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Proof of Goodness

A SUBSTANTIVE BASIS FOR NEW URBANISM?

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As a theory, New Urbanism is notably and refreshingly free of the grand statements and obscure rationales typical of many urban design theories. As a movement, its focus is practical and didactic, providing simple, clear and hands-on directions and guidelines for designers, planners and builders making towns. As a manifesto, its charter is readily understandable, basically saying, “let us make or remake traditional towns.”

New Urbanism has learned from the past, in both its outlook and strategy. Contrary to Modernist design and planning theories, which were based on the premise of breaking with building traditions, New Urbanism seeks to revive practices that had been discarded in post-war suburban development. Unlike theories that overlooked the practicalities of common development processes (for example, Christopher Alexander’s *A Pattern Language*), New Urbanism involves the different actors who have a role in making cities and towns.¹

New Urbanism’s timing could not be more propitious, in terms of its resonance with popular sentiment. New Urbanism comes just when contemporary suburban development practices are being criticized, seemingly, from all sides and on multiple grounds—functional, social, economic and aesthetic. In this context, New Urbanism provides a needed alternative.

Not surprisingly, critics have emerged, probing the theory in opposition to contemporary suburban development and often denouncing it as aesthetically and socially anachronistic, as dysfunctional and economically unfeasible. The battle is on and it is not clear who will win the war. How well New Urbanism fares in the long term, I believe, will depend on how it decides to measure itself and validate its claims.

Normative Versus Substantive Theory

New Urbanism positions itself squarely within the evolution of ideas and theories about city design (its closest relative is the Garden City movement). It defines itself as a normative theory, projecting a vision of what cities should be in the future. This type of theory falls in the realm of advocacy, both professed and practiced in hope of promoting a better future.¹ However, normative design theories have been notoriously short-lived; since they are based on belief, rather than proof, they are highly dependent on, and typically the eventual victims of, the vagaries of ideological fashion and economic cycles.

Urban design and planning theorists have long warned that normative theories are only statements of belief in “goodness” on the part of professional elites.³ These theories demand that followers make a leap of faith and simply trust in the beneficial outcomes that they claim will occur. To survive, these theories must ground themselves in substance, and provide the necessary “proof of goodness”—explicit and compelling evidence that their claims will have the intended effect. Proof of goodness thus takes normative theory from a state of conjecture and advocacy to one of greater certainty.

Idelfonso Cerdà, Patrick Geddes and Constantinos Doxiadis are the most famous advocates of building substantive theories of city design and planning. Kevin Lynch prefaced his own normative theory with an acknowledgment that it needed a substantive basis; indeed, his inimitably elegant writings often straddled between norm and substance. Recently, educators like Jon Lang and myself have argued that an explicit knowledge base about the process of city

Suburban Mixed-Use Morphology

building—one that addresses why cities are the way they are, and how they work or do not work in given circumstances—is essential for teaching urban design and planning.

Many theories advocating new ways of making cities have foundered, at least in part, because their advocates have not had the time to accumulate a large enough body of built work, and to apply, test and adjust their theories in a sufficient number of contexts before they fell into disregard (as in the cases of the Bauhaus or Alexander's *A Pattern Language*).

In contrast, the characteristics of New Urbanism are such that it could, relatively easily, test its claims and ground at least some, if not all, of them in proof of validity. Because New Urbanism wants to emulate common urban forms and common urbanization processes, it can draw upon the entire gamut of towns and cities built so far as precedents composed of many (though clearly not all) of the elements and features advocated by its charter. Existing towns and cities represent a vast laboratory of forms resulting from actions taken under a great variety of circumstances and contexts. As forms that have been and continue to be lived in, they hold all the data necessary for appropriate research, providing a long-term empirical foundation of applied planning and design principles.

Transportation planners have already tapped into the opportunity afforded by existing cities to test some of the claims of New Urbanism. A significant number of research projects have sought to measure the effect of the different street layouts and designs on traffic patterns and travel mode choices by using existing pre-World War II neighborhoods and contrasting



This study compared mile-square sections of four mixed-use districts in Scottsdale, Arizona. Clockwise from top left: an older neighborhood commercial district, a newer district with power retail and offices, downtown and a light-industrial/corporate district. Illustrated here are pedestrian networks; the study also documented block patterns, property lines, building figures, surface parking and clusters of similar building types. The project replicated methods done by

other researchers in other cities so the findings could be compared among cities as well as among the various districts. The findings are being used as the basis of urban design and redevelopment recommendations for these areas.

