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Michael Quinn Udley

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Sprawl As Strategy

City Planners Face the Bomb

Michael Quinn Dudley

Abstract

The extent to which the nuclear arms race may have played a role in the development of postwar urban form in the United States is explored through an examination of planning literature and government documents from the 1940s and 1950s. The project to disperse the urban form for civil defense reasons is followed from its emergence in the literature to the adoption of these principles by both the American Institute of Planners and the U.S. federal government. The ramifications of this movement, and the role it played in the social history of the cold war, are discussed.

Michael Quinn Dudley is a research associate with the Institute of Urban Studies in Winnipeg, Manitoba.

The historical and cultural discontinuities represented by World War II are such that the term “1945” has entered the vernacular of many disciplines—and history in general—as shorthand for a demarcation between two very different eras. This is certainly true for city planning. The postwar period is replete with examples of thoughtless city building, and its excesses have long been deplored by social and planning critics.

The year 1945 also marked the moment when humanity first released nuclear weapons against itself. The atomic bombings of Hiroshima and Nagasaki made profoundly final a decision that had been in process for most of the Second World War: that cities filled with noncombatant citizens were legitimate targets in total war. While “conventional” bombings had, over the course of the war, incinerated such cities as Dresden and Tokyo, the atom bomb now made the destruction of cities instantaneous, indiscriminate, and complete. More dismal still was that humanity now knew, for the first time, the very real possibility of self-extinction.

This article explores the possibility that these two sociohistorical currents are related—that the nuclear arms race and the social, political, cultural, and, most important, professional responses to it may have had some role to play in the evolution of postwar urban form in the United States. Early postwar planning literature and government documents reveal that a prominent movement in the American planning profession proposed, in reaction to the nuclear threat, new ideas for cities that would go on to inform important urban policies. These ideas revolved around the concept of defensive dispersal: the thesis that major cities were such obvious targets for nuclear weapons that they would need to be built at far lower population densities and contain much smaller industrial concentrations than before.

This article demonstrates that there is compelling evidence that urban policies informed by cold war civil defense planning, as well as consumer demand for suburbia motivated by nuclear fear, may have been factors in exacerbating suburban sprawl and urban decline. The research involved in preparing the article also revealed that these factors, and the defensive dispersal movement itself, go almost entirely unmentioned in conventional histories of postwar urban planning; therefore, this line of inquiry offers new insights on a complex and ongoing phenomenon and should serve as a basis for further study.

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► Method

This article is based primarily on a historical examination of planning literature and government documents from the 1940s and 1950s. As this work deals with the larger issue of the social impact of the nuclear arms race, research and analysis from other disciplines, notably history, are referred to as well.

The body of planning literature under discussion must be approached within the context of a time period filled with radical social changes. It is the intent of this article to explore social change in three contexts: the first will explain the social environment in which this literature emerged, the second will elaborate on the social consequences inherent in the proposed schemes, and the third will explore the possible social impacts of dispersal-related policies. Above all, this article will attempt to determine, in light of present conditions, the ways in which the defensive dispersal project did, in fact, succeed in its objectives.

► Nuclear Weapons and Social Change

From our own vantage point in history (and for those too young to remember), it is perhaps difficult to fully appreciate the enduring intensity of fear that permeated society in the years following the first use of atomic bombs. The origins of this fear can be traced to the very birth of the atomic era, when social, psychological, and cultural reverberations began manifesting themselves almost immediately upon the news of the bombings at Hiroshima and Nagasaki. In spite of the celebratory atmosphere surrounding the end of the war, America's "mood at the moment of victory was bleaker than in December 1941 [after] Pearl Harbor" (Boyer 1985, 7). Within days of the bombings, Americans "quickly transmuted the devastation of Hiroshima into visions of American cities in smoldering ruins . . . [and] envisioned themselves not a potential threat to other peoples, but as potential victims" (ibid., 14). It was as if, "in exploding bombs over Hiroshima and Nagasaki, we frightened no one more than ourselves" (Lifton and Mitchell 1995, 302).

Public opinion polls taken within weeks of the bombings indicated that a majority of Americans "foresaw a real danger of their own families dying in atomic attacks, along with most of the people in the world's cities" (Weart 1988, 134). As the nuclear era wore on—and especially once America's nuclear monopoly ended in 1949—the public's apocalyptic imagination was fueled by hundreds of books and films employing nuclear themes (Los Angeles, for instance, has to date been "nuked" at least forty-nine times in film and fiction [Davis

1998, 281]). A multitude of unstoppable cinematic monsters born of atomic radiation trampled cardboard cities in orgies of ersatz nuclear destruction, while atomic imagery pervaded every level of enterprise and popular culture, from cocktails to rock-and-roll music to children's toys (Boyer 1985). Underneath this panoply of widespread but uneasy cultural adoption of the bomb, however, lay almost universal apprehension. As novelist and civil defense advocate Philip Wylie noted, this terror was so pervasive that "a huge fraction of the public, perhaps the majority, *already* displays clinical symptoms of hysteria and predisposing to panic" (1954, 37).

