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TRANSPORTING AND TRANSFORMING A NATION

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Abstract

Planners increasingly blame transportation for the rapidly decaying inner-city urban environment. The freeway, after all, led to suburban development which has increased the disparity in economic opportunity within metropolitan regions. But transportation is also considered a tool to re-heal the social fabric of the nation's cities. Many social planners are promoting the design of more centralized systems that would reconnect inner-city residents with suburban jobs. The central city would then have a new social *raison d'être* to re-unite Black and white America.

Unfortunately, the combined social and economic forces at work seem to be too large and too well entrenched to be easily transformed by transportation, or any other current planning or policy device. American inner cities and suburbs are, in fact, disconnected. The only hope is that a new relationship can be forged between cities and suburbs that will provide for some reasonable accommodation. Transportation will be useful, but not a controlling mechanism for the development of some form of economic inter-dependency between city and suburbs.
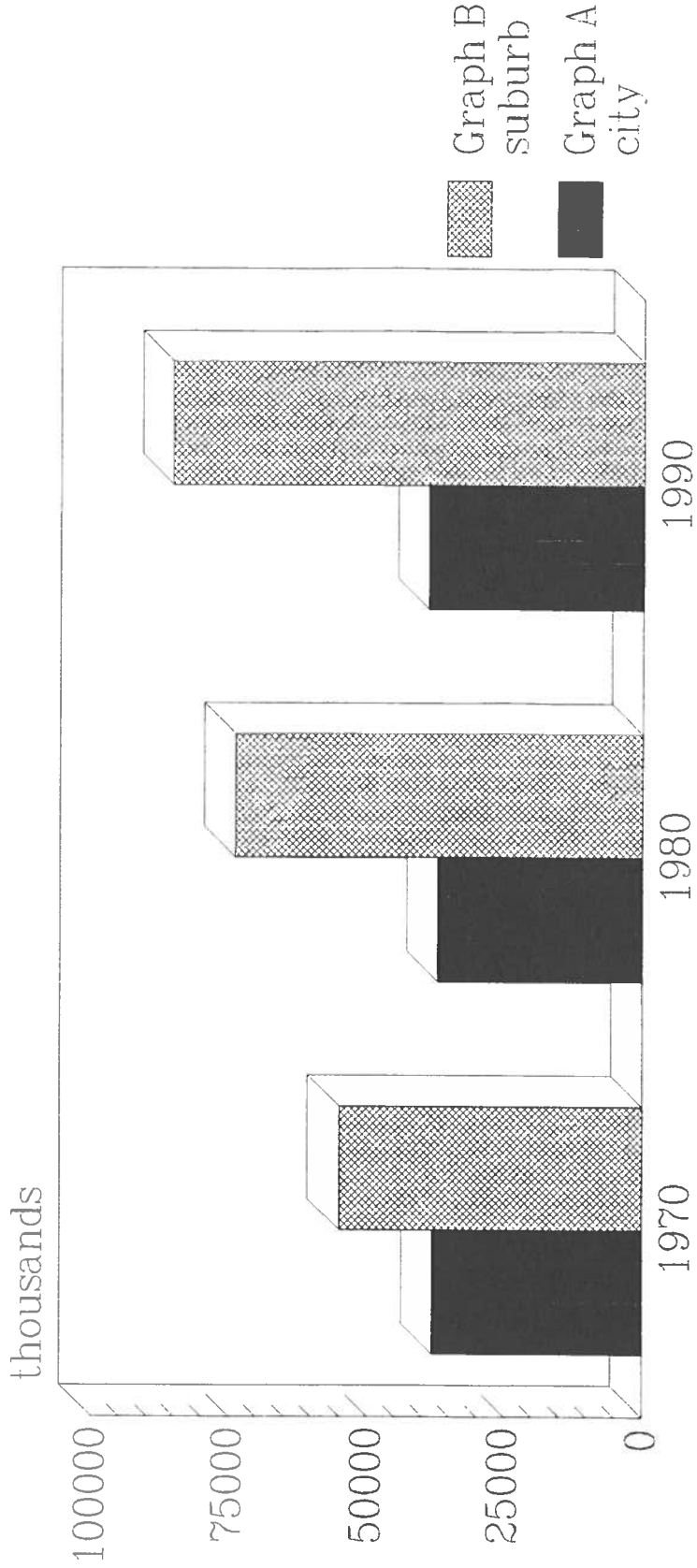
Introduction

