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A ghost in the growth machine: the aftermath of rapid population growth in Houston

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Summary. This paper focuses upon the social and political consequences of rapid growth in cities outside the regions of traditional economic development in the US. We argue that this growth has taken place despite a number of broadly-defined environmental costs. For the most part, these costs have been transfered to low-income residents, or passed to other levels of government, as these cities have functioned as growth machines. A slowdown in economic development, plus contractions within federal expenditures are uniting to pose serious problems for these cities; we examine how the growth machines will function, and consider the implications for future federal urban policies.

Introduction

For over a decade, it has been the conventional wisdom that American cities can be taxonomized into urban areas experiencing various forms of decline, a result of economic restructuring, and those enjoying rapid expansion, a product of capital and population movements. The success of the latter group has been at the expense of the former, and has produced a clear spatial pattern of growth and decline, with sunbelt cities expanding at the expense of those in the older industrial regions of the country (Sawers and Tabb, 1984; Mollenkopf, 1983; Bernard and Rice, 1984). There is little necessity to question the basic premise that some change within the national urban dynamic has taken place — that is to say, that the traditional patterns of population growth, and economic health, measured in terms of bond ratings or unemployment — have shifted. Newer urban centers have, to use Molotch's phrase, acted successfully as *growth machines*, having oriented their political and economic activities toward the process of attracting investment from business sectors (Molotch, 1976; Molotch and Logan, 1984; Kirby, 1985). In turn, they have become adept at attracting federal expenditures as a means of alleviating some of the resultant problems which have become identified as social and environmental areas of concern.

This growth machine logic notwithstanding, it is however necessary to examine further the assumptions that rest beneath these changes. It is, for example, not possible to accept the proposition that we have witnessed a fundamental alteration in the country's 'urban center of gravity', which will now endure through the current era of service-based employment (Gappert and Rose, 1982). Such a premise assumes that individual cities are substitutable containers of growth, and that investment and population can be poured readily from one vessel to another. Such an assumption abstracts the city from its physical setting, and implicitly downplays the externality costs that are involved in creating an urban infrastructure consistent with a city's natural and technological environments. In some settings, the logic of rapid growth has been questioned on environmental grounds, notably in some Western and Mountain communities (Molotch and Logan, 1984). In this paper we argue for a fuller consideration of these broadly-defined environmental costs.

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We suggest that urban growth outside the traditional industrial cores has been based upon very shaky foundations: we will show that expansion has taken place without concomitant attention being paid — within either the market or the political arena — to various forms of infrastructure. In consequence, a number of costs are typically passed on to certain groups of residents, or external forms of government. In either instance, we argue, the existence of these costs is constituting a major burden to the growth machine within such cities, with predictable implications for future levels and types of growth.

An Overview of Urban Expansion in Sunbelt States

In this section, we will indicate a number of broadly-defined environmental problems which are associated with regions of rapid urban growth: these problems are related both to *natural* and *technological* risks. An examination of insurance data suggest that there are major differences between hazardous events in those States growing slower than the US national average 1970–1980, and States with an above average rate of population growth (11.6 per cent). Although both groups suffer comparable amounts of damage, there is a major difference in terms of the ways in which the latter is caused. Slow-growth States suffer a preponderance of damage as a result of long-term, low intensity acts, such as winter freezing and automobile accidents. High-growth States, in contrast, suffer more from high impact, brief duration events. A number of such events are typical within sunbelt states: hurricanes and associated coastal flooding; severe storms and associated inland flooding; and tornadoes (further details are reported in Kirby and Lynch, 1986).

In addition to these high intensity events, there are also a number of other environmental issues which show geographic concentrations. Water depletion is an issue of political importance and conservationist concern in a number of Southwestern States (Westcoat, 1986). In other areas, over-abundant water is more usual, and in such States, notably in the Southeast, high water tables are likely, with the result that contamination by toxic products is common. In addition to water pollution, high levels of atmospheric pollution and acid deposition are frequent in a number of urban areas such as Los Angeles, Denver and Houston (Clark, 1984; Greenland and Yorty, 1985).