Despite the warnings of the postwar "scientists' movement" that no such defense would ever be possible, official and public urgings that a countermeasure to the atom bomb be developed led, nonetheless, to vast efforts toward that end. These measures ranged from new weapon ideas and programs encompassing entire military branches to expenditures for shelter construction and the concomitant mobilization of millions of citizens in the name of civil defense (Weart 1988, 128; Henriksen 1997, 193-239). These initiatives, begun in earnest in the 1950s, saw countless people, including schoolchildren, drilled in "safety" procedures by films like the now notorious "Duck and Cover" and were taught to dive beneath furniture at the sound of air-raid sirens (*The Atomic Café* 1982). Norman Mailer would note in 1957 that, "probably, we will never be able to determine the psychic havoc of the . . . atom bomb upon the unconscious mind of almost everyone alive in these years" (1957, 1), and indeed, years later, psychological studies would reveal that growing up with this ever-present threat had traumatized an entire generation of children with chronic dread and frequent nightmares (Weart 1988, 132). As Lewis Mumford observed in 1950, in using weapons of mass destruction to seek security, humanity had created a state of total insecurity (as quoted in Boyer 1985, 351).

It was in this social environment that many city planners realized that their professional expertise could be put to a specialized—and patriotic—use.

► The Response of the City Planning Profession: Defensive Dispersal

The movement within the city planning profession to develop a response to the atomic bomb began in the months following the end of the war and was spearheaded by Tracy B. Augur. Augur was already a prominent, veteran planner by the end of World War II, and had, in fact, served as the president of the American Institute of Planners in 1939 (Adams 1950, 3). In the 1930s, he had acted as the assistant planner in the Regional

Studies Department of the Tennessee Valley Authority (TVA) (Augur 1948, 29). During his career with the TVA, Augur also served as a planning consultant on the development of Oak Ridge (Scott 1969, 396), the secret Manhattan Project “atomic city” built in Tennessee to support the manufacture of atomic bomb components (Rhodes 1986, 486). Previous to this experience, though, Augur had, throughout World War II, been “haunted . . . by the devastation visited upon congested European and British cities by air attacks” (Scott 1969, 449).

Given his employment history, it is probably not surprising that Augur should have led so pronounced and prompt a crusade for the dispersal of American cities and would go on to do more than anyone else to try to make it happen. Exactly one year after the Hiroshima and Nagasaki bombings, Augur urged his planning colleagues to consider the threat of atomic warfare a “useful spur to jolt us forward” in the task of decentralization—a concept that had long been advocated by the profession to decongest overcrowded and often decrepit central city areas (Boyer 1985, 152).

In his 1948 article “The Dispersal of Cities As a Defense Measure,” Augur described in full the principal elements of his thesis, which he would repeat for years: if metropolitan areas were to be clearly designed so that they could continue to function after being atom-bombed, then such an attack is unlikely; but if a city is congested and vulnerable, it will not only invite such an attack, but could then do little “to support the retaliatory action needed for final victory” (Augur 1948, 30). In light of the tremendous amount of postwar construction that was then under way, Augur stressed that America could continue adding to its current, massive urban centers, thus making them inviting targets, or it could, with little extra cost, direct this construction into a “dispersed pattern of small efficient cities [that are] much more attuned to the needs of modern living, modern commerce and modern industry” (ibid., 31). Augur, echoing Wright (1935), observed that technologies such as telephone and radio had already obviated the need for aggregations of people and buildings and that planning smaller, more flexible urban units could account for the needs of the future as well. Augur believed these smaller units could, in fact, be replaced with minimal cost when obsolete. “We do not hesitate to scrap an obsolete factory and rebuild it on new lines if it is failing to keep pace with the demands of production; why should not the same course be applied to cities?” (ibid., 32).

What Augur (1948) was proposing instead of a large urban mass was a roughly circular cluster containing twenty small units two miles across with an area of 3 square miles each. The entire cluster would contain 886 square miles. No point within these communities of fifty thousand people would be more

than a mile away from open country—the green space in between the towns would act as a firebreak in case of an attack (ibid., 34). The ultimate goal of this arrangement would be not just to disperse the “urban target” but to maintain the country’s capacity for industrial production by also dispersing industry to the satellite communities (ibid., 32). Augur maintained that the benefits of his satellite communities would still be enormous even if nuclear war never came.

Like Tracy Augur, Detroit planner Donald Monson also contributed a great deal to the project of dispersal. In the two-part article “How Can We Disperse Our Large Cities?” (cowritten with his wife, economist Astrid Monson), Augur’s views were taken one step further. In addition to the construction of satellite towns, the Monsons advocated the gradual breaking up of the “existing masses of our great cities” (1950, 90). They shared with Augur the belief that the satellite system would make a more difficult target at which to aim, and a bomb that missed one of these urban centers by a few miles would land “relatively harmlessly in the open countryside, evaporating more cows than people” (ibid.). The five-point dispersal program they proposed included directing new war industries to these small centers, accelerating the construction of “broad express highways through our great cities” and a “drastic reduction of the population density of the central portion of these cities through control of all rebuilding” (ibid., 91).

The matter of expressways received much attention from the Monsons (1950), as then-current plans were deemed insufficient. The strips of land bordering the highways were, in their opinion, too narrow and ought instead to be three hundred feet wide on either side to act as a firebreak and to provide a place to bulldoze debris so that traffic could continue after an attack (ibid., 107). The added benefit of cutting large swaths of freeways through the hearts of cities would be to “greatly increase our present slum-clearance and relocation programs” (ibid.). Once the construction of satellites was well under way, and freeways driven through the metropolitan areas, work could then commence on widening the right-of-ways of these expressways and relocating former residents. The long-term view was to convert the central mass to a “number of more or less self-contained communities with populations of 50,000 to 100,000 each, separated one from another by broad belts of open space” (ibid.). (The Monsons would estimate in a later article that the open space between these units devoted to expressways should be up to a mile in width [1951b, 249]).

