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Spaces of Shrinkage: United States, 1950-2000

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Abstract

Using a data set for 106 large and medium-size cities, and comparing the period 1950-1980 with that of 1980-2000, this paper attempts to ascertain how space matters in the de-population of U.S. cities. It tests the argument that the fate of a city is tied tightly to the functional urban area and region in which it is located, with shrinking cities clustered in shrinking metropolitan areas and shrinking regions. The analysis finds only weak support for this claim, but less support for an alternative, uneven development argument that growth and decline are spatially interspersed.

Over the last ten years or so, urban scholars and policymakers have become increasingly interested in cities that have suffered sustained population and business loss and seem unlikely to grow sufficiently in the future to return to their former size or glory. These shrinking cities appear in only certain countries and regions of the world. Many industrialized nations – England, the United States, and France less so -- have them but others -- Finland, China, or The Netherlands – do not (Pallagst, et al., 2009). Shrinking cities also seem to be concentrated in particular regions. In the United States, the northeastern and midwestern parts of the country, what had been known as the manufacturing belt, seem particularly afflicted compared to the southwest and west (Beauregard, 2009). Eastern Europe – Poland, Ukraine, the former East Germany – also has a disproportionate share of shrinking cities (Mykhenko and Turok, 2008). To this extent, space seems to matter. But does it really matter and, if so, how does it matter? Moreover, what do we mean by space when we ask these questions?

This paper is an attempt to develop a better understanding of the spatial dimension of the shrinking cities' phenomenon. I am interested in two arguments that one might make about the relationship between space and shrinkage. The first is what I have labeled the spatial embeddedness argument; the second is that of uneven spatial development. (There is a third – a networked places argument – which is not part of this paper but about which I will comment later.)

The spatial embeddedness argument posits that the spatial position of a place – that is, its location vis-à-vis other locations (Smith and Katz, 1993) – has a significant influence on that place's prospects. Thus, a city in a shrinking urban area is highly likely to itself shrink. Contrarily, a city in a growing urban area is likely to attract residents, business, and investors. The premise is that these various "nested" places are tightly connected; that is, their internal linkages are stronger than external linkages. To this extent, indigenous assets (Mykhenko and Turok, 2008:325) are quite important and spatial integration dominates spatial disintegration. The result is a tendency toward spatial consistency – shrinking cities concentrated in shrinking urban areas and regions and growing cities in growing urban areas and regions.

I am not suggesting that places are geographical containers fixed in their boundaries and defining the limits of the processes and conditions that exist within them. In this I agree with Brenner (2001:606) that scale – one way to characterize these nested places -- is better conceived as a "historically evolving positionality." Neither am I arguing that places should be thought of as organized into hierarchical levels with one "scale" fitting neatly inside another and, moreover, with forces emanating from above dominating the places below (Howitt, 1998). Rather, my claim is that places emerge

when forces that are interconnected become more integrative than disintegrative. When this happens, juxtaposed places draw from the same developmental moment and thus share a more or less common fate. That is, they are spatially embedded as regards their growth and change.

By contrast, the argument from uneven spatial development is that investment and disinvestment are interrelated processes – think Schumpeter's creative destruction. They produce a variegated landscape of juxtaposed places of stark differences: for example, developed and developing countries, affluent and decayed neighborhoods, and advanced and backward regions (Smith, 1984). This unevenness, moreover, is fine-grained. That is, it is not that places of disinvestment are in one space and places of investment in another, but rather that they are proximate to each other as, for example, in Sao Paulo where favelas exist adjacent to affluent residential enclaves.

The uneven development argument is an alternative to spatial embeddedness. Spatial embeddedness posits a centripetal force that draws together places in similar developmental states. Uneven development, by contrast, suggests that diverse development states are functionally interconnected and spatially contiguous. Consequently, for example, any one region will have a highly differentiated mix of cities; under spatial embeddedness, cities with different developmental trajectories will be segregated from each other. Uneven development, then, posits that shrinking cities will be found in growing urban areas and regions while growing cities will appear in shrinking urban areas and regions. Spatial embeddedness suggests otherwise. Places with similar developmental trajectories will cluster in space not be scattered across the landscape.

