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The Death and Life of Urban Design: Jane Jacobs, The Rockefeller Foundation and the New Research in Urbanism, 1955–1965

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ABSTRACT *Between 1955 and 1965, the Rockefeller Foundation responded to the urban crises created by the pre- and post-war housing shortage and heavy-handed urban renewal strategies by sponsoring urban design research projects by Kevin Lynch, Jane Jacobs, E. A. Gutkind, Ian McHarg, Christopher Tunnard, Ian Nairn, Edmund Bacon, Christopher Alexander and others. Drawing on documents from the Rockefeller Foundation Archives, this paper considers the state of urban design theory after World War II and outlines the major sponsored research projects. The work of Jane Jacobs, who was closely involved with the Foundation's urban design research programme, is examined in greater detail, while the early research of Gyorgy Kepes and Kevin Lynch, which became The Image of the City (1960), will be considered in a subsequent paper.*

Introduction

In the mid 1950s, Humanities officers of the Rockefeller Foundation embarked on a programme in urban design which, like Rockefeller Center, continues today to shape and effect the understanding of cities. Crafted between 1955 and 1965, the Rockefeller Foundation research programme for Urban Design Studies contributed significantly to post-war urban theory and to the emergence of the new discipline of urban design out of the overlapping interests of the fields of architecture, city planning and landscape design. While Foundation documents do not discuss at great length the reasons for sponsoring such research, the first section of this paper describes the urban crises and the heavy-handed means for dealing with them which made such discussions redundant. In particular, a housing shortage which grew unabated between the Great Depression and the end of World War II encouraged legislation, design and development strategies, including the super-block, which were ultimately concerned more with the efficacy of rebuilding and the quantity of dwelling units than with the quality of housing design or any preservation of the existing city. In retrospect, it is possible to see that many of the problems associated with later urban renewal and housing development were evident even before the war's end in projects such as New York

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City's Fort Greene Houses and Stuyvesant Town. Moreover, criticism of such developments anticipated the more experienced and comprehensive criticism of Jane Jacobs and others later in the post-war period.

If the 1940s and early 1950s can be characterized by an increasing amount of anecdotal and empirical evidence of design failure and harm to the city through rebuilding and urban renewal practices, the period starting in the mid 1950s, as the Rockefeller Foundation research programme was inaugurated, saw a recognition of the inadequacy of understanding of the 20th-century city and the assembly of the pioneering works of urban design theory. As described in the pages ahead, early Rockefeller Foundation documents reveal the consciousness of this lack understanding on the part of architects, planners and landscape architects, and the growing understanding of the need to support urban design research and criticism on the part of Foundation Humanities officers. The resultant collaboration produced such important works of architectural and urban design theory, criticism and history as Kevin Lynch's *The Image of the City* (1960), Jane Jacobs's *The Death and Life of Great American Cities* (1961), and E. A. Gutkind's eight-volume *International History of City Development* (1964–72), as well as books and research by Ian McHarg, Barclay Jones and Stephen Jacobs, Christopher Tunnard, Ian Nairn, Edmund Bacon and Christopher Alexander. Among these sponsored researchers, this paper focuses on the work of Jane Jacobs, who, in addition to writing a canonical text on cities with Rockefeller Foundation support, participated in many aspects of the Foundation's urban design research programme, and was greatly influenced in her thinking about the complexity of



Figure 1. This image of a New York City Housing Authority (NYCHA) waiting room in November 1949 characterizes the demand for housing in American cities before and after World War II. From the time of its first public housing projects, the NYCHA, as well as private landlords, received thousands, even tens of thousands, more applications than the number of available apartments. *Source:* Courtesy of NYCHA and the NYCHA Archives at The La Guardia and Wagner Archives, La Guardia Community College, CUNY.

cities by Rockefeller Foundation Life Sciences Director Warren Weaver, a pioneer of complexity science.

The Housing Crisis and City Planning: 'One and the Same Thing'

By the end of World War II, the poor state of American cities, particularly their shortage of housing, was common knowledge (Figure 1). In country singer Merle Travis's *No Vacancy* (1946), the housing crisis was by this time singled out as America's new enemy:

Not so long ago when the bullets screamed, many were the happy dreams I dreamed, of a little nest where I could rest, when the world was free. Now the mighty war over there is won, troubles and trials have just begun, facing that terrible enemy sign 'No Vacancy'.¹

While the housing shortage became particularly severe by the time some 20 million servicemen and women were returning from overseas war service, 'No Vacancy' signs predated America's entry into the war, going back as far as the previous post-war period, the years following World War I. With the Great Depression, increasingly sweeping legislative means were sought to respond to a growing crisis. As part of the New Deal, the Housing Act of 1934 sought to stimulate private home construction through the guarantee of home mortgages, while the Public Works Administration itself built public housing. The Housing Act of 1934 also created the Federal Housing Authority, followed by local institutions such as the New York Housing Authority, which collaborated with the PWA on the first three housing projects in New York: First Houses in the Lower East Side, dedicated in December 1935 (Figure 2); Harlem River Houses in



Figure 2. First Houses, located in New York's Lower East Side, was the first public housing project in America, dedicated on 3 December 1935 by First Lady Eleanor Roosevelt with a national radio broadcast. While small and expensive, it is still considered by some the best-designed housing project in the city. With the bricks of the previous tenements used to build the new dwellings, no later housing project would fit better into the city. Source: Courtesy of NYCHA and The La Guardia and Wagner Archives.



Figure 3. Harlem River Houses was New York City's second public housing experiment. Having given up the renovation method explored in First Houses, Harlem River Houses followed a garden apartment typology with careful landscaping and sculptural adornments. *Source:* Peter A. Juley & Son, Smithsonian American Art Museum, Washington, DC.

Harlem, completed in 1937 (Figure 3); and Williamsburg Houses in Brooklyn, completed in 1938 (Figure 4). With the Housing Act of 1937—predecessor to the even more powerful urban renewal Housing Act of 1949—the federal government created the United States Housing Authority which, instead of engaging in housing construction itself, provided funding for public housing to the new local housing authorities. By 1938, most states had local housing authorities, which were by then managing nearly 50 public housing projects (*Architectural Forum*, 1938). In New York, by the end of the same year, the New York City Housing Authority had designated large areas for demolition and had already razed thousands of tenements, achieving, in the tradition of a long history of “creative



Figure 4. With a design championed by William Lescaze, Williamsburg Houses was the third public housing experiment in New York City. Started September 1936, the project explored a modern aesthetic, but in doing so initiated the incremental detachment of subsequent housing projects from the city fabric. This design rotated buildings 15 degrees off the city grid; later housing projects would abandon all reference to the city. *Source:* Fairchild Aerial Surveys Inc., New York.

destruction", the "greatest elimination of Old Law housing in the city's history" (Page, 1999, p. 102; Schwartz, 1993, p. xv).

With the growing scope and scale of both the housing problem and the means to address it, housing became the great urban design challenge of the pre- and post-war period. As one member of the New York City Planning Commission stated it in 1939, housing and city planning were "one and the same thing" (*New York Times* (NYT), 1939). Accordingly, by 1941, the New York City Housing Authority was planning, building and managing 13 low-rental housing projects throughout the city, with a total of 18 204 apartments (Figure 5). During the war years, when non-military construction was stalled, the demolition of 'blighted' areas to make way for the new housing projects nevertheless continued, as in some cases did housing construction for apartment blocks which would be used as barracks. The first New York State public housing project, Fort Greene Houses in Brooklyn, which broke ground in May 1941, became the home of 13 000 soldiers and Brooklyn Navy Yard workers before reverting to a public housing project—only to become the epitome of the failure of project housing, and a sign of larger urban problems, in the 1959 exposé 'Metropolis in a Mess' (*Newsweek*, 1959).²

In and of itself, Fort Greene was not an unprecedented or revolutionary design (Figure 6). It was not the first public housing project to deploy the super-block planning concept or to orient buildings in a manner at odds with the surrounding city—as, for example, Williamsburg Houses, designed in 1935, had done in consolidating 12 blocks into four and rotating its echinate forms 15 degrees to the surrounding building fabric (see Figure 4).³ However, as compared to earlier public housing in New York, Fort Greene Houses—designed by a team of architects that included Henry Churchill, Wallace K. Harrison, Ely Jacques Kahn, Albert Mayer and Clarence Stein—was unprecedented in scale and economy, the largest and most dense housing project to date. Fort Greene Houses replaced 41 acres of city streets and blocks with four super-blocks containing some