The Monsons (1950, 91-92) referred to the social benefits of the large city (symphonies, universities, a rich cultural and economic life), yet saw no conflict with the premise that such a city should have its heart shattered—and scattered—by great tracts of open land riven with expressways. That this cultural

life and, indeed, the metropolitan area's identity as a city would cease once residents, regardless of their social networks and attachments to neighborhoods, were relocated en masse to satellite towns never seemed to occur to the authors. They were equally oblivious to the fact that the satellites they proposed, in being delegated the distinction of housing the new, vital war industries, would consequently become more attractive targets than the cities they were meant to replace. Instead, the Monsons advised readers to consider that someday, if their plans were implemented and no atomic war came,

the present fearful . . . threat hanging over the great city [will] have been turned into so great a blessing that men, looking backward in an age in which atomic power shall have been fully harnessed to peaceful ends, will say that the greatest benefit which flowed from the explosion at Los Alamos [*sic*] was the enforced rebuilding of our urban centers. (1951a, 111)

Discussions regarding changes to cities were not limited to the planning journals or to city planners themselves. The 18 December 1950 issue of *Life* contained a feature article titled "How U.S. Cities Can Prepare for Atomic War: MIT Professors Suggest a Bold Plan to Prevent Panic and Limit Destruction." Norbert Wiener (the inventor of Cybernetics), along with a history professor and a city planning professor (who is not identified), had collaborated on a scheme for the urban form that would focus on transportation and communication needs. Their city radiates with expressways that are intersected ten miles out by a city-circling freeway, which would be called a "life belt." Here, survivors of an attack could flee to tent cities, hospitals, fuel-storage depots, and campsites. Wiener and his partners also include elaborate plans for protecting railways—which were, in their view, vital for moving medical supplies and troops. Ironically, the very superhighways they also proposed would become reality soon enough and start the railroads on their long decline. (Wiener's extraordinary vision of a city ringed with successive freeways and rail lines eerily resembles a diagram of the concentric range of nuclear blast effects superimposed on a city map, an image that occurred with regularity during this period.) Through this *Life* article, a very wide audience indeed was introduced to the concept of nuclear-inspired changes to the urban form.

In September 1951, a special issue of *Progressive Architecture* debated the pros and cons of architecture and planning for civil defense. Donald Monson, who contributed to the issue, took up the same arguments as before but added that contemporary urban renewal plans should be put on hold on account of civil defense objectives. Urban core redevelopment, he wrote, should be undertaken last—after satellite construction and inner-core breakup (Monson 1951, 73).

In the same issue, British planner Jaqueline Tyrwhitt argued against the satellite/new town concept on largely social grounds. Tyrwhitt wrote that such towns would be unable to maintain "sufficient diversity of opportunity" to fulfill the human need for self-actualization (1951, 77). In her opinion, the only way such a constellation of communities could thrive would be if there were a vital central metropolis at their core.

Other contributors to this issue included Dr. Ralph Lapp, an atomic scientist whose book *Must We Hide?* offered three new urban forms to protect against nuclear attack: the Rod City (fifty miles long and a mile wide), the Donut City, and the satellite system (1949, 157-68). In the special issue of *Progressive Architecture*, he presented a more conservative but "callous" solution—selective dispersal. According to Lapp, those factories and workers vital to war production should be dispersed, and no new vital industrial construction should take place within a twenty-mile range of cities (1951, 75-76).

Here we see several interesting currents: the link between dispersal theories and contemporary urban renewal plans, the rare argument that the social implications of the dispersal advocates' plans ran counter to the traditions of good city building, and that the principal focus of these efforts should be on vital industries. Worth special note, too, is the haunting and unintended prescience of Lapp's model city of the future, the Donut City—an appellation that has, all too often, been applied to the decayed urban centers of our time.

September 1951 also saw an entire issue of *Bulletin of the Atomic Scientists* devoted to the topic of urban and industrial dispersal; contributors included Donald and Astrid Monson, Ralph Lapp, and Harvard University Regional Planning Chairman William L. C. Wheaton. The Monsons' article essentially reiterated their earlier work but added a fascinating piece of evidence documenting consumer demand for suburbia and exurbia as a result of nuclear fear:

[during the past year] the possibility of atomic attack [has] ceased to seem remote to the general public. Land speculators were quick to sense this fear and have exploited it effectively. Around the periphery of many of our large cities sales of vacant land are booming, with more or less open references to the fact that here there will be safety in case of war. Slogans were coined and may be found in the newspaper want-ads, "beyond the radiation zone," "outside the fifty-mile limit," "buy now for security later." The desire to escape the dangers of atomic bombings, however unintelligently it may be expressed in the buying of vacant lots in the middle of a prairie, is a force to be reckoned with. (1951b, 244)

Bosworth (1997) also noted how the mass media and civil defense planners, particularly during the Korean War, contributed to this portrayal of the city as a place of danger and that

the real estate market responded with advertisements for suburban developments featuring headlines such as “Country Properties for This Atomic Age” and “Protected Country Living.” Bosworth contended that a combination of atomic fear and government subsidies favoring suburban living as a civil defense measure, both contributed to the accelerated growth of the suburbs in the early postwar years.

It was in the suburbs, too, that nuclear fear would come to be manifested in the rush for personal fallout shelters. This would reach a climax with “fallout shelter fever” in 1961, when President Kennedy urged families to build their own shelters, black-and-yellow fallout shelter signs appeared on public buildings, and some shelter owners publicly discussed the prospect of using guns to defend themselves against other survivors. Widespread recognition that this was just one of the many ethical dilemmas presented by private shelters, however, would see support for the shelter program plummet after the Cuban Missile Crisis (Henriksen 1997, 193-239).