In this paper I subject these two arguments to an empirical assessment. Focusing on central cities in the United States and using population as the measure of shrinkage, my goal is to understand the sense in which space matters in the existence of shrinking cities. In doing so, I treat the cities as embedded in layered, spatial settings, what I call spatial clusters.

Research Design

My research question has two components. First, to what extent does a city's position in space affect de-population? And, second, has this relationship changed between the early post-World War II period when U.S. cities endured severe population and business losses and the most recent decades when urban living in the United States has become much more desirable?

To investigate these questions, I use a purposive sample of cities over 100,000 residents in 1950. This population cut-off point was selected to limit the size of the data set and also to focus on large and medium-size cities. Small cities are less relevant for overall urbanization trends. The date was selected to capture the beginning of severe and persistent population loss among U.S. cities (Beauregard, 2009). The sample stays constant during the analysis with the findings thereby under-estimating urban growth. Cities that grew from fewer than 100,000 residents in 1950 to more than that after are not added to the sample as the analysis moves forward in time. There were 106 cities in this population range in 1950.

To measure shrinkage, I use population size, an indicator that reflects, though imperfectly, the overall desirability of a city for households and investors. It is not, of course, an indicator of conditions within the city; that is, of the extent of unemployment,

poverty, or the growth or decline in personal wealth. In fact, various urban scholars have argued against this measure because it fails to capture the situation in which a city shrinks in population but continues to prosper, a condition often associated with gentrifying cities like Hoboken , New Jersey (Beauregard, forthcoming). My retort is that population-loss-without-undesirable-consequences is primarily a situation which occurs in neighborhoods, towns, and small suburbs and does not characterize the large and medium-size cities that I am investigating. I cannot systematically defend my position, but neither have these critics done more than point to "isolated" examples.

Furthermore, in order to treat shrinkage as a temporal process, I organized the data into two time periods: 1950-1980 and 1980-2000. (Because Census data for all of the cities was unavailable at the time of the writing of this paper, I stopped at 2000.) The first represents a period when many U.S. cities suffered from decaying neighborhoods, racial unrest, fiscal insolvency, industrial decline, and deteriorated central business districts. By the late 1970s, though, urban living was once again becoming desirable as indicated by burgeoning gentrification, the rise of urban tourism (particularly around festival marketplaces), and, later, the building of downtown housing (Beauregard, 2003, 2005). The 1980-2000 period thus encompasses a more prosperous time for U.S. cities and having two periods enables an assessment of any changes in spatial embeddedness.

To model the spatial embeddedness of these cities I situated each one in its metropolitan area – equivalent to the functional urban area -- and in its regional division as defined by the U.S. Census Bureau. (Because a number of metropolitan areas contained multiple cities from the sample – for example, Minneapolis-St. Paul and Kansas City, Missouri-Kansas City, Kansas – there are fewer metropolitan areas (89)

than cities (106). There are 9 regional divisions.) Each city, then, is a three-layered object and the specific question becomes the extent to which being in that metropolitan area (an area experiencing its own population change) and in that region (an area also experiencing its own population change) influences the population change experienced by the city.

To measure population change, I created three categories of change – growing, stable, and shrinking -- for each areal unit. Using the average regional, metropolitan, and city-level rates of change for each time period, I identified breakpoints that distinguished the areas along this three-part dimension. In doing so, I also took into account the size of the resultant categories so that no one category had too few areas such that the analysis would be compromised by relatively empty spatial clusters. In effect, then, growth, stability, and shrinkage are made relative within each type of area. Clearly, a good deal of discretion went into these decisions, although I believe that reasonable modifications of the bounds of "change" are unlikely to produce major variations in the findings. Lastly, my emphasis on relative population change is meant to imply that shrinkage is a relational attribute of cities and not an "objective" one. While absolute population change is certainly politically, symbolically, and practically important, more important is how a city performs relative to others.