In some future millennium, anthropologists will attempt to fathom the rapid decline of America's central cities. These scientists will examine the available records to discern the pattern of settlement from records and artifacts, interpreting them with their own contemporary understanding of communities. Most likely, they will view the rapid de-population of our cities as a result of a series of thermo-nuclear detonations, or the devastation wreaked by the AIDS crisis, or the severe and life-threatening urban air pollution that altered the atmosphere. These scientists will be no better able to explain the decline of American inner cities than today's anthropologists can accurately determine why the ancient Inca settlements were abandoned.

No future anthropologist would guess that one-third of the population deserted the enormously costly infrastructure of urban America for racial and social preferences. Yet this is precisely what has occurred. In the last two decades, cities like Detroit, Cleveland, and St. Louis have lost that many people. In the past 20 years, the nation's 39 largest central cities increased their population by less than 1 million while their surrounding suburbs increased by 30.3 million. This rapid decanting of the nation's population is far greater and faster than anyone anticipated.

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FIGURE 1

Big City–Suburb Population Change
1970–1990
39 Largest SMSAs

thousands

100000
75000
50000
25000
0

1970   1980   1990

source: US Census

Graph B
suburb

Graph A
city

KeyChart. 2000

For example, it took nearly a century for agricultural settlement to decline to the point that the nation was dominated by an urban-based industrial pattern. Few population movements other than those resulting from the Great Plague have denuded a settlement landscape as rapidly as the current transformation of the U.S. city system.

The automobile is viewed as the central culprit in this transformation; it provided many Americans the option of leaving the city, which has been a cauldron for the nation's social experiment —a melting pot for all races and classes. But the auto, the highway, and freeways existed well before the rapid economic and racial segregation of the nation's cities. In fact, many policy analysts trace urban decline back to "school busing" and the 1960s race riots — and not merely to the advent of the cheap suburban housing tracts.

There is considerable evidence that schools and racial disharmony have reshaped the economy more than the auto or external worldwide competitive forces. Clearly, globalization and advanced communications have changed urban geography, but they can scarcely be considered the causes or rationale for the continuing dilemmas. Nor can we attribute this transition to the American propensity to low-density lifestyles. It is increasingly clear that most of the changes in the nation's urban fabric can be attributed to an economically costly and perhaps deadly social re-arrangement of the nation's land use patterns. Furthermore, it is no longer possible to talk in terms of regenerating the old central city or re-linking the central city with the suburbs. Instead, we must re-plan our metropolitan systems with the knowledge that the central city will never again have the primacy it represented in the past. This paper is based on the premise that transportation cannot solve the problems associated with the emerging urban social pattern but it can help to reforge links between the city and the suburbanized regions that will allow the city and its suburbs to co-exist and in some cases to reinforce one another.

Bad Intersections: Transportation, Race, and Land Use Policies

There is considerable public debate regarding land use patterns and transportation as the major issues confronting planners. As Mitchell and Rapkin said as early as 1954, traffic is "derived from demand" (Cervero, 1989: 119). Cervero adds,

> . . . It derives directly from how activities are organized on land. Residential densities, the degree of land use mixing, site designs, the location of housing with reference to job centers — all set the stage for travel behavior, affecting the volume and length of trips as well as the modes and routes travelers choose (Cervero, 1989: 119).

This debate is giving rise to a revival of "old form" higher-density solutions to land utilization. In part, this revival represents the recognition that new commercial and industrial activities do not

require as much spatial segregation as they did in the past because of economic and technological innovations.