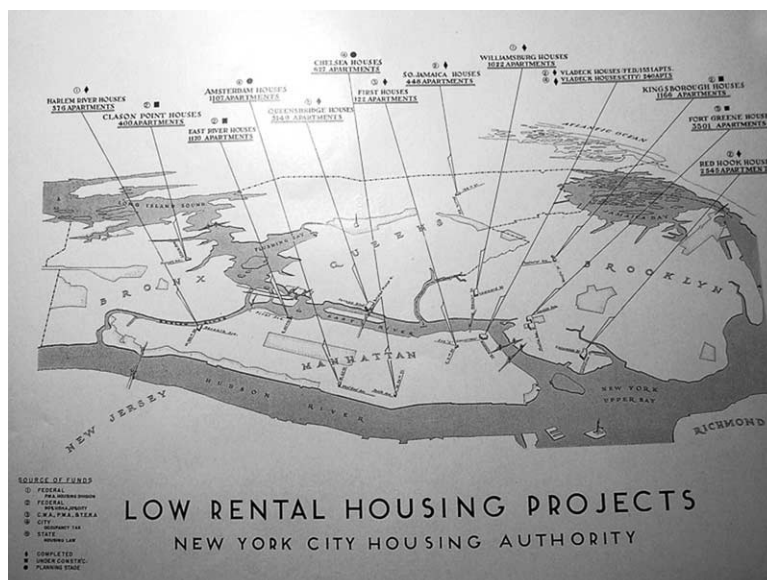


Figure 5. New York City Housing Authority projects built and planned by 1941. Source: Courtesy of NYCHA and The La Guardia and Wagner Archives.



Figure 6. Fort Greene Houses, Brooklyn, the largest housing project to date and one of the first 'housing projects' in the now familiar sense. Started in 1941, construction proceeded during World War II so that the project could become barracks for the nearby Brooklyn Navy Yard. After the war, Fort Greene reverted to public housing, but by 1959 it had become the epitome of the notorious housing project and a symbol of an increasingly unstable city. *Source:* Courtesy of NYCHA and The La Guardia and Wagner Archives.

3500 apartments in 35 I-shaped buildings. Whereas previous housing projects were built to four or six storeys, and thus did not overwhelm the neighbourhood building fabric, elevator buildings at Fort Greene, by comparison, reached 13 storeys.⁴ Thus, in urban design terms, by the time of Fort Greene, at least, traditional urban housing had evolved into housing 'projects'. As compared to the low-scale, estate-style developments, and even early super-block 'superproject' proposals, which retained physical and social connections to their neighbourhoods despite being relatively detached from their surrounding neighbourhoods, Fort Greene disregarded almost all of the urban elements previously taken for granted: existing city blocks, the street wall, typical height and massing and materials, and ground-floor shop space.⁵ By comparison, not many years before, First Houses, the first public housing project built in America in 1935, was literally built from the existing city: the very bricks of the old Lower East Side tenements it replaced were used to rebuild the new apartments (see Figure 1). By the 1940s, however, the needs and ambitions of the city had grown beyond the First House method of reconstruction, which was modest in terms of numbers of apartments produced—some 122 units—and expensive, ultimately costing much more than new pre-war construction (NYT, 1936).⁶

While Fort Greene Houses had the distinction of serving as military housing and barracks, when similar urban design strategies were applied soon thereafter in Stuyvesant Town, a private, middle-class housing project to be located on Manhattan's Lower East Side not far from First Houses, the housing project's relationship to the city was called increasingly into question (Figure 7). Indeed, Stuyvesant Town—named for New Amsterdam's last Director-General and described when it was publicly proposed in May 1943 as a 'post-war housing

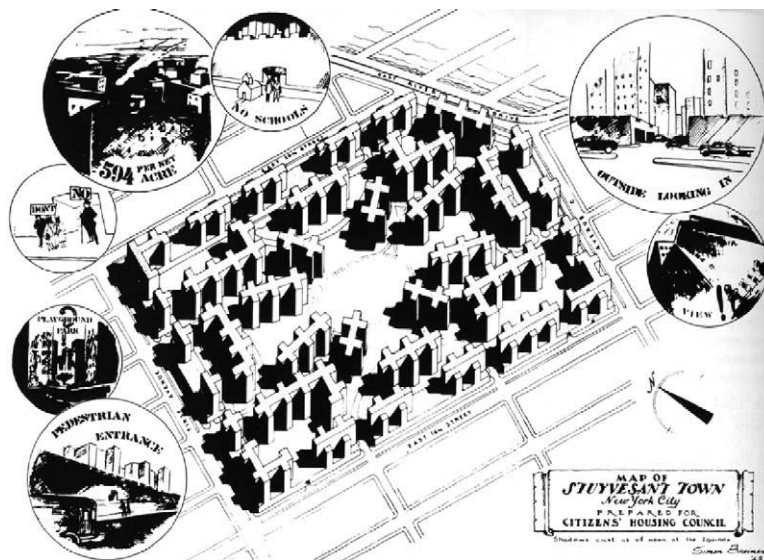


Figure 7. Recognized as a model for post-war city rebuilding even before the war's end, Stuyvesant Town was also controversial from the time of its first unveiling. The first in a long list of contested post-war rebuilding projects, it represented another attempt by Robert Moses to take control of housing and urban redevelopment and was a model for 'the McGoldrick Plan' for city rebuilding, which anticipated later Federal urban renewal strategies. Most significantly, it represented the privatization of the post-war city. *Source:* Fairchild Aerial Surveys Inc., New York.

project' due to the wartime construction hiatus—anticipated many later problems of post-war urban renewal, from public policy to urban design. Recognized during the war as a precedent and model for both public and private post-war rebuilding, and unencumbered by the pathos and regulations of public housing and eventually the war, it quickly became the focus of early battles in 'post-war' city rebuilding. By July 1943, the National Association of Housing Officials described the fight as "a battle up to now lacking only in beer bottles and murder" (*Journal of Housing*, 1943).

Due to the great need for housing and the costs involved, the terms for the Stuyvesant Town project had been largely dictated by the Metropolitan Life Insurance Company, from the selection of its site to a discriminatory tenancy policy. Championed by City Parks Commissioner Robert Moses, who had recently been denied control of public housing funds in his failed coup of the New York City Housing Authority, private housing construction, moreover, offered Moses another means towards power. Thus with Robert Moses's assistance, Metropolitan agreed to go forward with Stuyvesant Town in 1942, when the state legislature passed a bill designed, in Moses's words, "to meet the objections of these corporations" by amending the urban redevelopment laws that limited insurance companies' control and profits on real-estate developments (Moses, 1943).⁷

Soon after planning department approvals in June 1943, the architectural and planning journal *Pencil Points* described the Stuyvesant Town plan as having been "railroaded through", while the *New York Times* described the enabling legislation as "tailored to suit the Metropolitan's requirements" (*Pencil Points*, 1943, p. 24; *NYT*, 1943b, p. 24). Despite protests from civic groups and property owners, and

despite the fact that construction could not begin until the war's end, the property condemnation process went into motion immediately after approval. As was typical for rebuilding projects before and since, rapid condemnation was argued necessary to prevent a spike in real-estate prices. An 18-block area of the Lower East Side, with its formerly public streets and individually owned private properties, thus soon became the property of the Metropolitan Life Insurance Company, which, over the next two years, razed 600 buildings containing 500 small businesses and factories, three schools, three churches, two theatres, the private homes and even relatively new apartment buildings.