Until November 1952, the work of dispersal theorists was predicated on estimates of the destructive power of “nominal” twenty-kiloton bombs, the type used on Nagasaki. This all changed with the successful test detonation of “Mike I,” the first hydrogen bomb (Rhodes 1986, 777). Now the effects that could be expected—once the United States inevitably lost its thermonuclear monopoly (which it did less than one year later [Miller 1986, 118])—would need to be multiplied by thousands of times.

Yet, the defensive dispersal movement continued, and throughout the decade the American planning profession would remain dedicated to the problem of civil defense, often in close association with the federal government. As the decade closed, however, Walter Thabit would challenge this allegiance with his 1959 article, “Planning and Civil Defense,” in which he urged his colleagues to consider that the sheer destructiveness of thermonuclear weapons had put the protection of cities beyond the competence of their profession. Thabit also described what other minds were proposing for the latest ideas in dispersal for a thermonuclear era (namely, distributing the urban population over thousands of square miles and building underwater or underground cities [ibid., 37-38]). In his conclusion, Thabit exhorts the profession to “prepare a policy statement pointing out the impossibility of adequate civil defense preparations . . . and the necessity for positive political action to prevent this destruction” (ibid., 39).

Despite Thabit’s break with the status quo, other planners would continue to support defensive dispersal into the 1960s. In “Can We Plan for the Atomic Age?” author Philip Clayton lamented the lack of progress made in altering the urban form to reduce vulnerability. Clayton spent some time advocating the traditional “satellite town” concept (1960, 116), but

appeared more concerned with criticizing the half-hearted progress toward urban dispersal:

Streams of motorists ride tail-finned automobiles past city limits to execute a sort of dispersal, albeit a rather ineffective sort . . . the Housing and Home Finance Agency was charged by the Housing Act of 1954 with “facilitating progress in the reduction of vulnerability of congested areas to enemy attack” . . . [and] the Office of Area Development of the Department of Commerce as part of its plant-location service [has been attempting to induce industrial dispersal]. (Ibid., 115)

In Clayton’s report, we discover theory becoming practice: agencies promoting industrial dispersal and low-density suburban housing, as well as the reality of the consumer-driven flight from the city. Clayton may have regretted that “satellite towns” had not been realized, but decentralization inspired by the atomic bomb was recognized by the author as a reality.

From Thabit, however, we learn that dispersal ideas can be carried to an extreme. By 1960, when advances in thermonuclear weapons had superseded all hypothetical efforts to outrun them, even the most tenuous links with the traditions of city building were being abandoned by those who would dissolve cities or put them underwater or underground. The following year, Lewis Mumford (who had himself at one time advocated defensive dispersal [Parsons 1989, 653]), wrote a dismal scenario of what such fantasies would portend:

[Those] in the underground city . . . are the prey of compulsive fears and corrupt fantasies . . . and *the more they devote themselves to adapting their urban environment to this possibility, the more surely they will bring on unrestricted collective genocide* . . . the underground city threatens in consequence to become the ultimate burial crypt of our incinerated civilization. (Mumford 1961, 481, emphasis added)

While such extreme visions and their attendant consequences were, of course, to remain unrealized, the evidence below will demonstrate that this insight of Mumford’s might be applied with some utility to the actual postwar American city, in that the movement to adapt the urban environment to the atomic age may have had consequences quite unforeseen by its advocates.

► An Analysis of Defensive Dispersal

The dispersal theorists’ debt to planning history is quite evident. The principal design that was advocated time and again was that of a cluster of satellite towns radiating out from a central urban area. This is immediately recognizable as a mutated grandchild of Ebenezer Howard’s venerable Garden City concept, which was first described in his 1898 book *Tomorrow, a Peaceful Path to Real Reform* and would become the foundation

of the New Town movement in England (Clapson 1998). Although dispersal plans are sometimes referred to in the literature as “Garden Cities,” the credit for this design is rarely actually given to Howard. Norbert Wiener’s plan, with its circular freeways and rail-line, is much like Howard’s conceptual Garden City in that it was to be laid out in concentric rings surrounded by “the circle railway, which encompasses the whole town” (Howard 1996, 352). The city of industrial dispersal, like Howard’s Garden City, has all factories “on the outer ring of the town” (ibid.). The extent of the dispersal writers’ social program is that life in smaller communities surrounded by nature would be more beneficial than the large cities of the day; in this they also closely echo Howard. Yet, with populations approaching fifty thousand people, the atomic satellite towns are somewhat larger than Howard’s ideal of thirty thousand inhabitants. Howard’s green belts would also have served to provide the healthful benefits of country living; their civil defense counterparts were meant primarily to bar firestorms.

The other model that surely bears discussion in this light is the Broadacre City concept of Frank Lloyd Wright, which he revealed to the world in 1935 as a viable urban form in which telecommunications and the automobile would have eradicated the need for density. The utility of this model for the present study does not reside simply in its depiction of a vast urban form of very low densities; Wright also saw the architect as the “agent of the state in all matters of land allotment or improvement”—even to the point of determining that childless couples, for instance, would be granted smaller lots than couples with families (1935, 246). In this, Wright presaged the defensive dispersal movement, for, as shall be shown below, its project was also to be conducted in close collaboration with government.

