves us, of this goodly land; and to uprear upon its hills and its valleys, a political edifice of liberty and equal rights.' [67]

[66] HARTOG, H. December 1987. The Constitution of Aspiration and 'The Rights That Belong to Us All'. *The Journal of American History,* 74**,** 1013-1034.
[67] Address to the Young Men's Lyceum of Springfield, Illinois January 27, 1838 LINCOLN, A. 1967. The Perpetuation of our Political Institutions. *In:* CURRENT, R. (ed.) *The Political Thought of Abraham Lincoln.* Indianapolis: Prentice Hall Professional Technical Reference. In HARTOG, H. December 1987. The Constitution of Aspiration and "The Rights That Belong to Us All". *The Journal of American History,* 74**,** 1013-1034. pp. 1013

Hartog argues that within this logic it is the task of the framers to create, ours is conservation. [68] Lincoln goes on,

> 'We, when mounting the stage of existence, found ourselves the legal inheritors of these fundamental blessings. We toiled not in the acquirement or establishment of them – they are a legacy bequeathed us, by a once hardy, brave and patriotic, but now lamented and departed race of ancestors.'

Hartog paraphrases him: 'Thus, it remains to us to "transmit" our inheritance undecayed by the lapse of time, and untorn by usurpation – to the latest generation that fate shall permit the world to know.'[69] For Lincoln, the constitution drafted in 1787 was a 'closed repository of permanent constitutional meaning.'[70]

In contrast to this is another notion of the constitution as one of constituent struggle where the 1787 document is 'little more than a starting point for a variety of narratives… over power, justice, autonomy, citizenship and community,'[71] and we would add definitions of notions such a public, and public benefit. This argument involves a rejection of the passivity of Lincoln's position and the recognition that the Constitution acknowledges 'legitimate aspirations.'[72] Central to this idea is the notion of 'constitutional rights consciousness,' what Hartog describes as being

> 'an intense persuasion that we (and here the first person plural is of indeterminate and changing breadth) have rights – that when we are wronged there must be remedies, that patterns of illegitimate authority can be challenged,

[68] Framers: the authors of the constitution. Ours: first person plural indicates all Americans since the Framers. HARTOG, H. December 1987. The Constitution of Aspiration and "The Rights That Belong to Us All". *The Journal of American History,* 74**,** 1013-1034. ibid.
[69] Address to the Young Men's Lyceum of Springfield, Illinois January 27, 1838 LINCOLN, A. 1967. The Perpetuation of our Political Institutions. *In:* CURRENT, R. (ed.) *The Political Thought of Abraham Lincoln.* Indianapolis: Prentice Hall Professional Technical Reference. In HARTOG, H. December 1987. The Constitution of Aspiration and "The Rights That Belong to Us All". *The Journal of American History,* 74**,** 1013-1034. pp. 1013
[70] HARTOG, H. December 1987. The Constitution of Aspiration and 'The Rights That Belong to Us All'. *The Journal of American History,* 74**,** 1013-1034. pp. 1013
[71] Ibid. pp. 1014
[72] Ibid. pp. 1014

> that public power must contain institutional mechanisms capable of undoing injustice'[73]

All of which suggests a faith that 'the received meanings of constitutional texts will change when confronted by the legitimate aspirations of autonomous citizens and groups.'[74]

Implicit in this are two things. Most importantly, it involves a theory of 'political legitimacy', that to win recognition as legitimate, governments in the United States need to endorse constitutional rights, just as those who lay claim to constitutional rights need them.'[75] In addition, there is contained within it the idea that the constitution is constantly definitionally transforming in response to jurisprudential testing.

What is of interest to this thesis is the grounds on which this testing occurs and the conditional relationship that the coming into form of the housing project plays in this definitional process, as part of a testing in court, as part of claims to blight and eminent domain, and as part of arguments made for public benefit. An ecology of effect, or what Foucault might have called a complex discursive formation. Our thesis here is that the housing project understood as a practice has an iterative constitutive role in this transformation of both understanding of the city, and of we who inhabit it. This is architecture's disciplinary specific material politics.

5.3.2 Definitional Stability

Morris and Schneider's cases, what would become Parker v. Berman, were originally filed separately, but were merged by the three-judge panel that considered the constitutional claims. Morris' case was appealed to the Supreme Court, while Schneider's was returned to the trial judge and became moot after the Court's opinion in Berman. In 1954 the United States Supreme Court concluded that *the condemnations by the DCRLA were constitutional* thus clarifying that 'public use' constituted economic benefit via an argument grounded in notions of

[73] Ibid. pp. 1014
[74] Ibid. pp. 1014
[75] Ibid. pp. 1015

blight, which definitionally came to link economic benefit with public use in a way that it had not been previously been and in what is described as a major transformation of property law.[76]

This had an immediate stabilizing effect for urban development by ameliorating risk for developers who had been operating in an environment of uncertainty with regard to the grounds of physical takings. It set the conditions for the nationwide expansion of the urban renewal program. Before Berman v. Parker fixed the definitional relationship between public use and economic benefit, the judicial system had played a significant role in reviewing government condemnations.[77] While it is true that the courts were usually 'deferential' to public and private uses of eminent domain, 'judges frequently declared that a particular taking was not in the public interest'[78] and this process of review, and therefore any definitional dynamism in the system, stopped; in a sense it allowed the machinery of takings to operate without intervention or question, and in an environment of definitional stability.[79]

5.4 Conclusion: The Iterative Instrumentality of the Coming Into Form of the Architectural Object: What Is the City and Who Are We on the Occasion of the Housing Project

Each new case, then, was a definitional process that through the late nineteenth century worked through what constituted federal government responsibility, and on what grounds that government could claim legitimacy in its taking of property from the few to benefit the many. Blight, and through it the demand for a constant evolution of notions of 'public benefit,' were fundamental in this definitional evolution of the Constitution and of the role and responsibilities of the federal government. We might see, then, also the constitutive role that, through the constant iterative process of the coming into form, the housing project played in these

[76] 1954. Consolidation of Two Suits Against Project B Ordered. *Evening Star*, February 10 1954. In PRITCHETT, W. E. 2003. The 'Public Menace' of Blight: Urban Renewal and the Private Uses of Eminent Domain. *Yale Law and Policy Review,* 21.
[77] PRITCHETT, W. E. 2003. The 'Public Menace' of Blight: Urban Renewal and the Private Uses of Eminent Domain. *Yale Law and Policy Review,* 21.
[78] Ibid. pp. 2 For examples of this see MANSNERUS, L. 1983. Public Use, Private Use, and Judicial Review in Eminent Domain. *New York University Law Review,* 58, 409-426.
[79] Pritchett cites a diverse group of legal scholars who argue that today (2003) 'government powers of eminent domain are practically limitless.' A fact reinforced by the 2005 Kelo v City of New London. ACKERMAN, B. 1978. *Private Property and the Constitution.* New Haven: Yale University Press. EPSTEIN, R. A. 1985. *Takings: Private Property and the Power of Eminent Domain.* Cambridge Mass.: Harvard University Press. RADIN, J. 1993. *Reinterpreting Property.* The University of Chicago Press.

redefinitions. Here, the housing project isn't a reflection of transformations but, rather, we might see a different kind of directed material politics involved in questions of what is the city, and equally who are we as urban subjects. Take, for example, the trajectories of experimentation of opening up the interior block of the housing project, where, with the creation of superblocks, and through low density, public benefit to the surrounding remnant tenement blocks in the form of large areas of parkland was made.

This complex ecology or field of reasoning that iteratively tested, via a spatial reasoning, the sovereign responsibility and notions of public benefit, is the same ground on which we constituted the new spaces in the city through the middle of the twentieth century. And it is also the same ground on which our transforming understanding of what those spaces are emerges, the city of the modern movement versus traditional and existing city for example.

Writing in the 1970s and 1980s of this period, Marshall Berman states in All That Is Solid Melts Into Air that Robert Caro's epic tale of the rise and fall of Robert Moses, The Power Broker, is not the entire truth in terms of the questions that need to be asked about the real desires of communities affected by the monumental slum clearance, eminent domain and road-building schemes of the era. Immediately, the reader is able to catch a glimpse of the paradox that is dynamism, as it is described in Chapter One of this thesis, and as it can be understood to equally operate at the scale of the neighborhood and the city during this time, with regard to land acquisition, and in terms of the public's ability to be captured by arguments about the future. Berman describes Moses' ability to convince the public of his inalienable role with regard to the 'moving spirit of modernity.' To oppose his view was presented as opposing the very dynamism of 'history, progress, modernity' itself. [80] That, in fact, despite the fighting and railing against the demolition and destruction of neighborhoods and 'communities' which seem to characterize both Berman's early adulthood as described in the book – and much of the writing about the work of Robert Moses – the imperative for those living in the neighborhoods of the Bronx that were affected by this road-building from the 1930s to 1960s was, in fact, one of mobility. The Bronx was a staging post for an upwardly mobile population driven to 'get out,

[80] BERMAN, M. 1982. *All that is Solid Melts into Air: The Experience of Modernity*. London.: Simon and Schuster

schmuck, get out.'[81] The New Deal slum-clearance and public-housing programs have been described by Gwendolyn Wright as 'a temporary "slum of hope" for the submerged middle class, who should be encouraged to join the propertied class in the suburbs, even if they did not wish.'[82]

Berman states that to live was to move up socially, 'and that this, in turn, meant to move out physically; to live one's life close to home was not to be alive at all.'[83] All of these factors demonstrate how the domestic was mobilized as the domain of the dynamic individual and the mobilized family, always on the move up. 'No neighborhood can be anything more than a stage along life's way, a launching pad for higher flights and wider orbits than your own.'[84] Sigfried Giedion in Space, Time and Architecture describes such a move, the carving and 'hacking' the way for freeways with a meat ax through an existing city mass, carving through the flesh of the city, as one which opens the city to be something 'as flexible and informal as the plan of the American home itself'. [85]

[81] Ibid. pp. 327
[82] WRIGHT, G. 1981. *Building the Dream: A Social History of Housing in America.* New York: Pantheon Books. pp. 229. Stokes in 1962 also described tenements as a waystation for immigrants acculturation. STOKES, C. J. 1962. A Theory of Slums. *Land Economics,* 38**,** 187.
[83] BERMAN, M. 1982. *All that is Solid Melts into Air: The Experience of Modernity.* London.: Simon and Schuster pp. 326
[84] ibid. pp. 327
[85] The reference to the use of a meat ax is a reference to a quote from Robert Moses. GIEDION, S. 1941. *Space Time and Architecture: The Growth of a New Tradition.* Cambridge, Mass.: Harvard University Press.

Conclusion

Domains of Reasoning/Fields of Effect. The Housing Project and Urban Transformation

Typically, architectural histories of housing in the City of New York place a significant emphasis on what has been identified as an ideological split that occurred in the late 1960s, between a series of projects examined in this thesis. Such an argument places the 'tower in the park' projects, illustrated by Co-Op City, for example, or the East River Houses, in opposition to what was identified as a new contextualism, where projects like Richard Meier's Twin Parks Northeast were reasoned about in terms of a return to a pre-existing pattern and form to the city, the known and traditional city that had been waiting quietly for our return and attention, a city seen as lost or forgotten by the proceeding tower-in-parkland developments that dominated housing provision in New York until the 1970s.

Such an ideological split, structured as it is with an 'either/or' logic, might be seen to carry with it two significant consequences which, when examined in the context of architectural histories throughout much of the twentieth century, constitutes a kind of regularity of practice.

The first of these is the appearance of an inevitable unfolding of reason through revolutionary change, as we saw in Chapter Two. In this case, the housing project as completed architectural object is understood in terms of what it means or expresses, functioning to either break with or contextually repeat what is viewed as an existing and known city patterning and form, which carries with it an appeal to a wider context – urban sociology, for example, or urban social reform. As such, any continuity of discursive relations and resultant objects and strategies as part of an ongoing trajectory through such change is obscured.

The second consequence is that as an appeal to, or reaction against, a known city pattern and form, the housing project appears to always be a response to what we already know. That is, the urban is presented as stable in definition, clearly defined and understood in general terms, into which the mobile object of architecture is placed.

