Why the Garden Club Couldn't Save Youngstown

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IPC Working Paper Series

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Civic infrastructure and mobilization in economic crises

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MIT-IPC-04-002

March 2004

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Draft: March 22, 2004

Acknowledgements: This research was conducted with generous support from the MIT Industrial Performance Center, Richard Lester, Director, as well as the Cambridge-MIT Institute and a MIT-Sloan BPS research grant. Ezra Zuckerman, Chris Ansell, Isabel Fernandez-Mateo, Michael Piore, Sarah Kaplan, Forrest Briscoe, Dan Breznitz and Richard Locke provided extremely valuable advice. Thanks also to Paul Osterman, Peter Marsden, Gary Herrigel, Mashall Ganz, Roberto Fernandez and Tom Kochan. Participants at the MIT Industrial Performance Center Doctoral Research Seminar, MIT-Sloan Institute for Work and Employment Research Seminar, European Group on Organization Studies, the Organizations and Markets Seminar at Harvard University and the Society for the Advancement of Socio-Economics who provided feedback on earlier drafts.

ABSTRACT

This paper seeks to understand how the structure of civic relationships shapes trajectories of economic change through an examination of two well-matched Rust Belt cities: Allentown, Pennsylvania and Youngstown, Ohio. Despite sharing very similar economic histories, Allentown and Youngstown have nevertheless taken dramatically different post-industrial paths since the 1970s. The paper analyses how the intersection of economic and civic social networks shape the strategic choice and possibilities for mobilization of key organizational actors in response to two historical junctures that were critical in shaping the cities' economic trajectories. The analysis shows that differences in the way that civic and economic relationships intersected facilitated collective action in one and impeded it in the other. However, in contrast to much of the literature on "social capital" the results suggest the downsides of network density, particularly in times of acute economic crisis. Rather, it is more important that the structure of social relationships facilitate interaction—and mobilization—across social, political and economic divisions.

At the height of America's industrial era, Allentown, Pennsylvania and Youngstown, Ohio were known as places that "worked" both in terms of the men and women toiling in the cities' factories and in terms of the intangible qualities of life that attend well-functioning communities. In 1977, however, those images were shattered as the cities' core industry—steel making—entered an extended period of acute restructuring and decline. By 1983, both had taken on the moniker of the Rust Belt and faced what appeared to be similar fates: companies and workers were likely to abandon the cities in a vicious cycle that threatened to leave once prosperous communities hollowed-out shells (Bluestone and Harrison 1982). Twenty years later, however, it is clear that the cities have actually taken very different paths. Allentown[1] has emerged as a community on the "high-road" of economic growth while Youngstown remains a poster child for post-industrial decline. In late 2003, Allentown's unemployment rate was 4.8% compared to Youngstown's which stood at 6.8%. Average wages in Allentown were 10% higher than Youngstown's. Thirty-one entrepreneurial companies in Allentown had garnered $1.8 billion in venture capital funds over the course of the 1990s compared to 15 firms and just $280 million in Youngstown. Allentown's central cities have grown by 35% since 1980 while Youngstown's have declined. In the recent economic downturn, Allentown has retained many lucrative jobs as firms have consolidated operations *into* the region while Youngstown has suffered further job losses as more production has slipped away to the American South, Mexico and more recently, China.

This paper seeks to understand why these two places which shared remarkably similar histories have proceeded down such different post-industrial trajectories since the 1980s. Drawing on insights from social embeddedness theory (Granovetter 1985; Powell and DiMaggio 1990; Romo and Schwartz 1995), I argue that differences in the underlying structure of inter-organizational relationships in the two cities shaped the strategic choices and possibilities for mobilization among key organizational actors and that these differences were the source of the regions' economic divergence. Specifically, I show that differences in the relationship between two kinds of inter-organizational networks—one economic, the other civic—combined in different ways which ultimately facilitated beneficial interactions in Allentown and precluded them in Youngstown. In Allentown, civic relationships tied actors who were not otherwise economically connected while in Youngstown civic ties compounded connections among actors who were already economically well connected. Moreover, in Allentown key economic leaders concentrated their civic participation in a few prominent organizations whereas in Youngstown community leaders' participation was spread thin among a large number of civic commitments.

[1] Throughout, "Allentown" and "Youngstown" refer to each city's respective three county Metropolitan Statistical Areas: Allentown-Bethlehem-Easton (PA) and Youngstown-Warren (OH).

Concentrated and narrowly focused forms of civic participation evident in Allentown provided dedicated forums in which concerns of the community could be deliberated and provided an organizational and institutional infrastructure within which collective action could be taken. In Youngstown, the structure of social relationships provided a less robust set of social resources on which to take collective action.

The findings shed light on debates surrounding the role of network density and social capital. Most formulations of social capital associate superior regional outcomes with dense "networks of civic engagement" fostered by "civil associations" of all kinds. "The denser such networks in a community, the more likely that its citizens will be able to cooperate for mutual benefit" (Putnam 1993). Such networks are thought to provide ready access to information as well as enhanced trust and solidarity. Burt (1992) argues that social capital brings information from other actors to focal actors to the extent that this relies on a reciprocal outflow of information, the entire network benefits. Yet, the research presented here lends support to detractors of the communalist approach to social capital showing that strong identification among focal groups within a community may also lead to fragmentation of the broader whole. Social structures in which too much solidarity prevails among subgroups can spilt the broader aggregate into 'warring factions or degenerate into rent-seeking special interests groups (Foley and Edwards 1996)

These arguments are developed through an in depth empirical examination of two critical junctures in the cities' shared economic histories. First, it had become apparent in the 1950s that the shifting geography of the steel industry combined with institutional changes affecting the price of shipping steel to customers was likely to undermine each region's ability maintain their positions as centers of steel production. In response, economic leaders in both cities commissioned consultants to outline a course of action. In both cases, the reports that resulted had very similar recommendations. However, the historical record makes it clear that very different kinds of collective action emerged in response. Key actors in Allentown came to support the consultants' conclusions and took action to implement them. In Youngstown, on the other hand, outside consultants' reports were largely ignored. Instead, political leaders pursued a set of policies which they assumed to be in the best interest of the city's core economic elite, but ultimately failed to win the support of those actors when it came to implementation. The second critical juncture examined is the response of the two communities to the upheaval which struck the steel industry in 1977 resulting in massive plant closings in both cities. In Allentown, key actors were able to convene in the immediate aftermath of that crisis in order to craft a coherent set of policies

which were successfully implemented. In Youngstown, a highly fragmented set of responses emerged, none of which was ultimately pursued.