In *Planning in the Public Domain*, John Friedmann identified four traditions of planning thought ranging from the conservative to the revolutionary: policy analysis, social learning, social reform, and social mobilization (1987, 74-75). Of these, policy analysis, with its dependence on the objective methods of science and on public policies that mold society into the “image of a machine” (ibid., 139-40), most closely describes the methods and goals of the dispersal movement. Although policy analysis was first articulated only in the last years of the 1960s (ibid., 137), its intellectual tradition extends back to the eighteenth century (ibid., 138). It is also strongly identified by the ease with which its practitioners allied themselves with established authority. During World War II, for example, social scientists found themselves working closely with the American government on such projects as “psychological warfare, military selection and training, military intelligence, propaganda, production planning . . . [as well as] join[ing] another group of scientists who . . . were working for the government on new

weaponry such as radar and rockets and the atomic bomb” (ibid., 146). The association of defensive dispersal with the policy analysis tradition is, in fact, perfectly realized in the career and writings of Tracy Augur: recall his work for the Manhattan Project (Scott 1969, 396) and his later advocacy of an urban form so oriented toward the “image of a machine” that it could, like an old factory, be torn down when obsolete (Augur 1948, 32).

In addition, this movement can be clearly seen as a product of the traditional rational comprehensive planning model, and the form of rationality evinced by dispersal theorists was fundamentally *instrumental*—that is, concerned primarily with the means by which the project might be undertaken rather than with the ends (Weaver, Jessop, and Das, 1985). The social goals of the movement were always vague, and very little discussion was ever given to what sort of a society would result.

The narrative of the defensive dispersal movement should also be viewed within the larger socio/psycho/cultural narrative of America’s struggle to accommodate the existence, the then-recent use, and the subsequent testing of nuclear weapons. This cultural project has taken the form of films, magazine articles, popular songs, novels, television programs, and calming official pronouncements about civil defense and “the friendly atom” (Boyer 1985). It has also over the decades allowed America’s citizenry to cope with their fears and anxieties surrounding nuclear weapons, to normalize these weapons, and (periods of popular antinuclear activism aside) to essentially forget about them. As such, planners can be said to have taken significant steps through the dispersal project toward helping Americans adapt psychologically to the “Atomic Age.” To effect this adaptation, however, planners would gain the approval and cooperation of the federal government of the United States.

► Defensive Dispersal in American Urban Policy

With the arrival of the 1950s, the extent to which the planning of cities became considered to be a matter of national security is reflected in the increasingly important relationship that the American Institute of Planners (AIP) developed with the U.S. federal government as a result of its close association with the National Security Resources Board (NSRB).

The NSRB functioned as a peacetime version of the War Production Board, overseeing the long-range planning of the economic and production aspects of national defense (Irvine 1949, 463). The chairman of the NSRB sat on President Truman’s National Security Council (NSC) (NSC Web site); in this way, the dispersal movement in the American planning

profession had a direct line of communication with the highest office in the land. (The NSRB would, however, be abolished and have its functions merged with the Office of Defense Mobilization in 1953 [*Congress and the Nation* 1965, 276].)

This relationship became particularly close in 1950. As reported in the fall issue of the *Journal of the American Institute of Planners*, the AIP's Board of Governors had requested that the institute's president send a formal letter to both the NSRB chairman and the Director of Selective Service. This letter stated that because the expertise of planners was particularly valuable for military purposes and in matters of civil defense, the institute would henceforth be offering these agencies the full cooperation and services of its members (Institute Affairs 1950, 200). Inasmuch as the NSRB responsibilities included civil defense planning, the way in which this partnership would evolve would have a potent influence over several urban policies.

AIP member Tracy Augur carried this partnership further: by 1951, he was actually working for the NSRB (Nelson 1953, 13) just as the agency embarked on two important initiatives: President Truman's Industrial Dispersal Policy and the top-secret civil defense study, *Project "East River,"* in which he would play an important role.

The Industrial Dispersal Policy, which was initially limited in scope, was explicitly aimed at directing new defense-oriented industrial construction to areas outside of urban centers to protect them from a nuclear attack; however, in the years that followed, this policy may have encouraged industrial migration of a more general sort.

Urban histories that discuss the deindustrialization of central cities generally present it as the result of economic and technological trends. A typical example reads, "The city's factories fell victim to broad national forces affecting all urban industrial centers—economic expansion, changing patterns of corporate organization that accelerated the movement of capital, and spatial decentralization of economic activity" (Adams et al. 1991, 30-31); or, simply, "post World War II economic restructuring moved factories out of cities onto more decentralized locations" (Spain 1993, 3). What does not seem to be generally taken into account is that this migration may have been at least partly due to civil defense.

According to Parsons (1989), this concern was keenly expressed in regards to the federal workers in Washington, D.C. Tracy Augur was asked by the NSRB in 1949 to develop a plan for dispersing federal—particularly defense-related—facilities to an arc twenty miles out from the city. While President Harry Truman's \$190 million appropriation request to implement this plan was rejected by Congress in April of 1951, Parsons observes that most of the essential elements of Augur's

plan would, in the 1960s and beyond, ultimately achieve a remarkable degree of fruition (Parsons 1989).

On 11 August 1951, President Truman issued an executive order that the NSRB would be overseeing a policy of industrial dispersal (1951, 263). This policy would be directed at first toward "new and expanded" industries (Gorrie 1951a, 263) involved in defense, with a long-term objective of carrying out a "natural industrial expansion away from congested centers. This movement has been under way for a number of years. A speed-up of this natural expansion is an urgent security measure" (Gorrie 1951b, 264).

Seventeen months later, in "Is Your City a Target?—A Report on Industrial Dispersion Today," C. Benson Wigton would report that the NSRB had directed the creation of local dispersion committees in at least eighty municipalities. The committees were to submit reports on their communities' dispersal plans to the Defense Production Administration before their industries would receive tax breaks and defense contracts (1953, 159). Major defense contractors were quick to respond: in October of 1952, Westinghouse declared that its industrial location decisions were now being influenced by "the need to spread out defense plants for security reasons" (Walker 1957, 19).

