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Green Heart Attack: An Environmentalist's Eulogy for the Randstad, Dutch Grand Planning, and the Compact City

Kate Keleher

I. Introduction

Beneath the drama of current events, a serious paradox, as old as civilization itself, steadily erodes the foundations of modern society: humans rely on Earth to survive, yet their way of life burdens it with increasingly taxing demands. Thus, as humans degrade Earth, they threaten the quality of their own existence. Globalization, the compression of time and space,¹ both exacerbates and alleviates the burden of this environmental paradox. Perceiving time as accelerated and space as condensed alters the ways in which humans interact with their physical environment. For instance, globalization can promote behavior that improves environmental health by fostering creative environmental problem solving and cooperation among groups. It can also construct behavioral patterns that degrade the environment by encouraging resource consumption, waste, and pollution.

The modern city demonstrates this contradiction of globalization's mixed environmental effects. By encompassing the collective actions of a multitude of people, the modern city has a tremendous impact on the environment, and thus on the quality of life for future generations of humans. Its sheer density identifies it as a center of consumption and waste. However, in shaping the routines of daily life, the structure of the modern city can improve the environmental sustainability of its inhabitants' actions. The belief that the modern city has the potential to both aggravate and relieve the burden of the aforementioned environmental paradox informs and motivates this study.

Many environmentalists² suggest that limiting urban sprawl is one way to reduce a city's environmental impact. This concept of a geographically restricted urban form is known by several names, but this essay refers to it as the compact city model. These environmentalists argue that the compact city's accessibility by foot, bike, and public transportation discourages automobile dependence among its inhabitants and thus reduces the environmental burdens of fuel consumption and carbon emissions.

In discussions of the compact city, many uphold the Randstad, a metropolitan conglomerate in the west of the Netherlands, as a model urban configuration. For just over a century, the Dutch state has limited urban sprawl in the Randstad such that its cities form a contained ring around the "Green Heart," a sparsely populated rural core. One can understand the Randstad as a collection of compact cities wrapped around this Green Heart. This essay extracts three key elements of this scenario: the Randstad, Dutch "Grand Planning," and the compact city. This essay defines and addresses these terms more fully in the following pages.

Unfortunately for those who hold faith in the ability of these three elements to mitigate environmental problems, Dutch Grand Planning is already dead and today many suspect that the compact city and the Randstad are not long for this world. In the past decade, Dutch spatial planning systems have undergone numerous dramatic changes, which terminated the practice of Dutch Grand Planning as it was once known and respected.³ As a result, the once compact cities of the Randstad have begun to sprawl and fragment the Green Heart.⁴ Environmentalists mourn

the demise of these three elements. The effect that their departure may have on automobile dependency and consequently the area's fuel consumption and greenhouse gas emissions remains uncertain. Others find hope in the recent changes; they argue that compact city policies implemented in the Randstad suppressed economic prosperity and that, despite its great reputation as an antidote for environmental problems, their actual environmental contributions were minimal or even negative.

This analysis critically examines assumptions about the environmental sustainability of the Randstad, Dutch Grand Planning, and the compact city in an effort to come to terms with their passing. Were they obstacles, devoid of substantial environmental benefits, that prevented the Netherlands from reaching its economic potential or did they constitute an outstanding model for mitigating environmental problems? In an effort to separate fact from fiction, this essay identifies idealistic conceptions about the environmental sustainability of the three elements. It challenges these assumptions, in turn, in an effort to illuminate what was truly promising about their ability to combat environmental problems. In seeking to grasp what was lost in their demise, one can assemble an understanding of the limits and opportunities of urban spatial planning and apply that understanding in future considerations of cities and sustainability, both within the Netherlands and worldwide.

II. The Randstad

Environmentalists uphold the Randstad, a metropolitan conglomerate in the western Netherlands, as the ideal urban configuration for mitigating environmental problems. After providing basic information about the Randstad, this section summarizes claims found throughout academic and popular literature that praise the Randstad/Green Heart as an intentionally environmentally sustainable conurbation. It examines them critically in an effort to identify the Randstad's unique qualities that do merit international recognition.

The Randstad is a collection of cities and the sparsely populated open land, known as the Green Heart, which they surround. At 9,000 square km,⁵ the Randstad constitutes 21.7 percent of the total country's area, but its eight million inhabitants constitute nearly half of the nation's population. It has been the most densely populated area of the Netherlands for centuries; as early as the seventeenth century, it contained over half the population. Half of the Randstad's inhabitants live in one of the four major cities: Amsterdam, Rotterdam, The Hague, and Utrecht.⁶ Amsterdam contains the most citizens, with a population of 650,423. Rotterdam and Den Haag (The Hague) follow closely behind with 589,955 and 581,810, respectively. Utrecht, a university city, is the smallest of the hubs, with a population of 295,335.⁷ The importance of these four cities within the Netherlands becomes especially clear with the recognition that most of the nation's cities contain less than 10,000 inhabitants.⁸

The Randstad is the political, cultural, and economic leader of the Netherlands. Both nationally and internationally, it plays a significant political role. It contains Amsterdam, the capital city, and The Hague, which is the seat of parliament and government, and home to institutions such as the Supreme Court, the International Criminal Court, and the International Criminal Tribunal for the former Yugoslavia. The Randstad is the nation's economic "powerhouse"⁹ and its cities, Amsterdam and Utrecht in particular, host a wide array of cultural events as well.¹⁰ Though the Randstad reaps the benefits of political, economic, and cultural primacy within the Netherlands, it is vulnerable to environmental degradation and the discomfort of overpopulation.¹¹ Thus, the Randstad has always been a subject of national-level attention and intervention.