The paper is organized as follows. The next sections provide some background on social networks and theories of economic change as well a discussion of the methodology. The section that follows describes Allentown and Youngstown's emergence as centers of manufacturing and their divergence since the 1970s and 1980s. Next, the two historical junctures which emerged simultaneously in the cities' histories and the different responses these events elicited. To lend support to the claim that differences in social structure contributed to the divergent strategic observed, social network data were gathered on two kinds of social ties: (1) economic linkages as measured by board interlocks among large companies, and (2) civic links measured through common organizational representation on prominent civic organizations' boards of directors. These data were gathered on the structure of relationships as they prevailed *prior* to two the critical historical junctures in 1950 and 1975[2]. The paper concludes with a discussion of the findings and implications for theory and policy.

THEORETICAL BACKGROUND

Regional economies can be seen as intricate, overlapping systems of inter-organizational relationships (Lauman, Galaskiewicz and Marsden 1978; Markusen 1994, 1996). Organizations tend to create stable relationships characterized by trust and rich exchange of information with specific partners because relationships can reduce search costs and alleviate risks associated with opportunistic behavior (Dore 1973; Powell 1990). Over time, these relationships accumulate into a network containing a repository of information on the availability competence and reliability of prospective partners (Powell, Koput and Smith-Doerr 1996; Gulati and Gargiulo 1999). These structures are 'sticky' in the sense that structures and their paths persist over time congealing into long-term patterns of inter-organizational interactions.

In the aggregate, inter-organizational relationships are part-in-parcel of a region's social capital. Social capital refers to the resources available to actors which derive from their location in the structure of social relationships (Adler and Kwon 20002); the expectations for action within a given community that affect the economic goals and goal seeking behavior of its members (Portes and Sensenbrenner 1993). The concept of social capital has a long history in social science generally (see Portes 1998; Adler and Kwon 2002 for reviews) and economic development in particular (see Woolcock 1998; Woolcock and

[2] Data were also gathered on organizational ties in 2000. Subsequent research will analyze these data in more detail.

Narayan 2000; DeFillipis 2002). It is useful, however, to separate perspectives on how social capital affects relational economic outcomes into two camps. *Communitarian* approaches, associated mainly with the work of Robert Putnam (1993; 2001), argue that social capital creates higher levels of trust which to cooperation, information exchange and norms of reciprocity which ease transaction costs and facilitate collective action thereby increasing living standards and economic development in developed and developing countries. The second camp might be labeled a *social mobilization* approach. Associated with Theda Skocpol and colleagues (Skocpol 1996; Skocpol, Gans and Munson 2002; Crowley and Skocpol 2001; see also, Foley and Edwards 1996, DeFilippis 2001), the social mobilization camp takes issues with Putnam's assessment of "civil community" arguing that it glosses over real, and often sharp, conflicts among groups in civil society. The importance of social capital, according to this camp, lies in the cognitive and resource constraints which derive from the concrete relationship among various factions of interest within a community and the ability of actors to draw on these concrete relationships to mobilize collective actions which allow individual constituencies within the community to realize the power needed to attract and control capital (DeFillipis 2001).

The two perspectives on social capital lead to very different assumptions about how the structure of social networks affects regional outcomes. Putnam's trust centered approach has tended to focus on the notion of network density. Saxenian (1990), in a similar vein, painted a picture of a region in which dense social networks allowed specialist firms to innovate and react flexibly to challenges. Grabher and Stark (1994), in their synthesis of the literature on transformation among post-Soviet economies, assert these networks as the fundamental economic unit. "Dense social networks," they argue "facilitate the development of uniform subcultures and strong collective identities" which, in turn, "promote cohesiveness while hindering the ability to gain information and mobilize resources from the environment" (Grabher and Stark 1997, p. 537). These networks provide the coordinating mechanisms that direct the social, economic and political changes within which the economic change unfolded in the post-soviet era. Similar arguments have been applied to mature industrial regions (Amin and Thrift 1994). Power and conflict centered perspective on social capital, on the other hand, have tended to focus on the fragmentation of community social structure and the coalitions—one might think of them as overlapping pockets of social capital within the larger community of social ties—which prevail at specific times and places. Locke (1995) argued that decentralized "poly-centric" structures facilitate conflict resolution and deliberation across political divides, Padgett and Ansell's (1994) discussion of the rise of the Medici to power in Renaissance Florence showed the advantages conferred on actors situated at the intersection of overlapping networks.

Despite the widespread use of network concepts among adherents of both camps, with very few exceptions, analysts have shied away from gathering empirical data on the actual structure of network ties in making their arguments (Staber 2001a; but c.f., Castilla 2003). A growing body of work within economic sociology which incorporates the analysis of social networks to explain important historical phenomena suggests there might be considerable value in doing so. Gould's (1991) research on the Paris Commune of 1871, for instance, showed how the multiplex structure of networks among combatants based on their home arrondissement and guard division influenced combatants' commitment to the cause. McAdam and colleagues (McAdam 1988; Fernandez and McAdam 1988) employed network analysis to understand the forces that drove recruitment to the Mississippi Freedom Summer. In the line with this body of research, the goal of this paper is to bring the analytic techniques of social network analysis to bear how social structure is invoked during concrete historical events which shape regional economic trajectories. Specifically, it seeks to understand how the density of social ties in a community affect the response of community actors when faced with acute economic crises. To what extent does density facilitate collective action in the face of crisis? To what extent do crises reveal underlying social fissures? How does the intersection of various dimensions of network relationships contribute to the ability—or inability—of a community to mount an adequate response?

METHODOLOGY

The methodological strategy employed in answering these questions draws on historical comparison, specifically the method of similarity to generate grounded theory (Skocpol and Somers ; Paige 1999; Locke 1995). Under ideal conditions, the method of similarity dictates comparing two contexts that are similar with respect to all potential explanations except for (a) the variable one is trying to explain and (b) the proposed explanation for those outcomes (Mill 1843 [1976]). In reality, of course, it is never possible to achieve an exact match; many mitigating circumstances inevitably muddy the water. Comparative approaches, therefore, cannot "prove" a given finding. Nevertheless, when rigorously conducted, the method allows insights to emerge which can be contrasted to plausible alternative explanations providing compelling (if not conclusive) evidence in support of the claims being made.

The key is careful case selection and a full accounting of the similarities and differences between cases. Allentown and Youngstown were selected for analyses because they shared remarkable similarities with respect to several potential alternative explanations which might also explain divergent regional outcomes. The cities were initially identified through a statistical model testing the rate at which average

wages increased over a twenty-five year period among the 38 "rust belt" metropolitan statistical areas (defined as cities with populations of less than 10 million residents in the eight states bordering the Great Lakes). Independent socio-economic measures included manufacturing as a percent of total employment in 1975; change in manufacturing as a percent of employment, 1975-2000; percent decline in manufacturing 1977-1983; percent decline in manufacturing 1983-1987; percent completing high school 1975; change in percent completing high school 1975-2000; percent African-American 1975; percent change African-American 1975; number of Fortune 500 company headquarters 1975; and, log population in 1975. The model took the form of a standard linear regression—$y = \mathbf{X}ß+\mathbf{e}$—with y being the log change in average incomes 1975-2000 (standardized across regions using regional Consumer Price Indexes as a measure of inflation). **X** contained the vector of independent variables. Predicted values from this model ($r^2=0.37$) were then plotted against actual outcomes. Allentown and Youngstown emerged as outliers in this analysis with Allentown falling above predicted outcomes and Youngstown below. Tables 1a and 1b provide some very basic indications of the cities comparability showing aggregate descriptive statistics concerning the population and industrial composition of both cities in 1950 which is the beginning of the period discussed in this paper.

