



Are Compact Cities a Desirable Planning Goal?

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This paper considers some key issues that help to evaluate whether or not the promotion of compact cities is a worthwhile planning goal. These are: the pressures on prime agricultural land; residential density preferences; energy resource savings; the potential for expanding transit use and promoting TODs (transit-oriented developments); the costs and benefits of suburbanization; the efficiency gains from compactness; the impact of telecommunications on the density of development; the prospects for downtowns; the influence of rent-seeking on the promotion of downtown projects; the social equity of compactness; and the effects of competition among cities. Our evaluation of these issues does not support the case for promoting compact cities.

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The revolution in information processing and telecommunications is accelerating the growth and dispersion of both economic activities and population, possibly moving towards the point where "geography is irrelevant." Yet, at the same time, many planners (and policymakers) advocate "compact cities" as an ideal, in contrast to the reality of increasingly spread-out metropolitan development. The term "compact cities" is in increasingly common use in planning discussions, conferences and other similar venues. It can take on different meanings, each with different planning implications. To mention merely three possibilities: (1) a macro approach, based on high average densities at the city-wide or even metropolitan level, but more likely to be applied to a freestanding small town;¹ (2) a micro approach, reflecting high densities at the neighborhood or community level; and (3) a spatial structure approach, emphasizing a pattern oriented to downtown or the central city versus a polycentric (or dispersed) spatial pattern, with obvious density consequences. All three meanings are touched upon in this paper, although the micro approach is the one that has received most attention in the literature. An alternative classification is to distinguish among low-density, strip, scattered, and leapfrog development as forms of "sprawl," sometimes used as an antonym for "compactness" (Ewing 1995).

In this paper, we revisit several issues relevant to the compact cities discussion. Although the analysis is probably general enough to apply to most of the developed world's major cities, we restrict our remarks to United States cases. However, most of the differences between the United States and other developed countries are probably explained by a moderate time lag (e.g., in decentralization trends) rather than by significant differences in spatial structure. For example, Mieskowski and Mills (1993) sum up the results of another study by Goldberg and Mercer (1986): "Goldberg and Mercer set out to demonstrate that Canadian metropolitan areas are relatively compact and more centralized than those in the U.S. However, the authors conclude . . . that Canada and U.S. metropolitan areas were decentralizing *at the same rate*" [emphasis added].

Open Space and Agricultural Land

America is not running out of open space, nor in any danger of having cities encroach on reserves of "prime" agricultural land.

Compact city studies frequently refer to the savings in prime agricultural land. However, the favorite analytical model of cities (and their hinterlands) uses bid-rent curves that show how the highest and best use of land is determined and how policies to "contain" cities in order to preserve suburban farmlands force land into lower valued uses. The welfare losses show up in higher prices for urban space. High urban land prices in Japan, especially in the 1980s, resulting from government restrictions on the marketability of agricultural land, are an example (Miyao 1991).

Moreover, the United States has a major problem of agricultural surpluses. Fischel (1985) showed that if the entire United States population lived at "suburban sprawl" densities of one acre per household (all of them made up of four people), just three percent of the total land area of the forty-eight contiguous states would be utilized. He also cited Frey's 1979 land use data for the contiguous mainland states, which show that almost ninety percent of the total area is in forest, range, pasture, and cropland uses. The cropland proportion could *expand* substantially if crop prices were to rise.²

The rural land preservation argument is sometimes extended to the global level. United States agricultural land must be preserved now, it is argued, because at some date in the future the growth in world population will result in insufficient food. Although this is a common argument, the evidence for it is weak. World food production per capita has increased modestly in the past decade and a half, while food production per capita in Asia has increased by about 25 percent; in the developing world, only in Africa did food production per capita decline (by six percent), and that reflects primarily structural development problems rather than an intrinsic shortage of fertile land (Sen 1994, 66). Of course, malnutrition is rampant (perhaps 700 million people are undernourished), but that is the result of poverty and an unequal distribution of food, not of food scarcity. In the words of Per Pinstrup-Andersen, Director-General of the International Food Policy Research Institute: "The world is perfectly capable of feeding 12 billion people 100 years from now" (quoted in *The Economist*, June 10, 1995, 39).

Density Preferences

Low-density settlement is the overwhelming choice for residential living.