As a result, central cities with radical segregation of uses are less desirable than new suburban developments. In fact, the new suburbs offer better housing and shorter commutes to work than the old inner city for the upper-middle class. The new suburban developments are not spread across the landscape as popular literature indicates, but are highly concentrated along certain favored corridors and in relatively high-density settings (Archer and Smith, 1993). These development clusters have fewer traffic congestion problems than cross-city commutes. In fact, Archer and Smith found that ". . . firms in the suburbs have differing needs" (Archer and Smith, 1993: 53). Suburban firms need (1) a location with a "favorable image" and (2) employee perception that it is a "quality neighborhood" (Archer and Smith: 63). These findings are the new code words for the racial and economic transformations of the metropolis. As Christopher Leinberger states more clearly, ". . . metropolitan development patterns . . . are being affected by the fear of the underclass, which is perceived as black, than by any other factor" (Leinberger, 1993). Both the objective and the subjective data bear out this observation. As Figure 2 illustrates, jobs are leaving the city as poverty increases. The link between poverty, crime, violence, and social discomfort increases the demands for suburbanized developments.
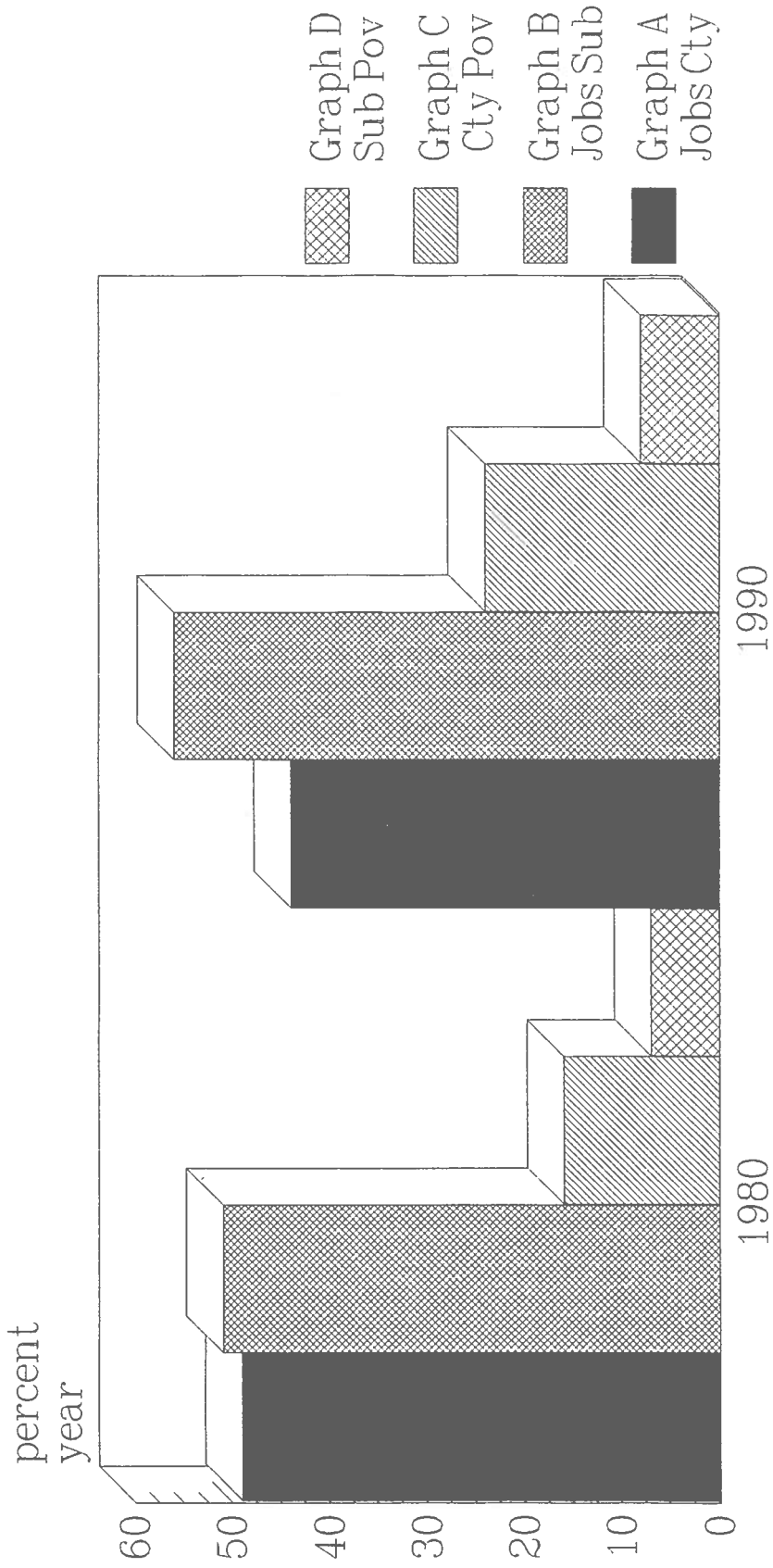
In essence, it is wrong to think of the suburb or metro-burb as a preferred urban form. A more appropriate view might be that it is the only form available given the current social circumstances. In other words, people might live in central cities if the city did not drive them away. The office or suburban clusters are a new means of re-congregating in "safe space." Or as Leinberger puts it, "Americans' natural instinct is to leave problems behind," (Leinberger in McCarron, 1993). As he sees it, the 1990s are the last chance to reverse this trend, or the 24 million new jobs forecast to emerge by 2005 will be located beyond the current suburban ring, too distant to be re-engineered by any transportation solution. For example, in Chicago, Lienberger says,