As this thesis has shown, if one is to leave aside such 'either/or' oppositions, exploring instead the housing project in terms of the specific material and formal practices interior to architecture which are engaged in such developments, architecture might be seen to be moving through a kind of typological process, contained within which are distinct strategies

and themes which constitute part of a wider discursive terrain over which it has limited influence. From such a position, arguments regarding an ideological split appear with a regular frequency through the twentieth century; a regularity of practice which begins to appear as a pattern, operating as a kind of strategy; the city as always on the verge of collapse, and a search for the stable units of urban life that will support it, for example, as we saw in Chapter Three with the Neighbourhood Unit, the scale of stable community life.

As we argued in the introduction to this thesis, there are many contemporary experiments into domesticity within both architectural and art practices that recognize and attempt to push away from the boundaries of what is argued to be the generalized conditions of domesticity and housing, from either the idea of the ahistory, to the family and its nostalgic Heideggerian dwelling place, or from the notion of domesticity as technical innovation and the functionalist economics of domestic labour and gender repression. In either direction as we saw in the introduction, these tend to operate by presenting the transgression of the house/home, or they operate by presenting an oppositional caricature to the stability of the domestic, in the figure of The Nomad, such as Toyo Ito's Dwellings for Tokyo Nomad Women, Pao 1 and 2 (1985-89).[1] However domesticity itself, the site of intimacy, care and family life remains the continuing ground for these critiques and challenges. It is the ongoing tendency to still position the eccentricity of the domestic subject, or the transgression of the object, on the same terrain that housing has been problematized and constituted since the nineteenth century as we've seen in Chapter One and Two of this thesis, and through a lens established by the human sciences: sociology, psychology and anthropology.

However, as this thesis has demonstrated, if scale understood not as a notation system but as an operational concept within a discursive system already defines the experiential and analytical languages that we use to approach urban problems, how do we approach the city in the pursuit of change? If the language of care and nurture of the domestic, for example, is predetermined by scale, as Chapter Three argues, or the language of public interface and community engagement is predetermined already by the scale of the quarter, in the face of the demands of transforming demographics, or the impending demand of climate change that

[1] BARTH, L. 2002. Review. The Good Life: A Guided Visit to the Houses of Modernity. *AA Files,* 48 (Winter), 76-78.

we consider differently how we live in cities, how does one find another way of approaching the question of housing, domesticity and urban transformation.

By discarding the totalizing and stabilizing spatial unities of courtyard, room, dwelling, neighborhood, city and region which support the apparent 'knowability' of such a definition, a series of spatial issues emerge which open up a new avenue of investigation; spatial issues through which dispute about the housing project is pursued. For example, as we saw in Chapter Four, the ground, the section and the multi-scalar, when examined in these terms, raise questions not as to the housing project's response to something pre-existing and known, but rather the housing project as constitutive of the urban itself in a process of reasoning focussed on the production of space before function. This is a process operative in the move from annotation/drawing to built form; that is, the very definition of the urban itself understood as something always under question and resolution, worked through the housing project.

It becomes possible to raise the question, then, as to the conditions under which the completed project comes to stand in for a position or statement belonging to a wider context of urban sociology or debates on urban social reform. But equally, the exact relationship of the housing project to the definition and therefore constitution of the city might be established, where the urban itself is an unstable and shifting idea consistently under question into which the disciplinary specific practices of architecture have limited and conditional autonomy. Clarification of that autonomy is fundamental if one is to better understand how architecture might address with greater speed and focus, fundamental issues affecting us in the contemporary city, climate change and population growth, for example.

Françoise Choay reminds us, in the face of the complexity of traditional city and architectural spaces, that it is easy to forget that 'the creation of an autonomous discourse on space is a recent western development,'[2] and that this has been a hugely transgressive and disruptive force. As Chapter One of this thesis has shown, urban spatial reasoning since the nineteenth century has formed a key element in the success of liberal governmentality within modernity. Contrary to arguments that claim that the great innovations during the Industrial Revolution

[2] CHOAY, F. 1997. *The Rule and the Model. On the Theory of Architecture and Urbanism.* Cambridge, Mass.: MIT Press. pp. 3

were technical, this thesis argues that in fact they were spatial and social: the positioning and organizing of bodies in space, in what through the nineteenth and twentieth centuries has become increasingly complex discrete but interrelated scale-based diagrams: the domestic, the urban quarter, the neighborhood, the metropolitan region. Here, we understand the urban not as aggregation (city) or infrastructure network (urban geography) but as interrelated sets of discursive formations constantly and with varying intensities since the nineteenth century, mobilized by a series of diagrams: the cultural building, the asylum, the prison, the campus, the workplace and, we have argued, the housing project. Our thesis here is that architecture understood as a material and formal discipline, as distinct from knowledge, allows us to open up a question of agency in terms of both definitions of the urban, and equally in terms of architecture's agency in the constitution of subjectivity. This is a kind of directed material politics that is in distinct opposition to a definition of architecture itself as knowledge. It is both less and more than that.

APPENDIX 1

Image list, source and attribution

Chapter Three
ITERATIVE INSTRAMENTALITY: THE CONDITIONS OF EXPERIMENTATION
THE CONCEPTUAL INSTABIITY OF THE CITY: Size, Scale and urban governance.
New York City 1920-1960.

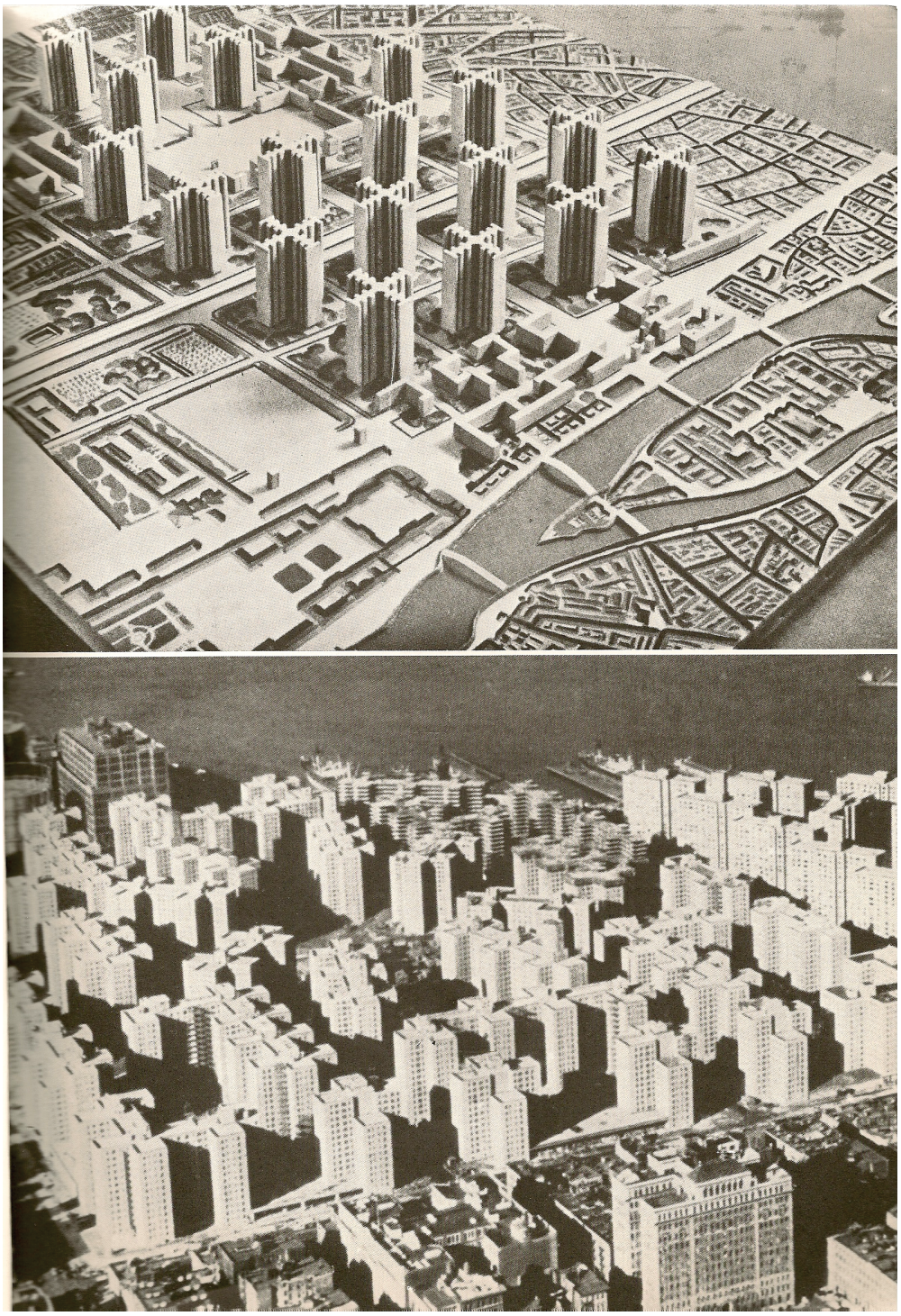


Image 1: Rowe and Koetter Collage City opening image. Le Corbusier's Ville Radieuse and a New York City Housing Project.
Source: (Rowe and Koetter, 1978) pp. 3

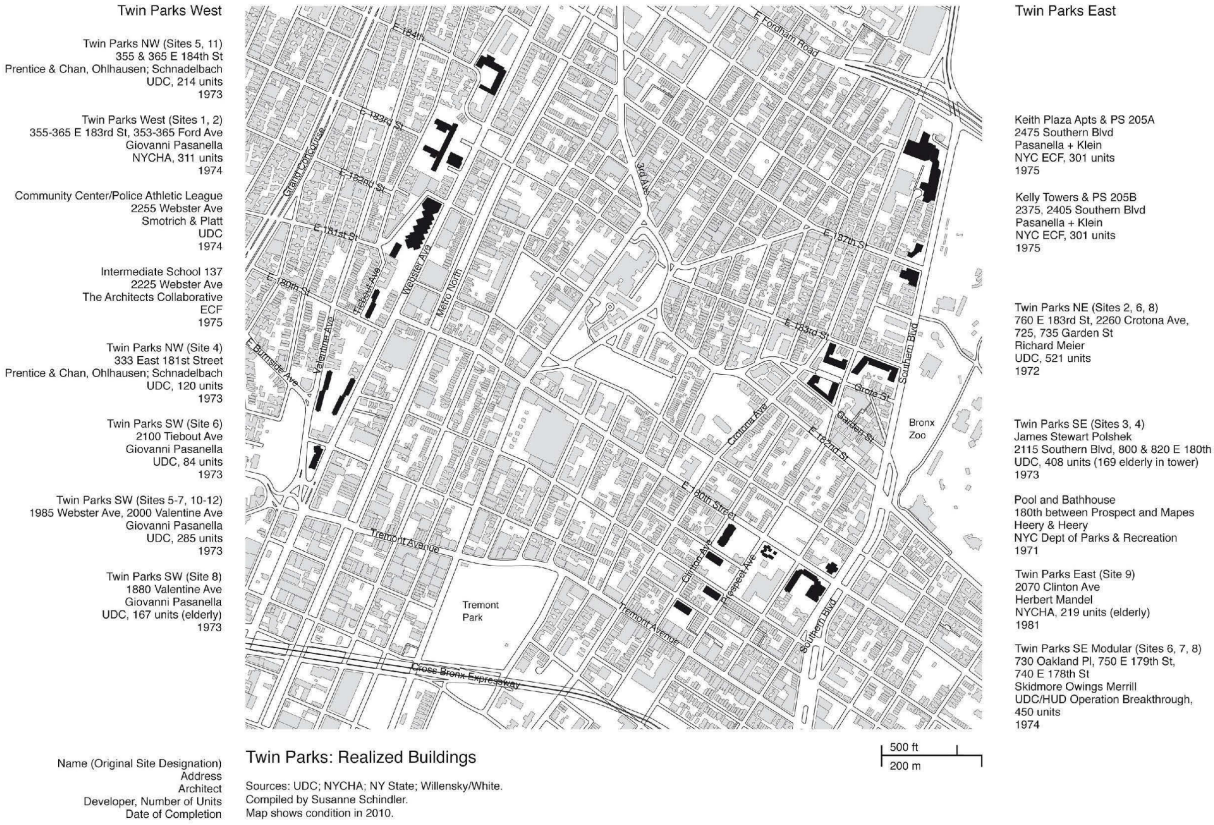


Image 2: Distribution of the Twin Parks projects.
source: Susanne Schindler. Drawing by and with permission of Susanne Schindler, 2013, on 2010 base map. First published in SPERTUS, J. & SCHINDLER, S. 2013. The Landscape of Housing: Twin Parks Northwest 40 Years On. *Urban Omnibus*.