Some observers have argued that this is not an unconstrained choice, but influenced by instruments promoting suburbanization, policies such as the preferential income tax treatment of home mortgage interest, subsidies to automobile use, and the ubiquitous interstate highway system. United States-Canadian differences (or similarities) may be a good test of these objections; for example, there is no home mortgage deductibility in Canada. Goldberg and Mercer (1986) marshalled considerable evidence to emphasize the differences. Yet, even their comparisons of the United States and Canada are subject to multiple interpretations, including the hypothesis of a simple time lag in decentralization trends. For example, both countries' cities are shown to have declining (and converging) population density gradients, although central city densities in Canada remain higher than those in the United States.

The policy explanations of United States suburbanization often emphasize the argument that more subsidies are given to auto travel than to public transit. The opposite is true. Federal, state and local expenditures for highways (and parking) were \$66.5 billion in 1991; revenues were \$53.8 billion (81 percent recovery); federal, state and local expenditures for transit were \$20.8 billion, while revenues were \$8.8 billion (42 percent recovery). On a per-passenger-mile basis, the auto subsidy was 0.54 cents; the transit subsidy was 54 times as large, 29.42 cents. Moreover, the transit subsidies have been growing faster: the same calculations for 1981 show that the transit subsidy per passenger-mile was then "only" 33 times the auto subsidy (U.S. Department of Transportation 1994).

The absence of congestion pricing and emissions fees is a widely acknowledged problem; it constitutes an implicit subsidy to auto users. While estimates of these costs cover a wide range, the Environmental Defense Fund (Cameron 1994) suggested that air pollution costs per passenger mile in Southern California in 1991 were 3.6 cents and congestion costs were 7.5 cents. Donald Shoup (1995) suggested that there may be up to an additional 11 cents per passenger mile of parking subsidies for Los Angeles automobile commuters. In any event, even with these adjustments (and making the extreme assumption that these "costs" are "subsidies"), the full auto subsidy adds up to little more than 22 cents per passenger mile and still falls short of the transit subsidy.

Many consumer surveys have shown strong preferences for suburban living (see, for example, the Federal Home Mortgage Association's National Housing Survey: FHMA 1992, 1993, 1994), and the link between household preferences and preferred spatial patterns is clear: "[in] evaluating the desirability of ex-

isting spatial patterns, revealed preferences of consumers, especially when they have persisted as long as they have in the U.S., must be given some weight" (Dyckman 1976, A-2).

Has the decentralized residential spatial structure that reflects these preferences been influenced by government intervention? Salins (1994) argued that zoning has inhibited high-density development and mixed residential and commercial land uses, that core preservation strategies have undermined the recycling of obsolete central city land uses, and that the absence of market-driven strategies (such as school vouchers and the privatization of infrastructure provision and services) has contributed to the deterioration of the central city. It remains questionable whether such reforms would have more than a negligible impact on densities and spatial patterns.³

Of course, in a world of heterogeneous tastes, there are people who prefer alternatives to the dominant decentralized lifestyle. As an example, Handy (1994) laments the consequences of moving from Berkeley, California, to Austin, Texas. In her words: "I miss having my favorite restaurants, a copy shop, a bike shop, a pet store, a bookstore, and a supermarket, all within a short and pleasant walk from home" (Handy 1994, 3). She longs for the application of principles of what she calls "coordinated transportation and land use planning" of the kind adopted in Portland, Oregon, "where state-level mandates have pushed coordination: an urban-growth boundary was adopted at the same time that policies shifted away from freeway expansion, and land use plans are now being created for development of areas around current and future light-rail stations" (6). The interesting point about this statement is that what is happening in Portland (which is highly controversial, by the way) is as a result of top-down command-and-control planning rather than the expression of individual preferences.

A related argument is that developers are prevented by land-use regulations, zoning, and building standards from building at higher densities that would be more profitable and perhaps, if available at much lower cost, more attractive to consumers. The problem with this argument is that such regulations are not ubiquitous, so that we can find locations where high-density construction is feasible, and in some cases has been undertaken. In most instances sales have been slow. In an industry as cyclical as residential construction, developers are very market-conscious. The risks of building an unacceptable product are very high, and builders are well aware of the strong consumer preference for the single-family detached home (a preference that has probably been reinforced by the

increased publicity about legal, insurance, and other problems with condominium and townhouse associations and other common-wall developments). We have no objection to developers promoting pilot, or demonstration, higher-density projects to test consumer acceptance. However, even under the wildest, most optimistic scenarios, we would expect such projects to have a less than negligible effect on the prevailing average densities in any type of settlement. The compact settlement projects may have a boutique appeal; and the essence of consumer sovereignty is the ability of the market to cater to the wide variety of consumer tastes. We are in favor of compact developments being subjected to a market test; we oppose attempts to impose these through command-and-control zoning and design regulations, and we reject the argument that enough projects of this kind will be implemented to have any discernible impact on overall land use patterns.