Beyond its obvious policy relevance, the location of these cities within the Rust Belt offers a number of methodological advantages for comparative analysis. The circumstances that gave rise to the American Rust Belt—the westward expansion of the United States which coincided with the Second Industrial Revolution—mean that many communities in the region have common economic, social and political origins (Page and Walker 1991). Moreover, the centralized, oligopolistic structure of the industries which took hold there – centered on steel and automobile production – ensures that various shocks which rocked core industries descended upon communities simultaneously. Both in terms of the timing of their development as centers of manufacturing, the nature of the manufacturing that took place within them, with respect to the narrative thrust of their histories and finally with respect to various crises each faced within those histories, the cities share remarkable similarities.

The core of the research is based on archival research and a careful reading of secondary historical accounts surrounding the socio-political processes surrounding exogenous shocks which struck both regions simultaneously. However, to gain objective insight into the nature of the key hypothesized difference—structure of social networks—data were collected on interlocking directorates. An interlocking directorate occurs when a person affiliated with one organization sits on the board of directors of another organization (Mizruchi 1996). Board interlocks have long been a way of examining community networks reaching back to stemming from studies of community elite structures (Laumann,

Marsden and Galasckiewics 1977; Galaskiewicz 1979) and have been used to examine mechanisms of corporate control (Burt 1980) financial institutions role in corporate governance (Mintz and Schwartz 1981) and processes of isomorphic diffusion (Useem 1984; Davis 1991). Interlocking has also long been recognized as at least partially a location driven phenomenon (Kono, Palmer, Friedland and Zafonte 1998). As such, corporate board interlocks have been used as a means of capturing social cohesion among community elites (Mills 1956; Mace 1971) and, in the critical literature as a means of observing capitalist class integration (Domhoff 1967; Zeitlin 1974; Palmer 1983; Useem 1984). Interlocks have also been used to analyze the mechanisms by which business and government elites band together to generate economic and population growth becoming 'urban growth machines' (Logan and Molotch 1987).

The role of board interlock data presented in this paper is to illuminate those elements of social structure which may underlay observed differences between the two regions. The data were gathered in such a way as to provide as much leverage as possible in deciphering questions concerning causality; specifically, they are gathered on relationships which existed *prior* to the outbreak of the crisis that are analyzed. However, it is important to be clear that the network data are not sufficient to *prove* causality; that would require finer grained data collection than is available. Nevertheless, in combination with a deep understanding of the historical processes which unfolded, the network data do help provide important insight into the fine grained nature of social structure and thus contribute to building the paper's overall argument concerning the importance of social structure in shaping regions' outcomes. With this caveat in mind, then, we can now turn to a discussion of the empirical setting.

ALLENTOWN AND YOUNGSTOWN IN COMPARATIVE PERSPECTIVE

Allentown and Youngstown emerged as industrial centers during America's Second Industrial Revolution. By the Second World War, both had reached near full employment producing goods from steel, concrete and cloth destined for both civilian and military use. But by the end of the 1950s, signs of trouble were becoming apparent as companies in both places faced strategic decisions that were likely to have significant—negative—consequences for the regions' inhabitants. By the 1970s, those fears had come to pass as manufactures began closing operations in both cities. This section lays the groundwork for the analyses presented in the second half of the paper by providing a brief history of the origins, growth, decline and subsequent divergence of the two cities.

Origins

In 1743, Moravian missionaries established the borough of Bethlehem on the south bank of the Lehigh River Valley. By 1750, it had been joined by two settlements at Allentown and Easton bringing the region's population to about 15,000 residents. In 1829, Philadelphia-based investors built the Lehigh Canal which served as a route for central Pennsylvania coal on its way to New York City and Philadelphia. The canal's monopoly over transportation in and out of the Lehigh Valley spurred a movement among local businessmen to create an alternate rail route parallel to the canal. This line, which opened in 1846, became the core of the Lehigh Valley Railroad which would go on to become a major line linking the East Coast to the interior Great Lakes. The establishment of a small iron mill built in 1857 and located in South Bethlehem led the Lehigh Valley Railroad to locate the junction of its second line connecting the region directly to Philadelphia nearby. The mill was the seed from which the Bethlehem Steel Company grew to become the second largest steel producer in the United States (Folsom, 1982.; Vadasz, n.d.).

The Mahoning Valley—including the cities of Warren, Niles and Youngstown—followed a similar developmental pattern. Settled by missionaries from Connecticut, Warren, located fifteen miles north of Youngstown, became the capital of the Connecticut Western Reserve in 1800. In 1802, a small iron mill was erected in Poland, south of Youngstown, becoming the first blast furnace west of the Appalachians. In 1852, coal and limestone were discovered in the town of Struthers just south of Youngstown leading to the construction of several more substantial furnaces. Industrial activity and a favorable geographic location attracted rail lines which connected the region to Cleveland and Pittsburgh, seventy miles in either direction north and south, as well as to New York and Chicago, approximately 800 miles to its east and west. Proximity to raw materials, the river and its favorable position on the nation's growing network of railroads led to the establishment of several more iron mills which soon dotted the valley (Ingham 1978, Jenkins 1990).

The discovery of the steel-making process and Andrew Carnegie's climb to become its most forceful advocate led to a period of consolidation throughout the industry which led many of Youngstown's small iron mills to be converted into integrated steel mills. In 1894, Carnegie's National Steel Company purchased the largest of Youngstown's integrated mills, the Ohio Works. The local sellers of the Ohio Works reinvested the windfall from that sale to create two new steel companies in Youngstown. The first was quickly sold to Republic Steel making it the third largest steelmaker in the United States after Bethlehem Steel. Republic's Youngstown Works were the company's largest capacity mills leading the company to move its headquarters from New Jersey to Youngstown soon after the purchase. The other

company, Youngstown Sheet and Tube, was founded in 1900 and remained locally owned and operated as the nation's fifth largest steel maker (Youngstown Sheet and Tube, 1950; Republic Steel 1944; Lynd 1987).