Among the most significant issues raised by Stuyvesant Town were not only the lack of public participation in the planning process, but the heavy-handed use of eminent domain and racial segregation, both of which resulted in numerous lawsuits and appeals. Lawsuits of the property owners of condemned land were promptly rejected in 1943 on the basis of the public purposes of the housing project (NYT, 1943d, e). The legality of racial discrimination would take a longer time to be resolved but, by 1947, the lawsuits of African-American servicemen, whose applications for tenancy had been rejected by the Stuyvesant Town Corporation on account of their race, were contradictorily denied by the State Supreme Court on the grounds that Stuyvesant Town was not a public project and that housing accommodation was not a recognized civil right (NYT, 1947a). Plaintiffs' advocate Charles Abrams argued that the previously established public nature of the project and the use of formerly public land and streets should require Metropolitan Life to follow New York City's policy of racially integrated public housing. Frederick Ecker, the president of the Metropolitan Life Insurance Company, which built Stuyvesant Town, maintained, however, that "Negroes and whites do not mix" (NYT, 1943c, p. 23). Metropolitan Life's Riverton Houses in Harlem—physically an architectural copy of Stuyvesant Town, but planned as a separate-but-equal measure when the Stuyvesant Town controversy flared up—effectively proved Ecker's point.

As would be repeated time and again over the next decades, the neighbourhood's notorious history, old buildings and disagreeable street-life had served as an excuse for demolition. As for Stuyvesant Town's former neighbourhood, the Gashouse District—named for the gas tanks that once dominated the local streetscapes—a low and subjective threshold was set for what constituted 'blight' or a 'slum'. In a widely used blight measurement survey prescribed by the American Public Health Association around the time of the demolition of the Gashouse District—*An Appraisal Method for Measuring The Quality of Housing* (American Public Health Association (APHA), Committee on the Hygiene of Housing, 1945)—interior inconveniences, like the lack of closet space and poor hot water supply, and extrinsic situations, such as yard debris and inadequate neighbourhood services, could conspire to condemn otherwise repairable housing to the wrecking ball.⁸ Stuyvesant Town would replace former gas tank sites, old industrial yards and vacant lots, but it would also wipe out a working and inhabited neighbourhood (Figure 8).⁹ Indeed, in some ways, neighbourhood conditions were made worse: among the first complaints about the project, for which three schools were razed, was that it provided no new schools or other community facilities (NYT, 1943a).

The demolition of the Gashouse District resulted, moreover, in what the New York Times described in 1945 as "the greatest and most significant mass movement of families in New York's history" (Cooper, 1945). Eleven thousand



Figure 8. The Gashouse District before Stuyvesant Town, 15th Street and Avenue B, looking north in February 1941. Over 600 private and public buildings were destroyed in the 18-block area, as land and public streets were transferred to private ownership. *Source:* Percy Loomis Sperr, courtesy of the New York Public Library.

persons or some 3000 families were displaced. Metropolitan Life had fought the requirement to relocate previous residents, and while the company set up a relocation office, there were few options for alternative housing. Due to the housing shortage that prompted Stuyvesant Town in the first place, and the fact that more housing was being destroyed than built during and immediately after the war, Gashouse District residents struggled to find new homes (Farrell, 1947).¹⁰ After the war, 'new' housing consisted of Quonset huts and converted barracks, such as Fort Greene. Unsurprisingly, in 1946, on the first day that they were accepted, the Stuyvesant Town Corporation received 7000 applications, and by the time of first occupancy in August 1947, the company would have received more than 100 000 applications (NYT, 1946, 1947b). Their investment had paid off and Lewis Mumford accurately observed that: "Those who are lucky enough to be accepted by the landlords will probably view their new homes through a rosy haze, as a Displaced Person might" (Mumford, 1948).

The housing shortage naturally obscured the limitations of untested urban design concepts—the transformation of public into private space and the diverse, fine grain of the city into homogenous, monolithic super-blocks—even as it made a case for the quantitative success of projects like Fort Greene and Stuyvesant Town. These and similar projects were, in fact, held out as exemplars for what became known as 'the McGoldrick Plan', a model for later federal urban renewal programmes. Named after Joseph D. McGoldrick, a former Columbia professor of government and progressive Comptroller of the City of New York, in the McGoldrick Plan the city would buy up slums and

after acquiring the property, shall offer it at public auction in super-blocks containing 50,000 to 300,000 square feet each. Proper zoning for various uses would precede the sales, paving the way for construction of apartment houses and a suitable variety of other structures. (NYT, 1944b, p. 29)

To support such a plan, in his November 1944 article 'The Super-Block Instead of Slums', McGoldrick effectively argued that the city itself was outdated and that

the old tenements and their blocks were of a piece (McGoldrick, 1944b). Manhattan, he offered, was fundamentally an antiquated 19th-century invention. He described its gridiron street system as composed of “arbitrary rectangular blocks”, and complained of the small lot size and their “many scattered owners”.
 455 The gridiron, moreover, not only “permits every street to become a thoroughfare”, allowing any ground-floor space to “seem equally suitable for a store”, but “ignores the needs of the various activities which make up city life. It provides no logical separation for mercantile, manufacturing, or residential section.” The traditional gridiron, finally, was an “excessive waste of space”, and
 460 made “no provision for getting quickly and easily from one part of the city to another” (p. 10).

However, while McGoldrick’s arguments may have echoed those of more radical urban theorists, his primary interest, as it was for Robert Moses, was in seeking the ways and means for large-scale rebuilding. He had in mind less the ideas of Ebenezer Howard or Le Corbusier than Moses’s self-serving declaration
 465 that “The great era of public housing with public funds is about over”, and similarly argued that even if federal, state and local funds were combined, they would still be insufficient for the task of post-war redevelopment (McGoldrick, 1944a; NYT, 1944a). The super-block, in addition to whatever other aesthetic or
 470 functional qualities attributed to it, consolidated ownership and created parcels of land that were attractive for large development enterprises. McGoldrick (1944a) saw the ownership of land, “splintered into thousands of small plots”, to be an obstacle to redevelopment. “A builder rash enough to assemble three or four of these parcels into a satisfactory building plot”, he argued, “would find that, unless
 475 his neighbors were prepared to do the same, he would be surrounded by an untidy mess of deterioration” (p. 10).

The Housing Act of 1949 effectively federalized the McGoldrick Plan, providing tens of millions of dollars for the demolition of city slums and enabling the consolidation of thousands of small plots into super-blocks. Rebuilding the
 480 city was more complicated than demolishing it, however, and although post-war optimism and hopes of better housing and cities initially favoured slum destruction and modernization, architects and planners had little experience with large-scale reconstruction or the ramifications of their untested urban design concepts. Moreover, while European city centres destroyed by wartime
 485 bombardment were frequently rebuilt on historical plan or pattern, in America, the pursuit of modernity allowed some of the most theoretical, albeit dated, planning concepts to be executed. Consequently, soon after Pittsburgh’s Gateway Center, one of the first major American urban renewal projects to follow the Urban
 490 Renewal legislation of 1949, was built in 1952, its designers were criticized for drawing on the thinking of 30 years earlier in modelling their project on Le Corbusier’s Radiant City ideas of 1922. “Now, At Last, Towers In A Park” ran
 495 Douglas Haskell’s headline in December 1953’s *Architectural Forum* (Haskell, 1953) (Figure 9).¹¹

Thus, by the mid 1950s, as Niemeier and Costa were planning the modernist city of Brasilia, the glimmer of newness of early urban renewal projects had
 495 already begun to dull in the United States. Slum clearance was increasingly regarded as not improving cities, but destroying them. In 1952, New York architect Charles Platt, former president of the city’s Municipal Art Society, offered that the wholesale destruction of city blocks was wrong insofar as many of the buildings
 500 slated for demolition could be made habitable (Grutzner, 1952). Overcrowding,