The Energy Glut

Energy is one of many scarce resources; markets are required to husband scarce resources; government interventions are the real sources of energy "crises."

It is now well established that there has been a global energy glut, and it continues. The queues of the 1970s at gasoline stations were a uniquely U.S. phenomenon, predictably linked to United States price controls prevalent at the time. Ever since the controls were lifted, the OPEC cartel has lost clout and markets have performed exactly as expected. Controlling for the effects of inflation and taxes, the September 1996 price per gallon of gasoline in the United States is below the 1974 price; consequently, the relative price of gasoline compared with other goods and services has fallen dramatically. Paradoxically, in California and probably in other states, the fall in the price of gasoline relative to the price of housing has encouraged households to substitute housing for transportation costs by living farther out, thus contributing to suburbanization. Furthermore, per capita energy consumption in the United States is now below its 1973 level, in spite of the relative price change (Bohi and Darmstadter 1994). Energy resource constraints are a weak argument for promoting compactness; in any event, as suggested below, the link between high-density development and reduced VMT (vehicle miles traveled), and hence reduced energy consumption, is by no means clear.

The Scope for Transit

Low densities make high-capacity transit systems unattractive and therefore wasteful (of all resources utilized, including energy).

Because the spreading out of cities reduces markets for conventional public transit (especially fixed rail, which is spatially inflexible and usually oriented to downtown), it should surprise no one that the United States transit industry has been in decline for most of the twentieth century. Massive subsidies have not helped; they may have made matters worse. The Congressional Budget Office concluded that “despite more than 25 years of federal assistance, mass transit carries only about 5 percent of people who commute to work. The other 95 percent mostly use automobiles. . . . New federally assisted transit systems have not added to mass transit; instead, they have replaced flexible bus routes with costly fixed-route services to a few downtown areas, while the growth in jobs and population has been in the suburbs and in the smaller cities. At the same time, transit costs are rising: transit fleets in general are greatly underused, and the new transit systems have for the most part added to costs and to unused capacity without attracting riders from cars” (Congressional Budget Office 1988). A large (and still growing) number of studies echo this finding (from Meyer, Kain and Wohl 1965 up to recent years, e.g., Pickrell 1989).⁴

It appears that “neotraditional” neighborhoods, pedestrian pockets, mixed land use developments and other features of the New Urbanism do not make much of a difference. Cervero (1994b) reports: “Overall, focusing development near transit and designing communities to be more transit-friendly, by themselves, will have little bearing on people’s travel choices.” Moreover, Crane (1996) has suggested it is possible that neotraditional neighborhoods may increase rather than reduce automobile use, depending on case-by-case empirical considerations, because shorter origin-destination distances reduce the average cost per trip. Cheaper trips mean more *vehicle* trips, and it is conceivable, perhaps more probable than not, that total VMT (vehicle miles traveled) may increase. Thus, neotraditional neighborhoods may neither increase transit use nor reduce auto travel.

Meanwhile, Downs (1994), in a recent attack on what he calls the “dominant vision” of decentralized development and low-density growth, has nevertheless criticized the effectiveness of Calthorpe’s (1993) idea of transit-oriented development (TOD) as a basis for the next American metropolis (Downs 1994, Appendix C). Downs attempts to simulate whether Calthorpe’s approach could have accommodated all the suburban growth (about 237,000 people) in the average MSA (Metropolitan Statistical Area) during the 1980s. He assumes, generously, that a TOD might be 288.5 acres (a circle with a radius of 2,000 feet around

a transit station), and that 35 percent would be devoted to residential use developed at a density of 15 units per acre. Accommodating the average MSA’s suburban growth would require 63 TODs. At intervals of 1.5 miles, this would require 96 miles of a transit system. In cases of faster growth, the number of TODs might rise to 140, and the transit system mileage might rise to 210 miles. Even in the first case, the required system would be larger than BART (the Bay Area Rapid Transit System in San Francisco), larger even than the Washington, DC Metro. Given the numbers of people served, construction of the needed system would not have been feasible, in terms of either financing or passengers served. Nor is there any evidence that such a system would divert significant proportions of travelers from private cars to transit, judging by experience in other United States metropolitan areas. Substituting buses for rail would not work, either, because most of the trips would be too long to attract much patronage.

Suburbanization and Congestion?

The traffic consequences of suburbanization are benign.