Andrew Carnegie and U.S. Steel also influenced the trajectory of steelmaking in Allentown, but in a somewhat different way. By 1900, Bethlehem Steel's original founders had grown the company to a respectable size. They were approached that year by one of Andrew Carnegie's protégés, Charles Schwab. Schwab had been pulled from factory floor by Carnegie at the age of 18 and made a foreman. Within ten years, at the age 28, Schwab was in charge of the entire company; the leading light of a cadre of young men under Carnegie's supervision. But a falling out in 1900 had led to Schwab's departure. In return for his resignation from the company, Schwab had received a substantial financial payout which he hoped to invest in a new venture that he could control according to the principles he developed at US Steel. He settled on Bethlehem Steel because of its proximity to the East Coast; a region in which U.S. Steel had relatively little market share. Schwab quickly consolidated control over the company.

By the end of the First World War, steel companies were the largest and most important employers in both the Lehigh and Mahoning Valleys representing 19% and 28% of total employment respectively. But in neither place was steel the region's sole economic driver. Allentown, for instance, was just as well known for its concentration of cement companies including Lehigh Portland Cement which appeared among the Fortune 500 for many years (Table 2). Also, in 1900, the Mack brothers moved their truck assembly company from New York to Allentown. Mack Trucks became the dominant heavy truck manufacturer in the United States. Just a year earlier, in 1899, the Packard brothers founded both a car company as well as another firm which produced electric motors and harnesses located in the city of Warren, north of Youngstown. The car company quickly moved to Detroit, but the wire harness business remained. Packard Electric became the largest employer in Warren although it too became a division of General Motors in 1932. Its success drew other electronics firms to the region including several major facilities owned by General Electric. Youngstown was also home to a large number of steel consuming companies including Mullins Manufacturing, a major munitions and equipment manufacturer.

Manufacturing-driven prosperity drew large waves of migration to the cities in the 1910s and 1920s. Poles, Russians, Ukrainians, Slovaks, Finns, Italians, Greeks, Irish and Syrians settled in working class neighborhoods such as the First and Sixth Wards of Allentown, South Bethlehem, and Youngstown's Brier Hill. By the 1930s, labor organizers affiliated with the Steel Workers Organizing Committee (SWOC) were actively recruiting in these neighborhoods. The steelmakers had resisted such attempts

reaching back to the disastrous Homestead strike of 1892. But in 1937, U.S. Steel—by far the largest producer in the industry—surprised the industry when it announced that it would sign a union contract. But the next seven largest companies—including Bethlehem, Republic and Youngstown Sheet and Tube—refused thus touching off the "Little Steel" strike of 1937, one of the first mass industrial actions in American history. Six pickets were killed in a violent clash with company security forces outside Youngstown Sheet and Tube mill during the walkout and ten more were killed at an altercation near Chicago. The workers eventually capitulated, but the union maintained and eventually won its first contract from Bethlehem in 1942, followed weeks later by contracts at Republic and Sheet and Tube. The steelmakers relented in part because of the coming of World War II during which the companies prospered producing steel for tanks, munitions and ships (Jenkins 1990; Bruno 1999; Fones-Wolf and Fones-Wolf 1998).

Post-War Prosperity and Crisis

By the 1950s, economic clouds had emerged to cast a shadow over both of the cities' futures. Initially, the cities' inland locations had been considered desirable because they were in close proximity to primary raw materials of the steelmaking process—coal, coke and limestone—rich deposits of which were located in the nearby Appalachian mountain range that lay between the two cities. But as early as the 1880s, steelmakers in both the Lehigh and Mahoning valleys had turned to others sources in order to find coal enriched with more carbon and less phosphate necessary for high-quality steel making. In Youngstown, the new source of coal was the Mesabi range in the northern Great Lakes. Bethlehem Steel sourced its coal form company owned fields in Cuba. Transporting the materials inland to Allentown and Youngstown required transferring the materials onto rail. New integrated mills located directly on the coasts or on the shores of the Great Lakes were much easier to reach. Moreover, since shoreline facilities were generally built later, the companies were also able to incorporate logistical more efficient layouts and install newer equipment (Allen 1952).

For years, these short comings had overcome due to the complicated set of pricing rules which had taken hold in the industry. By the 1940s, prices were determined according to the "base-point" formula in which costs were assessed according to their geographic distance from particular points of production rather than being allowed to float on according to market forces. Since Bethlehem and Youngstown were base-points in the system, shipping costs were constrained to be lower than actual costs. However, the system was eliminated in the 1950s causing concern among steelmakers and steel communities alike. Locational problems accumulated and finally came to a head in the late 1970s erupting in Allentown and Youngstown in the summer of 1977 following negotiations between the United Steelworkers and major

steel industry employers. The union's bargaining goals focused on securing wage and job guarantees in the face of the increasing market share of imported steel makers. The industry, which was in the midst of just such a downturn as negotiations were getting underway, was in a strong position to resist these demands. However, an unanticipated surge of consumer demand in anticipation of what was expected to be a lengthy strike changed the dynamic. The orders dried up steel producers' reserves leaving the industry in a substantially weak bargaining position. With temporarily large profits showing on the books, Federal mediators pushed a settlement in the Union's favor. A settlement was reached in July. However, the companies' paper profits quickly dried up and by the fall, the creditors began openly expressing their nervousness (Lynd 1987; Buss and Vaughan 1987; Strohmeier 1986).

Nervousness quickly translated into restrictions on lines of credit that forced companies to respond. Allentown was the first to feel the effects. Earlier that year, a severe winter storm in Western New York and a flood in central Pennsylvania had struck two of the Bethlehem Steel's outlying facilities that generated large unforeseen financial burdens. As demand dropped in late August, the company's leadership was compelled to take action. The company announced the closure of operations in western New York State and central Pennsylvania. The surprise came with the announcement of 800 layoffs among the company's white-collar headquarters workforce. Layoffs among production workers in Allentown followed soon after. By 1983, half of the steel workforce in Allentown was on unemployment—nearly 4,000 workers. The crisis erupted more violently in Youngstown. On September 17, 1977, the directors of the Lykes-Youngstown, the parent of Youngstown Sheet and Tube, announced the closure of the Campbell Works, the largest and oldest of the company's facilities in the area. The decision immediately threw 5,000 workers onto the streets. A year later, Republic announced it too was closing down much of its Youngstown operations affecting another 2,000 workers. Relentlessly, 1979 brought yet another announcement from U.S. Steel that it was closing its Youngstown facilities. In total, nearly 10,000 steel workers had lost their jobs by 1983 (Lynd 1987; Buss and Vaughan 1987; Strohmeier 1986).

The crisis, which lasted from 1977 to 1983, represented the most acute period in what had actually been a long-term decline in the importance of manufacturing to the two communities. From a peak of about 50% of employment in 1950, manufacturing had already declined as a percent of total employment from around 35 percent in 1977 as shown in Figure 1. Between 1977 and 1983, however, the slope of the downward curve increased. By 2000, manufacturing accounted for just 16% of employment.