As these examples suggest, the relationship between the natural and technological environments is of importance. This relation is underscored by the rapid generation of technological products which have the potential to affect negatively resources such as water. Recent data indicate that the Environmental Protection Agency regions centered on Dallas and Atlanta between them account for over half of the total of toxic waste products generated within the United States as a whole — in excess of 20 million tonnes of material per annum (Greenberg and Anderson, 1984).

These instances show that rapid economic development and attendant urbanization proceed despite the possibility of both natural hazards and technological damage to environment or population. This premise is underlined most clearly by the example of continued real estate development in California, which proceeds without regard to the potential impacts of an earthquake. Studies suggest that a seismic event, comparable in magnitude to that which destroyed parts of San Francisco in 1906, would cause in excess of 60 billion dollars worth of damage, and take thousands of lives. Although these predictions are well known, a minority of households in California possesses earthquake insurance (Palm *et al*, 1983).

The earthquake example is indicative of one of the key principles to be noted within rapidly expanding urban communities, namely, the attempt to pass costs on to other jurisdictions or other levels of government. As Molotch observed, the most successful form of development is that which places its externalities elsewhere. Several studies have noted that there has been a general assumption within California that a large earthquake would necessarily be followed by federal disaster relief and some form of financial assistance. In such situations therefore, the process of real estate expansion into progressively more marginal areas can be rationalized as a reasonable risk.

Similar tendencies have been noted in rather different contexts elsewhere in sunbelt States. There has been for instance a notable reluctance to take measures which would ameliorate the impacts of severe storms and subsequent flooding in many cities within Texas. As Feagin has suggested in a series of studies (see *inter alia* Feagin 1984, 1985), the only investment in infrastructure has come about when *federal* funds have been available. This

pattern can be traced back to early subsidies to enlarge port facilities in Houston before the First World War, and continues through the construction of oil pipelines in the 1940s and highway systems in the 1960s.

These kinds of examples show clearly that the commitment to growth in sunbelt cities has produced an ideology of growth at the lowest aggregate cost. As Mollenkopf has commented, many Southern cities have a city manager style of government, smaller bureaucracies, poorly-developed political parties, and a business ethos, all of which tends to exclude low-income and/or minority residents (Mollenkopf, 1983). In the past, such a bundle of management styles has resulted in a commitment to growth which has been inordinately successful, when measured in terms of dollar investments, bond ratings, building permit allocations, population inmigrations, real estate construction, and even more ephemeral indicators such as the transfer of sports franchises. Several sunbelt cities have transformed themselves from regional centers to urban places of national, and, increasingly, of global importance (Chase-Dunn, 1984; Feagin, 1985). Numerous commentators have explored the entrails of growth in cities like Los Angeles in order to test for a post-modernist style which may indicate the urban future (Dear, 1986).

This success notwithstanding, there remains our assertion that there is a ghost somewhere in the growth machine: that the growth bubble may burst at any time. Indeed, the recent downturn in the economies of several sunbelt States has provided some confirmation of the problems inherent in rapid expansion which outstrips the ability of the market or the public realm to consolidate the city into a coherent economic structure. Various cities have revealed themselves to be in poor fiscal shape: New Orleans, for instance, for some years a center of gentrification, reinvestment and tourist development, has in 1986 declared a 10 million dollar deficit, producing echoes of fiscal crises in less glamorous rustbelt cities like Cleveland or Detroit (Smith, 1986; Swanstrom, 1985). In all, some 12 sunbelt cities are operating at a deficit (survey from *City and State* Magazine 1986: other cities include Albuquerque, NM; Austin, Dallas, Houston and San Antonio, TX; Jacksonville, FL; Longbeach, San Jose, San Francisco, and Oakland, CA; and Phoenix, AZ). While many of these cities were hurt by the oil depression, all have been adversely affected by cuts in federal funding, as the long-heralded New Federalism and balanced budget legislation intersect. The new tax laws will strip approximately $30 billion in revenue sharing from local governments, and federal funding to urban areas has been reduced to $26.7 billion in 1986 from $61.2 billion in 1979 (Powell, 1986).