Industry moves to the suburbs, following the labor force, which allows many workers to enjoy a shorter worktrip in time if not in distance and reduces congestion pressures in traditional centers. Although this type of adjustment is not instantaneous, and there are inevitable short-term disequilibria, the important point is that the self-corrections are relatively fast. Orange County was Los Angeles’ quintessential “bedroom community,” with a local workers-to-jobs ratio of 1.4 in 1974. By 1993, the ratio had fallen below 1.1, almost identical to that of the core county of Los Angeles.

Suburbanization has been the dominant and successful mechanism for reducing congestion. It has shifted road and highway demand to less congested routes and away from core areas. All of the available recent data from national surveys on self-reported trip lengths and/or durations corroborate this view. The findings from *all seven* recent large-scale national household surveys present a consistent story of the containment of metropolitan area commuting times (Gordon and Richardson 1994b). Evidence from NPTS (Nationwide Personal Transportation Study) reports (1977, 1983, 1990), a commuting questionnaire included in the American Housing Surveys (1985, 1989), and the two decennial Census reports (1980 and 1990) all help to make the same point. The 1990 data indicate some increase in average commuting distances, which is accounted for largely by changes in the two tails of the trip distribution (i.e. fewer very

short trips and more very long trips). However, that increase was offset by faster travel speeds. As a result, commuting times remained more or less the same.

The Efficiency of Compactness?

The economic and resource "efficiency" of compact development has never been adequately demonstrated.

The debate touched off by publication of the Real Estate Research Corporation's (RERC's) *The Costs of Urban Sprawl* (1974) revealed the complexity of the issue. Altshuler (1977, 1979) and Windsor (1979) have summarized the many errors that weaken the RERC report and its sweeping conclusions beyond repair, although it continues to be quoted approvingly, especially in nonacademic circles (e.g., Bank of America et al. 1995).

Recent NPTS data give some idea of the range of RERC's errors. RERC assumed that auto daily travel time (for "head of household") living in "low density sprawl" (i.e. a housing density of 1,360 units per square mile⁵) was 61.2 minutes per day, and that the same individual living in "high density planned" development (i.e. 4,102 units per square mile) traveled only 37.8 minutes per day; hence, sprawl living patterns induced more than 60 percent more travel. But in the real world, central city residents and suburban residents incur similar trip times. 1990 NPTS files (Vincent et al. 1994) show that average commuting times were 18.2 minutes (one-way, all modes) for central city residents in urbanized areas, and 20.8 minutes for urbanized area residents living outside central cities. RERC also assumed that clustered development would generate considerable travel savings in shorter *nonwork* trips. The 1990 NPTS showed that auto users' average shopping trip time in the New York CMSA (Consolidated Metropolitan Statistical Area) was 12.4 minutes for central city residents and 11.8 minutes for suburban residents; the comparable numbers for the Los Angeles CMSA were 11.0 and 9.9 minutes (Gordon and Richardson 1994a, 1994b, 1995). The L.A. suburbanite had a 20 percent *shorter* shopping trip time than the New York center city resident. RERC, on the other hand, assumed that total annual travel for the average household in high-density communities would be 9,900 miles, but 19,700 miles in low densities.

It is now well known that the still frequently quoted RERC's report is badly flawed; for example, it focuses on on-site servicing costs at the expense of more general public service costs, such as roads to provide access to jobs, shopping and recreation, and does not allow for quality differences (e.g., the value of a private yard) in the cost comparisons. Yet advocates of compact cities have used similar techniques to offer more recent empirical corroboration for their

claims. Newman and Kenworthy are a notable example, and they also made a number of serious errors (Gomez-Ibanez 1991; Brindle 1994). Another example is the CUPR (Center for Urban Policy Research) group (e.g., Burchell et al. 1992a, 1992b; Burchell and Listokin 1995), which used an approach similar to that of RERC, that is, a prospective view of the comparative costs of alternative types of development under sets of very precise assumptions. Their conclusion was that "the state of New Jersey could save \$1.3 billion [a 10 percent saving] in infrastructure costs for roads, utilities, and schools over a twenty-year period if a state plan managing growth were followed, as opposed to the sprawl patterns of development" (Burchell and Listokin 1995). Government-sponsored studies (e.g., Duncan et al. 1989; Resource Management Consultants 1989) also have argued in favor of low cost/high density development. Furthermore, Frank (1989) reviewed several decades of studies and found that for streets, utilities and schools, capital costs tended to be higher at lower densities and at increasing distances from the central core. In addition, as pointed out much earlier by Downing (1977), costs may increase with distance from central facilities such as sewage treatment plants and water sources (but, of course, these may not be *centrally* located, so the relationship with density is obscure). On the other side, Ladd (1992) argued that, except within a range of very low densities, public service costs for traffic management, waste collection and disposal, and crime control increase with higher densities. Peiser (1984, 1989) estimated that infrastructure cost savings in "planned" as opposed to "unplanned" developments were very small. Altshuler and Gomez-Ibanez (1993, chapter 5) concluded that none of this research has given convincing support to the fears of sprawl.