The Empirical Puzzle: Post-Industrial Divergence

In a prescient book on the competitiveness crisis facing the United States in the early 1980s, Barry Bluestone and Bennett Harrison (1982) argued that multi-pronged industrial policy was necessary to counter the dehumanizing effects of deindustrialization. In addition to rebuilding the social safety net and reforming labor and employment law they called for policies that would nurture "sunrise" industries such as electronics and bio-medical technology while addressing challenges facing "sunset" industries such as steel and automobiles. Their program for supporting new industry included fostering "'public-private partnerships" between the companies manufacturing projects for which there are potentially profitable growing markets and the government that 'targets' financial and regulatory policy to help those companies grow" (Bluestone and Harrison 1982: 245-6). As for easing sunset industries' transformation, Bluestone and Harrison suggested transforming existing plants and equipment to new uses or, where possible, the maintenance of old facilities which remain economically viable if only for lack of a community-based response to reinvigorate them.

Leaders of both Allentown and Youngstown were intimately aware with the choices that Bluestone and Harrison described. And, given the remarkable similarities surrounding the cities' emergence and growth, one would expect the aftermath of their mutual economic crisis to have followed similar paths. However, this has not been what has transpired. Indeed, it is apparent that Allentown has in many ways embodied Bluestone and Harrison's vision of a community that succeeded by striking a high-road strategy of facilitating the growth of "sunrise" industry and smoothing the transition from sunset ones. Similar efforts in Youngstown have largely been frustrated.

As the data in Figure 1 indicate manufacturing remains more prominent as a percent of total employment in both cities than in the rest of the United States and has actually increased in Youngstown since in the late 1990s. Nevertheless, stark differences are apparent with respect to the *kinds* of manufacturing that take place in them. In Youngstown, steel, auto manufacturing, cement, textiles and apparel continuing to account for about 81% of total income derived from manufacturing in the city (Figure 3). Allentown, on the other hand, seems to have shed its old industrial stock almost entirely. While these five industry segments comprised 77% of manufacturing-based income in 1970, today they sum to only 28%.

Figures 4 and 5 give an indication of what has taken their place. Figure 3 shows that knowledge intensive growth-industries of the 1980 and 1990s including electronics, instruments and specialty chemicals have increased dramatically over this period of time in Allentown. Just as important,

Allentown has also experienced significant growth in 'high-end' service sector including finance, insurance and real estate services. As shown in Figure 4, in both cities, these jobs accounted for less than 5% of jobs in 1970. But today the numbers in Allentown are close to national levels with one in six workers in the Lehigh Valley employed in the health or education sectors while employment in these sectors remains stuck at the same levels as before in Youngstown. Automobiles, transportation equipment and some specialty steelmaking represent the bulk of the city's manufacturing base and the service industries which have emerged in Youngstown are concentrated at the lower end of the skill range. Call centers made significant inroads in Youngstown in recent years. In the 1990s the region became home to a cluster of private and publicly owned prisons.

Finally, the differences in the cities' economic trajectories have had an impact on standards of living. Figure 6 shows income growth in the cities since the 1970s (adjusted for regional CPI with 1984=100). Allentown and Youngstown essentially tracked each other until around 1977 with both above the national average. Indeed, until the mid-1980s, wages were on average higher in Youngstown than in Allentown. But by 2000, the cities had diverged significantly with average wages in Youngstown several thousand dollars below both the national average and Allentown's.

These data generate to the empirical puzzle which this paper seeks to explain: how is it that two communities which shared such similar historical patterns of development and which faced such similar crises in the deindustrialization of the 1970s and 80s have take such different trajectories in the decades since then?

TWO CRITICAL HISTORICAL JUNCTURES

The narrative just presented suggests two key moments in which actors' networks may have played important roles in shaping the cities' outcomes: (1) the response to the growing concerns in the 1950s around the shifting geographic logic of the industry away from inland locations and (2) the aftermath of the crisis which erupted in 1977. This section turns to the historical for clues as to how actors in the two cities responded to these crisis and how underlying social structure may have shaped those responses.

Addressing the Future: Reinforce Basic Industry or Diversify in the 1950s

By the 1950s, nearly a century of exploitation had depleted much of the regions' coal reserves while the innovation of electric arc furnace that had made it possible to manufacture high quality steel using cheaper, lower quality varieties of coal had allowed steelmakers to source the key input of coal from Minnesota and the northeast coast of South America. The historical record shows that civic leaders in

both communities commissioned consultants reports during this time to look into these challenges and propose courses of action. In Youngstown, reports commissioned in 1941, 1947, and 1955 by the New Industries Committee of the Greater Youngstown Area Foundation, a group whose membership included several prominent members of the city's economic elite. Similar report was commissioned separately by Bethlehem and Allentown Chambers of Commerce in 1951 and 1953 respectively. These reports supplied leaders in both communities with remarkably similar information about the challenges they faced and suggested remarkably similar interventions in response. An academic paper on Youngstown's economy published in 1952 is illustrative of their conclusions. Noting that Youngstown production costs were approximately 55% higher than in Cleveland 70 miles to the northwest and 19% more than Pittsburgh, the report offered the following:

> In large measure, the future of [Youngstown and its surround area] may be determined by forces beyond their own control because local operations are only a small part of the total capacity of the major companies operating in this area. On the other hand, local interests have it within their own power to initiate actions which may be the deciding factors in the continued industrial development of the region. There are at least three possible solutions for the problems faced… The first is to increase the size of the local market by the encouragement of steel fabrication in the Valley. The second is industrial diversification. This could be accomplished by encouraging the development of a variety of new industries in the region to take advantage of its latent possibilities. Finally, the third solution and one which is largely beyond the control of the Valley itself is a reduction in steel production costs.

In 1955, a Pace Associates report commissioned by a group of business leaders in Youngstown, for instance, noted the lack of industrial space suitable for light manufacturing in the region and suggested the regional airport and an area near Youngstown State University as possible locations (Woodward, 1941; Pace Associates 1955).

The cities' diversification efforts were accelerated by a pair of labor strikes that simultaneously struck in both Allentown and Youngstown—and other steel towns nationwide—in 1956 and 1959. With the country coming out of a recession in 1956, the steel industry had recorded record profits. Bargaining between the industry and the unions nevertheless quickly bogged down. For the first time, all of the industry's major employers—including Bethlehem, Republic and Youngstown Sheet and Tube—sat down together to reach a joint agreement. Although prepared to give substantial wage increases, the companies wanted wages locked in for a five-year period. The union refused and a three-week strike ensued. The settlement was favorable to the workers. Reached under pressure from the administration of President Eisenhower who was facing re-election that fall, it called for a three year contract, pay increases and a twice-yearly cost of living which brought the total increase in pay to approximately 30%

over the life of the agreement. Smaller companies—including Bethlehem, Sheet and Tube and Republic—were frustrated by the outcome. Faced with increased labor costs, the companies felt compelled to pass the costs on to consumers. Increasingly, however, those consumers were turning to cheaper foreign produced steel as an alternative (Rogers 1952)

The massive steel industry strikes of 1956 and 1959 catalyzed local action in response on concerns about the viability of the steel industry in both places. In Youngstown, despite the mounting and apparent need for change, diversification-oriented elements of the consultants' reports went unheeded (Walker 1981). Instead, with the backing of the region's banks, steel companies and labor unions, Youngstown's Congressional delegation—led by the city's long-time U.S. Congressman, Michael Kirwan—sought federal funding to build a canal linking Lake Erie to the Ohio River Valley through Youngstown. The proposal came up for approval in the U.S. Congress in 1961 and received initial support. But it was ultimately quashed by the intervention of rail roads interests which feared competition as well as by politicians in bordering states who questioned the benefits of the massively expensive proposal.