For our more detailed study we chose Houston, the 'golden buckle of the sunbelt' (Kaplan, 1984). The sheer scale of growth in the city has been singular: population increased 50 per cent between 1970 and 1980 for instance, and the city prided itself on an AAA rating on the Standard and Poor bond index. At the point at which preliminary field work was undertaken in 1986 however, this trajectory was faltering; all standard indicators showed a major downturn in the Texan economy, and the housing market in Houston was a scene of defaults and bailouts (Powell, 1986; Milburn, 1986; Cobb, 1986). As the next section indicates, this economic slowdown provided an opportunity to investigate our ideas on the stability of the urban economy in the sunbelt. Interviews were conducted in Houston during October 1986 with various members of municipal, county, and private organizations.

Tensions within the Growth Machine: the Case of Houston

Houston is an example of a once-thriving sunbelt city that is now caught in an economic, as well as political, bind. Houstonian politics have always embodied a *laissez-faire* attitude in terms of government and private practice. During the 'boom' years this system appeared to work, with Houston's successful growth coalition promoting the city's free-enterprise system and anti-state attitude of minimal 'government interference with land use' (Feagin, 1985). However, the lack of zoning restrictions and a lack of realistic planning for the future has left Houston at risk.

As Molotch and Logan (1984) noted, local industries have typically become involved in local politics, by supplying campaign donations and supporting pro-growth, pro-industry candidates. Such is the political history of Houston. Murray (1979) observes that '... the livelihood of an unusually large element of the elite in the local economy is dependent on sustaining rapid growth.

Developers, builders, realtors, bankers, big-firm lawyers, architects, engineers — the economic interests of all these groups dovetail in the propositions that the business of Houston is growth, that growth is good for all, and that government has a responsibility to facilitate growth in every possible way'.

From the standpoint of many local municipalities in the sunbelt, this is sound government. The industrial sector is accepted by them as an important part of the community with every right to participate in local government. What is mistrusted is a threat to their (and, in turn the community's), economic well-being, as a result of the imposition of environmental legislation. Not only is the environmental movement considered adverse to their (and thus the community's), needs, but it is expensive to industry and, ultimately, the consumer.

While Houston has been content to let business and industry flourish, there has been little apparent concern for the well-being of the public sector. For example, in 1979 the city council voted down an ordinance to prohibit the use of wood shingles by builders because it 'would constitute undue interference with the developers' sector'. The vote took place at the same time a fire caused by dry wood shingles destroyed a '1,000-unit luxury apartment complex on the west side of town' (Murray, 1979). Blackshear and Cassel (1982) noted the focus of the city's infrastructure dollars in new fringe areas outside of the city's beltway, where development was the greatest, with a deferment of capital improvements in needy inner-city neighborhoods. Much of the city further suffered from inadequate waste water treatment service that resulted in today's sewer hookup and construction moratorium (Feagin, 1985).

Houston's lack of zoning restrictions has yielded violations of residential areas by industry (most noticeably, in a predominately black section of the city), and overbuilding throughout Houston that has increased the potential for subsidence and flooding. Interviews with representatives of several Houstonian organizations, both public and private, indicated that several blamed the city's lack of zoning restrictions for the 300-plus toxic waste sites identified by the Environmental Protection Agency. One interviewee commented that contaminated sites had *raised* the price paid for city land in some instances because potential buyers would pay more to deduct a contaminated parcel from the total land to be purchased than have to pay for clean-up. At the least, some blame the lack of zoning for the absence of 'harmony' in many urban neighborhoods. The aggressive annexation policy the city has used to increase its tax base has also been blamed for poor city services. Annexed Clear Lake now wants to de-annex as a result of poor city services provided by Houston (Blackshear and Cassel, 1982; Feagin, 1985).

The policies of the city of Houston toward three areas of concern — subsidence, pollution, and vulnerability to hurricanes — have put residents at risk while protecting development interests, and we examine these issues in turn.

Subsidence

An expanding population has put increased demands on Houston's groundwater supply. To cope with this, Harris County has evolved a complex system of over 350 special water districts, each with its own fiscal plans and priorities (Perrenod, 1984). By 1976 industrial and residential use reached a high peak withdrawal of 457 million gallons per day (MGD). According to the Harris County Coastal Subsidence District (HGCSD) 'this rate resulted in drastic declines in the potentiometric surface of the two aquifers which underlie the area' (Neighbors, 1985) and led to intervention by the Texas Legislature (HGCSD, 1985), which resulted in the creation of the Subsidence District.