Environmentalists uphold the Randstad as an example of successful metropolitan planning and a model of an environmentally sustainable spatial form. They view the act of limiting urban sprawl to preserve rural space as motivated by environmental concern. Peter Hall's *World Cities*, written in 1969, identifies the Randstad as one of seven urban conglomerations with truly global influence. He even suggests that the other six world cities should look to the Randstad as a model: "There seems little doubt that for most of the still growing world cities of the present time, the Dutch solution is the right model."¹² The Randstad has become a "leading vision" for neighboring countries, including Germany, Belgium, and the United Kingdom,¹³ and a model for the European Commission's policies.¹⁴ Even the popular term "Greenheart Metropolis," coined by Gerald Burke in 1966, implies that the Randstad is a cohesive and stable entity, carefully crafted with the environment in mind.¹⁵

One finds an abundance of idealized discourse about the Green Heart as well. For instance, in *The Challenge of Farmland Preservation*, author Rachelle Alterman writes, "Visitors today enjoy the picture-book Green Heart area, with its spic-and-span stewardship of every corner, complete with grazing cows, meticulous canals, and dikes."¹⁶ In *Green Urbanism*, American author Timothy Beatley expresses his awe at the fact that the Green Heart lands "are not in a transitional use but should and will remain in an undeveloped state."¹⁷ These descriptions contribute to an understanding of the Randstad as a cohesive and stable conurbation, carefully designed to mitigate environmental problems.

One must approach these understandings critically. The Randstad concept was constructed relatively recently, *without* global environmental health in mind. The term "Randstad," which means "edge city," was not applied to the region until the 1930s, when KLM Airlines director Albert Plesman happened to fly over the region and notice its ring-like spatial formation. During World War II, Plesman, confident that aviation would grow in popularity, contacted J. A. Ringers, the civil engineer responsible for overseeing reconstruction, and recommended that he consider the notion of "the entire Randstad as a single municipality," with an international airport at its center.¹⁸ In the 1960s, British planners designed the concept for the region.¹⁹ Though many uphold the preservation of the Green Heart as a gesture of environmentalism, its establishment was not motivated by environmental concerns. It remained vacant because until the mid-16th century, its marshy terrain was uninhabitable.²⁰ According to Andreas Faludi, in "the 1950s, there was no real environmental concern as such. The preservation of space for instance has been one of the central concerns. That predates the Greenheart concept, of course."²¹ Also, industrialization did not emerge in the Netherlands until the end of the 19th century, and only began to gain momentum in the forties and fifties. In an economy primarily fueled by agriculture and trade,²² the economic incentive to industrialize the Green Heart remained weak.

In addition, the Randstad is not a singular, static entity, but rather a socially constructed concept that the global audience reproduces through discourse.²³ As Delft University of Technology senior researcher Marjolein Spaans explains, "There's not one Randstad."²⁴ The exact boundaries of the Randstad are contested. As Andreas Faludi articulates in *Rule and Order*, "Questions are also raised about whether or not the Randstad is a meaningful entity, and, indeed, whether the Green Heart exists anywhere but in the planners' fancy."²⁵

The Randstad is far more fragmented than most international viewers would like to recognize; its cities are distinct from each other. In fact, the establishment of ecological corridors that extend from the Green Heart and run between the cities, known as Rijksbufferzones, was motivated by the desire to keep the Randstad's cities separate, not due to environmental concerns.²⁶ The provinces that compose the Randstad vary greatly in age, background,

demographics, and values. For instance, Utrecht is more concerned with its environment and landscaping than the other provinces. Cooperation at the Randstad level is very difficult. Despite its international reputation as a cohesive entity, the Randstad fails to create a sense of solidarity among the municipalities that compose it.²⁷

Although the Randstad's international reputation as an intentionally environmentally sustainable conurbation may not be appropriate, it does have certain unique qualities that distinguish it from other metropolitan areas. According to Faludi, the "Randstad/Green Heart have become so successful that (planners' inventions as they are) they have become household words. . . Changes to their meaning notwithstanding, so far these concepts have remained intact." Faludi maintains that this is "surely a mark of success."²⁸ Though the Randstad did not emerge out of environmental concerns, it is (though perhaps not for long) an intentionally planned space, whose future is guided by a model. Even if the reality does not live up to the model, the fact that the model exists and continues to captivate does have real world implications in that it inspires thought about the impact of spatial formations on the environment. Known as a "research and policy laboratory"²⁹ and a "playground for planners,"³⁰ the Randstad attracts creative problem-solvers and provides planners with a space for experimentation, in which they can test out different ideas and see what works.

Dismissing the notion of the Randstad as an autonomous actor and viewing it instead as a fluid product of social forces invites deeper engagement with the concept in two critical ways. First, recognizing the Randstad's social roots provides a wealth of information about the forces that conceived and shaped it.³¹ The history of planning and land manipulation in the Randstad illustrates the ways in which human conceptions of the environment profoundly impact the physical world. Second, taking the Randstad off an environmental pedestal creates a less polarized forum for debate and decision-making. Those who are not environmentalists do not have to view the Randstad as part of a foreign belief system because it is not an inherently environmentalist concept.