Image 3: Twin Parks Northwest Prentice & Chan, Ohlhausen, 1973.
Source: STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.,* New York, The Monacelli Press. p960

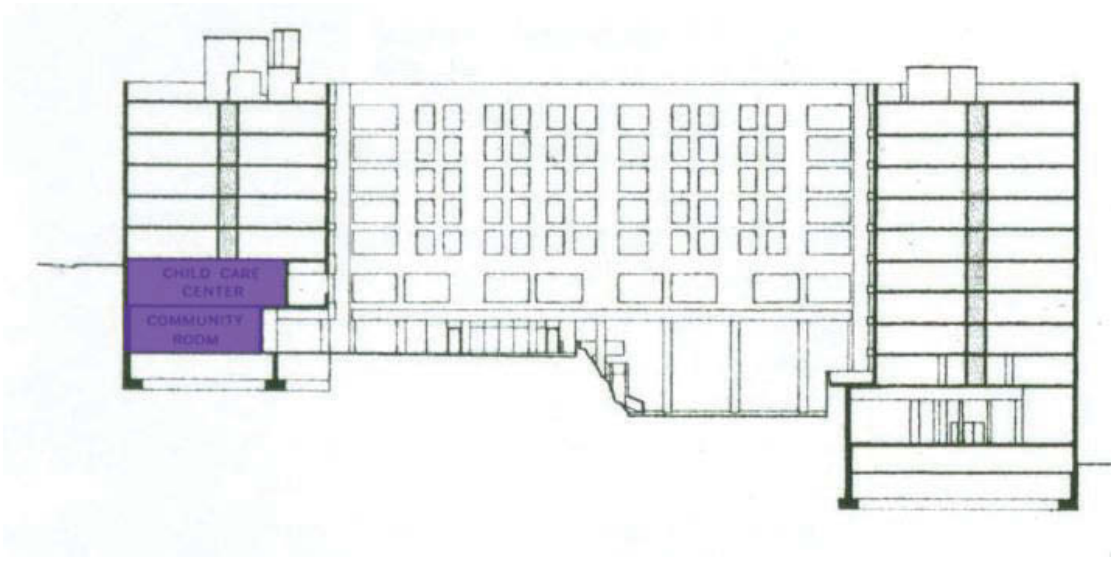


Image 4: Twin Parks Northwest Prentice & Chan, Ohlhausen, 1973.
Source: STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.,* New York, The Monacelli Press. p960

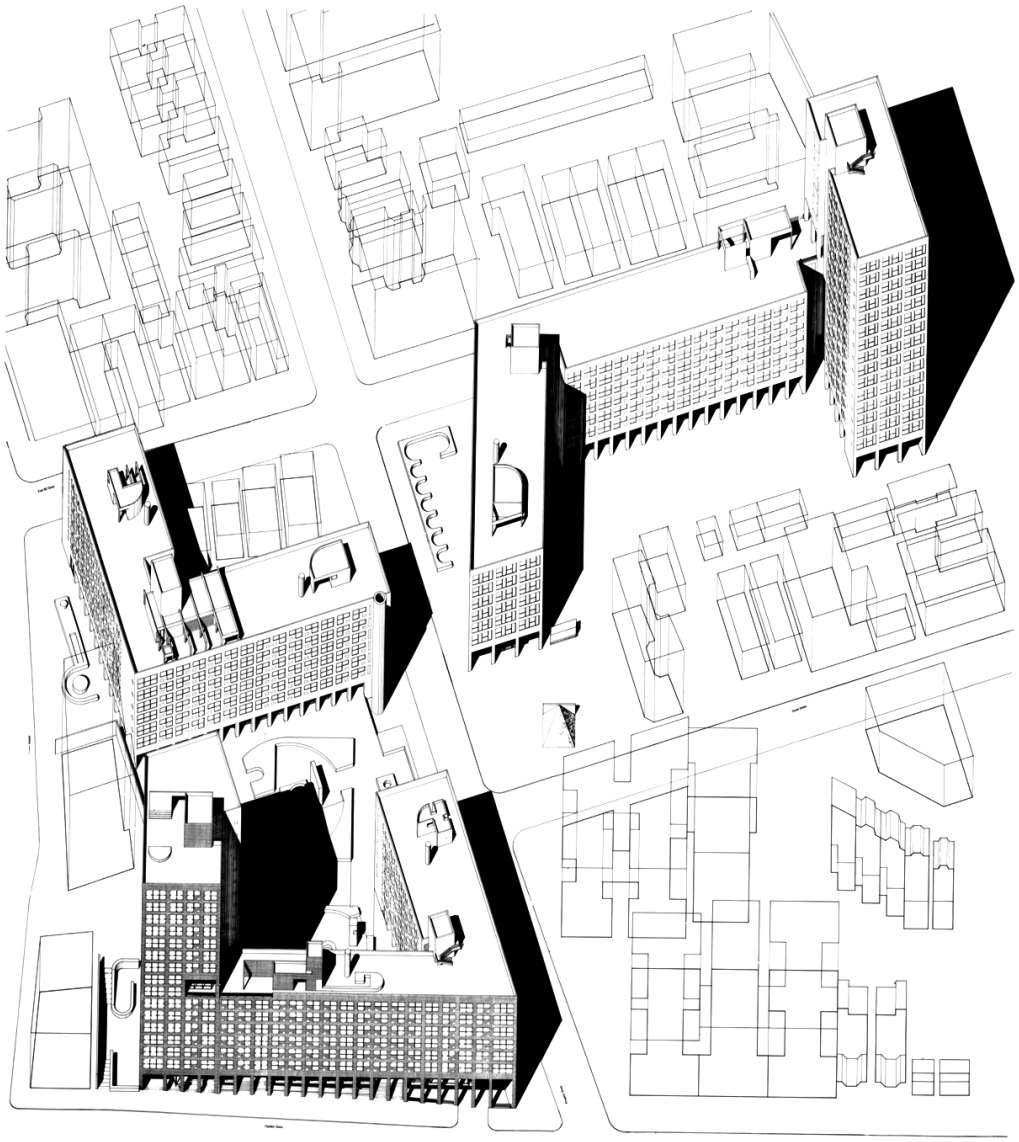


Image 5: Twin Parks Northeast, 1972
Source*: Courtesy Richard Meier & Partners Architects*.

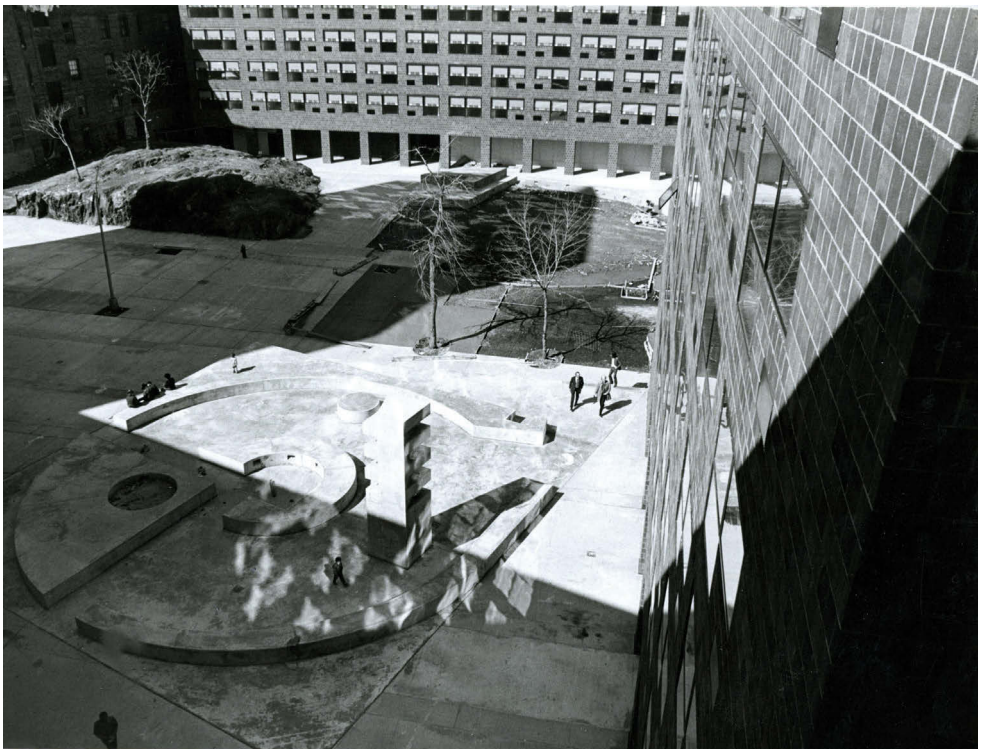


Image 6: Twin Parks Northeast looking into new plaza during construction.
Source: Courtesy Richard Meier & Partners Architects.

Image 7: Twin Parks Northeast piloti-flanked arcades, during construction, 1970.
Source: Courtesy Richard Meier & Partners Architects.

Image 8: Twin Parks Northeast piloti-flanked arcades, shortly after opening.
Source: Courtesy Richard Meier & Partners Architects.

Image 9: Twin Parks Northeast piloti-flanked arcades, shortly after opening.
Source: Courtesy Richard Meier & Partners Architects

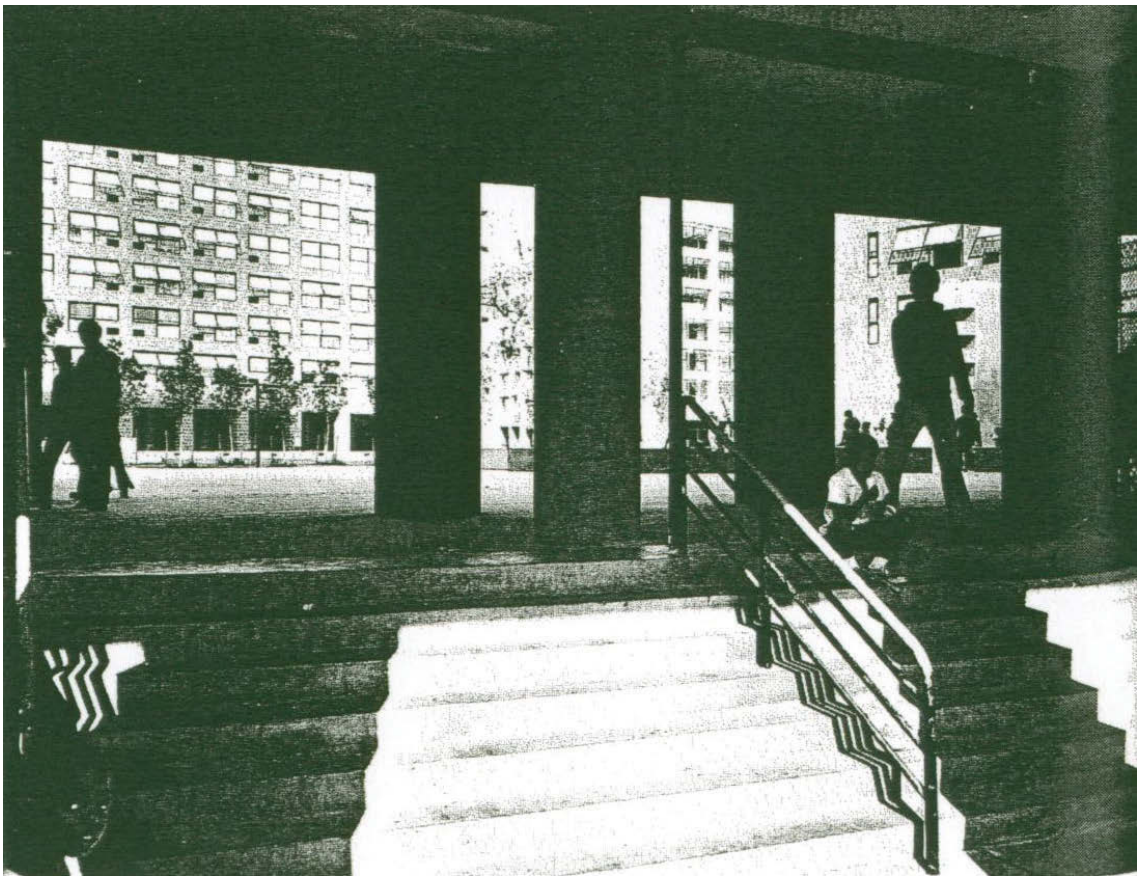


Image 1*0:* Twin Parks Northeast, view from under the piloti.
Source: STERN, R. A. M., MELLINS, T. & FISHMAN, D. 1995. *New York 1960: Architecture and Urbanism Between the Second World War and the Bicentennial.,* New York, The Monacelli Press. pp960

Image 11: Brounn and Muschenheim Proposal for slum clearance. 1934
Source: Muschenheim Archive, *Avery* Architectural and Fine Arts Library,
Drawings & *Archives*, *Columbia* University Job #: 41
Accession numbers and projects: 00752-.00800 Slum Clearance Housing Proposal, District no. 5
.00995-.00996 Manhattan (New York, N.Y.)