Of particular concern was the drastic loss in elevation (i.e. subsidence) along the Houston Ship Channel, in excess of 9.8 feet. This area of east Houston was defined as an Area of Concentrated Emphasis by the HGCSD and included 'all of Galveston County and portions of Harris County south of Lake Houston and east of downtown Houston' (Neighbors, 1985). The HGCSD began a program geared toward regulating groundwater withdrawal and surface water conversion. By 1985 this program resulted in a 16 per cent decrease in groundwater pumping. While the District provided some alleviation of the Ship Channel's subsidence problem, western and south western portions of Houston and Harris County were experiencing up to one foot of subsidence in the worst instances. There were 'significant increases in groundwater demand' between 1978 and 1982, with the demand for

groundwater lessening the following three years as growth in these areas tapered off (HGCSD, 1986). Subsidence has added two serious risks in these areas — flooding and increasing fault movement. Feagin (1985) cited flooding as a result of 'unrestrained real estate development' and the Subsidence District recognized that changes in stream gradient and localized ponding are results of 'subsidence and the effect of alterations to the topography' due to rapid growth. However, at this time the HGCSD has not enacted any additional regulations on groundwater removal in response to this information. Rather 'the Subsidence District is currently engaged in a joint study of subsidence and inland flooding to better understand this relationship' (Neighbors, 1985).

Berke and Ludeke (1985a) noted a similar subsidence problem in the Brownwood Subdivision in the city of Baytown (approximately 20 miles from downtown Houston). Brownwood experienced 'chronic' flooding due to a subsidence of more than nine feet as a result of industrial and residential water needs. In August 1983, after Hurricane Alicia destroyed over 300 homes, the community finally opted to relocate and the Federal Emergency Management Agency purchased most of the homes in the area (HGCSD, 1986). Homeowners who refused to sell are now waiting for the city of Baytown to condemn the property and to buy them out, since a city ordinance was passed 'prohibiting the occupancy or repair of all structures', as the subdivision was determined to be 'unsafe and a health hazard' (Berke and Ludeke, 1985a). While the Subsidence District cites Brownwood as 'the classic case of the devastation subsidence can cause', in recent years Houston's greatest growth has been in the subsidence-prone areas of west Houston (HGCSD, 1986).

A study by Holzer and Verbeek (1983) determined increased fault movement in areas pumping large amounts of groundwater in the Houston and Galveston area, where there are over 300 miles of active faults. Neighbors (1985) also noted the susceptibility of the Houston-Galveston area to 'possible fault activity'. However the November 1985 District Plan adopted by the HGCSD makes no note of this problem; nor is possible fault activity incorporated into the Plan's regulatory objectives as is the case with possible future flooding.

Of the fifteen 1986 members of the HGCSD Board, six, including the current chairperson, were appointed by the Mayor of Houston. This group has the power to 'permit or limit groundwater withdrawal' as well as the discretion to make 'temporary exceptions to the general rule for each area ... if an economic hardship will be created that is significantly greater for one person than for others in the same area ...' (HGCSD, 1986). The Subsidence District is divided into eight areas to 'better manage the monitoring of groundwater pumpage and the implementation of regulation'. All areas, including the two most afflicted by subsidence problems, may 'as a general rule' increase their pumpage of groundwater. To date the District has begun work on two future surface water plants. One near the ship channel is to be completed in 1987 and will have a 100 MGD capacity. Construction of a second facility to be located in southeast Houston has yet to begin but the District hopes to have it on-line by 1989, with a 50 MGD capacity. At this time there are no noted plans for any such facilities in the afflicted western portion of Houston and Harris County or anywhere else in the District (HGCSD, 1986; Neighbors, 1985).

Pollution

Houston has a visible non-point air-pollution problem emanating from its over-crowded highways and streets. Between 1975 and 1978, the city averaged 2,000 additional cars per week, but the traffic increase was not matched with an increase in road systems. 'The last major freeway construction was in 1973. The one-and-a-half hour rush period of 1975 has now stretched to two-and-a-half hours' (Biggar, 1979). Biggar also noted that 'unless auto exhaust emissions are reduced, federal officials will insist that new refineries and petro-chemical plants locate elsewhere'. In a 1985 article, Feagin noted that 'air pollution and toxic waste seepage into water systems has become extremely serious'. Out of its air pollution and transportation woes, Houston voters approved a one per cent sales tax to help fund a Metropolitan Transit Authority in August of 1978. The Authority has a nine-member Board with five members appointed by the Mayor of Houston. Plagued by past inefficiency, the Metro System had recently corrected many of its problems and produced a well-run bus system in addition to collecting a $360 milion surplus (MTA, 1986; Cobb, 1986).