III. Dutch Grand Planning

Throughout global discourse, one finds praise of Dutch spatial planning as a system guided by consistent principles and motivated by environmental concerns. Maarten Hajer is not alone when he articulates, "The Dutch system of spatial planning can rejoice in an almost mythical reputation in the international academic literature."³² However, these idealized notions of Dutch spatial planning demand critical examination. This portion of the essay uses historical narrative to challenge idealistic conceptions of Dutch spatial planning. It then argues that these inflexible notions of a fixed, environmentally motivated Dutch spatial planning contributed to its downfall.

Dutch spatial planning attracts praise for its restriction of urban growth in an environmental effort to preserve green space and decrease automobile dependency. Qualities such as long-term vision and consensus building also contribute to Dutch spatial planning's positive reputation. Environmentalists view these characteristics as inherent and consistent throughout the culture of Dutch spatial planning.³³

One must examine these claims critically. Though Dutch spatial planning is indeed marked by the practice of restricting urban sprawl and the qualities of long-term vision and consensus building, one must recognize that these characteristics evolved out of necessity, as reactions to given circumstances, not out of inherent altruistic concern for the well-being of Dutch society as a whole. Dutch spatial planning is not and has never been fixed; its values and mechanisms are constantly adapting to changing conditions. While many associate Dutch spatial planning with

the persistent restriction of urban sprawl, historically the system's values have been far less consistent. The tension between urban sprawl and urban restriction is primarily one of scale. Municipalities, hungry for economic gain, work to encourage industrial growth and urban sprawl, while the national level, concerned with the overall landscape of the Netherlands, prefers to carefully plan and geographically limit cities.³⁴ In the past century of institutionalized Dutch spatial planning, external circumstances have profoundly influenced the degree to which Dutch spatial planning sought to restrict urban sprawl.

The following historical narrative demonstrates the *reactionary* nature of Dutch spatial planning. First, it describes the emergence of long-term vision and consensus building as mechanisms of survival, not of noble intentions. It then delves into an account of institutionalized national spatial planning in the twentieth century to illuminate the role of external factors in the struggle back and forth between the dogmas of urban sprawl and urban restriction.

A. Surviving the Sea

Dutch spatial planning originated as a reactive system. With half of the nation susceptible to flooding and 27 percent below sea level, the Dutch state had no other option but to manage its territory firmly. The Netherlands as it stands today would not exist without this heritage of planning and public intervention.³⁵ The process of land reclamation began in the Roman era and evolved with time. The period from the ninth century to the fifteenth century saw the draining of peat bogs, the creation of embankments, and the implementation of windmills to replace tidal drainage. Thus, as the saying goes, "God made the world, and the Dutch made Holland."³⁶ This practice of topographical reclamation, redefinition, and control, known as the Dutch *maakbaarheid* ("makeability"),³⁷ continued throughout history, as evidenced by the creation of the polders of Lake IJssel, the Delta Works project, and the reclamation of land in Flevoland.³⁸ Even today, scholars of Dutch planning have compared the state's continued practice of constructing land to that of providing a "public utility."³⁹ In addition, the Dutch urbanized in the sixteenth century, earlier than other European nations.⁴⁰ This early development, combined with its strong planning culture, laid the groundwork for a society that maintains its cities with a strong hand.

This physical construction and maintenance of the Netherlands, along with the nation's small size and history of external threats, fostered a Dutch ethos of planning, cooperation, and pragmatic environmental cognizance.⁴¹ Faced with the "common enemy" of the sea, the Dutch had no choice but to unite and work together despite their differences. To successfully combat this enemy, the public had to share the "power to control, to direct, to allocate tasks, to define duties and rights"⁴² in a just and efficient way. Up until the past decade or so, in the struggle between the private and collective interests, Dutch culture promoted the latter. The "greater good" triumphed over individual privilege, and spatial concerns trumped the hunger for economic development.⁴³ Andreas Faludi argued, "The Netherlands has never been, and is still not, fully sold on a free market."⁴⁴ Just as the United States' perpetually expanding frontier contributed to its capitalist mentality of accumulation, consumption, and individual liberty, the Dutch state's space limitations and geographic challenges helped to foster traditions of cooperation and pragmatic problem solving through planning.

B. A Century of Institutionalized Planning

Though the Dutch have planned and manipulated their land for many centuries, national spatial planning was not institutionalized until the twentieth century. As Faludi argues in *Rule and Order*, “National planning was never at the top of the agenda before 1958, neither is the present setup the only conceivable outcome of developments.”⁴⁵ One must recognize that national planning emerged as a response to particular circumstances.