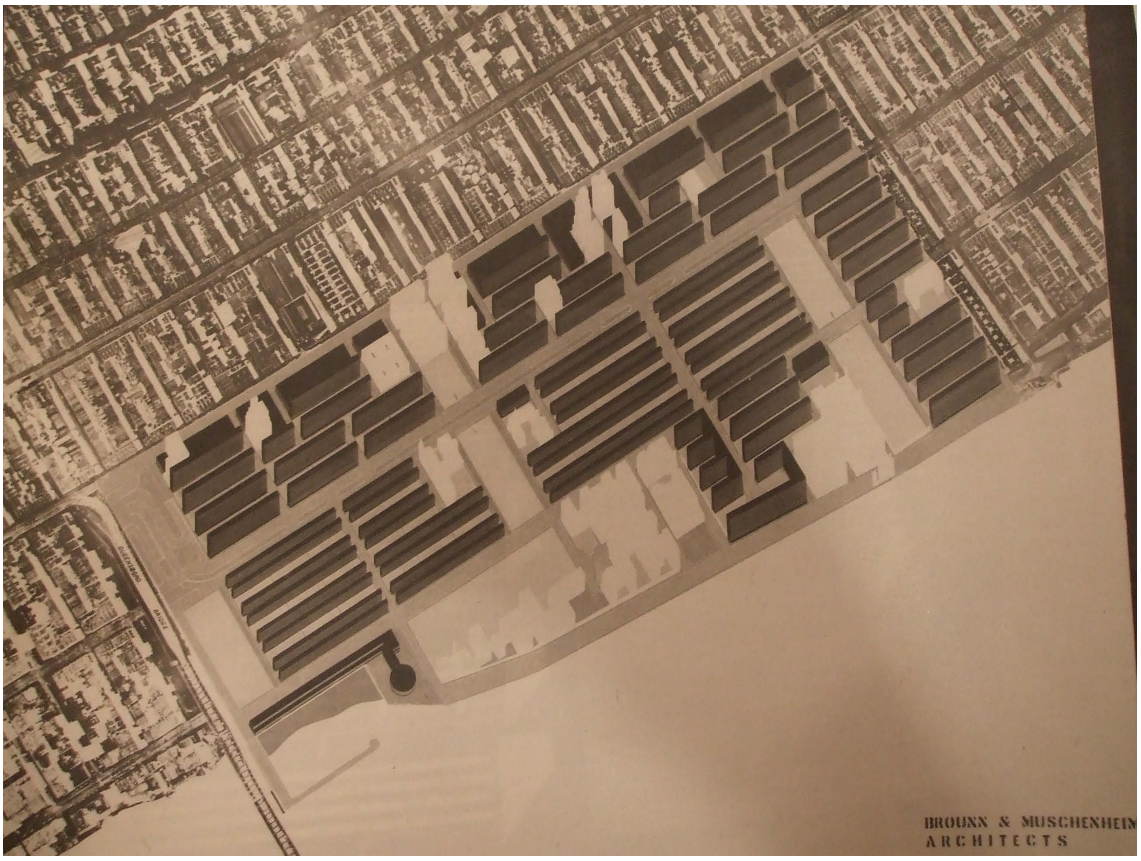


Image 12: Brounn and Muschenheim Proposal for slum clearance. 1935
Source: Muschenheim Archive, *Avery* Architectural and Fine Arts Library, Drawings & *Archives*, *Columbia* University
Job #: 41 Accession numbers and projects:
.00752-.00800 Slum Clearance Housing Proposal,
District no. 5 .00995-.00996 Manhattan (New York, N.Y.)

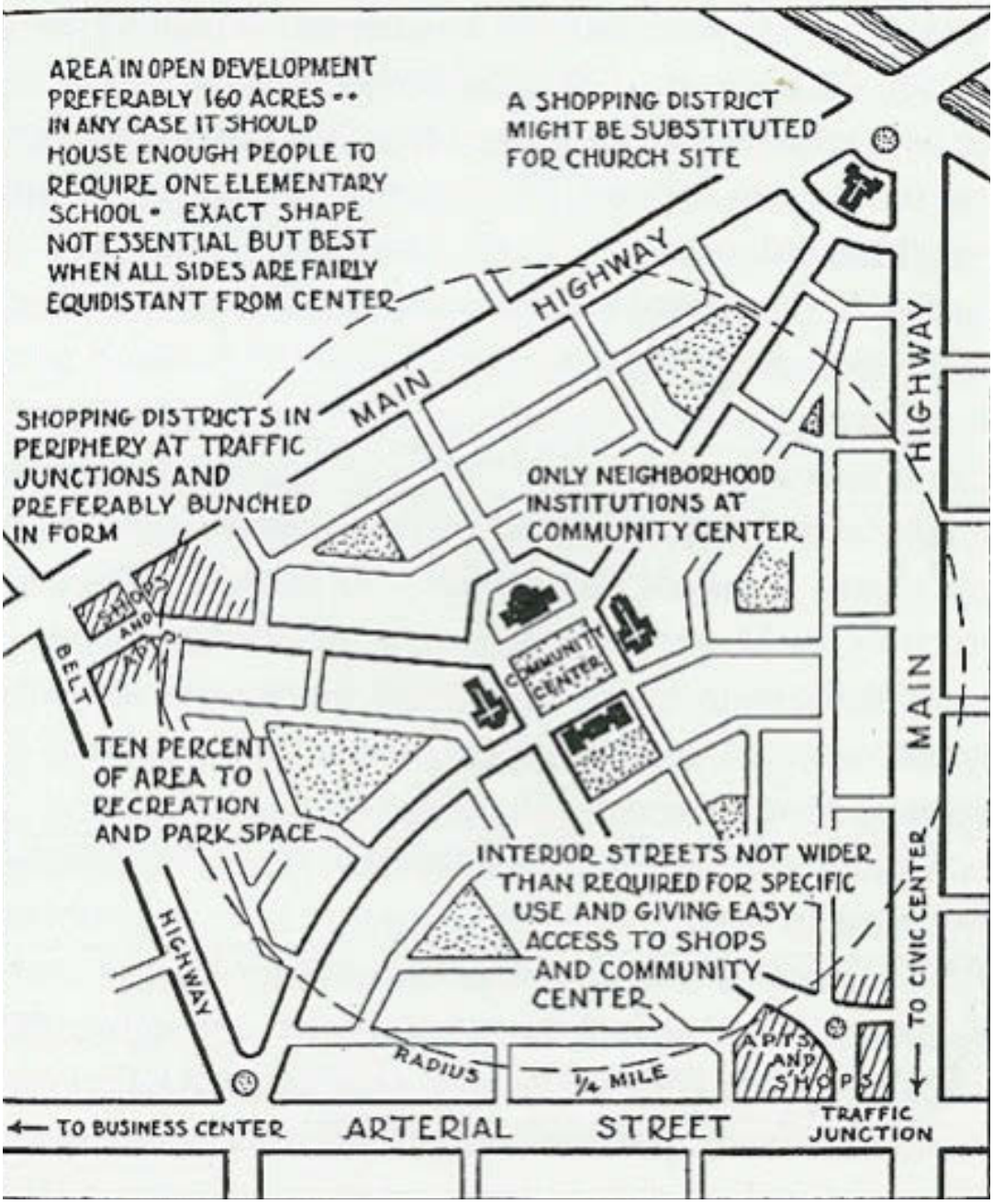


Image 13: Neighbourhood Unit, Clarence Perry. Published in the *Regional Plan of New York and Its Environs*, 1929
Source: GOROVITZ, M. 2005. Unidade de Vizinhanca: Brassilia's "Neighbourhood Unit". *In:* EL-DAHDAH, F. (ed.) *Lucio costa: Brasilia's Superquadra.* Berlin: Prestel Verlag. pp.42

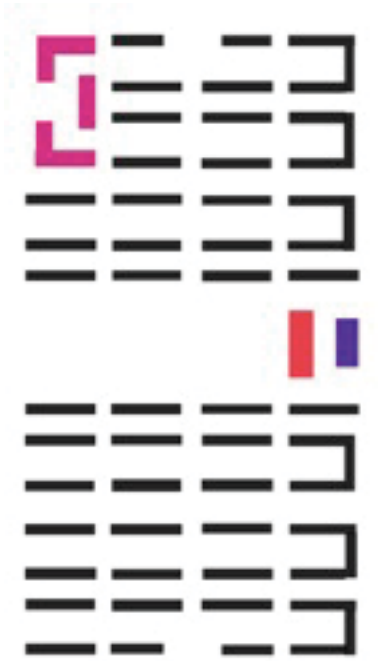


Image 14: NYCHA competition 1934. Entry Bernett C Turner
Source: N.Y.C.H.A 1934. *New York City Housing Authority: Competition.* New York: New York City Housing Authority.

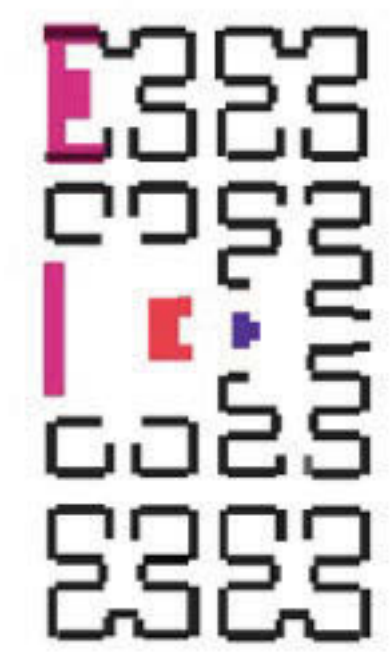


Image 15: NYCHA competition 1934. Entry Clarence Stein
Source: N.Y.C.H.A 1934. *New York City Housing Authority: Competition.* New York: New York City Housing Authority.

Image 16: NYCHA competition 1934. Entry John W. Ingle.
Source: N.Y.C.H.A 1934. *New York City Housing Authority: Competition.* New York: New York City Housing Authority.