However, the recent population drop in Houston has meant a drop in number of riders and sales tax revenues. In mid-1986 MTA cut the operating budget and laid off two dozen employees, but it would not use the surplus fund to maintain the system's quality. MTA responded that the $360 million was 'ear-marked for expensive capital projects like the transways under construction ...' To further reduce expenses in October 1986 the MTA cut back 25 per cent of its routes. The failure of the MTA and city planners to foresee times of economic stress and plan accordingly could have far reaching effects. As recently as March 1986, Board members were still planning a 'Cadillac system of transit for Houston' but falling ridership figures and a projected, future decline in metropolitan population left them with reduced routes, an 'already overloaded highway system', and no gains made in an effort to alleviate air pollution (Cobb, 1986).

Pollution of water is also a serious problem, according to the Texas Water Commission, which recently reported that two sewage treatment stations are currently dumping waste into the Buffalo Bayou. The Memorial Villages Water Authority 'disgorges 400,000 gallons of raw sewage a day into Buffalo Bayou'. Although a new plant is under construction to replace the Memorial Villages' current system, it would appear that significant damage has been done (Milburn, 1986). Feagin (1985) noted that 'half of Houston's waste water plants violated state discharge standards and a sewer hookup (and construction) moratorium covered three-quarters of prime development area'. A member of Houston's Housing Authority noted that the city now uses a Capital Recovery Cost System to provide new waste treatment systems during the moratorium. In this system a builder can pay to construct the treatment site for proposed development — 'a gravy system, but it's legal' — creating a situation in which HUD can no longer afford to build public housing in the Houston area but developers with the necessary capital can.

Vulnerability to Hurricanes

Berke and Ludeke (1985a) cited the Houston-Galveston area as 'one of the highest risk regions to hurricanes in the United States'. The most recent, damaging storm to strike this area was Hurricane Alicia, in August 1983. Peak gusts of 115 m.p.h. caused extensive damage throughout the Houston-Galveston area and flooding, such as that in Baytown, occurred in coastal and bay communities (Berke and Ludeke, 1985a; FEMA, 1983; Houston Chronicle, 1983). The 94 m.p.h. winds in downtown Houston literally 'closed' the area due to shattering windows in the many multi-storied buildings. Approximately 1,300 traffic signals were non-functioning and an estimated 3,000 city traffic signs, as well as 3,000 highway traffic signs were blown away, adding to the confusion of those attempting to evacuate. 40,000 persons were forced into emergency shelters and 1,000 family homes were destroyed (Perrenod, 1984). 750,000 Houston Light and Power customers were without power on August 18th and on September 1st 1,000 homes were still powerless (Congressional Hearings, 1984).

Property damage estimates ranged between $1.2 to $1.8 billion dollars and 22 people were killed. According to the Travelers Insurance Company, the Houston area was fortunate that Hurricane Alicia was a mild one and that it did not travel along 'the path of maximum damage ... up the Houston Ship Channel and into Houston'. 'If such a hurricane had roared into Houston along the path of maximum damage, the losses would probably have been about ten times greater than Alicia's' (Perrenod, 1984). According to the Berke-Ludeke study, ' all communities in the Houston-Galveston area were unprepared to varying degrees' and the authors also noted an over-reliance on emergency planning at the expense of land-use planning.

By placing an emphasis on emergency planning measures, such as building codes, the communities encouraged rather than discouraged rebuilding in high risk areas. Berke and Ludeke (1985b) cited opposition from development interests and a 'lack of concern' by local officials and citizens to 'limit post-disaster development in hurricane hazard areas'. A 1984 Congressional Hearing on Alicia's damage and recovery efforts cited problems in the Houston-Galveston area with 'emergency preparedness, warning and communications systems, and evacuation procedures'. The Corps of Engineers cited a 'critical need for improved hurricane contingency planing' and noted that the 'most serious shortcoming was the absence of an integrated emergency management system in the Houston-Galveston area'. The Corps also noted problems with building codes, floodplain management pro-

grams and evacuation plans (Congressional Hearings, 1984): some areas of Galveston were labeled 'deathtraps' during the Congressional Hearings on Hurricane Alicia, due to the amount of overbuilding in hurricane vulnerable areas.