> . . . Sears is moving its merchandising division to Hoffman Estates, which is
> unreachable by public transit —twelve miles beyond Schaumburg and thirty
> miles from the Sears Tower...the primary reasons for the move is that the com-
> pany wants to rid itself of the predominantly black workforce downtown...to
> hire better educated employees probably predominantly white, who live near
> the 1.9 million square foot campus complex. The same motivation may have
> been behind the other recent corporate moves to the extreme fringe.
> (Leinberger, *The Nation*, 1992)

The Rodney King riots of 1993 may have had as serious an effect on the fate of urban minorities and job prospects of the underclass as firmly as the Watts riots and the widespread inner city unrest thirty years ago which led to the exodus from the city.

FIGURE 2

Jobs & Poverty—Cities & Suburbs
1980–1990

source: U.S. Census

Graph D
Sub Pov

Graph C
Cty Pov

Graph B
Jobs Sub

Graph A
Jobs Cty

KeyChart 2000

Separating Opportunities

The new locator functions we have discussed do not build on the old concentric hierarchy models. A new, yet-to-be-defined urban land use pattern is emerging within metropolitan areas. Suburbs are now the engines of economic growth. As Hughes and Sternberg (1992) point out,

> At the same time, the function of the inner city has changed. The inner city was once proximate to employment. The inner ghetto was a part of an urban machine that created opportunity. Now that machine is broken for poor and black people, with its parts spread across the vast metropolitan landscapes we've created during the past decades (p. 4).

The changes in the core city are not merely a transition phase from the old manufacturing economy to a new knowledge-based economy. There has not only been a massive de-concentration of employment but a re-organization of employment options and opportunities. The term suburban can scarcely be used when two out of every three jobs are located outside the city core areas. Gary Pivo characterizes the new form as a "string of beads." This string is not as random and disconnected as it may appear (Pivo, 1990). In fact, each unit or bead is performing and sometimes directly replicating the core activities of the "old downtown." One of the beads, for example, acts as the retail shopping area, another as a center of light industry, and another as an office park. Each bead is independent, although connected by the same string of highway.

The new employment pattern, amplified by the twin forces of globalization and technological change, is shaped by land uses and not by access points. As the base for the new economy, the new land form is just as powerful an economic tool as the old manufacturing model that served the central city. This pattern has shaped a new urban hierarchy with corresponding employment nodes. These nodes occupy different spatial patterns and operate under various urban systems, depending on where the metropolitan area fits into the international system. One manifestation of this situation can be observed in the growth and development patterns of both inner cities and suburbs. As Figure 1 indicates, strong international suburban systems generate stronger central city nodes. These nodes form what might be termed "metro-plexes" configured to meet the needs of the external demands of the international market system.

There are three related forms of this development. One of these is the "export" suburb designed to create international standard knowledge or products such as software, consulting, or engineering as well as new flexible-production manufacturing employment. The export suburbs tend to congregate close to air links and along interstate highways in the new "edge city" environments like Tyson's Corner (Washington, D.C.), Newport Beach/Irvine (Los Angeles), King of Prussia (Philadelphia), and Schaumburg (Chicago). These new industrial centers are causing another ring of residential\retail development even farther from the central city (Leinberger, *The Nation*: 1992).