A final problem in discussions of the compact city is the pejorative use of the term "urban sprawl." It conjures up connotations of the general meaning of "sprawl" as an unaesthetic, lazy and undisciplined form of body expression. The original application of this term in a planning context was to describe predominantly commercial "ribbon" development along both sides of highways over considerable distances, sometimes called "retailscape." Now the term has been generalized to include almost any kind of low-density suburban development and "leapfrog" development (Altshuler and Gomez-Ibanez 1993). But that suburbanization itself should be an object of attack is amazing, given the expressed preferences of the majority of Americans for suburban lifestyles and the supposed sanctity of consumer sovereignty.

Technology and Agglomeration-Congestion Trade-Offs

High-rise or concentrated settlement is costly and only worthwhile if transport or communications costs are high; yet these have been falling for many years, and communication costs, at least, are likely to continue to fall steeply in the mid-term future.

High density settlement involves trade-offs between inevitable costs (congestion) and prospective benefits (agglomeration). High-rise buildings exist where they do only because the high costs of erecting and maintaining them were considered to be worth the economies realized through increased accessibility, communication and interaction, and the ease of face-to-face transactions.

These trade-offs help to explain how, over the past century, numerous innovations in technology and organization have changed cities, first by extending the "effective radius" from the center to the periphery, and subsequently by modifying the congestion-agglomeration trade-offs. These advances include the streetcar, the substitution of electric power for other energy resources, the rise of trucking, and the construction of interstate and intra-metropolitan highway systems. Major innovations in transportation and communications have made the benefits of agglomeration available over areas of increasingly greater spatial extent, allowing many of the costs of congestion to be avoided.

For most of the twentieth century, the highway system has been the major force for continued low-density settlement and suburbanization. The barriers of distance continue to "dissolve" (Webber 1993); factories and offices continue to move to where employees want to live. Most commuting is now suburb-to-suburb, taking congestion pressures off traditional downtowns and allowing many to drive faster on less congested suburban highways. Suburb-to-central-city commuting continues to diminish. City forms continue to evolve beyond polycentricity to patterns of generalized dispersion. Recent research on the Los Angeles CMSA that compares employment concentrations in the three census years, 1970, 1980, and 1990, shows that all places qualifying as "centers" (based on trip generation densities) accounted for 19 percent of regional employment in 1970, 17 percent in 1980 and only 12 percent in 1990. Also, the number of places qualifying as centers declined from 20 (in 1970) to 12 (in 1990) during a period when the region's employment base grew from 3.6 million to 6.3 million jobs (Gordon and Richardson 1996a). This dispersion of economic activities, clear-cut in Los Angeles and perhaps evident in other metropolitan areas once the re-

search has been done, is much more radical than implied by the adoption of concepts such as "edge cities," "satellite cities," "polycentricity," and "urban villages."

Rapid advances in telecommunications are now accelerating the decentralization trends set in motion by the advent of the automobile. In 1890, the "effective radius" of U.S. cities was said to be about 2 miles, based largely on pedestrian access. Dyckman (1976) reported that this had grown to 8 miles by 1920 because of the development of public transit, to 11 miles by 1950 (the diffusion of automobile ownership), and to 20–24 miles by the 1970s (the construction of urban freeways systems). The centrifugal trends have now accelerated because telecommunications access cannot be measured in terms of geographical distance. The locational choices open to both households and firms have expanded accordingly. In the extreme case, geography might become irrelevant. Peter Drucker suggests that "[o]ffice work, rather than office workers, will do the traveling" (Drucker 1989, 38). Proximity is becoming redundant. Rural (as well as "exurban" and outer suburb) workplaces are growing the fastest of all. The revolution in telecommunications has been neatly summarized in "Moore's Law": information processing capabilities double about every 18 months. Intense global competition ensures that the newest technologies are quickly adopted.

Entertainment already is, and instruction is more likely to be, transmitted over broad-band radio frequencies rather than seen in traditional theaters or lecture halls. Today's cities continue to become less compact; the city of the future will be anything but compact.