This imperative as applied to military industries seems to have also resonated with other forms of manufacturing. A survey conducted within the first year after the industrial dispersal policy was announced showed that 60 percent of industrialists would take security considerations into account when locating new facilities (Wigton 1953, 159). Douglas Greenwald's 1955 book *Industrial Migration* states that "industrial migration is going to continue relentlessly to change the industrial map of the U.S. The trend to decentralization inspired by the hydrogen bomb is only now beginning" (as quoted in Walker 1957, 8). Recall, too, how Clayton referred to the "Office of Area Development of the Department of Commerce as part of its plant-location service" having promoted defensive dispersal (Clayton 1960, 115).

Concern over industrial concentrations in vulnerable urban areas would also be considered in the civil defense study, *Project "East River,"* (so named because of its central hypothetical scenario—New York City attacked with a bomb detonated in the East River), which commenced in November of 1951 with the assistance of ten AIP members including Coleman Woodbury (editor of the massive and then-recently published *Urban Redevelopment Study*), NSRB staff member Tracy Augur, and dispersal advocates William L. C. Wheaton and Burnham Kelly. The project was coordinated by three different federal agencies: the NSRB, the Department of Defense, and the Federal Civil Defense Administration. Seventy-four atomic and

social scientists, businessmen, and government experts worked on the ten volumes of the report. The AIP members had spent months urging the project leaders to include urban vulnerability reduction in their study, and based on this initiative they were able to produce what was to become Volume V, *Reduction of Urban Vulnerability*. Volume II-B was devoted entirely to what the federal government could do to lead the way to reduce urban vulnerability (NSRB 1952a). The last of the ten volumes was completed by August of 1952, and the results were released in January of 1953 (Norton 1953a, 87). Among the recommendations were the following:

Further development of industry should be slowed down in central city areas of highest population density and industrial areas of target attractiveness.

A beginning should be made in reducing population and building densities in residential areas of greatest vulnerability.

New defense plants should be located at a reasonably safe distance from existing target areas (ten miles minimum) (ibid., 91-92).

To reduce central city vulnerability, it was recommended that “the Federal Government should not build or finance the building of any residential commercial or non-defense industrial structures except on a replacement basis effecting a 20% reduction in density of population . . . and a 20% reduction of floor area ratio . . .” (Norton 1953b, 163).

It was concluded that

if the standards recommended in this report are established, urban vulnerability can be reduced (1) by checking further central city growth (2) by encouraging the emerging trends towards deconcentrated (more wide-spread) metropolitan growth . . . the task is to *accelerate desirable contemporary trends toward . . . low density development already manifest in metropolitan growth and development*. (Norton 1953a, 92, emphasis added)

To effect this, “Federal aid (in the form of FHA insured mortgage commitments, etc.) should be available only for residential building providing a minimum of 5,000 square feet of lot area per family” (Norton 1953b, 164). Furthermore, Volume II-B of *Project “East River,” Federal Leadership to Reduce Urban Vulnerability*, would call on the federal government to place a priority on funding

circumferential expressways in metropolitan areas to open up new locations for dispersed development and as emergency bypasses of congested centers in time of attack; [and] slum clearance of potential conflagration and fire storm areas. (NSRB 1952a, 35)

The impact of these recommendations may well be evinced in the legislation that would follow, while the authority of the

report would help to officially cement the goals of the defensive dispersal movement with those of the AIP.

With the recommendations of *Project “East River”* now openly discussed in the planning literature, the AIP at the annual general meeting in San Francisco in June 1953 adopted a statement called “Defense Considerations in City Planning.” The adoption of this statement was based on recommendations from a report by a committee of the same name that was chaired by “*East River*” participant Tracy Augur. This statement included the following excerpts, which are important enough to quote at length:

Defense considerations have become primary considerations in American city planning. The United States is an urban nation . . . to the extent that [cities] are vulnerable to enemy attack, the nation is vulnerable. The emergence of nuclear weapons vastly more destructive than any hitherto developed makes necessary a complete reassessment of the forms that cities must take to continue their vital role in our national life. The old rules are no longer valid.

It is a prime responsibility of the science of city planning, working with other technologies concerned with urban development and national defense, to define that form of [relatively invulnerable urban] organization and to develop the procedures by which it may be attained within the framework of American institutions.

[The statement goes on to endorse *Project “East River”* and urges the government to provide] strong and continuing leadership in this field and to recognize reduction of vulnerability as a prime consideration in all construction and development projects which it undertakes or for which it provides financial or other assistance To be successful, such leadership must be exercised in a way that . . . there is a clear, consistent and authoritative national policy with respect to the location of industry

The American Institute of Planners does not claim competence in military measures of national defense, but it holds this fact self-evident, that *the best way to prevent attacks upon this country is to deprive potential enemies of targets that will make such attacks profitable to them*. The grave danger that now confronts us stems from the fact that our productive strength is at present so distributed as to facilitate destruction . . . plain common sense dictates that it should be remedied with all possible dispatch. (AIP 1953, 268, emphasis added)

Official sanction was now complete. Urban policy makers and those professionally dedicated to implementing those policies in the built environment had, by 1953, every justification necessary to commence defensive alterations to American cities. This goal was then legislated in The Housing Act of 1954. The echoes of “*East River*” may be seen in at least two sections:

Section 811: The Housing and Home Finance Agency, including its constituent agencies . . . will facilitate progress in the reduction of the vulnerability of congested urban areas to enemy attack. (Eighty-third Congress, H.R. 7839, § 811, 1954)

Section 910, Reduction of Vulnerability to Enemy Attack: This section would provide that all housing functions and programs of the Federal Government shall be carried out, consistent with the requirements of the functions and programs, in a manner that will facilitate progress in the reduction of vulnerability of congested urban areas to enemy attack. (Eighty-third Congress, H.R. 7839, § 910, 1954)

While the act does not define what “reduction of vulnerability” means, the only working definition the government had at this point was that of “*East River*”: the encouragement of low-density development on the periphery and the thinning out of inner cities.