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Adjacent to, but not dependent on, the export suburbs are the "national service" nodes consisting of finance, insurance, utilities, and real estate firms that serve national and increasingly international markets. These "service nodes" cluster in prestigious office centers to become "office park or park cities," offering campus-style large-scale office parks as their core configuration. Plano, Texas (outside of Dallas); Walnut Creek or Concord, California (both near San Francisco); and Scottsdale, Arizona (near Phoenix), are the best illustrations of this phenomenon. The park cities are frequently at long distances from the CBD and from one another. There is no relationship between these firm locations and the presumed face-to-face requirements of these industries. While some of their transactions are conducted by telecommunications, there is every indication that they remain highly dependent on face-to-face interactions to conduct the most important aspects of their enterprises. The park cities are primarily auto-dependent, tending to locate on major state access routes. They are seldom connected to urban transit systems, although busses are used for mass transit.

Both "edge" and "park" cities produce a third form of development designed to serve the metropolitan area as both living and recreation locations. These regional "mall-villes" are large-scale representations of the traditional shopping mall, but well beyond this scale. They include such large developments as Mall of America in Minneapolis and similar developments. The Mall-ville is anti-mass-transit. It is auto-oriented in the extreme. Mall-villes have several serious liabilities. They are dependent on lower-skilled workforces imported to the site. Moreover, they lack ordinary urban amenities such as childcare, parks, small-scale community services, and the like (Figure 3).
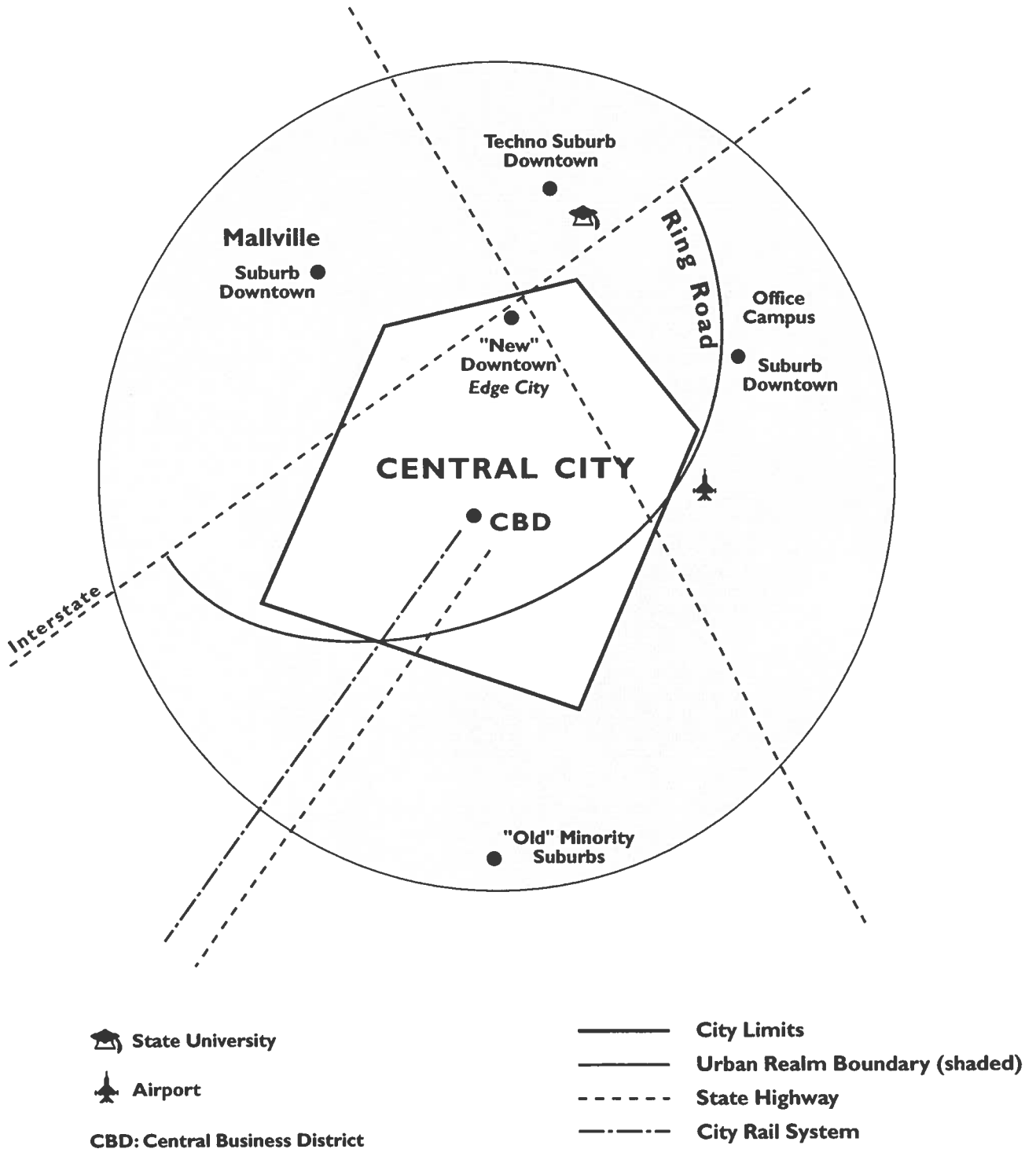
Low-skilled and local service jobs in any of these three configurations match the employment needs of inner-city residents. In fact, jobs such as maids, waitresses, school teachers, and other service workers jobs are the only jobs available in the suburbs. While some of this workforce commutes to these new jobs from the inner city, the majority are now commuting from ex-urban or older suburban districts. The commute between suburbs is adding congestion on the fringe while the amount of commute time into the inner city is falling. In fact, the number of commutes by inner-city residents from the city to employment nodes is falling despite transportation experiments to alleviate the problems. Hughes and Sternberg (1992) reviewed job access for inner city residents for the Ford Foundation and found three factors: (1) skills mismatches (social and education); (2) lack of information about jobs; and (3) feasibility of transportation systems as the real barrier to connecting inner-city residents with employment opportunities. They found the most successful efforts bridged both the information and training along with job support functions in the transportation system. In essence, the transportation program was a broker for the prospective employee as much as a means to reach the employment location.