Those who misread these trends do so at considerable cost. For example, Asian real estate investors lost approximately one-half of their \$77 billion investment in American cities over the last decade or so by focusing on downtown locations. Americans should not feel too smug, however, because their elected representatives have squandered, in total, even larger sums on dubious downtown renewal schemes.

Downtowns in Eclipse

Small-area employment data analysis show that the decentralization and dispersion of most activities continues, and that downtown renewal efforts have failed.

When we compare decennial population census files or quinquennial economic census data, or examine cross-sectional data from sources such as the Wharton Decentralization Project (Linnemann and Summers 1991), the same conclusion emerges: most job growth, regardless of economic sector, is in the outer suburbs far away from downtowns and transit

stations, even in the more transit-oriented metropolitan areas. The Wharton data also show that in the 1980s (the period of greatest downtown investment), CBD job growth was slow, negligible, or negative. Together, CBDs in the top ten cities (New York, Los Angeles, Chicago, Philadelphia, Dallas, San Francisco, Boston, Detroit, Washington, DC, and Houston) grew at barely over one percent per year in the period 1980–1986. It may be merely coincidental that the Census Bureau abandoned CBD tabulations in their 1990 reports. Although the compact city advocates focus primarily on increasing densities in suburban, exurban and free-standing settlements, they are invariably sympathetic to downtown and transit-oriented development. They are also supportive of central city revival efforts (Porter 1995); however, recent central-city employment performance (1988–1994), as reflected in central county data, has been as bleak as that of the CBDs (Gordon, Richardson, and Yu 1996).

Rent-Seeking and Politics

Declining sectors turn to political support for remedies. For cities, this leads to a rejection of market processes and creates coalitions for policies that attempt to offset them. However, these efforts are likely to fail; they waste taxpayers' funds and misallocate scarce public sector resources. As a result, the plight of cities worsens.

Generally, rent-seeking activities are facilitated by the actions of dirigiste governments, which in turn feed off rent-seekers. This augments the possibilities for waste: not only are there consumer surplus losses from the “welfare triangles” of elementary microeconomics diagrams (the inefficient use of resources), but resources are also diverted to the politics of seeking or avoiding favorable or unfavorable regulation. Dynamic analysis is even more disturbing: rent-seeking deters the “creative destruction” of buoyant economic growth; as pointed out by Mancur Olson thirty years ago (Olson 1965), the market losers are often the most politically connected, as well as the most economically motivated to resist change.

In United States cities, downtown interests have managed a broad spectrum of often creative political efforts on their own behalf. These have included downtown renewal projects that were hailed as breakthrough public-private partnerships by some planners, but seldom evaluated for efficiency or the incidence of their costs and benefits. (See Sawicki's review [1990] of Frieden and Sagalyn's [1989] celebration of *Downtown Inc.*). Among other efforts are downtown-focused rail transit systems, downtown-sited convention centers, and the revitalization of architecturally significant core neighborhoods as entertainment centers, stadiums, theaters, etc. The proof

of the political nature of many of these investments has been their across-the-board failure to reverse the decline of downtowns. In Los Angeles, the Community Redevelopment Agency has spent \$2.5 billion (in terms of constant 1992 dollars) on downtown renewal over the past 25 years. The results have been disappointing. Currently, the agency is unable to continue its attempts to revitalize downtown because of declining tax increment revenues from commercial properties within its development area. That was not the plan.

Despite expensive revitalization, downtowns compete poorly as public gathering spaces against suburban malls and “invented streets,” such as MCA's \$100 million City Walk at Universal City in Los Angeles, where the street performers do not panhandle and where the graffiti is public art commissioned by architects. Throughout the United States, downtowns continue to decline, rail transit systems continue to lose passengers, and convention centers continue to claim large subsidies (Mills 1991). Many of the new downtown projects might pass Hall's (1980) criteria to qualify as “planning disasters”; although their implementation can easily be explained by the victories of interest groups, that does not justify them. Their main effect has been a fiscal drain, further weakening the central cities they are supposed to save.

Keating and Krumholz (1991) examined six recent downtown plans and criticized them for not adequately addressing “social equity concerns.” Their call for analysis cannot be faulted, but it may be naive to expect such plans to be resistant to the rent-seeking agendas of powerful interests. Serious evaluation with a careful consideration of costs, benefits and incidence might show an unwelcome combination of inefficiencies and regressivity.