In Allentown, the strike catalyzed a very different set of actions on the part of the community's leadership. The first was a decision on the part of Bethlehem Steel to construct a new research facility on South Mountain overlooking both the main steel plant and Lehigh University. This facility, the Homer Research Labs, was the first of what would become a large contingent of corporate research and development laboratories located in the city. The stated goals of the company in doing so was to shift into higher value added production. The second and perhaps more lasting impact was the creation of the Lehigh Valley Industrial Park;, then a new concept in economic development. A small group of investors eyed a large parcel of land near the Allentown-Bethlehem-Easton Airport and came up with a plan to develop it into an office park that could attract small to medium sized companies. In pitching the park to the Bethlehem Chamber of Commerce, one of its investors, Frank Marcon, made the link to economic diversification explicit stating that it was "imperative that we go out for the greater diversification of our industry" (Stainbrook and Beste 2002).

Responding to the Competitiveness Crisis

When the crisis finally arrived in the fall of 1977 inflicting painful challenges for each of the cities it inevitably touched off responses from civic leaders. Consistent with the patterns that had already been established, the nature of these responses differed dramatically. In Youngstown, it was characterized by extreme fragmentation, infighting and ultimately inaction. In Allentown, a relatively unified coalition emerged and was able to take a number of key actions.

The first and most notable response to the crisis to emerge in Youngstown came from a group known as the Ecumenical Coalition. Shortly after the first mill closure announcement in 1977, workers and community activists gathered at a local union hall to express their rage as well as their fears. A resolution was drafted under the title "Save the Mahoning Valley" which called for reforms to environmental and trade policies which workers pinned as the cause of the shut down. The statement garnered over 100,000 signatures from area residents in just three days. Buses were hired to carry a large contingent of steelworkers from the area to deliver the statement to policymakers in Washington. At a meeting early on in this process, a member of the Youngstown Board of Education stood up and posed the question "Why don't we all put up five thousand bucks and buy the damn place?" Led by the Roman Catholic Bishop of Youngstown, James Malone, and his Episcopalian counterpart, John Burt, the Ecumenical Coalition took up the suggestion and soon hired a staff to develop and lead just such an effort. They found Staunton Lynd, an attorney, former Yale professor and activist who had led training for the Mississippi Freedom Summer and then became a prominent and vocal opponent of the Vietnam War. Lynd contacted Gar Alperovitz, a Washington, DC based economist and an advocate of community ownership as a response to economic dislocation. Together, they crafted a plan based on the idea of turning the mills into community property by creating bank accounts into which community members could deposit funds that would convert into stock once the new company was underway. The funds, however, could not cover the entire cost of purchasing and modernizing the plants. There coalition therefore also sought federal funds and loan guarantees of up to $500 million (Lynd 1987; Feutchtman 1989).

The Coalition's plan, however, failed to catch on among local politicians. In 1978, two additional groups emerged to advance competing proposals. One was led jointly by Youngstown Mayor J. Phillip Richley and by Congressman Charles J. Carney. Their organization—the Mahoning Valley Economic Development Corporation—had an agenda of creating a national center for steel technology development as well as potentially building a new steelmaking facility designed to support the city's remaining steel production facilities. A third already existing agency, the Western Reserve Economic Development Agency, also contributed a plan which called for federal funds to help modernize remaining facilities. Finally, in 1980, yet a fourth group emerged to represent the interests of several of Youngstown's affluent Southern suburbs. This group sought state funds to create a new office and industrial park out of the brownfield site of one of the region's largest former steel mill sites. As the economic crisis in Youngstown worsened over the next several years, these various proposals—and their backers—battled for attention and funds at the state and federal level. Strikingly absent from the deliberations, however, were the leaders of region's remaining major employers. In the end, with the

exception of the construction of a light industrial park at one the closed steel mills, none of the four proposals were ever fully or effectively implemented (Buss and Vaughn 1987).

The crisis and the community's response played out very different in Allentown. Early on, a group of the city's most important economic leaders—mainly the CEOs of its remaining major companies and banks—gathered to address the crisis facing the region. As the crisis worsened in Allentown, this group of leaders began crafting a response. Building on ties to labor and to local government, two proposals rose to the top. The first involved an extension of a major highway—Interstate 78—which ran through the city. Improving existing portions of the road along with the construction of a new by-pass route through the city promised to ease transportation to New York City and its suburbs in Northern New Jersey. Walter Dealtrey, the owner of a local chain of tire outlets and a member of various corporate and civic boards in the area, lead an effort to push legislation that would ensure the construction took place.

The second proposal concerned a new initiative then being developed by the State of Pennsylvania known as the Ben Franklin Technology Partnership, which was meant to generate endogenous growth through partnerships between industry and research universities. Local business leaders, including Dealtrey, spoke with Walter Plosila, the State's Secretary of Commerce at the time. Plosila was a vocal advocate of endogenous growth, an approach which contrasted with the more popular strategy of creating investment incentives designed to attract large employers which Plosila, among others, derided as "smokestack chasing." The idea was to create public-private partnerships that would build on the state's higher education infrastructure to support existing companies seeking to engage new technologies as well as to generate new ones. Initially, the Ben Franklin program's creators planned on establishing three centers, one in Philadelphia, another in Pittsburgh and a third covering the rest of the state to be located at State College near Pennsylvania State University. The local group in Allentown, however, succeeded in advocating for a fourth located near Lehigh University. In addition to creating links between university researchers and the business community, the plan in Allentown called for a private venture capital fund which would be run in conjunction with the Ben Franklin center. The fund drew investments from several of the community's companies and several wealthy individuals.

INTERORGANIZATIONAL NETWORKS: 1950 and 1975

To establish what differences, if any, exist between the cities' networks I employ a set of network analytic techniques. As the preceding narrative makes clear, the cities shared remarkable parallels in terms of the timing and magnitude of their economic, social and political development. However,

despite the surface similarities between these two places, important differences existed with respect to the social and economic networks in which people and organizations were embedded. The section presents data from two of the periods: 1950 and 1975. The section that follows builds on the findings developed here to analyze their effect on the regions' outcomes.