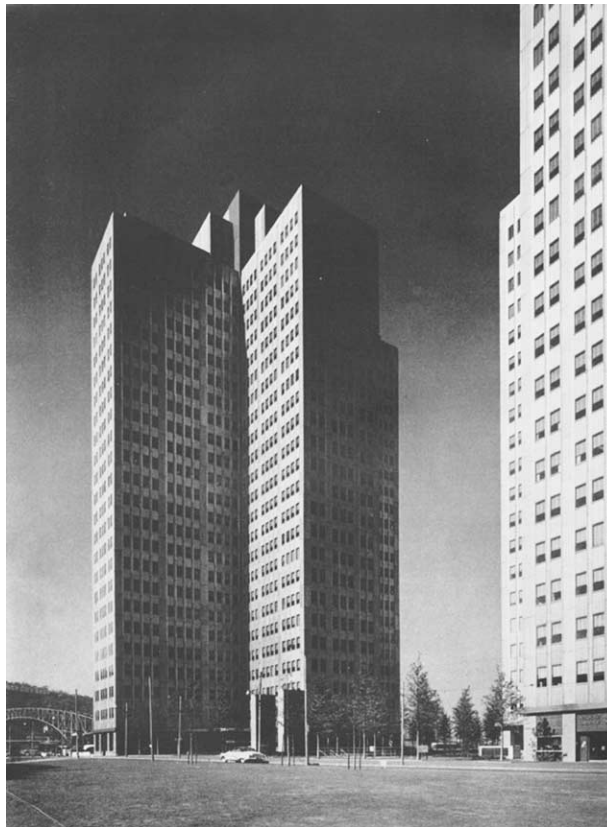


Figure 9. Pittsburgh's Gateway Center was one of the earliest non-residential slum clearance and rebuilding projects following the Urban Renewal legislation of 1949. At a time when architectural criticism not only resulted in lawsuits, but also violated the gentleman's agreement of professional unanimity, Douglas Haskell, Editor of *Architectural Forum*, criticized the project for "weak modernique" architectural design and not living up to the potential of architecture to be a "fashioner of cities". Source: Reproduced from *Architectural Forum*, 99 (December 1953), p. 112.

not old buildings, he argued, was the problem of slums. Jacobs, who, a few years before, had renovated an old Greenwich Village storefront building into a family home with her husband, architect Robert Hyde Jacobs, would later offer a similar analysis in writing. In the same year, moreover, local activism against Robert Moses and city redevelopment plans began in earnest. Shirley Hayes, a committee member on the new local Community Planning Board established by Manhattan Borough President Robert F. Wagner Jr, founded the Washington Square Park Committee and for seven years fought Robert Moses's various plans to extend Fifth Avenue and bisect Washington Square with a highway (Figure 10).¹² Jane Jacobs joined the fight as a concerned citizen and neighbour in 1955, signing a petition and joining the letter-writing campaign to the then Mayor Wagner and the new Borough President. Jacobs wrote that "I have heard with alarm and almost with disbelief, the plans to run a sunken highway through the center of Washington Square", and continued, "My husband and I are among the citizens who truly believe in New York—to the extent that we have bought a home in the heart of the city and remodeled it with a lot of hard work (transforming it from



Figure 10. This site plan of Greenwich Village south of Washington Square represented two of the first seven slum clearance and redevelopment projects drawn up by Robert Moses's Committee on Slum Clearance in anticipation of the passage of Title I of the National Housing Act of 1949 (a development Moses had been waiting for since the early 1930s). The Washington Square projects included the widening of Fifth Avenue as seen here, in anticipation of an arterial connection or highway through the park. The other projects in this first wave of urban renewal projects were Delancey Street, Corlears Hook, Harlem, North Harlem and the Williamsburg Section. *Source:* Reproduced from Committee on Slum Clearance Plans (1951). Courtesy of the Avery Architectural and Fine Arts Library, Columbia University.

slum property) and are raising our three children here". But, she continued, "It is very discouraging to try to do our best to make the city more habitable, and then to learn that the city itself is thinking up schemes to make it uninhabitable" (Jacobs, 1955, no page numbers).

By 1956, protest had spread from the bohemian Village to the Upper West Side, where a group of matrons linked fur-coated arms to protest similarly destructive changes to Central Park.¹³ By this time, *Architectural Forum* Editor Douglas Haskell and his staff had become increasingly interested in urban design issues, and Jane Jacobs, on the staff since 1952 and familiar with the battles in Greenwich Village, took up the cause of East Harlem, which was overwhelmed by renewal plans and housing projects that made the problems of her neighbourhood seem trivial in comparison. Whereas Greenwich Village was poised to get its first Moses housing project, by the mid 1950s, East Harlem was home to more than a dozen housing projects—East River, James Weldon Johnson, Lexington, Washington, Carver, Madison, Franklin, Jefferson, Taft, Wagner and DeWitt Clinton Houses—with a total of approximately 14 000 dwelling units (Figure 11). Thousands of storefront buildings were destroyed to make way for them and, along with those buildings, as documented by Ellen Lurie, a social worker for the Union Settlement House Association, located in East Harlem, a multitude of small businesses and community institutions such as storefront clubs and churches (Lurie, 1956).¹⁴ Prompted by architect Philip Will of the firm of Perkins & Will, Union Settlement director William Kirk described Lurie's findings and East Harlem's plight to Douglas Haskell, who put Jacobs on the story. As she noted in *The Death and Life of Great American Cities*, Jacobs owed much of her understanding of city dynamics and the problems of rebuilding practices to Kirk (1961, p. 16). Lurie, who later contributed to *Forum's* two-part series on 'The Dreary Deadlock of Public Housing' at Jacobs's behest, was also cited in *Death and Life* (Jacobs & Lurie, 1957; Jacobs, 1961, pp. 66, 278).

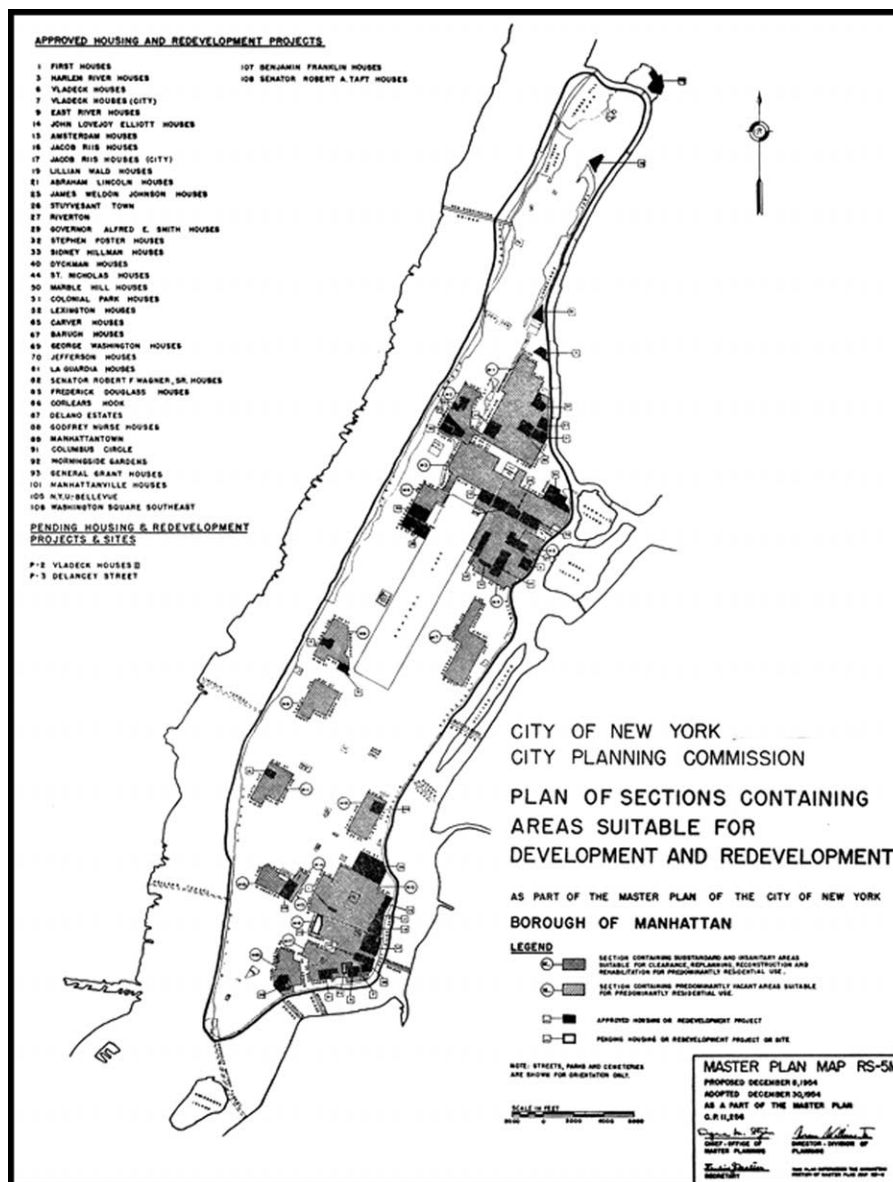


Figure 11. This 1954 Master Plan Map of New York City shows the concentration of existing and proposed housing and redevelopment projects in Harlem, the Lower East Side and elsewhere in Manhattan. Source: Reproduced from City Planning Commission (1954). Courtesy of the Avery Architectural and Fine Arts Library, Columbia University.