The *1901 Housing Act* marked the beginning of a century of state intervention in spatial planning by bringing housing into the public concern. The act enabled the government to set rent based upon income, rather than cost or market price.⁴⁶ Aside from the two 1920 manifestos of Dirk Hudig, which set the stage for a *National Plan*,⁴⁷ and the 1922 constitutional amendment along corporatist lines, which created the regulatory agencies that would eventually become critical parts of urban planning mechanisms,⁴⁸ planning remained under municipal authorities until World War II.⁴⁹

World War II increased Dutch central government control over planning.⁵⁰ Upon invasion, the German Nazi forces recognized that keeping the Netherlands running smoothly was in their own economic self-interest. Thus, they worked to establish an efficient system by concentrating Dutch authority into the hands of a small group of Dutch civil servants, who formed a makeshift Council of Secretaries-General. Without the departmental ministers of parliament to provide a system of checks and balances, these non-political civil servants were free to enact their own national-level planning visions with minimal restraint.⁵¹ This was a time of major transformation for the land itself and the governmental mechanisms that shaped it. The state disregarded property rights and claimed and transformed land. J. A. Ringers, the civil engineer elected to oversee the repair of Dutch infrastructure, set up national-level agencies, which eventually became critical in general Dutch spatial planning.⁵²

Planning gained credibility during the period of post-war construction.⁵³ The state and provincial levels exerted their influence through subsidies, regulations, traffic planning, and agricultural modernization. The municipal level depended on the state, which facilitated the implementation of nationwide planning schemes.⁵⁴ Municipalities bought land and sold or leased it under rigid guidelines. Because municipalities and semi-public housing associations were the main housing investors, the flow of funding for housing was steady and the market was stable. Private developers played a very small role in urban planning. Throughout the 1950s, the economy grew and population increased. In response, the Netherlands produced more social housing in that decade than did any other country in Europe.⁵⁵

In 1958, the Dutch government introduced the *First National Spatial Planning Act*, which was followed by four others, one every ten years. The differences among these acts demonstrate the role of historical circumstances in shaping a given time period’s planning values and mechanisms, and the ways in which planning discourse shaped the Dutch environment. Spatial planning expert Andreas Faludi says it best when he explains:

Plans are moving frameworks. . . Each planning document goes through phases. During each phase, ideas change. Rather than being merely preparatory to the final document which, once adopted, lays down the law, each of the interim documents articulates policy in its own right. This policy is acted upon long before the final document is approved.⁵⁶

Though the planning document itself is important, the value adjustments that surround its preparation and publication also play a critical role in the nature of a given time period's planning ethos.

The 1958 *First National Spatial Planning Act* took a step towards the restriction of urban sprawl. It institutionalized the concept and protective measures for the Green Heart and the Rijksbufferzones in its "Development Scheme for 1980."⁵⁷ The act also gave planners more opportunities for influencing national policies.⁵⁸ While the process of spatial arrangement always involves interplay between public and private forces, planners prefer public intervention as a mechanism of control,⁵⁹ so generally the transfer of power to planners increases regulation, as demonstrated in this instance.

Though the 1965 *Second National Spatial Planning Act* did introduce the *bestemmingplan*, a legally binding land-use plan to which building applications had to conform,⁶⁰ the Act's emphasis on "concentrated decentralization" enabled urban sprawl. In an effort to prevent new small rural developments, concentrated decentralization limited new development to pre-established growth nodes on the outer ring of the Randstad.⁶¹ Implemented throughout the seventies and eighties, concentrated decentralization was criticized for promoting suburbanization and neglecting the status of inner cities.⁶²

In response to these criticisms, the 1973 *Third National Spatial Planning Act* began to move away from promoting practices of urban sprawl. The act limited suburbanization and emphasized urban renewal. The rise of environmentalism in the 1980s contributed to the backlash against the concentrated decentralization policy and further discouraged spatial planning from enabling urban sprawl.⁶³

The *Fourth National Spatial Planning Act* of 1988 marked an even more dramatic departure from urban sprawl and the first officially "environmental" flavoring of Dutch planning. It built on the Third Act by rejecting the policy of concentrated decentralization in favor of investing in the restoration of existing urban sites.⁶⁴ However, it also introduced two new themes: the potential problems of increasing automobile traffic and the importance of environmental awareness.⁶⁵ The Transport Ministry became interested in a new task: "to manage mobility for the sake of the environment."⁶⁶ Its introduction prioritized environmental concerns over economic well-being.⁶⁷ It was during this period that many fell victim to the folly of retroactively applying the Fourth Act's explicit message of environmental sustainability to other acts.⁶⁸ In an effort to address transportation and sustainability issues, the Fourth Act promoted a rigid compact city policy, which attempted to cultivate high density, mixed-use urban space. The expansion of existing cities was limited and the majority of new development was forced into designated zones called VINEX sites. Located along the immediate borders of existing metropolitan areas,⁶⁹ these sites were necessarily compact, as they had to contain at least 33 homes per hectare. The Fourth Act's limitations on the presence of new shopping centers beyond the existing metropolitan districts, and its A-B-C location policy, which funneled employment opportunities into places accessible by public transportation,⁷⁰ further restricted urban sprawl and encouraged environmental sustainability.

Incredibly, throughout the 1990s, amidst global neoliberal change, Dutch national spatial planning policies continued to focus on limiting sprawl.⁷¹ However, these international trends did impact government activities such as social housing. The Dutch state began to favor "enabling development" over "providing development."⁷² Social housing decreased from 73 percent in 1991 to 46 percent in 1996.⁷³ In 1998, the housing sector continued to move in a more market-oriented direction.⁷⁴ The Dutch government began to provide more incentives for economic

growth and entrepreneurship.⁷⁵ These shifts in other sectors foreshadowed the transformation in spatial planning that was on the cusp of unfolding.