Image 17: Twin Parks Northeast. Under construction.
Source: Courtesy Richard Meier & Partners Architects

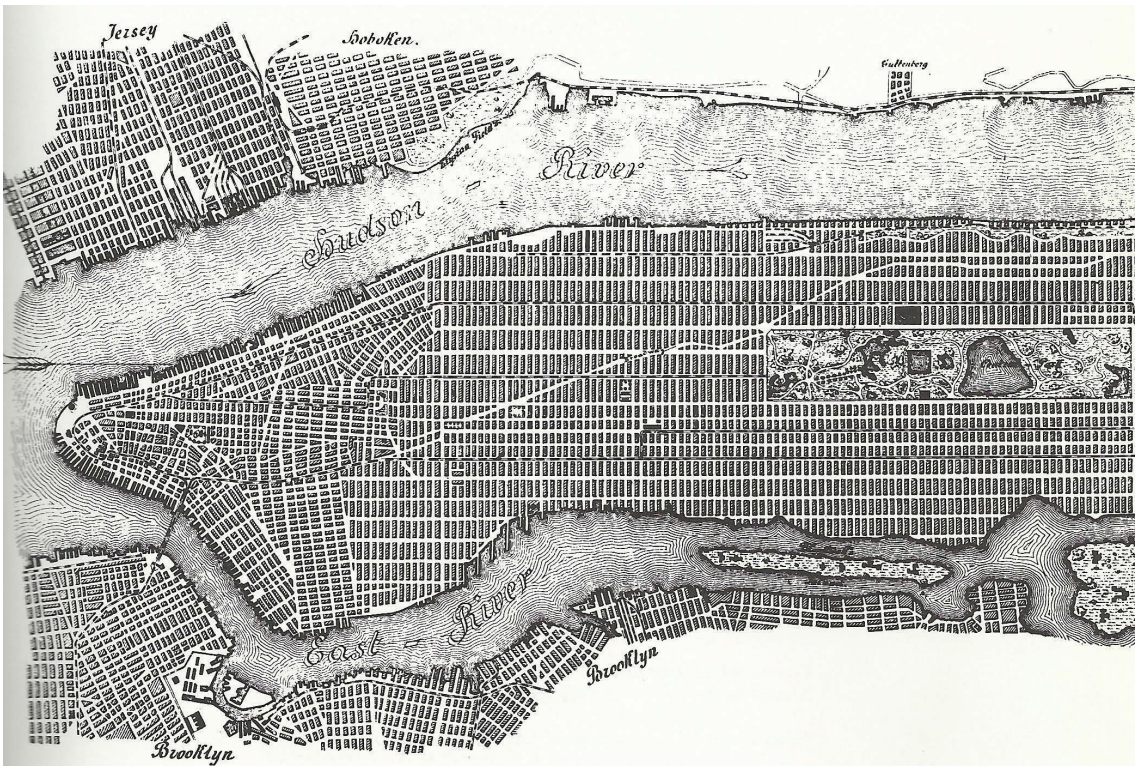


Image 18: 1811 Commissioners Grid of New York with Central Park
Source: PLUNZ, R. 1990. *A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis,* New York., Columbia University Press p12

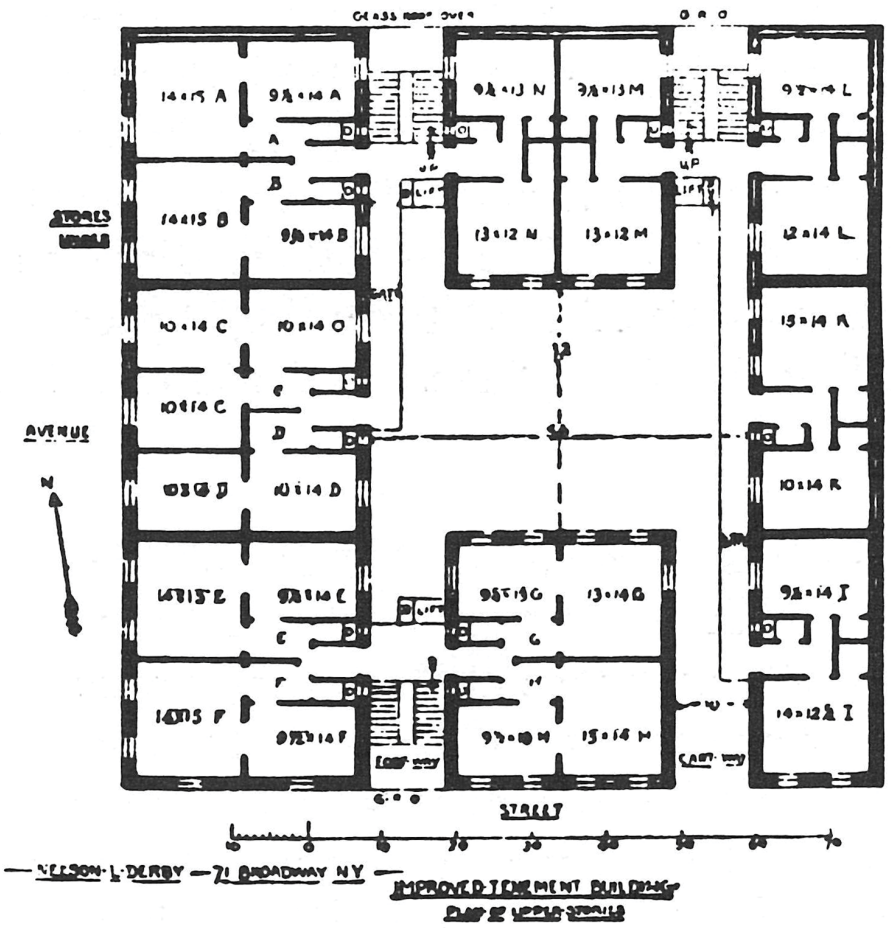
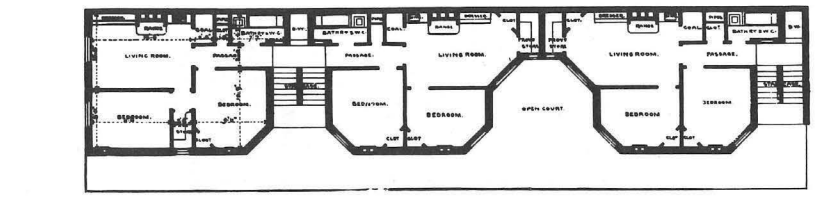
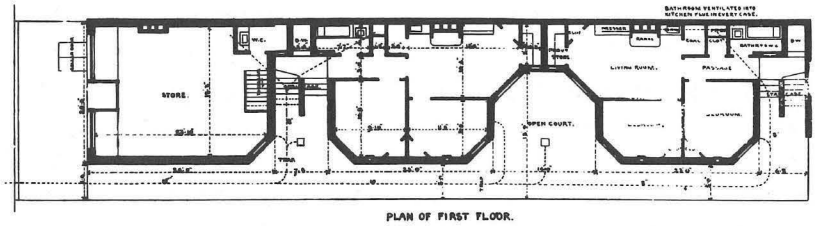


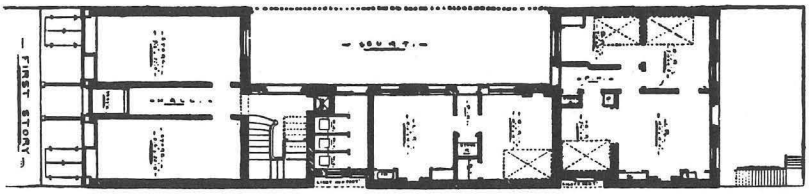
Image 19: Nelson Derby: proposition for a tenement with four adjoining lots
Source: American Architect and Building News January 20th 1877. pp20

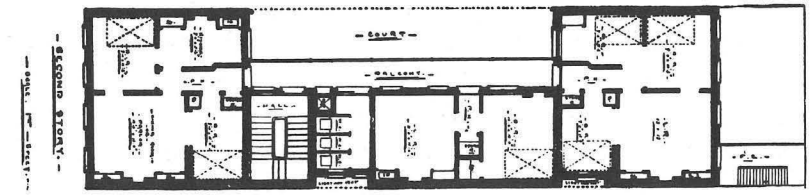


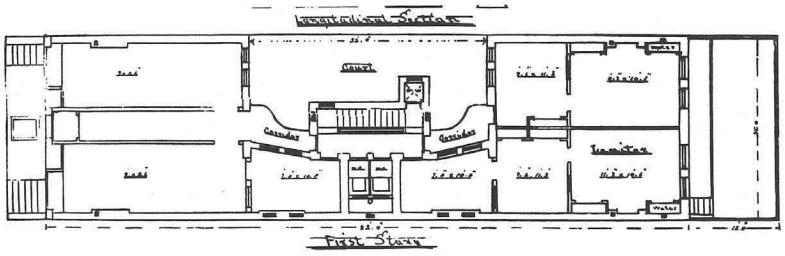
PLAN OF SECOND FLOOR.



PLAN OF FIRST FLOOR.







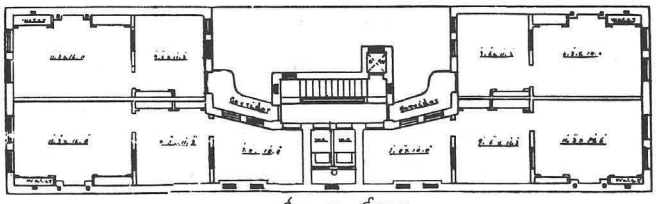


Image 20: Tenement House Competition
Source: Plumber and Sanitary Engineer April 1879 pp2

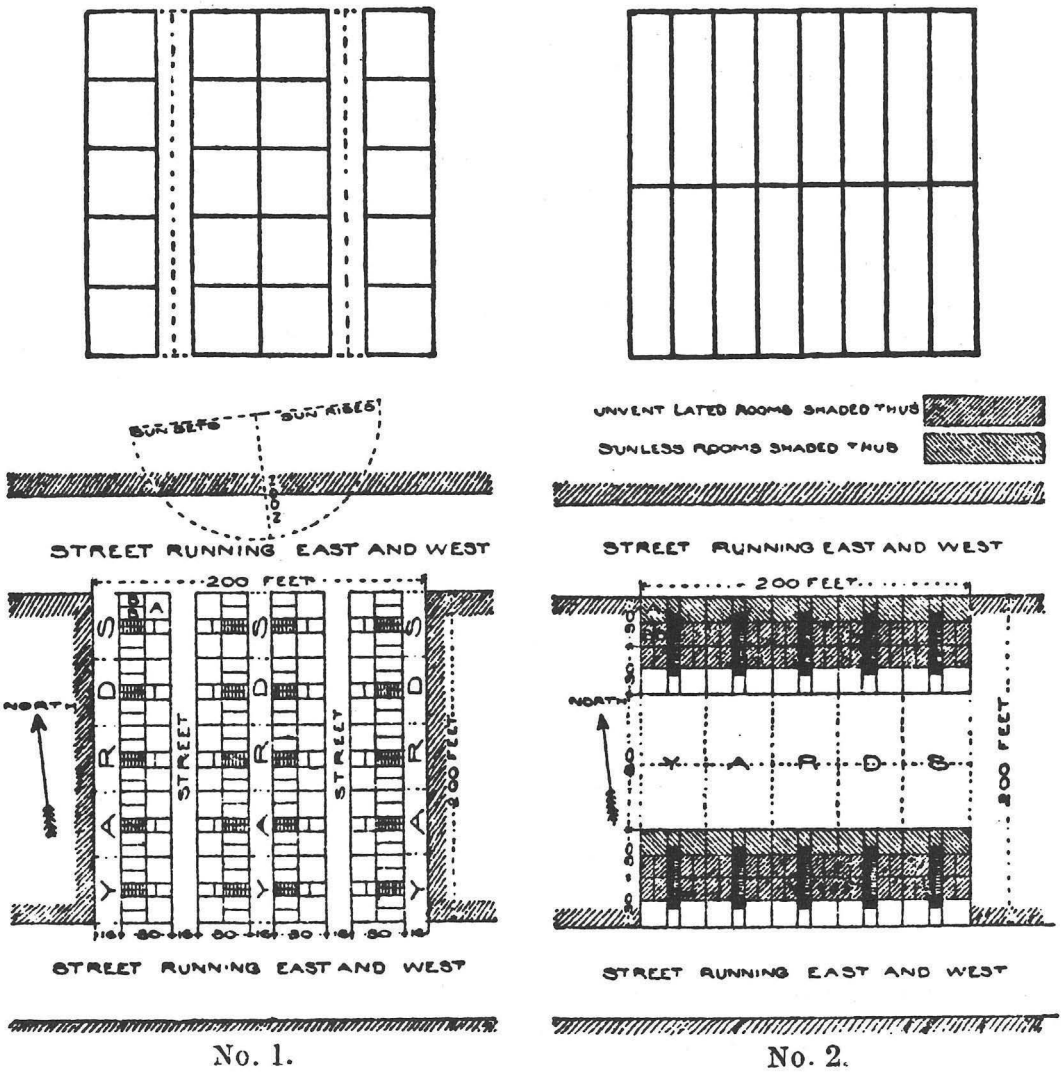


Image 21: Experiments with service alleys, mews and other
Source: American Architect and Building News April 1878 p3-92