The shock and experience of East Harlem inspired one of Jacobs's first by-lined articles for *Architectural Forum*, which she presented as a paper at the First Harvard Urban Design Conference in April 1956. Her paper was well received, but the arms-length understanding of her academician fellow panellists galvanized her intentions to write the book that became, with Rockefeller Foundation assistance, *The Death and Life of Great American Cities* (Jacobs, 1961).

The Rockefeller Foundation and the New Research in Urbanism

While the theoretical reasons were as yet unclear, those on the frontlines of urban renewal already had the sense that, by contrast with the design ideas that had created a large project like the Rockefeller Center, the new urban design models were fundamentally anti-city, at odds with the city's essential multi-layered and multi-modal nature. Even Joseph McGoldrick, as early as 1944, had observed that slum clearance projects were not doing what was expected of them. In the very article in which he promoted them, he wrote that: "Such projects have had no regenerative effect on the areas in which they are placed" (McGoldrick, 1944a, p. 35).

This context of reconstruction, confusion and protest underscored the need to better understand cities and led to the establishment of the Rockefeller Foundation's programme for urban design research.¹⁵ Discussions beginning in 1953 resulted in the Foundation's first grant in the field, awarded to Gyorgy Kepes and Kevin Lynch of Massachusetts Institute of Technology (MIT)'s School of Architecture and Planning in April 1954.

Early Rockefeller Foundation urban design studies documents reveal something of the professional consciousness of the inadequacy of disciplinary knowledge to cope with contemporaneous changes in American cities. In January 1953, in the first extant record of the Foundation's interest in post-war urban design, Professor Frederick Adams of MIT, a colleague of planner Clarence Stein and an active member of the American Institute of Planners, reported his findings on the state of city planning degree programmes (Fahs, 1953a). Adams observed that of the 23 American degree programmes in planning, more than two out of three were quite new, having been founded after the war. His data documented their collective lack of experience and the simultaneous need and naïvety of the field. Unknowingly confirming this a few years later, Dean G. Holmes Perkins of the University of Pennsylvania and his faculty acknowledged that they were "deeply conscious of the fact that city planning is a comparatively new profession" and that the "very heavy demands now made upon it are not supported by an adequate scientific basis in knowledge". In making a case for Foundation support, Perkins offered that teaching materials "for systematic training of what is now known are quite inadequate or wholly lacking" (D'Arms, 1956a).

Landscape Architecture was an equally incomplete field of knowledge. At Pennsylvania, for example, the Landscape programme, which had ceased instruction in 1942, was re-established only in 1954. According to Perkins's research proposal, while pre-war landscape architects had been preoccupied with private gardens and estates, post-war training and research was "necessary to give concrete physical expression to community objectives in the design of public open spaces and areas" (Perkins *et al.*, 1956). Comparable to the lack of teaching materials in city planning, the primary research interest of the school at this time was the development of up-to-date professional literature on the increasingly public role of landscape architecture, directed by the new department chair Ian McHarg. Overall, in preliminary discussions of research funding in 1955, Perkins and his faculty offered that "there is little which can be described as research in the school, or, in fact, in other architectural schools" (D'Arms, 1956a). It is difficult, planning professor William Wheaton added, "to get a sufficiently detached, yet intimate picture of the range of problems involved in the design-architecture-

planning–landscape complex to identify and formulate a research project”
 Q8 (D’Arms, 1956a).

705 The newness of the public post-war role of such a field as landscape
 architecture is further revealed in documents which outline Foundation
 arguments *against* funding McHarg’s project. Ironic and premature given the
 holistic understanding of environment that McHarg developed in the years ahead,
 Humanities officer Edward D’Arms rejected McHarg’s proposal in October 1955
 on the grounds that he had not convincingly related the relationship of landscape
 architecture to urban design. As D’Arms offered to his colleagues:

710 McHarg, by implication at least, seems to regard landscape architecture
 as something different and distinct from architecture or city planning.
 Actually, it seems to me that the examples he has given of landscape
 architecture (parkways, expressways, municipal parks, play fields,
 715 Q8 playgrounds) should be regarded as part of the total urban or rural scene
 and, hence, can hardly be considered separately from either architecture
 proper or urban design and suburban planning. (D’Arms, 1955)

720 While McHarg and the Penn faculty soon clarified what they understood to be the
 relationships between landscape and its interconnected fields in the following
 months, the question of the relationship of landscape to architecture and planning
 shows that the expanded urban and environmental horizon of landscape design
 was only just developing. Indeed, in the following year, Perkins established a
 Civic Design programme, which Penn planning professor David Crane later
 described as “the progenitor of graduate programs in ‘urban design’ established
 725 Q8 at many other U.S. universities” (Strong & Thomas, 1990). Around the same time,
 Dean José Luis Sert of Harvard’s Graduate School of Design announced the
 programme for an Urban Design Conference for April 1956. With intentions
 similar to those of Perkins, this conference, the first of a series, was a prelude to the
 establishment of a new degree programme in Urban Design at the Graduate
 School of Design in 1960, being organized to argue for greater co-ordination in
 730 “the Roles of Planners, Architects and Landscape Architects in the Design and
 Q8 Development of Cities” in a shared concern for urban design (Sert, 1955).
 Pennsylvania’s and Harvard’s urban design programmes, both of which were
 open only to those already holding degrees in the three elemental fields of
 735 architecture, landscape or planning, represented more a sought-after than an
 actual synthesis of knowledge, however. The theoretical inversion—where
 specialized knowledge continued to pre-empt a common ground of basic urban
 design precepts—evidenced the absence of a fundamental intellectual corpus. As
 Perkins predicted, unsupported by an adequate basis in city knowledge, the
 740 design professions would largely collapse under the heavy demands placed on
 them in the urban renewal era.

In this context, the Rockefeller Foundation’s early recognition of the
 importance of urban design studies put it in the post-war avant-garde of
 architectural and urban theory. The Foundation’s first grant in urban design
 745 studies in April 1954—for a basic research project formulated by Gyorgy Kepes
 and Kevin Lynch at MIT to study the fundamentals of human perception and
 understanding of the urban environment—was also generally regarded at the
 time as among the first of such research in the field. Thus, in retrospect, it seems no
 coincidence that Lynch and Kepes’s research, emerging from a time when
 750 planning was dominated by the technical and financial efficiency of post-war

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functionalism, resulted in what may be considered the first text in the post-war canon, Lynch's book *The Image of the City* (1960).

As an alternative to what would be later described as 'naïve functionalism', Lynch and Kepes's larger project emphasized the human and social side of city planning, which was consistent with the interests of the Foundation's programme in urban design. The analysis of the field by Dr John Burchard, MIT Dean of Humanities and Social Sciences—that "city planning throughout the United States during the last several decades has neglected aesthetic elements to concentrate largely on technical ones of communication, hygiene and economics"—was widely held by both architects and planners, and shared by officers of the Foundation's Humanities Division (Fahs, 1953b). With echoes of the interest in integrating of architecture and the arts observed in the CIAM's Eighth Congress, and in anticipation of Sert's integrative conception of urban design observed above, Foundation Humanities directors regarded urban design as an integration of the arts, especially the architectural arts, and city planning. As they wrote in the report awarding Lynch, Kepes and MIT the first grant in the field:

The Division of Humanities has no intention of entering the general field of city planning. Urban design, however, is one of the fields in which the arts have most direct impact on the quality of human life. In view of the relative neglect of aesthetic aspects in connection with city planning during the last few decades, an effort to restore the balance in thinking in connection with city design seems well justified under the Foundation's program in the arts. (Rockefeller Foundation, 1954)

The Foundation's conviction in the Lynch–Kepes project was not unqualified, however. Following discussions with those knowledgeable in the field, Humanities Division directors decided that MIT's School of Architecture and Planning was then the most promising institution in which to begin to develop the new research, but were aware of possible inadequacies. Asa Briggs of Princeton's Institute for Advanced Study, for example, who reviewed the Lynch–Kepes proposals, expressed doubts about the basic technique of interviewing subjects in order to glean information about the perception of cities. This was an insightful critique of what did become a limitation of the research published as *The Image of the City* (Lynch, 1960), which was based, in part, on the subjective impressions of a statistically insignificant sample and a rather subjective methodology. (The book itself, however, which was based on sound propositions and concepts which Lynch and Kepes developed during their three years of research, did not necessarily represent the full expression of their research.) While prescient, Briggs's objections were, moreover, in the context of a general objection to the social science style of research. More promising than generalizing from such studies, he offered, was an "historical approach, which examines in detail the origin, development and peculiar problems of the individual city" (D'Arms, 1954). While reference was not made to this comment in later extant documentation, it may have influenced the Foundation's second urban design grant in the following year, which responded to deficiencies in the field by following the basic theoretical research project at MIT with a major historical project at the University of Pennsylvania.