The evidence from all the available research is that the spatial mismatch is growing as the occupational/sectoral mismatch among racial/economic groups increases. Hughes and Sternberg say it best:

FIGURE 3

URBAN REALMS MODEL

In Relation to Metropolitan Downtown in the Polycentric Metropolis

Techno Suburb Downtown

Mallville
Suburb Downtown

Ring Road

Office Campus
Suburb Downtown

"New" Downtown
Edge City

CENTRAL CITY

CBD

Interstate

"Old" Minority Suburbs

🎓 State University	——— City Limits
✈ Airport	——— Urban Realm Boundary (shaded)
CBD: Central Business District	- - - - - State Highway
	—·—·— City Rail System

Source: Adapted from Hartshorn and Muller, 1989

All the newest research supports the existence of some cost to city residence in the employment and/or earnings of African-Americans. Most of these studies test for and find that travel time exerts a negative effect on Black earnings or employment possibilities (p. 11).

That is, the employment opportunities and options open to an inner-city African-American are in different sectors with different skill and social requirements than the opportunities for middle-class suburban whites and blacks. "The basic fact remains that African-Americans are extremely disproportionately concentrated in the aging cities (and jobs) that most Americans have abandoned" (Hughes and Sternberg, 1992: 9).

However, there can be no mistake about the real issue here and the underlying problem. The new suburbanized America is distant both physically and socially from the inner-city resident. This social and economic distance will increase over time as new rural areas become urbanized. There is very little to prevent this process since local jurisdictions govern planning and the allocation of land in this country. As a result, as Don Benninghoven notes,

> We have a carefully developed system for guiding the future of individual cities . . . . What we lack, however, are similar mechanisms for developing the future region, for dealing with issues that transcend city boundaries (Bradshaw, 1992: 51).