Andreas Faludi foresaw these changes when he published *Rule and Order* in 1994. At the time, he began “voicing certain. . .misgivings about developments.”⁷⁶ He knew that a doctrinal change, like Thomas Kuhn’s scientific revolutions, would be “mostly violent.” In the mid-nineties, he began to wonder, “Is there going to be a doctrinal revolution? And if so, what’s the effect going to be?” He began to feel “afraid because a revolution, by its very nature, means that the standard bearers of the doctrine like. . .the national spatial planning agency and the key persons behind it, and really the whole discipline behind it, would change beyond recognition.” Today, he looks back and confirms that, “This is indeed what has happened. . .There has been a revolution.”⁷⁷

C. The Death of Dutch National Spatial Planning

The whole nature of spatial planning, the whole notion of what spatial planning is and what it should be has changed. . .An explicit tradition of national planning—the whole idea of national planning—has been abolished. . .the whole constellation, the whole institutional substructure, has changed.⁷⁸

This section outlines the factors that contributed to the demise of Dutch Grand Planning. By the turn of the 21st century, Dutch Grand Planning was rapidly approaching its demise.⁷⁹ The *Fifth Spatial Planning Act*, drafted by the social-democratic minister, Jan Pronk, of the Ministry of Housing, Planning and the Environment, was an extension of the Fourth Spatial Planning Act in many ways. The Act called for stricter regulations preventing urban sprawl and demanded especially firm rules regarding the protection of the Green Heart. It suggested drawing “red lines” around existing urban areas, beyond which new developments would be actively discouraged. The Act also recognized the population’s desire for large-lot, village-style housing as well as high-density urban housing. Though these shifting tastes did not align with the plan’s values, it chose not to ignore them.⁸⁰ Despite this acknowledgement, the act “was opposed almost violently by a coalition of local and regional authorities. . .Heavily influenced by this international agenda of globalization,” the right-of-center political party in power at the time dismissed planning “as a so-called leftist hobby” and refused to allow the Act’s implementation.⁸¹ Parliament did not approve the Act before elections because it was seen as too controversial.⁸² The *Nota Ruimte*, an alternative document that favored new developments over renewal and regulation, replaced the *Fifth National Spatial Planning Act*.⁸³

Meanwhile, growing criticism about the National Spatial Planning Agency’s ability to conduct objective research prompted parliament to change the agency’s name and function in 2002,⁸⁴ and outsource its research function to another institute. In addition, in a sudden turn of events, the Ministry of Housing, Spatial Planning and the Environment split up. The responsibilities of the Ministry of Housing and the Ministry of the Environment were sent to new agencies, but “Spatial Planning” as a term disappeared altogether.⁸⁵ In July of 2008, the Netherlands abolished regional coordinating agents,⁸⁶ which further decentralized the Dutch spatial planning system. It also eliminated the *National Landscape Plan*, which included protective measures for the Green Heart and the *Rijksbufferzones*.⁸⁷

Today, the national government no longer participates in spatial planning, leaving the provincial and municipal levels in charge of spatial planning decisions.⁸⁸ The municipal level still follows the guidelines of central- and provincial-level authorities, but it no longer must adhere to a national-level plan.⁸⁹ A municipality has numerous incentives to sprawl, but this

essay will outline two. First, increasing its population above a certain threshold brings certain benefits, including salary increases for the burgomaster. Second, the ability to provide housing is viewed as a political victory.⁹⁰ Thus, decentralization will likely foster competition among the cities of the Randstad, which will encourage them to urbanize into the Green Heart and the Rijksbufferzones.⁹¹ The state's decreased budget and reduced authority gives enterprising forces more influence; private developers build new motorways and social housing measures are pushed to the periphery of the national agenda.⁹² Under the new plan, the state *follows* development processes instead of *shaping* them.⁹³ The state's decreased influence on the Randstad's spatial arrangement has begun to alter the Randstad/Green Heart structure. Already, Rotterdam and The Hague have expanded more, fragmenting the Green Heart.⁹⁴

These changes reflect the Netherlands' shifting priorities away from Grand Planning towards economic competition. The Dutch system has responded to increased capital flows, labor migration, and the global market's growing interconnectivity.⁹⁵ Motivated by the financial crisis and the rise of the BRIC economies (Brazil, Russia, India, China), today's Dutch economists fervently search for ways to improve their nation's economic climate.⁹⁶ The Ministry of Infrastructure and the Environment states that, "the economic crisis has made economic recovery and strengthening economic competitiveness top priorities for the current Dutch government. That means strengthening the sources of economic power, for the good of the whole."⁹⁷ It clarifies that municipal economies are "engine[s] of the economic breakthrough,"⁹⁸ and further specifies that:

Central government therefore intends to bring spatial planning as close as possible to those directly affected (people and businesses), and leave more to the municipal and provincial authorities (decentralisation as the first option). This will mean less focus on national interests and simpler regulations.⁹⁹

This environment of "financial cutbacks, protectionism, and political individualism" fosters the perception that planning inhibits growth.¹⁰⁰

These transformations can be understood in a larger context, which geographer David Harvey identifies as a rise in "urban entrepreneurialism." He highlights three critical qualities of this trend: partnership between the public and the private sector, speculative work over rational planning, and construction over renewal. He highlights the second aspect, urban entrepreneurialism's speculative nature, as especially problematic in the inherently risky process of city making, because it creates a situation in which the public sector absorbs the costs and the private sector reaps the benefits.¹⁰¹ In the case of the Randstad and urban sprawl, the private sector would economically benefit from development, while the public sector would suffer environmentally.