Finally, I organized the analysis around the distinction between statistical possibilities, theoretical likelihoods, and empirical actualities. In effect, I created the statistically possible spatial clusters by dividing the regions into their three types (growing, stable, declining), the metropolitan areas into their three types within each of the three regional categories, and the cities into their three types within each of the

regional-metropolitan categories. The result was twenty-seven possible spatial clusters. These are the statistical possibilities. I then allocated the 106 cities to these clusters for each of the time periods. These are the empirical realities.

Theoretically, if one believes that space matters in whether a city shrinks or not, then all or most of the depopulating cities should be in depopulating metropolitan areas within shrinking regions and all or most of the growing cities should be in growing metropolitan areas in growing regions. That this is always empirically improbable requires us to turn to theoretical perspectives in order to make sense of the findings.

Analysis

Between 1950 and 1980, 63 of the 106 large and medium-size cities lost residents relative to their peers. This was 59 percent of the total number of cities. In the following two decades, conditions improved and fewer cities – 55 (52%) – experienced a relative decrease in population. (In absolute terms, the number of cities that lost residents is slightly different – 58 and 51 respectively – for these two time periods.)

Table 1 displays the allocation of all of the large and medium-size cities across the 27 spatial clusters. Clearly, the cities are not randomly distributed. Simple observation indicates that many fewer cities are located in growing and stable regions compared to shrinking regions, regardless of the time period. Additionally, shrinking cities seem to have an affinity for stable and shrinking metropolitan areas in shrinking regions. For example, Pittsburgh lost 20 percent of its residents between 1980 and 2000, its metropolitan area lost 8 percent of its residents, and its region (the Middle Atlantic) was the slowest growing (11 percent) of all of the regional divisions. At first glance, then, it appears that shrinking cities are affected by their spatial position, thus providing

Table 1. Spatial Distribution of Shrinking Cities in the United States (N = 106)

	1950-1980	1980-2000
Growing Region		
Growing Metropolitan Area		
Growing City	5	11
Stable City	2	6
Shrinking City	**6**	**5**
Stable Metropolitan Area		
Growing City	0	0
Stable City	1	2
Shrinking City	0	**2**
Shrinking Metropolitan Area		
Growing City	0	0
Stable City	0	0
Shrinking City	**1**	0
Stable Region		
Growing Metropolitan Area		
Growing City	11	6
Stable City	4	0
Shrinking City	**2**	0
Stable Metropolitan Area		
Growing City	3	3
Stable City	0	2
Shrinking City	**3**	0
Shrinking Metropolitan Area		
Growing City	0	0
Stable City	1	0
Shrinking City	0	**2**
Shrinking Region		
Growing Metropolitan Area		
Growing City	3	1
Stable City	1	2
Shrinking City	**3**	0
Stable Metropolitan Area		
Growing City	5	4
Stable City	3	14
Shrinking City	**21**	**17**
Shrinking Metropolitan Area		
Growing City	0	0
Stable City	4	0
Shrinking City	**27**	**29**

support for the spatial embeddedness argument. These tentative findings, however, require a more systematic assessment.

Table 2 displays what the "ideal" distribution would be under spatial embeddedness. The argument is that growing cities should be concentrated in, even confined to, growing metropolitan areas and growing regions, stable cities to their stable spatial counterparts, and shrinking cities to shrinking metropolitan areas and shrinking regions. This does not seem at all to be the case. Very few stable cities (none in the 1950-1980 period) were in stable metropolitan areas and regions and fewer than one-half of the growing cities (and only in 1980-2000) were in growing metropolitan areas and regions. As regards shrinking cities, the empirical evidence is as anemic, but nonetheless suggestive. Regardless of the time period, roughly one-third of the shrinking cities are in a spatial cluster with a shrinking metropolitan area and region. To state the obvious, this

Table 2. The "Ideal" Distribution for Spatial Embeddedness

Type of Spatial Cluster*	Number of Cities		Percentage of All Similar Cities	
	1950-1980	1980-2000	1950-1980	1980-2000
Growing-Growing-Growing	5	11	13.5	44.0
Stable-Stable-Stable	0	2	0	7.7
Shrinking-Shrinking-Shrinking	27	29	50.9	52.7
Total	32	42	30.2	39.6

* Region-Metropolitan Area-City

means that two-thirds are not. Six of ten shrinking cities do not conform to the ideal distribution.