Graphics: Todd W. Bressi, Dan Sirois, Chris Magnuson; City of Scottsdale Redevelopment and Urban Design Studio

them with contemporary suburban designs.⁴ The research suggests that suburban street layouts devised to accommodate the automobile do so quite poorly (while excluding other modes of transportation), while the small street-block layouts found in pre-war neighborhoods (and, by extension, those advocated by New Urbanism) support pedestrian travel and reduce traffic congestion.

Similarly, developers and urban policymakers tested some of New Urbanism's principles in the marketplace by conducting consumer preference surveys on neo-

traditional and contemporary suburban designs.⁵ Though these surveys were limited to a sample of potential new home-buyers, the results are unsettling. Respondents showed affinity for New Urbanism's approaches to town center design. But they opted for the large lots typical of contemporary suburban development practices, not for the small residential lots advocated by New Urbanists—effectively rejecting New Urbanism's push for compact neighborhoods.

Urban Morphology and New Urbanism

A befitting knowledge base for New Urbanism could come from a little-known body of research and theory emerging from the field of urban morphology. Literally the study of urban form, urban morphology began as a branch of historical human geography. Because it focuses on the built landscape and uses a language already familiar to urban designers and planners, this field holds promise as a framework to evaluate New Urbanism's achievements.

Urban morphologists ask several basic questions: How did or does the built landscape come about? How did or does it function? How has it been adapted, or is it adapting, to changing needs and circumstances? As they seek explanations for the processes that affect urban form, urban morphologists turn to traditional social sciences, typically sociology, anthropology, psychology and economics.

Hence urban morphology provides a designer-friendly, interdisciplinary and integrated methodological framework. It centers the study of the city on its physical environment, but also explicitly links the spatial and material elements of the city to the social and economic forces that shape them.

The recent formation of an association, the International Seminar on Urban Form (ISUF), has broadened the interdisciplinary dimension of urban morphology, specifically including architects, urban designers and planners.⁸ ISUF's mission is to assemble a body of integrated knowledge of urban forms and urbanization processes across cultures and disciplines. In this context, geographers, archeologists and historians using the morphological approach seek to develop

substantive theories of city building, architects and designers look at these processes to develop normative theories of design; others study urban form to evaluate critically the effectiveness of past normative design theories.

ISUF's work is still at an empirical and inductive stage, but it is beginning to provide a forum for exchanging knowledge about city design and development. The continuing survey and synthesis of past and ongoing research indicates that New Urbanism's reliance on building types, street and block patterns, land subdivision and land-use mix within small areas and hierarchies of public space mirrors both traditional spatial arrangements and the processes of formation and transformation that continue to shape parts of many cities. These traditional elements of urban form are not superficial emulations of the past but the outcome of known practices that have a track record of accommodating greatly different urban processes.

Expanding the Palette

The research suggests ways of expanding the theory and practice of New Urbanism. On one hand, it begins to spell out the enormous range of culturally based differences in urban forms, both historical and present. The research extends beyond the limited range of Anglo-Saxon responses and outlines many potential options that designers and planners might consider, especially in anticipation of the continued influx of Asians and Latin Americans into the United States.

On the other hand, the research provides detailed information about recurrent phenomena at the micro-levels of urban form. For example, the importance of the individual lot or parcel of ownership in shaping urban form certainly lends credence to New Urbanist focus on building type. The study of urban lots (one of urban morphologists' favorite subjects) not only documents the potential of many different building types, but also illustrates the range of mutations that occur within each type over time, reflecting attempts to balance the provision of sheltered space against the need for private open space for either cultivation or recreation.

Gianfranco Caniggia, for example, identified the

process of *tabernizzazione* (literally “the making of rooms”) or the gradual subdivision of buildings within individual lots to accommodate growing population and densities in Italian towns over many centuries. This example helps us consider New Urbanist proposals for accessory dwelling units in the context of the long-term history of optimizing the use of space under economic pressure and growing population needs. Another phenomenon, which M.R.G. Conzen calls “market colonization,” highlights the incremental transformation of open-air market places in British medieval towns into permanent mixed-use urban quarters; this provides a fascinating historical context to understand the current transformations of commercial malls.