Moreover, modern land use is not centralized to focus on one place. "The urban area", as Bradshaw says,

> is increasingly independent of urban location. People find community in many different places, and they must get to each of these places somehow . . . . Day care centers and schools are located near children; shopping centers (are) where (there are) both good access and people . . . and large firms (are) where workers and materials can be brought to them . . . . These networks form . . . (a) 'post modern, post urban collage' (Bradshaw, 1992: 54).

As agriculture is placed under increasing international pressure with the North American Free Trade Agreement (NAFTA) as well as increased food production overseas, more farm land will be released for urbanization. This means that even longer commutes are likely. While the environmental and social cost of agricultural land development may be high, the economic cost is not borne uniformly among jurisdictions (Blakely and Bradshaw, 1992).

City Lights

Strong pressures still remain for regenerating the "old core city" pattern for social and economic reasons. As a social use, the old form represents an important "integrator" function.

The city provides a level of social, ethnic, and racial diversity that less dense environments do not replace. In fact, most decentralized areas are intended to be socially homogeneous.

Cities and suburbs are not as separate as these observations infer. In fact, healthy suburbs breed healthy cities and the reverse. O'Connor and Blakely have examined city-suburban relationships in the United States and Australia and concluded that those metropolitan regions with strong city-suburb links —such as like San Francisco and Atlanta —outperform areas with weaker links (O'Connor and Blakely, 1990). In addition, the core city infrastructure is vastly under-utilized as the nation decentralizes. City sewers, streets, transportation systems, and facilities were all built to serve high-density populations, increasing face-to-face interactions that did not require a lot of movement. As Castells points out,

> it remains true that technology exists today that would allow a substantial proportion of office work to be performed in spatially scattered networks. . . . should such a trend develop, the consequences for the urban system would be phenomenal, as well as the social life. . . . (It) would signal the end of the basic material from which the industrial culture emerged in the 19th century (Castells, 1989: 43).

New immigrants from all over the world are revitalizing many of the core areas of the "old city" for new entrepreneurial purposes. In addition, core city areas have been the target of very large amounts of foreign investment. For most of the 1980s, Japanese investment alone was over 10 billion dollars per year. The bulk went into downtown commercial real estate and fueled the speculative investment levels of central cities. While Japanese money has all but disappeared since 1990, other Asian nationals from Hong Kong, Malaysia, Singapore and South Korea, as well as Indians, continue to view American cities as a major investment opportunity. This pattern has possibly diverted more local money to the suburbs, where an enormous orgy of speculative office building occurred in the mid-1980s for markets that never materialized. Some real estate leaders felt that the overbuilding was a manifestation of weak market analysis because there were few real studies done on the existing market potential of these projects. The assumption was that the suburban growth machine had no immediate limits. These large-scale suburban failures will hang over the market place for the next decade or two, according to Leinberger and others (Leinberger APA Speech, 1993).

Several factors are contributing to the restoration of many of America's central cities. First, downtown real estate is a bargain. Environmental clean-up costs are coming down, and well-situated city real estate is beginning to rebound in growing market areas like the West and South. Second, central cities serve some functions that suburbs cannot. Cities remain destination points as well as magnets for sports, entertainment, and social gatherings such as conventions. Developments like Baltimore's Inner Harbor, numerous downtown festival marketplaces, and new urban precincts —such as those emerging at New York's South Shore and Pike's Market in Seattle— have

rekindled these cities, while publicly induced developments have reinvigorated downtown Pittsburgh, Oakland, St. Louis, Boston, Atlanta, and Los Angeles, among others. Many of these new projects seem to be doing well despite the growth of suburban market areas (Frieden, 1990).

Third, military base closures will potentially release valuable urban space, inducing new economic activity within central cities. This process will be accelerated by the Clinton Administration's coupling of high-tech tax incentives to central locations for technology transfer. If the vast store of government and university research can be unleashed within urban settings, this will have a greater impact on new job formation than new transportation initiatives. Enterprise zones and ISTEA funding, on the other hand, will have little impact on inner-city areas, since most of the transportation improvements cannot access the vastly dispersed employment nodes in the suburbs. Moreover, the skill requirements for many of these new jobs is beyond the capacity of many inner-city residents. The only way in the long run to increase opportunities in the inner city is to build them into the community. Recycling technology can create some of the lower-skilled jobs lost by automation and suburbanization. However, even the recycling industry is being rapidly globalized. It is cheaper, for example, to ship recyclable metals to Bangladesh than to process them in the United States for the domestic market.