The National Weather Bureau ranked Hurricane Alicia — at its worst — a force three storm, meaning that although it was a major storm, the accompanying winds, rain, and storm surges were relatively tame in comparison to a stronger system. Hurricane experts predict that the Texas coast will be hit by a force five storm, like the one that destroyed Galveston in 1900, at some time in the future. The results of the 1984 Congressional Hearing indicated that improvements must be made to insure future public safety. Houston Mayor Kathryn Whitmire however noted the serious problem of advanced planning. She noted that many locals remembered making preparations (some of evacuating), in 1980 for Hurricane Allen which then took a different course and missed the city; for this reason many people were reluctant to believe National Weather warnings about Hurricane Alicia. Berke and Ludeke (1985a) referred to this problem, although their study did not show a hesitation on the part of the population, but rather one on the part of officials to begin evacuation procedures and then be accused of 'crying wolf': 'because an evacuation decision was not made in the time necessary to evacuate the entire island (Galveston Island), the potential for loss of life was high'.

Economic prosperity continues to be a priority of Houstonians involved in planning the future of their city; however, much of this planning appears to have been done at the expense of public safety. It is inevitable that Houston will one day experience a devastating hurricane, but it should not be inevitable that widespread death and destruction must occur.

Summary of Houston's growth problems

Studies of Houston's policies and attitudes toward the issues of subsidence, pollution, and hurricane preparedness serve to underline the city's purposeful ignorance of human susceptibility, in order to further a favorable business climate. The state of Texas has long prided itself on being a non-interventionist force in the design of local government and this attitude has been passed on to the political ideologies of local governments. A recently interviewed Houston Chamber of Commerce member quoted Thomas Jefferson in defense of Houston's policies: "he (sic) governs best, who governs least". The cost of too much growth with too little planning can be high. Whereas in the past, cities such as Houston could afford, and absorb, an environmental disaster, in the light of today's economic reality this course of action could lead to a future fraught with crisis. This is underlined by the proposals outlined in the 1987 Presidential budget, which shows, *inter alia*, that the allocation earmarked for Federal disaster assistance is scheduled to disappear by the end of the decade (Office of the President 1986).

An Overview of US Urban Fiscal Stability

In light of the issues already introduced — namely a diminution of federal spending and a contraction of the economic sector in many sunbelt cities — it is unsurprising that these urban areas are undergoing a restructuring in their finances. In the first instance, there has been a weakening of the stability of a number of urban economies, including some which have been viewed in the past as particularly solid — the slippage in Houston's bond rating represents the end of a period of pre-eminence in financial circles, for instance. These changes can be seen as a short term response to the problems of energy-based economies. There are also signs however of more significant changes within this broad category of cities. Table 1, for example, indicates that cities in the South and West are now experiencing a growth in expenditure at the same rate as cities elsewhere in the country: that is, the previously low-spending growth machines are now increasing their spending in step with older, industrial centers.

Although it would be rash to base too many conclusions on a single annual return, there is some additional evidence that this trend has been in effect for some time. For instance, comparable studies by the National League of Cities indicate that municipal employment has been rising in sunbelt cities, whilst it has been shrinking in rustbelt centers. Houston's public employee roll has risen by 24 per cent between 1979 and 1984 — during which time Detroit's payroll has shrunk by 28 per cent (National League of Cities, 1986, p. 23).

The implications of such changes are clear. Cities

Table 1

Geographic distribution of urban expenditure changes, 1985–6

Region	Expenditure increase 1985–6				
	zero growth	1–5%	6–10%	>10%	All cities
South	20	18	20	42	100%
West	18	20	18	44	100%
Midwest	19	18	28	35	100%
Northeast	14	24	38	24	100%

After National League of Cities, 1986.

such as Houston are caught within a cleft stick; their attempts to provide a system of government in keeping with their rapid growth in population have taken place just as their economic fortunes have slipped in line with energy prices. Although the long term implications of the latter are unknown, there is little question that, in the short term, there will be some onus upon city governments throughout the sunbelt to trim their expenditure, and return to the slim, growth machine orientations of the previous decade.