The oldest and the largest United States cities often have the most entrenched interests and the most intrusive governments. They are prone to higher taxes, more mandates on businesses and landlords, and more burdensome regulations, often along with deteriorating public services. The effect is to drive more and more economic activities out from central cities. At the same time that bureaucracies are strengthened, the cities increasingly become the haven of the poor and the unemployed. A vicious cycle sets in that further weakens traditional city centers.

Compactness and Equity

The equity case for compact cities is weak.

Some reviewers of an earlier draft of this paper complained about its preoccupation with economic efficiency arguments and its neglect of social equity concerns, with the implication that compact cities are

more equitable. For example, "market processes might produce socially unacceptable results . . . and . . . market processes in urban areas are hugely affected by political forces controlled by upper-income rent-seekers who favor socio-economic segregation" (Anthony Downs, letter to the Editors of *JAPA*). Or, in the words of one of our colleagues: "A second rationale for attempting to change land use and transportation patterns is to increase social equity." Suburbanization is "the result of the affluent population escaping the fiscal and social problems of central cities. . . . Once they establish such communities, they can exercise land use controls to exclude households with different housing needs or preferences. This process results in spatial segmentation of the population on the basis of income, ethnicity, and race; . . . intervention is justified because suburban residents are actively preventing a spontaneous mixing of population, thus denying less affluent and minority populations access to suburban jobs and suburban amenities" (Giuliano 1995, 10–11).

Such arguments involve several separate, but interrelated, strands: existing suburban land-use patterns are inequitable; suburban areas are racially segregated; measures to increase compactness would improve equity; and, more generally, land use policies *should* be designed so as to increase social equity.

First, in the United States, 30.3 percent of urban households living in suburban areas have annual incomes below \$25,000, a significant proportion although lower than the central city share (46.8 percent; U.S. Bureau of the Census 1990). Second, in many suburban communities the nonwhite population share is high, sometimes in the majority.⁶ Of course, this does not apply to all types of suburbs, especially high-income locations. But the absence of significant numbers of minorities in such communities is the result of their lower incomes, not their race. Third, the link between interventions to increase compactness by promoting higher densities and improvements in equity is obscure at best. The more highly publicized compact communities (e.g. Laguna West, Seaside, Kentlands) are much less affordable relative to statewide average house prices than are many more typical suburban communities such as Moreno Valley in Riverside County, California, one of the fastest growing communities in the country during the 1980s. Fourth, poor people are excluded from buying into expensive residential neighborhoods not because of exclusionary zoning, but in exactly the same way that they are excluded from buying Lexus or Mercedes automobiles; they cannot afford them. If this is regarded as inequitable, the remedy is to press for direct income redistribution, not for changes in land use policies. The latter are a feeble approach to social equity issues.

Competition Among Cities

The major countervailing force to these trends derives from the fact that in an age of increasingly mobile capital, cities (and their governments) must compete to survive.

As capital becomes more mobile, crossing both state and even international frontiers with ease, policy errors are quickly punished by capital markets, inflicting considerable damage on the offending localities in terms of lost jobs and investment. Cities that are the most captive to special interests are the least likely to adopt growth-oriented policies. Enlightened administrations such as Indianapolis' mayor, Stephen Goldsmith, and Jersey City's mayor, Bret Shundler, understand this, and are pursuing reforms that resist rent-seekers. The differing responses to policy errors are one of the best answers to the old question of why some regions prosper while others decline. That answer induces skepticism about the desirability of the reduced competition that would surely result if the advocates of metropolitan and regional government had their way.

Conclusion

Bourne (1992) directs attention to "more compact and humane" urban forms. He does not recommend New York City as his model, but rather Toronto and its published plans that offer "the possibility of achieving new agglomeration economies for firms, lower automobile dependency for households, reduced environmental destruction, lower pollution levels and higher quality of service" (512). However, Bourne provides little empirical evidence for his position, citing only Newman and Kenworthy's (1989) and Nowlan and Stewart's (1991) findings.

Suburban life is often dismissed by visionaries for its alleged "moral minimalism," evidenced by lack of involvement in community affairs or "social control" (Baumgartner 1988). However, the moral superiority of core-city programs that forcibly divert huge resources towards downtown projects that enrich favored developers and their political allies is highly dubious. Not surprisingly, advocates usually link downtown capital projects to inner city revitalization and redistributive agendas. However, such projects' "porkbarrel" aspects and their regressive financing via sales taxes are well established. Los Angeles' downtown-focused rail transit projects account for more lobbying activity than does the entire California State government!