As the moment was not ripe to substantially support Ian McHarg's new theoretical research for reasons outlined earlier, the Foundation's next major grant went to the University of Pennsylvania to support an ambitious history of Western

planning and urbanization by E.A. Gutkind. While the grant included a small line item to McHarg as project administrator, it could not be said to have significantly forwarded the research that became McHarg's *Design with Nature* (1969), one of the most important texts in environmental design in its broadest sense, which laid the groundwork for the ecology movement, sustainable design and today's interest in 'landscape urbanism'. Gutkind's proposal, however, clearly fulfilled the Humanities department's basic mission. Gutkind was seen as a successor to his friend Lewis Mumford, who was then teaching at Penn, and Gutkind's research project was believed to be an opportunity to balance what Humanities officer D'Arms described as the "social science or social engineering" direction of Penn's School of Fine Arts. The Gutkind project, he wrote, "will tend to balance this tendency and at the same time to provide materials which will make it possible to introduce historical perspectives and materials into the field of urban studies" (D'Arms, 1956). Gutkind's work, it was hoped, would "restore a humanistic balance to the program of the School of Fine Arts" and build "historical depth into the school" (D'Arms, 1956b; Marshall, 1955). These objectives and the Foundation's support for Gutkind, in light of his relationship with Mumford, were all the more remarkable in the Cold War period. While a background check on Penn faculty revealed the accusations by the Red-baiting Reece Committee of 1951 that Mumford was a "communist fellow-traveler" who sought to introduce communist propaganda into the school system, neither this nor his encouraged role as mentor to Gutkind was taken as "adverse information" with regard to awarding Penn and Gutkind the \$66 000 grant (Gilpatric, 1956). To the contrary, at a time when there were few contemporary architectural historians or city columnists, Mumford was one of the few available models for historical and critical writing on urban design. Apart from Mumford's scholarly writings, his 'Skyline' column in the *New Yorker* and Grady Clay's articles in the *Louisville Courier Journal* were regarded as "the only regularly published criticisms of urban design appearing in any American [journal or] newspaper" (Wheaton & the University of Pennsylvania Institute for Urban Studies, 1958).¹⁶ As Humanities officer Chadbourne Gilpatric put it later: "One form of the question was where there were to be found other Lewis Mumfords, who could bring his critical, philosophical and historical background to bear on problems of urban planning" (1958).

While the first volume of E.A. Gutkind's *International History of City Development* did not begin appear until 1964 (and the eighth in 1972), the third arm in the history-theory-criticism triumvirate of reflective practice was addressed about a year and a half later, following a conversation that Chadbourne Gilpatric arranged with Douglas Haskell in February 1958. As bulldozers proceeded with their destructive work on American city centres in the wake of the 1956 Urban Renewal legislation, Gilpatric noted in his diary that Haskell "deplores the paucity of critical thinking about new demands for architecture and design in city planning. One of the few able and imaginative people concerned with this domain is Jane Jacobs, on his staff" (Gilpatric, 1958).

A few days later, Gilpatric had read a draft of Jacobs's 'Downtown is for People', which was soon to be published in *Fortune* magazine (a Time Inc. sister magazine to *Forum*), and set up a meeting with her. In a memo to his colleague Charles Fahs, Gilpatric wrote:

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You will find some interesting ideas and formulations in the attached forthcoming essay in *Fortune Magazine*. Jane Jacobs, borrowed from the staff of the *Architectural Forum* to do this piece for *Fortune*, has obviously drawn heavily on the Foundation-financed MIT research. (Gilpatric, 1958)

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Jacobs, in fact, had not drawn on Lynch's work. The perception that she had, however, as well as the many favourable letters to *Fortune's* editorial department in response to her article, strongly recommended her work to the Foundation. According to a memo forwarded from *Fortune* Editor Holly Whyte to Haskell and then to Gilpatric, Jacobs's essay generated "one of the best responses" the magazine ever had. "Look at what your girl did!" Whyte penciled at the top of the memo, which excerpted the enthusiastic letters of some 30 academics, planning directors and four mayors (Whyte, 1958). Jacobs seemed to fit the criteria for sought-after writers with "critical viewpoints in city design" and to be one of the "other Lewis Mumfords" that Gilpatric and the Foundation were seeking (Gilpatric, 1958c, 1961).¹⁷ About a month later, Jacobs described to Gilpatric the first outline of her book on cities, and—with the recommendation of Lewis Mumford himself, as well as those of Catherine Bauer, Holly Whyte, G. Holmes Perkins, and Random House's Jason Epstein—in September 1958 was awarded the first of three grants to write it.

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Apart from advancing Jacobs's proposal, Gilpatric took Haskell's remark about the "paucity of critical thinking" in architecture and urban design yet further. At Gilpatric's prompting, University of Pennsylvania professors William Wheaton and David Crane organized a "Conference on Urban Design Criticism" for October 1958, funded by a substantial Foundation grant. The conference brought together some of the best thinkers in the field: Mumford, McHarg, Lynch, I.M. Pei, J.B. Jackson, Catherine Bauer, Grady Clay, Louis Kahn, Jane Jacobs, Penn faculty and many others (Figure 12). Gilpatric, who also attended and presented a paper on 'The Meaning of Depth in Criticism', later reported, "this was the most



Figure 12. Attendees of the October 1958 Conference on Urban Design Criticism, initiated by Chadbourne Gilpatric of the Rockefeller Foundation and organized by Dean Perkins and faculty of the University of Pennsylvania School of Fine Arts. Most of the participants were in some way involved in the Foundation's urban design research programme. Left to right: William L.C. Wheaton, Lewis Mumford, Ian McHarg, J.B. Jackson, David Crane, Louis Kahn, G. Holmes Perkins, Arthur Holden, Perkins's secretary, Catherine Bauer Wurster, Leslie Cheek, Mrs. Eric Larrabee, Jane Jacobs, Kevin Lynch, Gordon Stephenson, Mrs. Grady Clay and I.M. Pei. Not visible or present in the photo were Chadbourne Gilpatric, Frederick Gutheim, Grady Clay, Eric Larrabee and Edward Weeks. The Penn conference marked an important moment in the history of architectural criticism and the development of urban design theory. Source: Courtesy of the University of Pennsylvania.

febrile and intellectual conference I have ever attended”—high praise from a Rhodes scholar, former professor of philosophy, member of American intelligence agencies and modern polymath (Gilpatric, 1959).

While Gilpatric also reported some disappointment with the conference’s “lack of constant purpose” and resulting conclusions and publication, he was nevertheless accurate in his assessment that the conference would have “a wide-spread effect . . . through what the individuals present took away with them” (Gilpatric, 1959). The conference brought Jacobs, in particular, into personal contact with Lynch, McHarg, J.B. Jackson and others with whom she had an intellectual affinity. Other early ripple effects observed and reported by Gilpatric were influences on the programme of Harvard’s Third Urban Design Conference in 1959, in meetings of the American Institute of Planners and the Canadian Institute of Public Affairs, and in the reporting of the *New York Times*, as well as “the efforts of *Architectural Forum*, *Landscape*, *Horizon* and other publications to print more critical accounts of projects and moves to develop cities with reference to aesthetic and social values” (Gilpatric, 1959). A few years later, a conference on ‘The Press and the Building of Cities’ at Columbia University was, according to keynote speaker Grady Clay, another direct result of the Penn conference (Clay, 1962). Clay echoed Gilpatric’s assessment of the subtle but significant influence of the conference some decades later, remarking that: “The conference incited all of us into publications of every sort; and was a career turning-point for many” (Clay, 1996, no page number). At Penn, meanwhile, the conference was likely to have had an effect on Perkins’s decision to found the first PhD Program in Architecture. If this was indeed the case, Gilpatric and the conference that he promoted could be said to have had some direct influence on the emergence of the discipline of architectural history, theory and criticism in the 1960s and 1970s. Less ambiguous, however, is the conscious intention of Gilpatric and the Rockefeller Foundation to promote critical thinking in urban design and their support of Jane Jacobs’s critical writing.