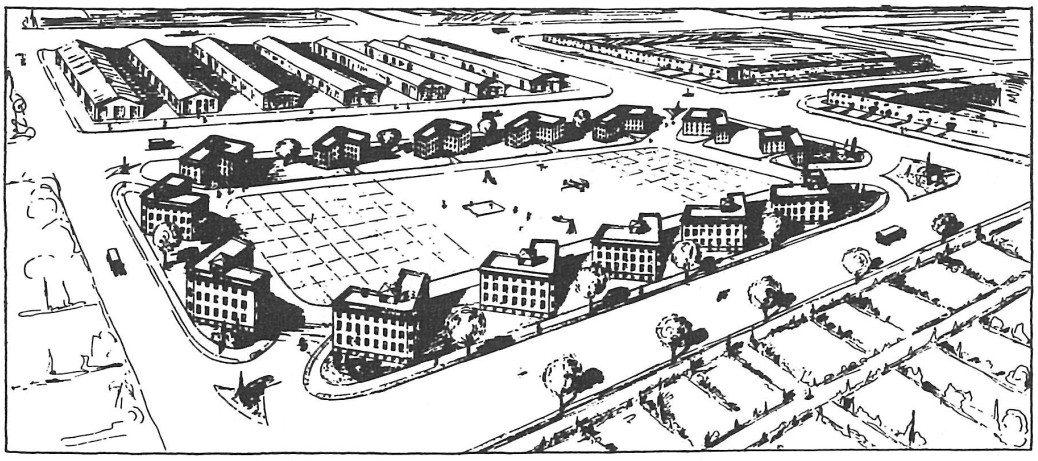


Image 22: 1917 Henry Atterbury Smith analysis of site using 'sawtooth' geometry to break the gridiron
Source: Architecture May 1917 p35-81

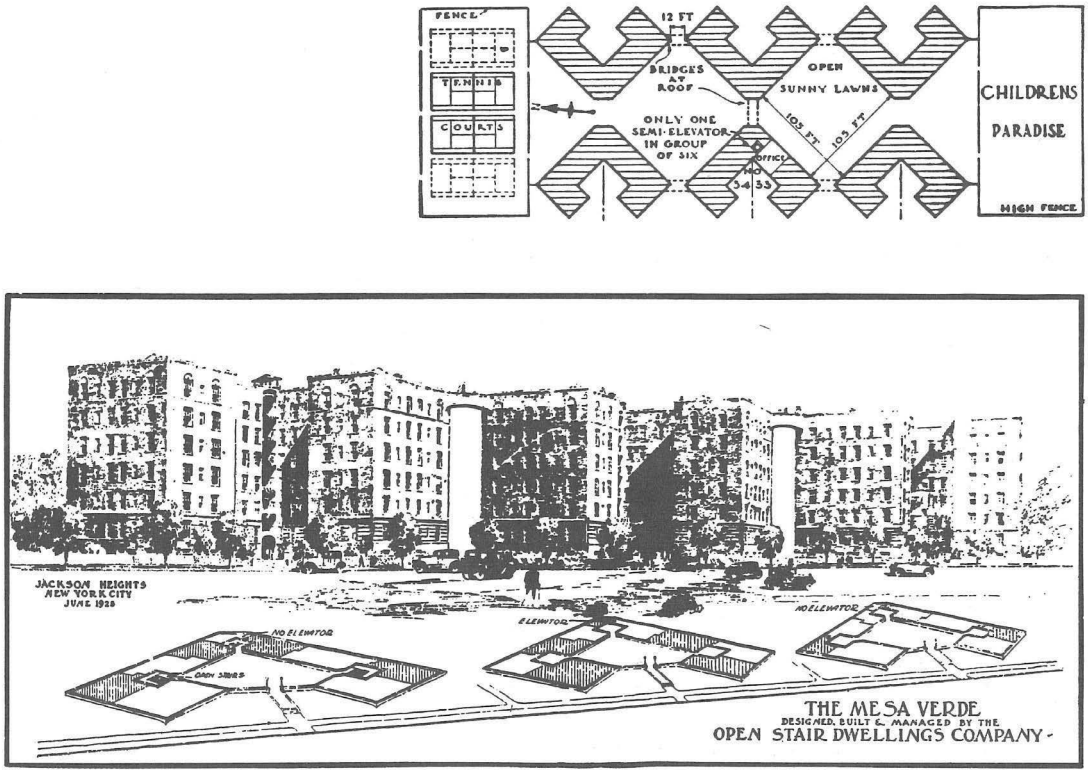
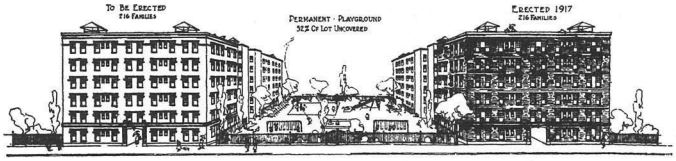


Image 23: Play Paradise in the center of blocks. 1926 Henry Atterbury Mesa Verde Site Plan, philanthropic housing developed by the Open Stair Dwellings Company, Jacksons Heights
Source: FORD, J., MORROW FORD, K., THOMPSON, G. N., PHELPS STOKES, N. & FUND, P.-S. 1936. *Slums and Housing, with Special Reference to New York; History, Conditions, Policy.* Cambridge, Mass: Harvard University Press.



PERSPECTIVE OF OPEN-STAIR APARTMENTS ON WEST 146th AND 147th STREETS, NEW YORK CITY.

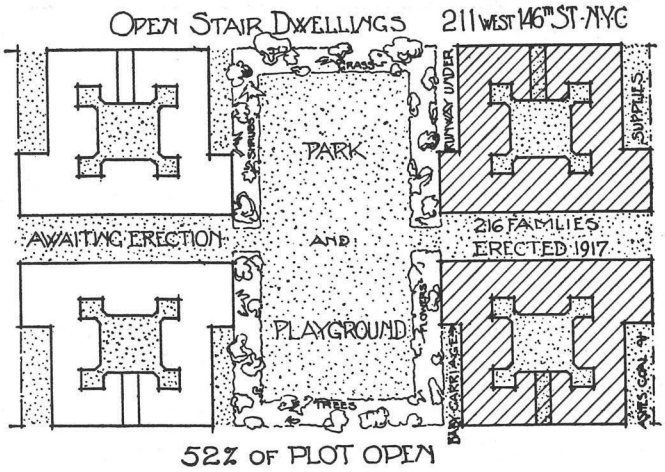


Image 24: 1917 Philanthropic Tenement on West 146th Street and 147th Streets for the Open Stair Dwelling Company. 52% site cover.
Source: *Architectural Record* July 1920 48:67

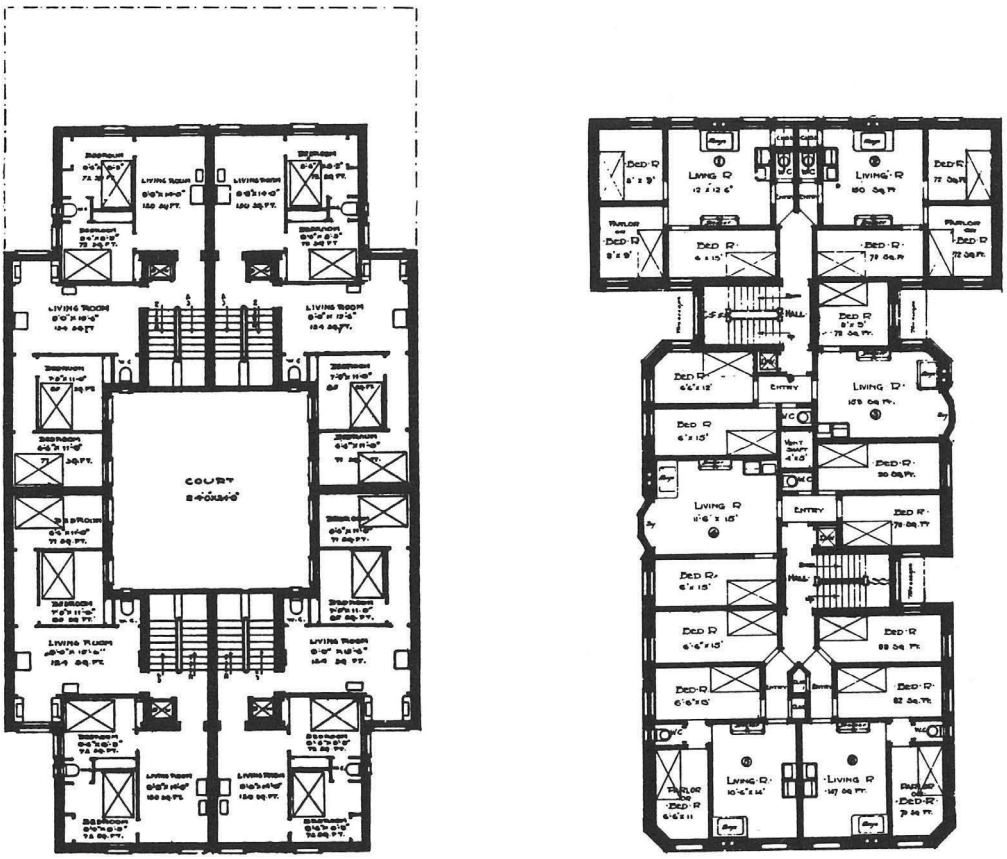


Image 24 : 1900 Tenement Plan proposal submitted to the New York State Tenement House Commission showing a clear interior definition of domestic plan.
Source: James Ford, Slums and Housing vol. 2 1936 Plate 10E

APPENDIX 2

Papers published and conferences convened and participated in as an outcome of this thesis.

Contents:

1. Conference: Type versus Typology. 7th February 2014. Architectural Association, London.

2. Publication: FINNEY, T. December 2015. The Ground, Object and Strategy: Architectural Transformation in Housing Projects, New York City. *Journal of Architecture,* 20.

3. Conference: Architectural type and the Discourse of Urbanism. Co-organizer. 14th December 2015.

1. Conference, invited speaker.

Type vs Typology

Organised by Projective Cities M.Phil. Program director Sam Jacoby
Architectural Association, London
7th February 2014

Website and Video here: http://www.aaschool.ac.uk/VIDEO/lecture.php?ID=2371

Synopsis: During the nineteenth century, a deliberate turn away from ideas of imitation and truth-to-nature towards concepts of abstraction or objectivity emerged and fundamentally altered the knowledge and practices of many disciplines. In architecture, this important shift resulted in theories of type and design methods based on typology, complementary concepts through which architecture as both a modern form of knowledge and knowledge of form was to be consolidated. In terms of architecture and its instrumentality, type and typology are unique as disciplinary frames through which broader socio-political, cultural and formal problems can be posed.

To explore the sustained, or perhaps renewed critical, interest in the potential of type and typology, a number of academics and practitioners will discuss their relevance to contemporary architectural practice and research, and in relationship to the problem of the historicity of disciplinary knowledge.