Far from waxing fondly about the ability of densely populated older areas to encourage urban vitality—as would Jane Jacobs (1961) in *The Death and Life of Great American Cities*—dispersal theorists saw these areas as prime targets that would produce nuclear firestorms (NSRB 1952b, 63). It is therefore curious that the National Housing Act of 1954 introduced the term “urban renewal” to replace the urban redevelopment concept of the 1949 act; its intent was to encourage more renovation than demolition. In light of the “overenthusiastic land-clearance” that followed, however, (Barnett 1995, 121), this is difficult to reconcile.

Nevertheless, the goals of *Project “East River”* (to encourage slum clearance and to reduce congested urban densities by 20 percent) do seem to have been partially realized through urban renewal. Jane Jacobs noted that “when old buildings are replaced with new projects, the dwellings densities are often made lower than they were, so there are fewer dwellings in a district than before” (1961, 207). Another observer pondered why, “when public subsidies are made available for urban renewal projects, maximum densities are set at levels far below usual practice” (Frieden 1966, 605). The results may be seen in the fact that

between 1950 and 1960, the [urban renewal] program was responsible for the destruction of approximately 126,000 housing units . . . in this same decade approximately 28,000 new housing units were completed within urban renewal areas This means almost four times as many homes were destroyed as were built. (Anderson 1966, 495-96).

During the 1960s, 10 percent of all central city white residents and 20 percent of all black residents lost their homes as a result of urban renewal (Logan and Molotch 1987, 114). A link between policies informed by defensive dispersal and the social disaster of urban renewal is difficult at this stage to establish beyond correlation, but the evidence is suggestive.

The interstate freeway system, by contrast, was openly acknowledged as a means by which civil defense goals could be promoted. While the majority of the intercity routes (totaling 37,700 miles) had been tentatively mapped out in 1944 (St.

Clair 1986, 153), the Defense Department had been consulted regarding the remaining 2,300 miles, which were planned as circumferential routes so that (bombed) urban centers could be bypassed (ibid.; Lewis 1997, 108). The automobile lobby, which sought to connect cities to the interstates so that cities could be opened to more automobile traffic, countered with the argument that radial links were needed to aid mass evacuations (St. Clair 1986, 152-54). In September 1955, the final sections were designated and the 1944 routes reviewed: in the end, beltways, or circumferential routes around cities, and radial expressways going into the cities themselves, were approved (ibid., 155)—both having been justified on defense grounds (and, as noted above, featured prominently in the recommendations of *Project “East River”*). The Federal Aid Highway Act was passed in 1956, and the highways themselves were officially called “Interstate and Defense Highways.” While waiting for the opportunity to use these highways for swift escapes from their doomed communities, Americans could truly enjoy the “open road.” The ramifications for cities would manifest themselves ever afterward.

► Defensive Dispersal and Social Change

In 1947, Lewis Mumford published a remarkable essay titled simply “Social Effects.” In it, he presented four scenarios of possible social futures in the atomic age. The first three result in nuclear war; yet the fourth scenario, in which war never comes, is actually the most chilling of all, for it describes a world in which the preparation, anticipation, and adjustments necessary for atomic war have completely destroyed the civilized impulse. Cities are abandoned, and populations are dispersed first into linear cities and then underground. All human activity is oriented toward the secret production of atomic arms to the point where the military becomes an elite class and all nonmilitary scientific research and inquiry are neglected. Enforced underground habitation inevitably results in psychological dysfunction, and people resort widely to sexual promiscuity, drugs, and senseless violence. In the end, a world that has for decades known a nuclear-enforced “peace” is destroyed by anarchy and disease.

It does not take too great an intuitive leap to recognize much of Mumford’s prediction in our own dysfunctional society today, replete as it is with epidemics of drug use, divorce, and suicide; an increase in crimes committed by apparently amoral youth; erosion of sexual mores; and the horrifying recurrence of insanely pointless mass murders in public places. While many point to a loss of religious faith and engage in political wars over “family values,” one must consider that

there may be another, darker source behind at least some of these ills in the form of the decades-old nuclear threat.

While it is, of course, difficult to establish a causal relationship between the nuclear arms race and current social crises, psychologist Robert Jay Lifton has written that the sense of doom and futurelessness engendered by the arms race has brought on “cultural disarray” in our society (Lifton and Mitchell 1995, 341-50). As well, this futurelessness threatens not only our biological continuity as individuals and as a species (Lifton and Falk 1982, 67) but has also made us only too aware that nothing we make or do may survive, thus “eliminating the substrate of what we call culture” (ibid., 71). In this light, Kunstler’s lament in *Home from Nowhere* takes on unintended significance:

Connection with the past and the future is a pathway that literally charms us in the direction of sanity and grace. The antithesis to this can be seen in the way we have built things since 1945. We reject the past and the future and it shows in our graceless constructions. Our houses, commercial and civic buildings are constructed with the fully conscious certainty that they will disintegrate in a few decades. There is even a name for this condition, the design life . . . they are not expected to endure through the span of a human life . . . since there is no expectation that these things will last, nor that they will speak to any era but our own . . . (1996, 89)

Through the lens of the present study, Kunstler’s remarks are used to suggest that there may be a subconscious awareness of futurelessness incorporated into much of the postwar built form itself.