To ascertain the structure of inter-organizational networks, board interlock data were gathered

The list of actors considered for inclusion in the networks include the officers and directors of all major companies, banks, and utilities as well as the officers of major universities, civic and cultural organizations, religious officials and government officials.[3] Ties between these actors are derived from

[3] An interesting challenge arose with respect to coding data pertaining to prominent wives. The data, generally, were coded in such a way that any two individuals with the same first and last names are assumed to be the same individual. However, in the 1950 and 1975, many women took their husband's first and last names in formal settings. For instance, the wife of Sheet and Tube CEO Frank Purnell or Bethlehem Steel CEO Eugene Grace is generally listed as Mrs. Frank Purnell and Mrs. Eugene Grace. As John Strohmeyer (1986) makes clear in his book on Bethlehem Steel's rise and fall, these were not simply polite formalities. Wives' roles in the community were taken quite seriously:

> "Conforming to the corporation's mores does not end with the executive. His wife (very few women have achieved executive status at Bethlehem Steel) is all but given a script to follow. Her wardrobe, topics of conversation, general appearance, drinking habits, skills as a hostess and certainly her devotion to her husband's career are carefully scrutinized….
>
> "The cloistered role for the wives back in the fifties and sixties reflected the cultural insecurity of the company's officials then the highest paid industrial managers in the country. Although most were college graduates, the need to establish social credentials was paramount and the role models were eagerly sought. No woman sent tremors through ambitious steel families more than that wife who came to the company with a Seven Sisters' degree, a collection of heirloom silver and a lineage of old money. This type was home free. She could do as she pleased, join the organizations she chose, and always be accepted at the highest company level.
>
> "For the majority of wives, however, such license was an unavailable luxury. For them membership in even the non-partisan League of Women Voters was taboo (although they coveted and sought enrollment in the Junior League). The Ladies' Auxiliary of St. Luke's Hospital, church work, and family duties were the approved ways to use spare time. Later, during the seventies and assuredly in the eighties opportunities broadened to include working with youth services and health agencies. The right to pursue their own careers also became acceptable. Lucky was the organization that captured the attention of the steel chairman's wife. A whole retinue of eager volunteers was sure to follow. When Marge Foy, wife of Chairman Lewis Foy who headed the company from 1974 to 1980, plunged into volunteer work with the American Cancer Society, the local chapter became the biggest fund raiser in the state. This was due in part to the support she received from steel executives' wives." (Strohmeyer, 1986 pp. 47-49)

This raises a difficult question for data collection with a direct bearing on the outcomes we seek to gauge: to treat wives in the data as serving in their own right or as extensions of their husband's social obligations? I have chosen the latter—when women are listed using their husband's first and last name, the assumption is made that she is essentially acting in her husband's capacity. Where women are listed under their own names, they are counted as separate individuals. A dummy variable in the data, notes wherever a civic tie is attributable to a wife's participation in this way are included in all analyses which follow.

two-mode affiliation data gathered on membership as officers and/or directors of all organizations considered to be in the boundaries of the cities' networks. A tie is recorded between any two organizations when individuals affiliated with them serve together as officers or directors of the same organization.

Ties are classified as either economic or civic depending on the organizations involved. The definition of "economic" organizations versus civic ones follows criteria first used by Laumann, Marsden and Galaskiewicz (1977). Economic organizations are those for which maximizing either shareholders' or members' profits are primary goals. Civic organizations are those for which the primary goal is to improve the community in some way. These criteria contain considerable ambiguities. In particular, the categorization of several organizations was unclear either because their goals are indefinite or because their emphasis has shifted over time. Utilities, banks and unions could be considered both profit-maximizing and community-oriented. Hospitals' and universities' goals, on the other hand, have arguably changed over time with onset of managed care and the potential for profit derived from sponsored research in universities. The criteria in these cases rested on a judgment about likely intensions of those who would agree to serve on the boards of directors of such organizations. I included hospitals and universities in the civic category since members of their boards of directors are more likely than not to view participation on those boards as primarily civic in nature. I included the banks, utilities and unions in the economic category since board members are more likely to sit on those boards for instrumental purposes having to do with either their own or their organizations' interests.

Two additional dimensions were taken into consideration with respect to defining the boundaries of the network: time and geography (Laumann, Marsden and Prensky, 1992). Data were gathered at two moments in time: 1950 and 1975.[4] These years were chosen because they occur just *prior* to the two events identified for analysis and, therefore, offer some leverage with respect to the direction of causality. In terms of geography, the boundaries of the network were limited to organizations falling within the metropolitan statistical areas of Allentown-Bethlehem-Easton, Pennsylvania and Youngstown-Warren, Ohio.

1950

Table 3 presents data describing characteristics of the economic organizations included in the analysis examined in the two communities in 1950. In 1950, Youngstown had thirty-nine organizations that met the criteria for inclusion while Allentown had 37. The data on first blush appear somewhat lopsided

[4] Where necessary, data from the years either immediately before or after the target dates were substituted.

with respect to the sizes of organizations. This is primarily due to the fact that Bethlehem Steel at this time (and, indeed, subsequently) was about twice the size of the comparable companies in Youngstown—Youngstown Sheet and Tube and Republic Steel. However, combining these two organizations' assets would yield a company of similar size to Bethlehem Steel. Indeed, including all of the steelmaking manufacturers in Youngstown would yield a steel industry that was somewhat larger than Allentown's. Thus for all intents and purposes, the cities' roster of organizations—and therefore the universe on which this network is based—can be considered roughly equivalent.

Figures 7a and 7b present a graphical representation of the board interlocks among economic organizations in the two cities in 1950. Organizations are represented by dots next to the name of the organization. A line appears whenever at least one individual from an organization appears on the board of directors or as an officer in another organization. For example, if the CEO of Mahoning National Bank sits on the board of Youngstown Sheet and Tube, this appears as a tie between the two organizations. Several differences are immediately apparent. Youngstown's graph (Figure 7b) is dominated by a densely connected group of organizations. In Allentown (Figure 7a), on the other hand, two distinct groups are evident. As Table 4 shows, the most central actor in Youngstown's network in 1950 was Union National Bank which had a total of 16 direct interlocks with other economic organizations in the city. In Allentown, the most central organization in the network on the left side of the graph is Bethlehem Steel with five interlocks. The central organization in the network on the right of the graph is Lehigh Coal and Navigation; the company founded in 1824 to build and administer the canal that ran alongside the Lehigh River which led to the region's initial economic development which has six interlocks in the network.

To establish the role of civic ties, data were gathered on the membership of boards of directors and officers of civic and community organizations. Particular civic organizations were chosen for inclusion in such a way as to be as comprehensive as possible while at the same time offering comparability across the two cities; these are listed in Table 5. Figures 8a and 8b show the networks among organizations with the civic ties included. Again, important differences are apparent. Perusing the figure, it seems evident that civic ties increase the density of the network in Youngstown. Indeed, it is difficult from the graph to clearly discern any structure at all beyond the tight clump of ties existing in the center. A very different picture emerges from Allentown's graph. First, adding civic ties unites the disconnected parts of the network which existed when only economic ties were included. Second, the network structure itself is quite orderly. Indeed, it seems apparent from the figure that civic organizations are linking across otherwise disconnected economic elements of the network.