Programme

SESSION 1

10:00 - 10:10 Welcome

10:10 - 10:50 Sam Jacoby (AAPC): 'Typal and Typological Reasoning'

10:50 - 11:30 Larry Barth (AA)

11:30 - 12:10 Hyungmin Pai (University of Seoul): 'The Diagrammatic Construction of Type' 12:10 - 12:40 Panel Discussion: Chaired by Alvaro Arancibia (AA PhD) and Cyan Cheng (AAPC)

13:00 - 14:00 LUNCH BREAK

SESSION 2

14:00 - 14:40 Philip Steadman (UCL): 'Building Types and How they Change over Time'

14:40 - 15:20 Tarsha Finney (UTS): 'The Typological Burden'

15:20 - 16:00 Christopher Lee (Harvard GSD, Serie Architects): 'The Fourth Typology' 16:00 - 16:30 Panel Discussion: Chaired by Naina Gupta (AAPC), Simon Goddard (AAPC), and Thiago Soveral (AA PhD)

17:00 - 18:30 COFFEE BREAK (Mark Cousins: Friday Lecture Series)

SESSION 3

18:30 - 19:10 Rafael Moneo (Harvard GSD): 'Type, Iconography, Archaeology, and Practice'

19:10 - 20:00 Concluding Round Table: All speakers; chaired by Adrian Lahoud (UCL)

Venue

Architectural Association School of Architecture, 36 Bedford Square, London WC1b 3ES Lecture Hall

Participants

Lawrence Barth lectures on urbanism in the AAs Graduate School and has written on the themes of politics and critical theory in relation to the urban. He practises as a consultant urbanist, most recently collaborating with Zaha Hadid Architects and s333 Architecture and Urbanism on large-scale projects, and is engaged in research on urban intensification and innovation environments.

Tarsha Finney is an architect, urbanist and a senior lecturer in the School of Architecture at the University of Technology, Sydney (UTS). She completed an M.A at the AA (Distinction 2002-2003) and was recipient of the Michael Ventris Memorial Award (2003). From 2004-2008 as part of the doctoral program at the AA, she was a participant in research seminars led by Lawrence Barth: Rethinking Architectural Urbanism 2006-2007; Transformation and Urban Change 2007-2008. She is completing her Doctorate at UTS, Domains of Reasoning/Fields of Effect: The Housing Project and the City. New York, 1960-1980.

Sam Jacoby is an architect who trained as a cabinetmaker, graduated from the AA, and received a doctorate from the TU Berlin. He teaches at the AA since 2002 and has taught at the University of Nottingham and Bartlett School of Architecture. He has directed Projective Cities since 2009.

Christopher Lee is the co-founder and principal of Serie Architects London, Mumbai and Beijing. He is Associate Professor in Practice at Harvard University's Graduate School of Design. Prior to that he was the Director of Projective Cities (2010-12) and AA Unit Master (2002-09). Lee graduated with the AA Diploma (Honours) and his Doctor of Philosophy from the Berlage Institute and TU Delft. Lee is the author of Common Frameworks: Rethinking the Developmental City in China, Part 1, Xiamen: The Megaplot, and Working in Series. He co-authored Typological Formations: Renewable Building Types and the City, and Typological Urbanism: Projective Cities.

Rafael Moneo received undergraduate (1961) and doctoral (1965) degrees from the Madrid School of Architecture, worked (1960-61) with Danish architect Jørn Utzon, and studied (1963-65) at the Spanish Academy in Rome before opening (1965) his own practice in Madrid. Moneo, who founded (1968) Arquitectura Bis magazine, is also a noted theorist, critic, and teacher. He has taught in Spain and at such American institutions as Princeton and Harvard, where he was (1985-90) head of the graduate architecture department and remains a professor. Among his many awards is the 1996 Pritzker Prize.

Hyungmin Pai graduated from Seoul National University and received his Ph.D from MIT. Twice a Fulbright Scholar, he is professor at the University of Seoul. He was visiting scholar at MIT and London Metropolitan University and has lectured at Harvard, Cornell and Tongji University. His books include The Portfolio and the Diagram, Sensuous Plan: The Architecture of Seung H-Sang, and The Key Concepts of Korean Architecture. For the Venice Biennale, he was curator for the Korean Pavilion (2008) and a participant in the Common Pavilion project (2012). He was curator for the Kim Swoo Geun exhibition at Aedes Gallery, Berlin (2011) and was Head Curator for the 4th Gwangju Design Biennale (2011).

Philip Steadman is Emeritus Professor of Urban and Built Form Studies in the Bartlett Faculty of Built Environment, University College London. He trained as an architect at Cambridge University, and has taught at Cambridge, the Open University and UCL. Much of his research has been on the forms of buildings, and he has published two previous books on the subject: The Geometry of Environment (1971) and Architectural Morphology (1983). His book on biological analogies in architecture, The Evolution of Designs, was published in 1979. His forthcoming book Building Types and Built Forms (2014) brings together several of these themes: architectural history, building geometry, and parallels with the analysis of form in biology.

2. FINNEY, T. December 2015. The Ground, Object and Strategy: Architectural Transformation in Housing Projects, New York City. *Journal of Architecture,* 20.

The Journal
of Architecture
Volume 20
Number 6

The object and strategy of the ground: architectural transformation in New York City housing projects

Tarsha Finney

School of Architecture, University of Technology Sydney, Australia (Author's e-mail address: Tarsha.Finney@uts.edu.au)

Kenneth Frampton, in a 1973 *Architectural Forum* review of the 1968–1973 Bronx-sited Twin Parks Housing Development in New York City, asked: 'to what purpose do you assign the space under the pilotis? The problem posed by the pilotis […] is integral to the original model […] What would the inhabitants of the Ville Radieuse have done with these continuous arcades? […] This is the typological burden … '

The apparent banality of Frampton's observation obscures what is revealed in the lifting up of the building on pilotis: the ground itself. Rather than follow Frampton's use of typology as a descriptive tool in the service of a critical judgement, this paper will instead see the question of type as one involving a diagnostic and propositional gesture within the design process itself, and as part of an ongoing and critical questioning of the city. The paper will explore how the three-dimensional articulation of the ground level evident in a trajectory of projects in New York City has been a site of concentrated architectural research from the late nineteenth century through to contemporary approaches to urban intensification. Here the ground can be seen to be both an object of architectural investigation and spatial reasoning, and at the same time, to operate at a strategic intersection with the spatial politics of the liberal metropolis.

Finney, T. 2015, 'The object and strategy of the ground: architectural transformation in New York City housing projects', *The Journal of Architecture*, 20(6):962-987.
doi: 10.1080/13602365.2015.1115420

 1360-2365 http://dx.doi.org/10.1080/13602365.2015.1115420

3. Conference: **Architectural Type and the Discourse of Urbanism**

14th December 2015
Royal College of Art, London.

The School of Architecture, University of Technology Sydney, in partnership with the Architecture Culture and Tectonics Research Group, Department of Architecture and Built Environment, University of Nottingham present a symposium on Architectural Type and the Discourse of Urbanism, hosted by the School of Architecture, Royal College of Art, London.

Architectural Type and the Discourse of Urbanism

Architecture's relationship to the city is one of the key themes in architectural and urban theory and practice. This relationship bears upon questions of architecture's disciplinary autonomy, its agency in the change and transformation of the city, and the possibility of its politics. Indeed, recent years have seen a plethora of publications addressing architecture's relationship to the city, seeking to understand the seemingly uncontrollable urban growth as a network of flows and infrastructures, or as an aggregation where architecture and the urban form an unquestioned, apparently natural, continuity. However, neither the descriptions of the complexities of the city nor the insistence on architecture's formal autonomy as some sort of language articulate architecture's precise relationship to the urban.

The following one-day symposium proposes to explore typology as a mode of spatial reasoning that underlies architecture's autonomy as a field of thought and action, its agency in the transformation of the city, and its strategic intersection with the spatial politics of the liberal metropolis. It brings together academics and practitioners to reflect on typology both as critical project and design strategy.

Organised by Dr Katharina Borsi, Tarsha Finney and Dr Pavlos Philippou.

Schedule:

10.30am: Introduction

11am: Dr Katharina Borsi – The Dwelling Cell, the City and the Autonomy of Architecture

11.30am: Dr Maria Shéhérazade Giudici – Counter planning from the kitchen: For a Feminist Critique of Type

12pm: Dr Sam Jacoby – OM Ungers: Dialectical Principles of Design

12.30pm: Roundtable discussion, chaired by Dr Renee Tobe

1pm: Lunch

2pm: Tarsha Finney – Urban Instability: Typological Reasoning, the Housing Project and the transformation of notions of Public Benefit

2.30pm: Chris Schulte – Radical Distance: the role of contingency in contemporary urban typologies

3pm: Dr Pavlos Philippou – Cultural Buildings and Urban Areas

3.30pm: Lawrence Barth – Type and Urban Strategy

4pm: Roundtable discussion, chaired by Adrian Lahoud

Abstracts:

1. The Dwelling Cell, the City and the Autonomy of Architecture
Katharina Borsi
Hans Scharoun projected his Siedlung Charlottenburg Nord of 1955 and his Siedlung Siemensstadt of 1929 as a partial realization of his urban vision for a radical restructuring of Berlin after WW2. For Scharoun, “the mechanical decentralization” as he paraphrased the bombing of Germany's cities, presented the opportunity to reconstruct a new spatial and social order. His urban figure of a decentralized urban landscape, organized through three parallel bands of development for work, housing and leisure, all connected by transport infrastructure, prescribed the interrelationships between meticulously defined functions. The residential cell, a grouping of around 5000 inhabitants, Scharoun saw as the basis of the ‘structure’ of the ‘new city’ in its mediation between the subject and the metropolis. For Scharoun, Charlottenburg-Nord exemplified how the *Gestalt* of the scalar relationship between the dwelling, the cell and the city, describe and inscribe a seemingly natural socio-spatial structure conditioning the social and economic equilibrium of the city.

Scharoun’s status within modernism tends to be classified within an alternative tradition, one whose expressivity and plasticity are read as true functionalism in its response to use and context, and in opposition to the geometric, rational, and classicizing tendencies of Le Corbusier, Gropius and Mies. While this classification, based on formal difference and variation, reveals distinctions and variations in design approaches, it does not offer an understanding of architecture’s contribution to housing beyond its realization of the architectural project.

Conversely, the recent decade has seen a number of publications re-evaluating modernism’s social project as a key part of the process of rationalization and normalization of society throughout the twentieth century. From this perspective, architecture’s contribution is seen as a form of social engineering through its description and inscription of social order; its spatial articulation of the needs and norms of individuals, families and groups within the urban population – thus providing distinct spaces for the social as fields of intervention. In the context of this literature, Scharoun’s Siemensstadt and Charlottenburg-Nord exemplify architecture’s spatial and organizational capacity for supporting the conceptualization and structuring of social relationships. However, this interpretation of architecture in the service of social engineering cannot evaluate the importance of distinctions in design approaches, or the value of design in the evolution of the field.

This paper proposes typology as a mode of spatial reasoning that drives not only architecture’s immanent processes of evolution and experimentation, but also its engagement with its ‘outside’. Architecture’s design process is registered on the surface of the drawing, where it encounters and enfolds a terrain of dispute across disciplines about how to house and group the urban population. This perspective allows a reading of Siemensstadt and Charlottenburg -Nord as instances of typological reasoning specific to architecture and strategic in its operation in the broader discourse of urbanism.

2. Counterplanning from the kitchen: For a Feminist Critique of Type
Dr Maria Shéhérazade Giudici
While housing has long been a terrain of struggle in terms of its scale, provision, urban morphology and technological advancement, it often escapes a political critique of its interior logic. And yet, it is perhaps only from a political perspective that we might be able to see beyond the impasse we are witnessing. If most of the newly built stock conforms to models established more than a century ago, an increasing number of ‘experimental’ proposals reimagine domesticity with a chequered success that is surprising if we consider how ill-fitting the petit-bourgeois family apartment is to our current conditions. In such a conjuncture the concept of type seems to be still a useful ground for debate as it helps us read housing as a tool for the construction of subjects.
Only in the aftermath of the industrial revolution that European typological discourse shifted its focus from public buildings to residential architecture; if it is perhaps impossible to define traditional dwelling places as ‘non-typological’, they were however most definitely ‘pre-typological’. Already since the late renaissance concepts of distribution and composition had started to introduce typological concerns in the design of houses; however, it is with the application of these strategies to the dwellings of the working classes that the full potential of thinking housing through type emerged.