The Implications for US Urban Policy Making

The thrust of this essay should now be clear. Our overview of the situation in many sunbelt cities suggests that the reduction in many federal programs, from General Revenue Sharing through to disaster relief expenditure, will have a major negative impact upon these cities, many of which are now large population centers. As we have argued above, the urge to operate with minimal governmental interference has in the past been ameliorated by an ability to compete for, and obtain, large amounts of federal assistance, both for capital projects and to deal with the aftermath of emergency situations.

The fiscal imperatives to reduce federal spending are well known. It is however unlikely that cities such as Houston could step in to match the shortfall in income from national sources, even if economic circumstances were different. The development of growth machine politics is, as commentators like Mollenkopf have indicated in detail, a long term history based upon a longstanding ideology of possessive individualism, quite unlike the managerialism frequently observed in older, North-eastern cities (Mollenkopf, 1983; Steinberger, 1985).

In consequence then we conclude that the reduction in federal expenditures on urban populations will have predictable consequences for many sunbelt cities. A large number of broadly-defined environmental issues will remain untreated: contexts such as toxic product generation and air pollution will become progressively worse. In some senses, there is a crude spatial equity in view here, insofar as the benefits *and* the costs of development will remain largely within the same urban regions: that is, the location of the benefits of economic development and the disbenefits of environmental degredation will be isomorphic. However, the analyses of a number of policy domains show quite clearly that problems which are not treated in the short term must eventually be treated in the longer term: and as cases such as nuclear waste, and toxic products indicate, the costs of treatment which are then borne by more powerful governments are proportionately much higher, and the problems of regulation much greater in consequence (Wilson, 1980). In short, then, we identify here a serious lapse in the development of a general policy toward urban areas within the United States, a lapse which is likely to have larger financial implications in future years.

Conclusions

Discussions about the sunbelt region of the United States tend to focus on the high rate of population growth and the continued economic potential of this region. Reports of long term economic advance and the potential for continued success in the future have tended to overlook a regional history, in the Southern and the Western States, that has supported the relatively free hand of industry in a situation of minimal government intervention. Often ignored in the courting of industrial dollars is the creation of an industrial landscape that may very well prove to be a replay of the problems that have continually plagued the older more established industrial centers of the American Northeast and Midwest. Many sunbelt state and city governments are anti-interventionist with respect to their industrial ideology, in order to be more appealing sites for business and industrial location. This attitude is further imbedded in the philosophies of local governments that have generally viewed State or federal policies as ones of interference and hindrance. In many southern States, local governments have had power over zoning issues since the turn of the century and they

intend to keep it. The response of sunbelt governments to the economic needs of their growing population has been economically sound but shortsighted in a broader sense. The system of postponing any attention to environmental problems until they present a clear and imminent danger has only raised generalized costs to city populations and to other components of society.

As our study has indicated, however, we are witnessing the emergence of a new period in sunbelt city fortunes. The diminution of federal forms of support has thrown responsibility for a number of programs back to local communities; a change that has occurred just as several regional, and their many local economies, have faltered. The implications of these changes are serious. In the first instance, we can expect that growth machine politics will be under pressure to revive city finances. As we have argued here, though, such policies produce a large number of externality costs. In the past, these have been dealt with incrementally, or passed on to other levels of government. We thus face the implications of reduced responsibility being borne by external political units.

Quite how this situation will resolve itself is open to further analysis. Our prediction is that with the need for cities to recover their economic prosperity, the sunbelt's industrial and environmental traditions will continue as before. The difference will be that environmental costs, in the broadest sense, will remain within the community, rather than being passed on elsewhere. Inevitably, these costs will be borne differentially; that is to say, lower-income residents and/or minority groups will find that environmental damage will tend to hit their neighborhoods the hardest. This is no major surprise — indeed, the history of American cities is a story of political action with respect to externality issues. What is perhaps unfortunate is the way in which the urban history of the older historic cities is likely to be replicated over the next decades; a replication which will involve massive urban inequalities, political conflicts, and, logically, a new generation of federal programs designed to alleviate poverty and environmental degredation.

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