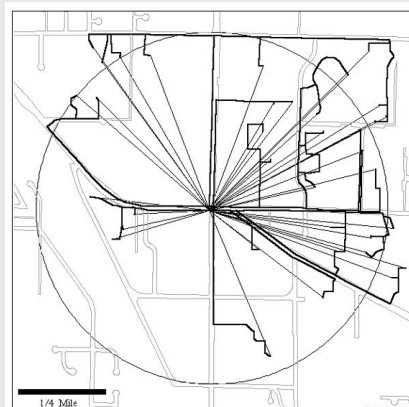
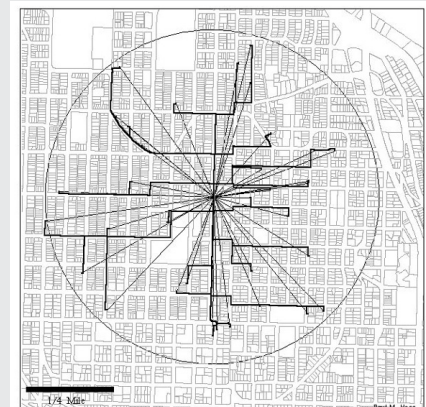
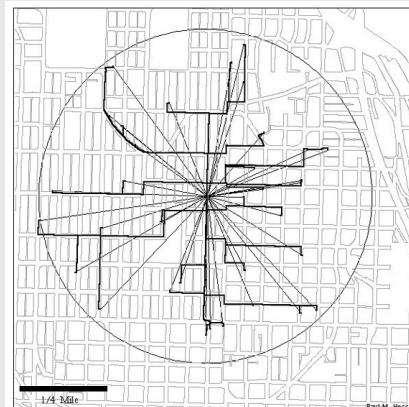
Generally, these studies show that New Urbanist proposals aim to recapture urban design processes that have long structured the formation of urban space and to adapt urban development strategies that have long enabled urban evolution and the inevitable transformation of urban space. The studies also suggest that New Urbanism rethink its reliance on static building types, expanding its definition to include how space may be used by different people and for different purposes, and to consider how types perform over time. Urban morphological studies make it clear that time is an essential dimension of urban form, and that the designer’s intervention only marks the beginning of a long process of transformation. Educating designers and planners to understand the processes of change will allow them to better anticipate its inevitability and to provide some of the necessary options.

Interpreting Substantive Research

The development of substantive theory is neither value- nor risk-free. The controversy that surrounds the interpretation of research on urban form and urbanization processes echoes some of New Urbanists’ struggles for identity.

One such struggle in urban morphology involves the issue of modernity in city building. Most scholars see long-term continuity in urban form and accept the gradual introduction of change; hence, they support the direction taken by New Urbanism. Some, however,

Pedestrian Accessibility



This study assesses the pedestrian accessibility characteristics of traditional neighborhood development and typical suburban development, comparing two communities in the Seattle area. Each pair shows the same area; the image on the left shows street patterns and the image on the right shows street and lot patterns.

Top row: The urban neighborhood of Queen Anne showing walking routes and straight-line distances between randomly selected housing units and the center of the retail district. Average walking route length is 0.43 miles. On average, walking routes are 1.29 times the length of straight-line distances.

Bottom row: The suburban neighborhood of Kent East Hill showing walking routes and straight-line distances between randomly selected housing units and the center of the retail district. Average walking route length is 0.66 miles. On average, walking routes are 1.6 times the length of straight-line distances.

Graphics: Paul M. Hess

argue that the Modernist break with tradition (large, self-contained buildings, large blocks, etc.) is likely an accelerating and irreversible trend.