However, contemporary housing production lacks such a clear political mandate, and is haunted by a major shift in its economic rationale – from the need to provide machines à habiter to feed the industrial cycle, to the production of a mere commodity that does not even need to be inhabited to fuel speculation. At the core of this mandate crisis lies a great unsaid non-said of western society, namely the role played by the house in the institutionalization of reproductive labour. Reproductive labour is the care, education, and actual production of the labour force from childbearing to housework to the care of the elderly – a form of labour that before mature capitalism was never seen as separate from other productive activities. In this sense, the paper assumes a feminist standpoint in that it rereads modern housing as the place of women’s

hidden, unwaged work, and typological discourse as the intellectual and technical arsenal that has allowed the fine tuning of such a labour system.

The hypothesis that will be explored is that reproductive labour itself is undergoing a large-scale shift that architecture is struggling to register. In order to understand this shift, we will look at the recent architectural production of three nations – the Netherlands, Switzerland, and Japan – where a strong design culture has met an acute awareness of the recent changes in the organization of work. Looking at work by MvRdV, Christian Kerez, and Toyo Ito, but also at a broad catalogue of built examples, we will try to construct a map of possible solutions for housing beyond reproductive labour – and, perhaps, beyond type itself.

3. OM Ungers: Dialectical Principles of Design
Sam Jacoby
An important contributor to the European debate on architecture's relationship to the city after the Modern Movement was Oswald Mathias Ungers (1926–2007). Coinciding with his appointment at the Technische Universität Berlin, he became interested in questions of typological organisation and morphological transformation, positing that they are related by dialectical principles. Reviewing a number of key lectures, writings and projects from 1963 to 1976 by Ungers, I will discuss how his interest in design as a serial problem of explicit formal and implicit social transformations led him to understand the design of the urban as conditional to a typological reasoning of architecture.

4. Urban Instability: Typological Reasoning, the Housing Project and the transformation of notions of Public Benefit
Tarsha Finney
Both the 1934 Brounn +Muschenheim (B+M) slum clearance proposal for fifty blocks of Manhattan, and the 1973 Twin Parks (TP) Project in the Bronx involved the use of eminent domain and the forced acquisition of land. Architectural historical accounts of the transformation of the housing project typically place these two projects on either side of a transformation in the field in the late 1960's. B+M is seen to be the first move of European derived Modern Movement Housing which it has been argued came to dominate the city through the twentieth century, while TP is held up as one of the first moves away from this toward the contextual; a move understood to be on the one hand a return back toward the existing and traditional city, and on the other the result of a more complex political context and financing relationship between state and civil society partners.

However, what both of these projects have in common is their procurement via the vehicle of the Public Authority. The PA had considerable powers in terms of eminent domain, the use of which depended on the establishment of public use and public benefit. Throughout the twentieth century this use was constantly tested in the state and federal courts on the occasion of the coming into form of the housing project, and as part of a definitional question regarding the Fifth Amendment of the US Constitution. Here 'public benefit' emerged to include economic benefit via a constitutive dispute around the concept of blight. Contrary to historical accounts that argue that the housing project is a simple reflection of a series of economic, political and social forces external to it, in fact this process shows that the coming into form of the housing project involved a considerably more complex iterative testing that linked spatial questions with questions of the size of governance, and the very definition of concepts within the US constitution.

5. Radical Distance: the role of contingency in contemporary urban typologies
Chris Schulte
Artefacts accumulated by what might be called 'the city'—i.e. the specific conditions within which architecture and urban topography act as a framework for communicative associations—often mirror the conceptions which underpin civil society at different points in a city's existence.

Until relatively recently it was assumed that, by and large, urban buildings occupied discrete plots within a block and therefore they assumed direct relationships with the street or streets they fronted and the neighbouring properties they abutted. In this way, the particular decorum of a street was acknowledged and neighbourly relations were 'regulated' through carefully choreographed media, including, for instance, the party-wall (Borie and Denieul).

The absolute freedom of an individual plot-owner or user was by its nature tempered by and contingent on many factors outside the owner's control. Freedom was thereby modified within reason. Boundaries were tested (literally and figuratively), and resolved through the urban practices of dialogue, argument, compromise, etc. The rather 'complex' streets and blocks that were made through this kind of heuristic process perhaps reflected and promoted a collective way of being civil (sometimes through the very demonstration of incivility). Civic decency is, perhaps, what provides a high street with its capacity to belong to a population of people who mostly don't know each other and probably never will – but who nonetheless look out for each other, and identify with each other on some level. This intermediate

condition, between the extremes of the individual on the one hand and the statistical abstractions of 'the population as a whole' on the other, is seldom acknowledged, or, it would seem, explicitly valued (Black).

More recently, contingent and often 'self-regulating' negotiations between plot holders were supplemented with, or pre-empted by, more blanket forms of legislation. The role of defining what makes a good neighbour has increasingly become a concern for the State. Themes relating to public safety (spread of fire) eventually branched into those of general health (penetration of light, fresh air) and privacy ('overlooking', containment of noise). New block and building types were formulated in response: both intentionally and unintentionally whole cities and urban districts were posited, and sometimes constructed, which adhered to new principles of urban appropriateness (Periton). In the process, artefacts such as the party-wall were often suppressed in favour of new ways of building in the city which eliminated or reduced the sort of contingency previously associated with standard urban practice.

A number of contemporary urban projects suggest a further radicalisation of this tendency; ways have been found to 'pre-negotiate' certain modes of development through a disengagement with their immediate physical context, and has allowed additional development freedom while by-passing the uncertainties inherent in practical debate. Whether we look to London, New York, Paris, Dubai or Mumbai, we increasingly see a direct inversion of the urban tendencies which reflected and regulated civic transactions for centuries.

Using two contemporary case studies this paper proposes to examine recent urban processes in terms of a 'politics of separation' and attempts to uncover how these tendencies both mirror and undermine current conceptions of civility.

6. Cultural Buildings and Urban Areas
Pavlos Philippou
Even a cursory review of contemporary urban spatial strategies attests that the field is largely driven by two opposing dispositions. On the one hand, there is abundant work promoting place-making, which is rooted upon a sociological and geographical understanding of local identity, in conjunction with a design emphasis upon the city's public realm, all from an environmentally-responsible perspective. On the other hand, there is roughly equal output advocating for a profound revaluation of the field, since the world is apparently confronted by unmanageable urban growth, which supposedly defies our existing conceptual tools for critical evaluation and design projection. While the former fosters 'humane' architecture, regional sensitivity and public participation, the latter strives for an inventive approach at the intersection between global politics, emergent technologies and abstract beauty. Notwithstanding the numerous variations of these two dispositions, what they generally seem to be missing is a sophisticated understating of the intricate and reciprocal relation between architecture and the city.

To clarify with an example: the pervasive 'Bilbao effect' neologism, a usual focus in the literature of both dispositions, is regularly deployed as a synonym for a single building of such outstandingly affirmative reception that it is perceived to transform the entirety of the city. However, an acquaintance with the late twentieth-century plans for the regeneration of Bilbao will confirm that the Guggenheim Museum was just a fraction of a comprehensive strategy that sought to transform the post-industrial condition into a city of culture. In other words, the typical employment of the 'Bilbao effect' is rather inattentive to the notion of urban area – as well as that of the city of parts – as an integral component of a multiscalar urbanism in which architecture exerts an instrumental force. Yet, the neologism is more diligent in conceiving the special role cultural buildings play in strategies of urban development and regeneration. By being consistently deployed as keystones in urban strategies, cultural buildings seem well-placed – if not inescapably positioned – to anchor and spearhead the outlook of the areas in which they belong. Through a series of both textual and design references, this paper proposes to examine the richness cultural buildings bring into their urban areas.

7. **Type and Urban Strategy** Lawrence Barth

Speaker Bios

Katharina Borsi is an architect and urbanist with a Diploma from the Bartlett School of Architecture and a doctorate from the Architectural Association. She has taught at the Architectural Association, the Mackintosh School of Architecture and since 2007 at the University of Nottingham. She is the course director of the MArch Architecture (ARB/RIBA Part 2). Her research interests are broad and span the history and theory of architecture and urbanism, sustainable and resilient cities, design research and urban design consultancy.

As an academic she has published chapters, journal papers and presented at major international conferences in the areas of architectural humanities and urbanism, housing and sustainable cities. With her design research studio, Katharina has been involved in a number of live projects and resultant master planning consultancies. She has also a large PhD group undertaking primarily urban research projects.

Maria Shéhérazade Giudici earned her PhD from Delft University in 2014. Her thesis *The Street as a Project: The Space of the City and the Construction of the Modern Subject* is a critique of the contemporary idea of public space and an attempt to rethink the 'void between the buildings' as the object of political and architectural intentions. Between 2005 and 2011 Maria worked in Bucharest-based office BAU and collaborated with DONIS Rotterdam and Dogma, specializing in large-scale urban developments and mass housing projects. As well as teaching core design studios at the Berlage Institute and BIArch Barcelona, Maria has been a Diploma Unit master at the Architectural Association since 2011, and a First Year studio master since 2012. Maria's writings on space and subjectivity have appeared in international publications such as Perspecta, AA Files and Domus, as well as in several collective books; she co-edited with Pier Vittorio Aureli the upcoming book Rituals and Walls: The Politics of Sacred Space (AA Press, 2016). Since 2014, Maria runs Black Square, a publishing and educational platform based in Milan.

Sam Jacoby is a chartered architect with a Diploma from the Architectural Association School of Architecture and a doctorate from the Technische Universität Berlin. He has taught at the University of Nottingham, the Bartlett School of Architecture, University College London and the Architectural Association, where he is currently Director of the MPhil in Architecture and Urban Design (Projective Cities) programme and a PhD supervisor. He is a tutor in the RCA Architecture programme.

Jacoby is author of Drawing Architecture and the Urban (forthcoming), co-edited Typological Formations: Renewable Building Types and the City (2007) and guest edited the Architectural Design special issue 'Typological Urbanism' (2011) and the Urban Flux special issue on 'New Design Research in Architecture and Urban Design' (2015).

Tarsha Finney is an architect, urbanist, curator and academic practicing and teaching between Australia and the United Kingdom. She is currently a Senior Lecturer in the School of Architecture at the University of Technology, Sydney and has a visiting position at the Royal College of Art, London teaching across graduate design studio, professional practice and histories and theories. Her research interests cross several areas: domesticity, the housing project and the role of multi-residential housing in the constitution of the city since the 19th century with specific knowledge of the cities of New York, Beijing and Sydney; architectural typology and notions of disciplinary specificity and autonomy; and the architectural urbanism of innovation in cities.

Whilst completing a Masters degree in Housing and Urbanism at the Architectural Association, Tarsha won the Michael Ventris Memorial Award. She was a Visiting Research Scholar at the University of Technology, Sydney while undertaking her doctoral studies at the AA from 2004-2007. In Australia, Tarsha has been an advisor to State government on issues to do with aged care and multi-generational housing, and she is a regular guest critic at architecture schools in locally and internationally, such as the Architectural Association, the Bartlett, the RCA and Nottingham University.

Chris Schulte is an architect and urbanist practicing in London. He is Project Director at Publica.

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In terms of research output, he has acted as a peer reviewer for scholarly publications, has organised symposia and curated exhibitions, while he is in the process of completing a paper and a book review for a forthcoming issue of the Journal of Architecture. Pavlos is currently adjunct faculty both at the University of Nicosia and the University of Cyprus, while in the past has taught at London's Architectural Association (AA). Finally, he has participated in design juries-reviews, has led workshops and has delivered lectures in numerous universities around the world – mainly within the United Kingdom, but also Cyprus, Greece and Australia. He has completed all three of his degrees – i.e. Diploma, MA (Housing & Urbanism, Distinction) and Ph.D. – at the AA.

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Adrian Lahoud is an architect, researcher and educator. Prior to being appointed Head of Architecture at the Royal College of Art, Adrian Lahoud was Director of the Urban Design Masters at The Bartlett School of Architecture and served as Director of the MA programme at the Centre for Research Architecture, Goldsmiths.
He is also an external thesis advisor at the Projective Cities MPhil in Architecture and Urban Design at the Architectural Association.

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