In Mumford’s essay (and in his later observations regarding underground cities noted above), the alterations to the built environment brought about by the threat of nuclear war have ruined the civilization the bombs were intended to defend. Again, we may draw parallels to our present-day situation.

In 1999, Dr. Robert Fishman of Rutgers University, under the auspices of the Fannie Mae Foundation, conducted a survey of urban historians in order to create a “top ten” list of the principal factors influencing the evolution of American cities. Five of the factors that emerged from the survey were

- The interstate highway system
- Federal subsidies for suburban housing
- Deindustrialization of central cities
- Urban renewal
- Sunbelt-type sprawl

Some of these factors (and discussions regarding their implementation) predate the bomb. However, as this analysis demonstrates, the acceleration of these policies and conditions was either strongly and officially advocated or else promulgated into urban policies in the name of civil defense. That

the military-industrial complex made a marked exodus in the 1950s away from America’s industrial heartland, often in favor of low-density Sunbelt locations (Markusen et al. 1991), was also perfectly consistent with the bomb-inspired industrial dispersal policies of the time.

The urban conditions described above are, of course, closely interrelated. The construction of the interstate highway system with its circumferential “beltways” opened up—as *Project “East River”* anticipated and intended (NSRB 1952a, 35)—vast sections of the country to strip development, suburbs, and edge cities, making the dispersal of industries more convenient and more certain. In the inner cities, meanwhile, the poor, unemployed, and disenfranchised (often of non-white racial origin) saw their neighborhoods undermined by industrial flight, residential abandonment for the suburbs, and destructive urban renewal projects. That many inner cities have generally been considered doomed and subject to unconscionable neglect seems, in the context of defensive dispersal, to be almost inevitable.

The evidence indicates that the efforts of the defensive dispersal movement did, in fact, achieve a certain level and quality of success; yet, it is to be doubted that our present fractured, inequitable urban society is quite what early postwar planners would have envisioned to be inhabiting the supposedly safer, dispersed environment they sought to create. The flaw in their methods, however, was fairly elementary: only the means were explained. The possible social ramifications were never adequately explored and, as a consequence, even today may not be properly understood—or recognized for what they are.

► Conclusion

Although the interpretation of urban history arising from the present inquiry appears to be compelling and is certainly open to debate, the research here has revealed that, with few exceptions, the nuclear arms race and defensive dispersal have been all but ignored in the literature of planning history and analysis (see, however, Beauregard 1993, 122-23; Bosworth 1997; Boyer 1985; Dimendberg 1997; Parsons 1989). Indeed, the work of the defensive dispersal movement itself seems to have been essentially forgotten by the profession. Perhaps the interrelationships between nuclear fear, city planning, urban policies, sprawl, and social disintegration have been mostly overlooked because, although our profession has a long tradition of self-criticism, there is an even more potent and general societal tradition of self-deception where the atom bomb is concerned. As Paul Briens has noted, “Nuclear war must be the most carefully avoided topic of general significance in the

contemporary world" (1987, 3-4; see also Lifton and Mitchell 1995).

As well, if one views this movement within the greater social project to accommodate the bomb within the realm of the "thinkable," then is it not unreasonable to conclude that dispersal discourse was, along with the bomb itself, reluctantly rendered acceptable to democratic society and then willfully forgotten? To put it another way—and building on Innes's theories regarding communicative action—it is herein suggested that defensive dispersal became "embedded information" that "informatized" the planning profession; and, "*when information is most influential, it is also most invisible*. That is, it influences most when it is part of policy participants' assumptions and their problem definitions, which they rarely examine" (1998, 54).

The significance of the defensive dispersal movement as a part of the larger cultural project described above may have even wider implications. Indeed, the contribution that city planners made to this project of atomic normalization must represent the ultimate expression of that project, in that America's willingness to acquiesce to the presence of nuclear weapons could surely find no more profound a form than in the notion that our society's very physical structure would need to adapt to them. That this proposition was once a commonly accepted one is, to postmodern sensibilities, remarkable.

This study, while preliminary, presents a new understanding of urban form and the history of the planning profession. Fear of nuclear catastrophe allowed a relatively immature profession to gain influence at the highest levels of office of the United States. Prominent planning professionals made significant contributions toward persuading policy makers to legislate sprawl as a national imperative under the rubric of civil defense. We must recognize, however, that the efforts of the dispersal advocates were sincerely—if naively—directed toward maintaining economic functionality after a nuclear attack and to save lives; yet, they consistently failed to identify dispersal's inherent futility.

The causes of sprawl and urban decline are, of course, multifaceted and complex. The debate in planning and urban sociology continues over the historical and ongoing impacts of such factors as the automobile, government programs and subsidies, economics, governmental structures, racial conflict, and cultural factors (for recent examples, see Fishman 1999 and Beatley and Manning 1997, 40-42). The chronology of defensive dispersal, however, reveals a potent motivation that can be linked to many of these factors.

In addition, there is an element of commitment that cannot be denied. Three federal agencies—the NSRB, the Department of Defense, and the Federal Civil Defense Administration—all officially recommended the acceleration of low-density

peripheral development to the federal government; the government integrated this recommendation into the 1954 Housing Act; the interstate highways system was planned in part to aid this decentralization; and, finally, the AIP officially endorsed defensive dispersal. Viewed this way, sprawl becomes not so much an accident of history as it may be seen, at least in part, as an intentional but misguided strategy for survival in the nuclear age.

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