“Conservatives” (those who believe in the future continuity of forms), “progressists” (those who see the accommodation of gradual change) and “Modernists” (those who believe that Modern environments have only begun to be produced in cities) engage in debates that are similar to those surrounding the New Urbanism. The question is one of interpretation: whether and when New Urbanist advocacy (or, for that matter, any other instrument of change, such as significant increases in gas prices) will effectively co-opt contemporary forces

of suburbanization and eventually prevail in reversing the forms and patterns of suburban development.⁷

Another challenge relates to the regional scale of today's cities. While urban form continues to be produced at a relatively small scale, in increments of lots, blocks or districts, cities have taken a regional dimension that greatly affects how they function, in terms of location, transportation decisions and behavior in general. Most urban morphologists, as most New Urbanists, continue to work at the neighborhood or district scale and have yet to address the great challenges posed by the emergence of city–regions. The few studies of regional form and the few New Urbanist regional plans suggest the need to recognize the different scales at which urban form is shaped and the need to understand, as well as practice, the relationships that exist between elements at the different scales.

Next Steps

Claiming its roots in the history of theory, the New Urbanism first exercised its influence by building a supporting base in design practice. It later added a pedagogical dimension, with educational programs at the University of Miami and in the Congresses. A logical next enabling step would be to develop a research program that would establish a substantive foundation that would test and validate the movement's ideas, ground it into actual processes of city building, and contribute to its long-term viability.

Three areas of research emerge. One is the critical documentation of the New Urbanism's nemesis, contemporary suburban development practices, including their impacts on human behavior and resource consumption, especially environmental systems. For all the rhetoric surrounding the subject, only lip service has been paid to actually measuring the vast excesses related to this form of development. Few policy makers really know how big and spread out the elements of suburban development are, even as compared to previous generations. If the reaction to Newman and Kenworthy's attempt at comparison is an indication, even academics seem to pay a deaf ear to the issue.⁸

To provide a contrasting and positive alternative, a second area of research could turn to those parts of American cities where a more modest human imprint still enables healthy socio-economic conditions—documenting, for example, the many late-nineteenth and early-twentieth century suburbs where property values have risen over time, where residents may own and use multiple cars, yet where they drive at least half as fewer miles as in the newer suburbs, and where they may walk to shop. It is important to go beyond polling prospective buyers of new suburban homes and to learn more about people who selecting to stay in these older communities, how they use and behave in these environments, and why.

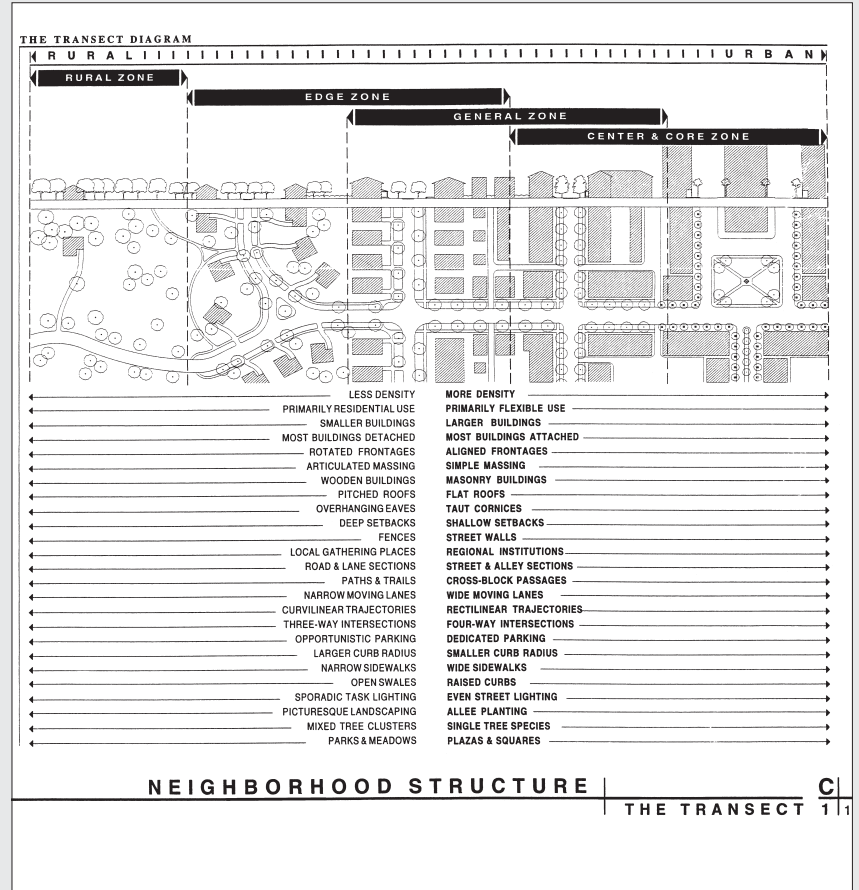
Finally, New Urbanism should study its own work, evaluate it critically and establish a baseline from which progress can be measured. People living in New Urbanist communities, as well as those building and managing them, can shed light on all sides of the debate: how good are the small lots, the town centers, the alley dwellings? Are residents shedding their cars, children walking to school? How strong are social ties in the community? Both positive and negative answers to these questions need explanation, in order to guide the designers into the next generation of projects.