D. Problematic Perceptions

Ironically, idealized notions about Dutch Grand Planning contributed to its downfall.¹⁰² If the international audience had understood the reactive nature of Dutch spatial planning and taken the concept off its pedestal, actors within the Dutch system would have had less rigid values,¹⁰³ which might have prevented or slowed the demise of Dutch Grand Planning. In addition, recognizing that Dutch spatial planning, much like the Randstad, was not created out of environmental concern, but rather constructed and reconstructed in response to historical

circumstances, illuminates the factors behind its vulnerability to radical change at the turn of the present century.

IV. The Compact City

Many environmentalists highlight the compact city model as the ideal spatial form for mitigating environmental problems. However, in recent years, these claims have drawn criticism. The debate about the compact city model's ability to mitigate environmental problems demands examination because in shaping policy and planning decisions, it impacts future spatial arrangements and environmental conditions worldwide. This paper assesses both sides of the debate in an effort to determine the extent to which the compact city model, specifically as demonstrated in the Randstad, lives up to its reputation as an environmentally beneficial urban spatial form.

The compact city, characterized by high density, mixed-use development,¹⁰⁴ has existed on the national level in the Netherlands for three decades. It was first adopted in the final part of the Third Policy Document on Spatial Planning in 1983, but it was not fully embraced until 1988, when it was presented in the Fourth Policy Document. Compact city regulations were first used in Rotterdam and then implemented in the remaining three hubs of the Randstad: Amsterdam, The Hague, and Utrecht.¹⁰⁵

From farmers to business people, the policy received broad support in the mid-eighties. It was seen as linking environmental accomplishments to the promotion of cities as “the command centers of an emerging network economy” in which the importance of national borders was eroding.¹⁰⁶ The European Commission encourages emulation of the compact city model.¹⁰⁷ The compact city model is “one of the most compelling planning metaphors in national spatial policy.”¹⁰⁸

Though the supposed environmental benefits of the compact city model are numerous, this inquiry focuses primarily on the assumption that limiting sprawl reduces reliance on automobile transportation and thus reduces fuel consumption and carbon emissions. This claim, widely accepted by European governments, the European Commission, planners, and environmentalists across the world, is largely founded upon the study of Peter Newman and Jeff Kenworthy, which is published in their 1989 volume *Cities and Automobile Dependence: An International Sourcebook*. This work suggests that the density of the compact city decreases automobile dependence by encouraging commuting by foot, bike, or public transportation.¹⁰⁹

Despite the claim's widespread acceptance, the actual impact of the compact city model on transit behavior, and thus on the environment, remains uncertain.¹¹⁰ The scientific community has not produced enough evidence to support the assumption that the compact city dramatically reduces automobile dependence, fuel consumption, and air pollution. Even Newman and Kenworthy's 1989 study lacks solid supporting evidence; it focuses exclusively on the relationship between density and emissions while ignoring variables such as income and gas prices.¹¹¹ In addition, despite its positive reputation, the polycentric character of the Randstad does not actually limit traffic congestion.¹¹² Though the public transportation system in the Randstad is efficient and includes trains, trams, and buses,¹¹³ only fourteen percent of the population use it to commute. Over a fourth of the population walks or bikes, and the remainder commutes by automobile.¹¹⁴ With more than 50,000 people commuting between two of the hubs daily, this transportation behavior has a profound impact on the environment.¹¹⁵ Petroleum, solid fuels, gas, and CO₂ supply almost all of the Randstad's primary energy; only four percent of the

region's energy comes from renewable sources. Transportation is responsible for nineteen percent of the region's CO₂ emissions.¹¹⁶

One must avoid anticipating dramatic change from spatial rearrangement. Many academics invest their hope in cities. In his text *Green Urbanism*, Timothy Beatley writes, "Cities, through their spatial organization, their management practices and the development of their economic bases—can be the locus for significant reductions in demand and pressure on the planet's resources and ecosystems."¹¹⁷ The idea of the well-planned city as a solution to the world's environmental problems can be very seductive, especially to Americans such as Beatley, who are disillusioned by the excesses of suburbanization and sprawl.

Some have argued that the compact city model actually exacerbates environmental problems, such as air pollution, on the local level. As Michael Neuman argues in "The Compact City Fallacy," the density of mixed-use sites has created "toxic flashpoints," which can harm humans and the environment.¹¹⁸ This phenomenon is called the compact city paradox.