From Criticism to Complexity Theory: *The Death and Life of Great American Cities*

If one might have expected that Gilpatric got more in the way of criticism than he bargained for when he finally read Jacobs’s manuscript of *The Death and Life of Great American Cities* (Jacobs, 1961) in March 1961, their correspondence shows this not to be the case. To the contrary, not only was he “exhilarated” by her bristling first chapter, he wanted to see a more critical position. Commenting on the concluding chapter, he wrote, for example:

I was sorry to note that you didn’t include in this chapter a critique of some of the governing images of city organization and physical layout, which are out-dated. This is more than made up, perhaps, by the lambasting you give the Garden City planners and addicts of the Radiant City” (Gilpatric, 1961a).

So focused was Gilpatric, in fact, in seeing Jacobs’s book as a concise work of criticism, that he wanted to see her cut much of the material which Jacobs regarded as supporting her constructive argument. In addition to eliminating much of the anecdotal material that served as data for Jacobs’s theses, Gilpatric recommended cutting extended references to the work of Kevin Lynch and

Rockefeller Foundation Life Sciences Director Warren Weaver, with the goal of reducing the 669-page manuscript by half. While Jacobs shortened her excerpts of Lynch's *Image of the City* (Lynch, 1960) (in which she saw many parallels to her own work, as Gilpatric had predicted some years before) to a few citations, she felt that Gilpatric's editorial suggestions disregarded the integrity of the work and its progressive purposes. (As it was, while not having made the book a more concentrated work of criticism, its often scathing introductory first chapter fixed itself firmly in the minds of readers, at the expense of the ideas of the following primarily affirmative 21 chapters.) Not pleased by the suggestion to cut the manuscript so drastically, Jacobs did not reply to Gilpatric's letter for some six weeks, by which time the manuscript was being set in type. When she did write, moreover, her primary purpose was to seek permission to quote from Warren Weaver's essay 'Science and Complexity', published in the Rockefeller Foundation's 1958 *Annual Report*, permission which Gilpatric politely extended in reply.

Jacobs's discovery of Warren Weaver's ideas of complexity was a serendipitous consequence of her Foundation grant. The importance of Weaver's complexity theories to Jacobs's book and subsequent thinking cannot be underestimated, however. For Weaver himself, his ideas on complexity science were one of the two or three important and original themes that he developed during his career (Weaver & Columbia University Oral History Research Office, 1962). His essay 'Science and Complexity' was accordingly reprinted in a modest festschrift upon his retirement from the position of Foundation Director of Life Sciences in the Foundation's 1958 *Annual Report* —the same volume which reported Jacobs's first Foundation grant.

Weaver's essay galvanized Jacobs's thoughts about the complexity of the city and provided the theoretical conclusion for the sequential and cumulative observations which Jacobs described in the preceding chapters. Applying Weaver's concepts, Jacobs argued that the city was like other living things, a system of 'organized complexity', of interrelated and interdependent variables. In making this leap, Jacobs became one of the earliest promulgators of complexity science outside of scientific circles, and the first person to describe their relationship to urban dynamics. In her later books, moreover, such as *The Nature of Economies* (Jacobs, 2000), Jacobs has followed the development of chaos theory and non-linear dynamics, and complexity theory's application to human as well as natural systems.

From a foundation's point of view, Jacobs's work should represent among the best of possible outcomes of grant aid. With Foundation support, Jacobs wrote a landmark work both urgently needed at the time and one which, even as it has since been incorporated into the canon of great books on the city, largely retains the freshness and immutability of scientific principle. This latter quality, moreover, was in part the result of Jacobs's learning from the work of a Foundation affiliate, Dr. Warren Weaver, then one of the most distinguished scientists of the time.¹⁸ Furthermore, among urban design grantees, Jacobs was also one for whom Foundation support was essential. While her position as a writer and associate editor for a leading professional journal had provided a non-academic platform from which to conduct her early research into the problems and workings of the city, Foundation support, as well as sponsorship by the New School for Social Research, ultimately allowed Jacobs to take the three years' leave from *Forum* needed to write her treatise on the city (Figure 13). Frequent contact



Figure 13. Jane Jacobs at *Architectural Forum* shortly before taking leave to write *The Death and Life of Great American Cities* (Jacobs, 1961). Source: Courtesy of the Jane Jacobs Archive, John J. Burns Library, Boston College.

with Humanities officer Gilpatric was a further benefit, leading to the exchange of articles and manuscripts, introductions and invitations that further expanded Jacobs's view of the field and her acquaintance with its players. Jacobs, in turn, frequently advised on related Foundation research projects and proposals, and, following the publication of her book in October 1961, similarly contributed to the formation of the Foundation's Studies in Urban Design project in the early 1960s, which, though short-lived, provided a locus for conversations among leading architects and urban designers, including Wallace K. Harrison, Nathaniel Owings, I.M. Pei, Victor Gruen, James M. Fitch, Kevin Lynch and others.

Conclusion: The Ebb and Flow of Cities

The time was right for the Rockefeller Foundation's support of research in urban design, and particularly Jane Jacobs's contribution. As Morris Ketchum, Chancellor of the American Institute of Architects College of Fellows, remarked to Chadbourne Gilpatric in February 1962, a systematic and cumulative research programme in urban design "would have been premature several years ago and would be too late five or ten years from now ..." (Gilpatric, 1962). While such a statement may sound flippant, it accurately described the significance of urban design research in the post-war period, even as the ominous words 'too late' foreshadowed the urban crisis of the late 1960s. Appearing between Lynch's *The Image of the City* (1960), the first result of Foundation-sponsored research, and Edmund Bacon's *The Design of Cities* (1967), the last supported publication, Jacobs's book also arrived on the scene when the American city was at its most populous, before the epochal suburbanization of the nation, and, not coincidentally, when the urban renewal regime was also reaching its high-water

mark. Among the other Foundation-funded research projects which resulted in publications—Barclay Jones and Stephen W. Jacobs's 1960 book, *City Design Through Conservation* (Jacobs & Jones, 1960), Christopher Tunnard and Boris Pushkarev's *Man-Made America: Chaos or Control?* (Tunnard & Pushkarev, 1963) and Ian Nairn's *The American Landscape: A Critical View* (Nairn, 1965)—the latter were perhaps published a little too late, as people who could afford to do so were preparing to leave increasingly unstable cities in increasing numbers, and as American cities descended into their 20th-century nadir.

Apart from these major research efforts, the Rockefeller Foundation grants in urban design had indirect effects on academic departments and scholars alike. Often multi-year and substantial, these grants gave a significant boost to the awarded departments at MIT, University of Pennsylvania, Yale, Berkeley and the New School for Social Research, as well as those associated with the grants and other projects, including project collaborators such as Gyorgy Kepes, Ian McHarg, David Crane, William L.C. Wheaton, Grady Clay, Coleman Woodbury and Gordon Cullen, who were not always listed as co-authors of published works. In some cases, meanwhile, funded research continues to develop. Jane Jacobs, celebrating her ninetieth birthday in 2006, published her seventh major book, *Dark Age Ahead* (Jacobs, 2004), not long ago and continues to research and write. Similarly, Christopher Alexander, who received the last grant related to the programme for expenses related to residence at the Foundation's Villa Serbelloni in the summer of 1965, has only recently published his four-volume work, *The Nature of Order* (Alexander, 2003), the ambitious result of research which he began to develop some 40 years ago. Humanities officer Boyd Compton may have been disappointed then by the lack of immediate results, but Alexander has since discharged any implicit promise he made to Compton when he wrote in December 1965 that "It will be a long time before the work appears in any published form" (Alexander, 1965).