The convergence of towards the ideal by growing cities in the 1980-2000 period is, in part, a function of the increase in the overall number of cities in growing regions from 15 to 26. And, while the percentage for the triple-stable cluster improved relative to the ideal, it did so while the number of cities in stable regions was declining from 24 to 13. These changes are worth consideration because more cities increase the variance in the category and should give a "truer" sense of actual conditions; small numbers in any category can produce volatile findings. Nevertheless, in the two instances where there is convergence to the ideal, the sample size is increasing in one and decreasing in the other, thus weakening any firm conclusion we might hope to make. What we can say is that if a tendency toward spatial embeddedness exists, it is neither strong nor weak.

Table 3 enables us to explore further the spatial relationship between city, metropolitan area, and region. It displays the degree to which shrinking cities are clustered in different types of regions and metropolitan areas. Here, the numbers for shrinking regions are closely aligned with the spatial embeddedness argument -- 8 of every ten shrinking cities, regardless of time period, is in shrinking regions. This is not the case for metropolitan areas. Here, only about one-half of the shrinking cities are in shrinking metropolitan areas. Note also that shrinking cities are almost as likely to be positioned in stable metropolitan areas as in shrinking ones. If we assume that stable areas are areas whose prospects are weakening, then this supports the spatial

embeddedness argument. Moreover, shrinking cities still appear in growing areas, whether regions or metropolitan areas.

Table 3. Percentage (Number) of Shrinking Cities by Area: 1950-1980 and 1980-2000

	1950-1980	1980-2000
REGIONS		
Growing	11.1 (7)	12.7 (7)
Stable	7.9 (5)	3.6 (2)
Shrinking	81.0 (51)	83.7 (46)
Total	100.0 (63)	100.0 (55)
METROPOLITAN AREAS		
Growing	17.5 (11)	9.1 (5)
Stable	38.1 (24)	34.5 (19)
Shrinking	44.4 (28)	56.4 (31)
Total	100.0 (63)	100.0 (55)

These data, then, suggest that spatial embeddedness is a regional more than a metropolitan phenomenon. That is, shrinking cities are more likely to be located in shrinking regions than in shrinking metropolitan areas. If this is the case, it implies tighter linkages between regions and cities as regards population loss than between metropolitan areas and cities.

Implicit in this finding is an interpretation of the relationship between cities, metropolitan areas, and regions that needs to be made more explicit. The unwritten assumption is that influence flows from larger territories to smaller ones; that is, that forces are stronger, almost by definition, when their spatial reach is greater. Theoretically, though, it could also be the case that the cities exert (greater) influence on metropolitan areas and regions than vice versa. This understanding is at the core of

arguments that posit city-regions as the driving force of national and even global development (Glaeser, 2011; Scott, 2001). And, to the extent to which these cities once dominated their metropolitan areas economically, political, and demographically, as was the case in Buffalo, New York, and Detroit, Michigan, and is still the case in New York City and Los Angeles, then we need to consider reversing our point-of-view. Additionally, many of these cities comprise a significant portion of the metropolitan population and thus have a disproportionate statistical influence over the metropolitan growth rate. Columbus, Ohio, accounted for 46% of the metropolitan population in 2000 while Duluth, Michigan, a shrinking city, made up 36 percent of its metropolitan population. A re-interpretation of Table 3 along these lines would claim that shrinking cities have a greater impact on their regions than on their metropolitan areas. Why this might be the case would be the puzzle to solve.

These relationships can also be explored by looking at the shrinking cities as a percentage of all cities in the spatial category. (See Table 4.) The findings here dilute the sense that shrinking cities are more tightly connected to shrinking regions. Rather, what we see is a slightly tighter connection to metropolitan areas. Over 4 of every 5 cities in shrinking metropolitan areas underwent de-population between 1950 and 1980, and <u>all</u> of them did so in the following time period. Cities, though, are almost as likely to shrink if they are in shrinking regions. Seven of the ten cities in shrinking regions between 1980 and 2000 lost residents. The numbers are quite close for 1950-1980, more discrepant for 1980-2000, and always lower for regions than for metropolitan areas.