The compact city paradox, in which the burden of environmental problems is felt most intensely by those within the confines of a limited urban space, is evident in the Randstad. Studies have found that there is a positive correlation between a city's density and the level of disturbance—such as noise, odor, and air pollution—within it. For instance, within Amsterdam, researchers predict that a 20 percent population density increase would increase the concentration of nitrogen dioxide by 8–25 percent.¹¹⁹ Compared to other countries, the Dutch actually lack any compact cities; only the Randstad cities approach the definition.¹²⁰

Though the compact city does not live up to its reputation as the ideal spatial form for mitigating environmental problems, this essay argues that the concept's passing is premature. This article will highlight four benefits of the compact city model that justify reviving the concept, either in the Netherlands or elsewhere. First, though the compact city does not significantly influence the time spent commuting, studies have found that there is a correlation between the compact city structure and the *type* of transportation: traveling by bike, foot, or public transit is more common in the compact city.¹²¹ Second, most debates about the compact city focus on its effects on transportation. However, it is important to recognize that compact city policies could also provide other environmental benefits. The Green Heart, for instance, provides fertile soil, healthy ecosystems, and recreational and agricultural spaces. It also facilitates pollination, protects against floods, and filters air.¹²² One must not overlook the fact that almost all Randstad inhabitants live less than six kilometers from non-agricultural open land.¹²³ Though it is difficult to measure, there is a fair chance that a city's population can extract aesthetic, recreational, and psychological value from accessible open land. Third, the compact city demonstrates several kinds of progress in the Netherlands. After its implementation, use of public transportation increased in both absolute and relative terms, especially in the Randstad. In addition, the Green Heart has remained limited to local-level development.¹²⁴ In 1985, buildings in "poor condition" constituted nineteen percent of the country's stock. In 2000, that number was reduced to one percent.

In addition, though the *benefits* of the compact city remain uncertain, there is minimal evidence to suggest that it generates *negative* effects. Scholars of the compact city need more time to observe it in practice before they can draw conclusions about its ability to mitigate environmental problems. The compact city's continued presence in spatial planning discourse reaffirms this desire for more observation time. The fact that people continue to extract different meanings from the compact city model demonstrates that the model remains compelling enough to invite new interpretations even after many years.¹²⁵ As with the Randstad, although the

concept may not live up to its reputation, the fact that it remains captivating after all three decades is a sign that the concept is not yet ready to disappear.

V. Rest in Peace

Indeed, the Randstad, Dutch National Spatial Planning, and the compact city did not live up to their reputations as ideal solutions to today's environmental problems. However, the fact that these concepts remain relevant enough to spark imagination worldwide (even after many decades have passed since their respective conceptions) is surely a sign that they will continue to appear throughout sustainable development discourse. The likelihood that their unrealistic reputations accelerated their premature demise stands as a cautionary tale for idealists eager to sing the praises of a "solution" to environmental problems.

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Notes

1. David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Wiley-Blackwell, 2004), p. 240.
2. This paper utilizes the word "environmentalist" to denote an individual who is concerned that many current behavior patterns compromise the quality of life for future generations. The term can apply to *anyone*, not just activists or people whose careers relate to environmental issues.

3. Andreas Faludi, interview by Kate Keleher, tape recording, Maastricht, 23 December 2011.
4. Henk Ovink, Ricky Burdett, and Maarten Hajer, "The Tale of Two Regions: A Comparison Between the Metropolitan Areas of South East England and the Randstad in Holland" (2011), p. 31.
5. *Ibid.*, p. 8.
6. *Ibid.*, p. 3.
7. *Ibid.*, p. 9.
8. *Ibid.*, p. 8.
9. Emmeline Besamusca and Jaap Verheul, *Discovering the Dutch: On Culture and Society of the Netherlands* (Amsterdam: Amsterdam University Press, 2009), p. 39.
10. *Ibid.*, p. 40.
11. Andreas Faludi and Arnoud van der Valk, *Rule and Order: Dutch Planning Doctrine in the Twentieth Century* (Springer, 1994), p. 26.
12. Ovink et al. 2011, p. 6.
13. L. Boelens, E. v. d. Krabben, and H. L. Pálsdóttir, *Compacte Stad Extended* (010 Publishers, 2011): 13.
14. M. Breheny, "The Compact City and Transport Energy Consumption," *Transactions of the Institute of British Geographers* 20, no. 1, New Series (1995): 81.
15. Gerald L. Burke, *Greenheart Metropolis: Planning the Western Netherlands* (St. Martin's Press, 1966).
16. Rachele Alterman, "The Challenge of Farmland Preservation: Lessons From a Six-Nation Comparison," Vol. 63, no. 2 (1997): 231.
17. Timothy Beatley, *Green Urbanism: Learning From European Cities* (Washington, D.C.: Island Press, 2000).
18. Faludi and van der Valk 1994, p. 72.
19. Ovink et al. 2011, p. 43.
20. Faludi and van der Valk 1994, p. 26.
21. Andreas Faludi, interview by Kate Keleher, 23 December 2011.