Transportation Options

It is clear that the solutions of the past offer few prospects for the future. The current notion that we re-create the *urban village* movement based on clustered dwellings surrounding plazas is appealing but not useful. The new urban village is scarcely a contained unit. As Chinitz and others point out, over 60 percent of American workers commute from suburb to suburb. As a result, the new village is just another point on the random suburban settlement map (Chinitz in Bradshaw, 1993: 53).

Housing, not jobs, generates employment. In many instances, new settlements are built around the automobile and are hostile to any form of mass transit. Michael Southworth (1993) has recently documented the movement away from mass transit and mass circulation options. He shows that cul-de-sac and semi-circular street systems make it impossible for buses to circulate in them. In addition, the large-scale subdivisions built in the 1970s and 1980s were purposely designed to make it difficult to gain access by using guard gates and regulated entry points to restrict all forms of transportation. In fact, a real estate premium is placed on the distance to and difficulty in gaining access by means other than the private auto. The theory is that this reduces the risk of contact with lower-income groups. Nearly half a million Californians and perhaps even more Floridians already live in fortress-like gated compounds.

Although there are few options today to use transportation as a means to reposition suburban-urban links, there are some possibilities. One means for redeveloping the link between city and

suburb is to re-establish the historic rail systems between suburban cities and metropolitan down-towns. This is possible as the inner ring of suburbs reconnects to the central city in order to ease employment mobility and re-stimulate the entertainment/retail potential of downtown. For example, rail links, like the Blue Line connecting Long Beach with downtown L.A., are outperforming the projections. However, it is not merely the transit system at work here. The central city must possess major magnet facilities such as judicial courts, entertainment, tourism sites, and major corporate headquarters activities. Another less costly mechanism is to use telecommunications to link inner-city workers with the back office work in the suburbs. This would reverse the current trend of placing telecommuting centers in suburbs. Transportation agencies might facilitate this process by providing free right-of-way through the highway systems to inner-city locales.

However, even when cities successfully develop their downtown areas, a new dual city is sometimes created, as Mollenkopf and Castells (1991) point out. This duality can be easily observed in the physical and social environments of most major cities. Homelessness and other clear signs of poverty and deterioration seem to be impervious to general citywide improvements. Cities simply attract populations that suburbs do not serve. Suburban areas do not generally offer housing or social services for the poor. As a result, cities cannot escape this burden.

Only a few approaches appear to be workable. First of all, we must level the playing field between city and suburb. The real cost of suburbanization can be distributed back to the suburb by differential taxes and development fees that reflect the social, economic, and environmental burdens of sprawl. This can be accomplished by either increasing the purchase price of suburban units or by new regional tax policies that increase the tax rate by distance from the central city. Moreover, the cost of toxic cleanups in the city should be borne by the entire state and not the locality where the pollution has occurred. The federal government should issue pollution bonds to fund the clean-up activities required to re-use the urban infrastructure.

A related strategy to re-link city and suburb would be to require regional planning frame-works to mandate integrated infrastructure plans that include mass transit connections for all commercial and housing sub-divisions. Air Pollution Control Districts would have the power to enforce these mandates. Finally, a mix of incomes and housing types should be required by the federal government through FHA and other mortgage assistance. This measure would provide more opportunities for minorities and lower-income groups to move to the suburbs and be closer to the employment nodes.

Arguments as to whether planners, developers, or the market create this new spatial unevenness are very relevant. Planned interventions using new information and other technologies can re-kindle these areas as well as re-connect city and suburbs through telecommunications devices. It is unclear what kind of urban structure will emerge from these processes or what the role of the CBD will be in this pattern. There will be central corporate business and government

space as well as residential space for an urban workforce in the center of the city. The question, as succinctly put by Catherine Bauer Wurster (1964), is whether we planners can provide the vision that sustains the central city's functions rather than merely responding to a new set of economic activities that have no social or quality of life outcomes.

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