Table 4. Shrinking Cities as Percentage of All Sample Cities by Area: 1950-1980 and 1980-2000

	1950-1980	1980-2000
REGIONS		
Growing	46.7	26.9
Stable	20.8	15.4
Shrinking	76.1	68.7
METROPOLITAN AREAS		
Growing	29.7	16.1
Stable	66.7	43.2
Shrinking	84.8	100.0

Once again, Table 4 indicates the importance of stable metropolitan areas for understanding the spatial embeddedness of shrinking cities. The relationship diminishes from the first time period to the second, but it remains more than an anomaly. Overall, the table reinforces the presence of shrinking cities in all types of metropolitan areas and regions, a finding that weakens the spatial embeddedness argument.

To better understand these findings, we need to turn away from spatial embeddedness and consider the findings in relation to uneven spatial development. The argument from uneven development sets places against each other geographically – gentrification juxtaposed with slums and decayed central cities with affluent suburbs, for example. Consequently, we would expect to find a relatively even distribution of shrinking cities across regions and metropolitan areas.

In fact, there is some support for this. We find shrinking cities in most of the spatial clusters -- 70 percent of the clusters in 1950-1980 and 56 percent in 1980-2000.

Moreover, the proportion of shrinking cities in growing and stable regions never drops below 15 percent, about 1 in 7. And, the percentages for stable metropolitan areas and growing regions in 1950-1980 are even more robust. Still, one cannot ignore the high numbers in the two shrinking regional and metropolitan categories.

For the uneven spatial development argument to reconcile these data, it would have to add de-industrialization and the historic concentration of manufacturing in the northeast and Midwest regions to explain the regional concentration of shrinking cities and the detrimental effects of the postwar suburbs to explain the metropolitan concentration of urban shrinkage. In effect, shrinking regions would become an exception to the uneven development argument. Overall, and it is a judgment call, spatial embeddedness seems to better explain the data than uneven spatial development, but not by much.

Conclusion

The evidence in support of the spatial embeddedness of shrinking cities is encouraging but not overwhelming. Only one-half of the shrinking cites are in shrinking metropolitan areas within shrinking regions. (Pack (2011:158) develops a similar finding: distressed cities, though more prevalent in distressed metropolitan areas, are also found in well-off metropolitan areas.) On the other hand, more than 7 out of 10 shrinking cities are either in a shrinking region or a shrinking metropolitan area. In addition, while only a few shrinking cities are in growing regions and metropolitan areas, many shrinking cities are in stable metropolitan areas in shrinking regions. If stability is the phase prior to shrinkage, these numbers would also support spatial embeddedness. The general findings, moreover, hold for both time periods with the caveat that there seems to be a slight

strengthening of spatial embeddedness from the 1950-1980 period to the 1980-2000 period.

Providing different support for the spatial embeddedness argument is that its alternative, uneven spatial development, does not conform as well to the data. Uneven spatial development helps to explain why we find shrinking cities in growing regions and metropolitan areas, although these numbers are small, but can only explain the concentration of shrinking cities in shrinking or stable areas by adding explanatory factors. These factors – deindustrialization, the historical and geographical situatedness of manufacturing, and suburbanization – are, however, factors that would strengthen the spatial embeddedness argument as well. That manufacturing was concentrated in regions that are now shrinking and their metropolitan areas were often integrated through manufacturing processes – Pittsburgh is a good example with its steel mills in the central city and in industrial suburbs – and that suburbanization was and remains a process with strong effects for the central city speaks to the spatial integration on which spatial embeddedness relies.