This paper has reviewed some of the findings that must be refuted before Bourne's proposals can be taken seriously. Citing the problems of the compact city ideal does not imply, however, an endorsement of

the status quo. There are inevitable problems with *how we manage* the highway system, negative externalities and urban service delivery systems. Approaches to some of these shortcomings, such as time-of-day road pricing, tradable development rights, and fully portable education vouchers, have been discussed elsewhere (Richardson and Gordon 1993). Spelling out the details of why such policies are cost-effective remains a research challenge; but the alternative of attempting a *reversal* of existing urban development trends is neither feasible nor desirable.

POSTSCRIPT

The first draft of this paper was written in 1994. The controversy about compact cities and sprawl has raged on. It is infeasible here to review all the new literature, but an overview can be obtained from two Lincoln Institute of Land Policy publications (Lincoln Institute of Land Policy 1995; Diamond and Noonan 1996) and from a review paper on the relationship between energy use and urban form (Anderson, Kanaroglou, and Miller 1996).

AUTHORS' NOTE

We are grateful to our referees, both anonymous and named, and mostly critical, for helping us to clarify our arguments, if not to change our minds.

NOTES

1. According to the 1990 Census of Population, gross population densities per square mile in the United States as a whole were 3,320 in "central places inside urbanized areas," 2,813 in central cities, 2,149 in suburban areas and 1,498 in "central places of 10,000 population or more outside urbanized areas." These data indicate relatively low densities overall and moderate differentials among different types of urban settlement. Eight cities (New York, San Francisco, Jersey City, Chicago, Boston, Philadelphia, Newark, and Miami) have densities in excess of 10,000 per square mile (Downs 1994, Table 8-3). In addition, higher suburban densities can be found at specific locations; for example, Downs (1994, Table 8-1) estimates that of all suburban residents in Los Angeles County, 31.9 percent live at densities of more than 10,000 per square mile. (The equivalent numbers are 10.3 percent in Dade County, Florida and 10.5 percent in the suburbs of New York City.) Thus, there is considerable scope for increasing densities in an abstract sense. The real issue is whether this could be stimulated on a sufficient scale to influence overall average densities.
2. A more recent study by Frey (1995) increases the urban land share to about 15 percent by 1987. The contradiction between this and Fischel's conclusion is partly explained by the difference between gross and net residential densities and the proportion of urban land devoted to nonresidential use.
3. In a widely quoted article, *Newsweek* magazine lists "15 ways to fix the suburbs," namely: (1) smaller lots (especially front yards); (2) promote stores within walking distance; (3) narrower streets; (4) abolish cul-de-sacs; (5) establish urban growth boundaries; (6) hide the garage; (7) mix housing types; (8) plant trees on sidewalks; (9) redevelop or revitalize old shopping malls; (10) promote mass transit; (11) build mixed-use developments that link work to home; (12) develop town centers; (13) shrink parking lots; (14) less garish streetlighting; and (15) preserve rural green areas (Adler 1995). Many of these proposals refer more to design elements than to the broader issue of density.
4. Not only academics, but also politicians are joining the chorus. For example, in California, State Senator Tom Hayden, a radical in terms of California politics and, incidentally, a driver of an alternative fuel vehicle, wrote an op-ed piece in the *Los Angeles Times* (Hayden 1995) arguing vehemently for pulling the plug on the Los Angeles rail transit project. We agree with his arguments 100 percent. In view of our notoriety as the libertarians of the planning profession, we can only marvel that logic makes such strange bedfellows.
5. In fact, prevailing suburban gross housing densities in 1990 were 780 units per square mile; even central city housing densities were only 1,060 units per square mile, while equivalent "central places inside urbanized areas" densities were 1,261 units per square mile. The implication of the RERC data is that in national average terms all the United States is "low density sprawl." The compact city proponents argue in favor of densities of 5-6 units per acre, or up to 3,840 units per square mile, not very different from the RERC's high-density standard.
6. To illustrate this point, consider the following examples from Southern California. Starting alphabetically and stopping with the letter C, the nonwhite household share in 1990 was 50.8 percent in Alhambra, 31.5 percent in Anaheim, 35.9 percent in Artesia, 41.0 percent in Baldwin Park, 49.3 percent in Bell, 56.0 percent in Bell Gardens, 57.8 percent in Carson, 51.1 percent in Cerritos, 35.9 percent in Colton, 90.8 percent in Compton, and 61.5 percent in Cudahy. We would not argue that Southern California is typical, but it is clear that the wholly white suburb assumption requires drastic qualification.

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