Setting itself in this context, New Urbanism will be able to add substance to its claims, confirming with certainty their validity or calibrating them accordingly. Urban morphology offers a wealth of comparative data and analyses, as well as tools to carry out the research in a format that links the designer's concerns for the spatial and material elements of the city to the social and economic indicators typically used by the development industry. Adding this research dimension will afford New Urbanism the deeper level of self-awareness needed to insure the goodness of future cities.

Notes

1. New Urbanism has cultivated a large network of collaborators, not only in the architectural, engineering and urban design fields, but also in the areas of public policy, development, finance and community-based planning (through the charrette process).
2. For a historical overview of normative theory in urban design, see Geoffrey Broadbent, *Emerging Concepts in Urban Space Design* (New York: Van Nostrand Reinhold, 1990). A discussion of the different types of design theories can be found in Jon Lang, *Creating Architectural Theory: The Role of the Behavioral Sciences in Environmental Design* (New York: Van Nostrand Reinhold, 1987). For a broad discussion of the historical context contrasting belief versus proof, see Ian G. Barbour, *Religion and Science, Historical and Contemporary Issues* (New York: Harper San Francisco, 1997).
3. I borrow the concept of “goodness” from Kevin Lynch to encompass the necessarily broad goals that urban design and city planning theories must consider. The concept also serves as an umbrella for the various claims that the growing number of New Urbanists have made covering environmental, transportation, cost-of-life and quality-of-life issues. This conceptual shortcut does not address the issue that New Urbanism has become many different things to many different people.
4. For a recent review of the research and literature in this field, see Randall Crane, “The Impact of Urban Form on Travel: A Critical Review,” Lincoln Institute of Land Policy Working Paper (Cambridge, MA: Lincoln Institute of Land Policy, 1999). Much of this research remains inconclusive because the transportation and land use data that are readily available relate to automobile travel speeds and distances rather than to the characteristics of non-motorized or transit travel. In addition, Crane’s interpretation overlooks the limitations of available data in relating transportation, land use and urban form.
5. *ULI on the Future: Smart Growth* (Washington, D.C.: Urban Land Institute, 1998) and Adrienne Schmitz and Lloyd W. Bookout, *Trends and Innovations in Master-Planned Communities* (Washington, D.C.: Urban Land Institute, 1998).
6. Some of ISUF’s members refer to the field as typomorphology rather than morphology, in reference to the important role that building types (and hence architectural scale) play in the production of urban form.
7. ISUF de facto adopted Geddes’s conceptual division

Rural-Urban Transect



“The transect is a system of classification deploying the conceptual range, rural to urban, to arrange in useful order the elements of urbanism. The transect is a natural ordering system, as very urban element easily finds a place within its continuum. For example, a street is more urban than a road, a curb more urban than a swale, a brick wall more urban than a cluster.”
The concept of the transect can undergird systems of

regulation and implementation that correlate various elements (such as street types and parking strategies, land uses, parks and house types) in a logical, immersive manner.

Graphic: *The Lexicon of the New Urbanism*, © Duany Plater-Zyberk and Company

between the descriptive dimension of the study of urban form (politography) and the interpretive dimension (politology), a division that is quite common in the sciences. Thus work goes on documenting trends in urban development, while disagreement on the meaning of these trends persists.

8. Peter Newman and Kenworthy, *Cities and Automobile Dependence* (Brookfield, VT: Gower, 1989).