A third argument might help us better understand the spaces of shrinkage. It has a broader spatial reach than either the embeddedness or uneven development arguments. Essentially, it suggests the cities are neither isolates whose growth and development depend wholly on internal qualities, nor so integrated into their surrounding territories such that their fate is locally-determined. Rather, external forces operate on the city and they are far-flung (Massey, 1994). These forces, in fact, travel along linkages between the city and other cities, urban, areas, countries and regions throughout the world. In a sense, the city is conceived as de-contextualized and networked. From this perspective, the

growth trajectory of New York City, for example, has to be explained in reference to its ties to Washington, D.C. from where legislation and regulations concerning financial services emanate; Albany, New York, the State capitol, where laws about the city government's ability to regulate land, generate revenue, and control its schools and police are made; London to which many of the city's economic and political elites compare the city's accomplishments; the Dominican Republic, original home of a large number of the city's immigrants and a place to which many still have ties; and Jersey City, New Jersey, where developers continue to construct office buildings and use them to lure businesses from Manhattan. This is the spatial context in which New York City makes sense.

Cities are thus viewed as networked into a larger, global context, not simply a regional one. What makes sense is neither a hierarchical spatial analysis nor a locally confined one. Rather, the idea is to embrace a "flat ontology" (Marston, Jones, and Woodward, 2005) that encompasses localized and non-localized forces and avoids the boundlessness of the "spaces of flows" argument. To this extent, the networked city is at odds, theoretical and methodologically, with what I have done here. I have made the theoretical claim that the important forces are not far-flung but local and, methodologically, used geographically-bound objects for the analysis. Nevertheless, a network argument is compelling and a powerful alternative to both spatial embeddedness and uneven spatial development, despite the methodological difficulties involved.

This is not to abandon the spatial embeddedness approach however. What I have done could be fruitfully refined by, for example, using other indicators than population to measure shrinkage, problematizing the Bureau of the Census delineation of regions, adopting a more sophisticated sequencing of time periods, and treating change in a less

stilted manner. Until we work through these and other modifications, simultaneously re-thinking the theoretical perspective, we will still wonder what influence space has on shrinkage.

Bibliography

Beauregard, R.A. Forthcoming. "Growth and de-population in the United States," in A. Mallach, ed., *Legacy Cities*.

Beauregard, R.A. 2009. "Urban population loss in historical perspective: United States, 1820-2000." *Environment and Planning A* 41, 3:514-528

Beauregard, R.A. 2005. "The radical break in late twentieth-century urbanization," *Area* 38, 2:218-220.

Beauregard, R.A. 2003. *Voices of Decline: The Postwar Fate of U.S. Cities*. New York: Routledge (second edition).

Brenner, N. 2001. "The limits to scale? Methodological reflections on scalar structuration," *Progress in Human Geography*, 25, 4:591-614.

Glaeser, E. 2011. *Triumph of the City*. New York: Penguin Press.

Howitt, R. 1998. "Scale as relation: musical metaphors of geographical scale," *Area* 30, 1:49-58.

Marston, S., J.P. Jones III, and K. Woodward. 2005. "Human geography without scale." *Transactions of the Institute of British Geographers*, 30:416-432.

Massey, D. 1994. "In what sense a regional problem?" pp. 50-66 in D. Massey,

Space, Place, and Gender. Minneapolis, MN: University of Minnesota Press.

Mykhenko, V. and I. Turok. 2008. "East European cities – Patterns of growth and decline, 1960-2005." *International Planning Studies*, 13, 4:311-342.

Pack, J.R. 2011. "Reinventing older communities: Does place matter?," pp.140-159 In H.B. Newburger, E.L. Birch, and S.. Wachter, eds., *Neighborhood and Life Chances*. Philadelphia: University of Pennsylvania Press.

Pallagst, K., et al. eds. 2009. *The Future of Shrinking Cities*. Berkeley, CA: Institute of Urban and Regional Development, University of California.

Scott, A.J., ed. 2001. *Global City-Regions: Trends, Theory, Policy*. Oxford: Oxford University Press.

Smith, N. and C. Katz. 1993. "Grounding metaphor: Towards a spatialized politics." Pp. 67-83 in M. Keith and S. Pile, eds. *Place and the Politics of Identity*. London: Routledge.