22. Faludi and van der Valk 1994, p. 40.
23. Ibid., p. 231.
24. Marjolein Spaans, personal communication, 12 December 2011.
25. Faludi and van der Valk 1994, p. 252.
26. Ovink et al. 2011, p. 31.
27. Spaans, personal communication, 12 December 2011.
28. Faludi and van der Valk 1994, p. 251.
29. F. M. Dieleman and Sako Musterd, *The Randstad: A Research and Policy Laboratory* (Kluwer Academic Publishers, 1992), p. 6.
30. Andreas Faludi, "Coalition Building and Planning for Dutch Growth Management: The Role of the Randstad Concept," *Urban Studies* 31, no. 3 (1994): 3.
31. David Harvey, "From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism," *Geografiska Annaler. Series B. Human Geography* 71, no. 1 (1989): 5.
32. Maarten Hajer, "Spatial Planning in the Network Society: Rethinking the Principles of Planning in the Netherlands," *European Planning Studies* 8, no. 3 (1 June 2000): 337.
33. Faludi and van der Valk 1994, p. 18.
34. Marjolein Spaans, interview by Kate Keleher, Maastricht, 12 December 2011.
35. Ovink et al. 2011, p. 46.
36. Andreas Faludi, "The Netherlands: A Country With A Soft Spot for Planning," in *Comparative Planning Cultures*, edited by B. Sanyal (New York and London: Routledge, 2005, p. 445.
37. Ovink et al. 2011, p. 46.
38. Ibid.
39. Faludi and van der Valk 1994, p. 28.
40. W. Mijnhardt, "Urbanization, Culture and the Dutch Origins of the European Enlightenment," *Bijdragen en Mededelingen Betreffende de Geschiedenis der Nederlanden* 125, no. 2-3 (2010): 144.

41. Faludi and van der Valk 1994, p. 444.
42. Ibid., p. 28.
43. Ibid., p. 444.
44. Ibid., p. 447.
45. Ibid., p. xv.
46. Ibid., pp. 30–45.
47. Ibid., p. 47.
48. Ibid., p. 45.
49. Arjen J. Van Der Burg and Frans M. Dieleman, “Dutch Urbanisation Policies: From ‘Compact City’ to ‘Urban Network,’” *Tijdschrift voor Economische en Sociale Geografie* 95, no. 1 (1 February 2004): 108.
50. Faludi and van der Valk 1994, p. 71.
51. Ibid., p. 70.
52. Ibid., p. 71.
53. Ibid., p. xv.
54. Van Der Burg and Dieleman 2004, p. 108.
55. Ibid.
56. Faludi and van der Valk 1994, p. 259.
57. Ovink et al. 2011, p. 31.
58. Faludi and van der Valk 1994, p. xv.
59. Ibid., p. 1.
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61. Tim Schwanen, “Policies for Urban Form and their Impact on Travel: The Netherlands Experience,” *Urban Studies* 41, no. 3 (2004): 580.
62. Van Der Burg and Dieleman 2004, p. 110.

63. Ibid.
64. Schwanen 2004, p. 582.
65. Boelens et al. 2011, pp. 24–27.
66. Faludi and van der Valk 1994, p. 216.
67. Ibid., p. 219.
68. Jan Goedman, “Dutch Spatial Planning: From Implicit Towards Explicit Sustainable Urban Development,” *Sustainability in Dutch Planning* (2008): 1; and Faludi and van der Valk 1994, p. xiv.
69. Schwanen 2004, p. 581.
70. Ibid., p. 580.
71. Van der Burg and Dieleman 2004, p. 109.
72. Willem Altes, “Local Government and the Decentralisation of Urban Regeneration Policies in The Netherlands,” *Urban Studies* 39, no. 8 (2002): 1441.
73. Ibid.
74. Van der Burg and Dieleman 2004, p. 109.
75. Altes 2002, p. 1441.
76. Andreas Faludi, interview by Kate Keleher, tape recording, Maastricht, 23 December 2011.
77. Ibid.
78. Ibid.
79. Ovink et al. 2011, p. 45.
80. Van der Burg and Dieleman 2004, p. 109.
81. Andreas Faludi, interview by Kate Keleher, 23 December 2011.
82. Van Der Burg and Dieleman 2004, p. 109.
83. Andreas Faludi, interview by Kate Keleher, 23 December 2011.
84. Faludi 2005, p. 448.

85. Andreas Faludi, interview by Kate Keleher, 23 December 2011.
86. Ovink et al. 2011, p. 31.
87. Edwin Buitelaar, “Window on the Netherlands: Cracks in the Myth: Challenges to Land Policy in the Netherlands,” *Tijdschrift voor economische en sociale geografie* 101, no. 3 (2010): 928.
88. Van Der Burg and Dieleman 2004, p. 109; and Ovink et al. 2011, p. 31.
89. *Ibid.*, pp. 10–12.
90. Andreas Faludi, interview by Kate Keleher, 23 December 2011.
91. Ovink et al. 2011, p. 31.
92. *Ibid.*, p. 8.
93. Buitelaar 2010, p. 14.
94. Ovink et al. 2011, p. 31.
95. Faludi 2005, p. 449.
96. Boelens et al. 2011, p. 16.
97. *Ibid.*, p. 6.
98. *Ibid.*
99. Ministry of Infrastructure and Environment, “Summary Draft National Policy Strategy for Infrastructure and Spatial Planning with the Strategic Environmental Impact Assessment” (2011): 3.
100. Ovink et al. 2011, p. 46.
101. Harvey 1989, p. 7.
102. Faludi and van der Valk 1994, p. 251.
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104. Faludi and van der Valk 1994, p. 30.
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121. Schwanen 2004, p. 579.
122. Ovink et al. 2011, p. 12.
123. Ibid., p. 31.
124. Boelens et al. 2011, p. 15.
125. Ibid., p. 55.

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