While massive governmental programmes, demographic trends and other historical forces overwhelm the soundest reason and research agendas, the Rockefeller Foundation's support of urban design research, particularly the accessible but comprehensive work of Jane Jacobs, did influence the history of the related disciplines, as well as public policy. Unfortunately, as Jacobs discusses in *Dark Age Ahead*, insofar as there is a relationship between urban life and civilization, ignorance and de-urbanizing forces may yet promote a corresponding cultural decline. Despite this pessimistic vision, we may recall, however, the prophetic optimism in the title of Jacobs's first and best-known book on cities (*Death and Life*, not vice versa), and the urban renaissance that followed some decades later. Moreover, despite a lamentable lack of historical consciousness, profound but now commonplace knowledge about cities contributes to the difficulty of recalling today the experience of the American city in the late 1950s and early 1960s and the intellectual machinations necessary to affect a sea-change in thinking. Today we can see the development of the intellectual currents that were set in motion in the mid 1950s, which resulted in our indispensable commonplaces. We can recognize correlations in the work of Lynch, Jacobs, McHarg and others who shared not only a common affiliation with the Rockefeller Foundation's urban design research programme, but a common goal of re-conceiving the relationships between people, cities, environment and the larger world.

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Notes

1. In the second verse of Travis's song, the housing shortage at home has become the new enemy: Not so long ago when the bullets screamed, many were the happy dreams I dreamed, of a little nest where I could rest, when the world was free. Now the mighty war over there is won, troubles and trials have just begun, facing that terrible enemy sign 'No Vacancy'. (Capitol Records 258 No. 3, 18 March 1946)
2. Written as Jane Jacobs was writing *The Death and Life of Great American Cities*, this *Newsweek* article described racial tensions among Harlem's various ethnic groups easily touched off into confrontation and riot (African-Americans from the US South and Puerto Ricans were moving into the neighbourhood by the tens of thousands annually); narcotics addiction, trafficking and violence which had spilled over into city high schools; 'costly barracks' such as Fort Greene Houses that were creating 'new slums'; and the flight of middle-class New Yorkers to the suburbs.
3. Super-block planning was proposed in the early 1930s for slum clearance redevelopment, but it had become well enough accepted by the late 1930s to be publicly advocated for by Alfred Rheinsein, Commissioner of Housing and Buildings and Chairman of the New York City Housing Authority, for all housing project development (*New York Times*, 1939).
4. East River Houses, completed in 1941, was New York's first high-rise public housing project, but high-rise 'super-projects' had been proposed as early as 1932. The Lower East Side Planning Association proposed a super-block based on the 'neighbourhood unit'. Rutgers Town, proposed for the Corlears Hook area of Manhattan's Lower East Side in 1934, would have built approximately 100 12-storey towers on some 20 blocks, consolidated from 50 original city blocks. While the project was not as determined about making super-blocks as later housing projects, it was nevertheless criticized for replacing old slums with new "vertical sanitary slums" and did not go forward (Plunz, 1990, pp. 224–225).
5. The Fort Greene project had some street-front shop space, but it was among the last to make this connection to the city.
6. The original plan was actually to raze only every third tenement on the site to provide light and air, and then reuse those bricks to renovate the remaining buildings. However, after renovating two of the 1846 tenements, the remainder were found to be in too poor a state and were torn down to their foundations.
7. The 1942 amendment to the New York State Insurance Code allowing insurance companies to invest in housing projects actually repeated an earlier attempt to stimulate post-war housing construction. In 1922, in the wake of World War I, Metropolitan Life similarly lobbied the New York legislature to allow it to invest its tightly regulated funds in real-estate development. As with Stuyvesant Town, that amendment resulted in the largest housing project in New York City to date—a garden apartment building complex with 54 buildings in Long Island City, Queens (Plunz, 1990, pp. 150–151, 253ff).
8. The APHA rating system was systematic, but subjective, and favoured demolition over renovation. Points could be deducted for housing lacking closets, sufficient hot water, dirty toilets and yards, pests and other problems not requiring demolition. Further points accumulated toward the demolition threshold if otherwise adequate housing lacked 'basic community facilities' nearby. Thus, in practice, if the appraiser was so inclined, he or she could easily recommend demolition.

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9. The Gashouse District had a troubled history in the late 19 century, due to the gas tanks that sometimes leaked, and due to the gangs, such as the eponymous Gas House gang, which had operated in the area. The neighbourhood had improved prior to the Depression, however, and at the time it was razed, all but four tanks had been removed. A photograph of the district one block from the future Stuyvesant Town and Peter Cooper Village was taken in 1938 by Berenice Abbott for her Works Progress Administration project. While gas tanks took up some of the neighbourhood, much of the neighbourhood was no more 'blighted' than the block in Abbott's photo (Abbott & Yochelson, 1997, Plates 9, 10, p. 379).
10. As reported in 1947, while almost 8000 dwellings were demolished during the previous 15 months, none had been completed in Manhattan (Farrell, 1947).
11. Jane Jacobs had been at *Architectural Forum* for over a year when this piece was written. She repeated some of Haskell's criticisms of the Gateway Center in *The Death and Life of Great American Cities* (Jacobs, 1961, p. 106).
12. The Washington Square Park battles lasted from 1952 to 1959 and involved not only a number of traffic schemes—for a surface thoroughfare, for a sunken highway, and even for a tunnel under the park—but included an urban renewal slum clearance and redevelopment project known as the 'Moses Title I Washington Square Southeast Plan'. Eventually the Committee managed to convince the city to close the park to all traffic, eliminating the pre-existing bus route that ostensibly made Moses and Traffic Commissioner Wiley's multi-land thoroughfare and depressed highway proposal somewhat less preposterous. Jacobs cited Hayes and the Washington Square fight in *Death and Life* (1961, p. 361), but more details of Hayes's and the Washington Square Park Committee's battles against these city plans are preserved in Shirley Hayes Papers, held at The New-York Historical Society.
13. In terms of public relations, the Central Park Battle was more significant than the early Washington Square fights. The 'Battle of the Tavern on the Green' was a turning point in Robert Moses's relationship with the public and in city politics (Stern *et al.*, 1990, p. 769). Insofar as Moses was advocating commercial development in Central Park, on one hand, and replacing park space with automobile thoroughfares, on the other, his title and position as Parks Commissioner was by then becoming farcical.
14. Not all housing projects replaced storefront buildings, of course. Lexington Houses, for example, occupied the site of a former subway garage and repair shop (Bell, 2003, p. 67).
15. The Foundation's first grant in city planning research was towards the establishment of the Department of City Planning at Harvard in 1929. This grant, however, was not generally recognized as a precedent for sponsored urban design research in the post-war period.
16. John Brinckerhoff Jackson, who participated in the Conference, also wrote on urbanism in the 1950s, but he was a less well-known public critic than Mumford or Clay at this time.
17. In spite of Jacobs's contributions—at least those she had achieved prior to the publication of *The Death and Life of Great American Cities*—Gilpatric was still looking for another Mumford in August 1961. As he wrote:
 I myself have felt that one good model for urban design criticism is the kind of thing Lewis Mumford has done in the New Yorker 'Skyline' series... Unfortunately, I know of no other individual who does this kind of searching and well-rounded criticism of developments or projects significant in the civic design field. I have been on the lookout for individuals who might have the capacity and tenacity of Mumford. He himself doesn't know of any such person and I haven't found one in this country. (Gilpatric, 1961b)
18. Weaver held positions as Director of the Natural Sciences division of the Rockefeller Foundation (1932–52) and Vice-President for Natural and Medical Sciences, (1952–59); President of the American Association for the Advancement of Science (1952); Chairman of the Department of Defense Basic Research Group (1952–53); chairmanships and trustee positions of the Sloan Kettering Institute, Alfred P. Sloan Foundation, and Salk Institute (1955–62); member of National Academy of Sciences (1969). As if to prove it all happens in Greenwich Village, New York University's mathematics building, Warren Weaver Hall, located just off of Washington Square, was dedicated in 1965.

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