The data in Table 6 provide a statistically significant test of multiplexity in the two networks. The test is a modification of a procedure developed by Borgatti and Feld (1994) to measure the strength of ties. The test has three steps. First, a proximity matrix **A** is created in which a tie of 1 is recorded between any organizations that share members (the number of ties between organizations is ignored for this analysis). Second, the matrix is transposed (**A'**) and then postmultiplied by **A**. The data contained in the cells of the resulting matrix **AA'** is a count of the number of times that each pair of rows in A has a 1 in the same column, indicating that the two actors are connected to the same third party. Finally, the QAP technique is used to compute the Pearson correlation between **A** and **AA'** while at the same time assessing the significance of the correlation.[5] The correlation is a statistically significant measure of the mean strength of ties within the network. This procedure was conducted on the data in three different ways as indicated in the table. The data in the first column shows the strength of economic ties only. The second column presents a measure of ties derived from joint membership on civic organizations; that is, a tie in **A** is recorded wherever two economic organizations both send individuals to sit on the board of the same civic organization. Thus a 1 appears in the cell in **A** which indicates a tie between Mack Truck and Bethlehem Steel if both organizations each have a representative on the United Way board of directors. Finally, the data in the last column present the strength of interorganizational ties when both economic and civic ties are included in the same matrix.

The results show that, in Youngstown, ties are extremely strong—above 0.8—for all three measures. In Allentown, on the other hand, the ties are equally strong for both economic and civic networks—again, around 0.8—but the strength of ties is cut in half when the two networks are combined. These results represent an important finding. In Allentown, the civic ties among elites in 1950 connected actors who were <u>not</u> otherwise connected economically. In Youngstown, on the other hand, civic ties amplified contacts among actors who were already well connected. This suggests that civic organizations in the two cities played very different roles in terms of how social capital was organized and used. Specifically, perusing the complete network structure for Allentown in Figure 8a suggests that civic organizations may have played a role bridging among otherwise disconnected organizations in the community. Further evidence of this is presented in Figure 9. The graph shows the eigenvector centrality scores—which

[5] The QAP procedure is used in order to overcome the obvious co-linearity of the data which would lead to spurious correlations significance measures using conventional techniques. The procedure compares the observed correlation with a distribution of random correlations generated according to the null hypothesis of no relationship between the matrices. The *p*-value is given by the proportion of random correlations that are as large as or larger than the observed correlation. It does so by permuting the rows and columns (together) of the input matrices, and then correlating the permuted matrix with the other data matrix. This process is repeated hundreds of times to build up a distribution of correlations under the null hypothesis.

provide an indication of the degree to which organizations act as brokers bridging between other organizations while simultaneously "controlling" for the centrality of those organizations' ties—of the top six civic organizations in each city. The raw centrality scores were transformed to add to 1.0. The graph indicates that, in Allentown, a few civic organizations—particularly the city's two largest colleges—occupied very central positions within the network compared to the parallel group of civic organizations in Youngstown—the region's two Red Cross chapters as well as the CEO dominated Greater Youngstown Foundation—which were largely undifferentiated from each other in terms of their bridging roles.

1975

Table 7 presents data describing characteristics of the economic organizations in the two communities in 1975. Youngstown had 27 organizations that met the criteria for inclusion while Allentown had 29. Again, mitigating for the differences between Bethlehem Steel and the larger but more fragmented steel industry in Youngstown, the networks are roughly equivalent. Figures 10a and 10b show the graphical representations of the board interlocks among economic organizations in 1975. Although it is less dense than in 1950, Youngstown's network (Figure 10b) remains well connected with several apparent overlapping ties. Allentown's economic network (Figure 10a) has become more connected with Pennsylvania Power and Light (the local power utility) serving to connect the two previously disconnected groups of companies.

Turning next to the networks with civic ties included, the data in Figures 11a and 11b indicate a relatively similar pattern to the one that existed in 1950. Once again, Youngstown's network is densely connected with numerous civic and economic organizations occupying a tight core of organizations at its center. Allentown's network retains the relatively orderly structure. Table 8 shows the normalized centrality scores for the top 15 most central economic actors in each of the networks.

Data from the multiplexity test prove out these observations. Again, while the ties are relatively strong in both cities when economic and civic ties are considered separately, the strength of ties declines when the two kinds of relationships are considered together in Allentown but remain high in Youngstown. Finally, considering the brokerage of the top five civic organizations in each city (Figure 12) again shows important differences. In Allentown, a handful of organizations—specifically Muhlenberg College as well as the local chapter of the Boy Scouts—have much higher scores than other organizations while in Youngstown none of that city's most central civic organizations—the Youngstown Garden Club, the Butler Art Institute and the Youngstown Chamber of Commerce—stand out.

DISCUSSION

Three salient facts can be concluded from the historical comparison and network data just presented. First, despite the remarkable parallels that surrounded the cities' emergence and growth as industrial centers, they have nevertheless diverged dramatically since the competitiveness crisis of the late 1970s and early 1980s. Second, the political processes which emerged around at two key historical moments differed dramatically with the responses in Allentown coalescing around a relatively unified set of community-oriented actions and Youngstown's Balkanizing along the narrow interests of a powerful faction. Thus, despite having access to the same information and ideas, the implementation of those ideas into policy and strategic action was very different. Finally, social networks exhibit significant differences with respect to configuration of multiplex economic and civic ties in the two cities. In Youngstown, the networks among economic organizations in the 1950s and 1970s are densely connected and, in particular, the multiplex economic and civic ties overlap indicating that actors' civic relationships connected actors who were already well connected. In Allentown, economic ties were deeply fragmented. However, civic associational ties linked the relatively disconnected economic actors. Furthermore, there are important differences between the cities with respect to the structural position of particular civic organizations. In Youngstown, no one organization or set of organizations emerges as particularly prominent. In Allentown, on the other hand, a few civic organizations emerged at various points as places where socially important actors gathered.

The findings are at least inconsistent with the communitarian approach to social which would suggest that Youngstown—a community which possessed dense interconnections among the city's core elite—should have been the more successful of the two. Instead, analyzing the structure of civic ties in Allentown and the role they played in that community when compared to Youngstown would seem more in line with a social mobilization perspective: particular civic organizations emerge as playing key roles connecting otherwise disconnected groups within the wider community. In some ways, these organizations resemble the position the Medici assumed in Florence as described by Padgett and Ansell (1993): they were members of both of the "camps" or network cliques in the community, but were not necessarily *of* either camp in particular. Yet the role these civic organizations played in connecting these groups was not self-interested in the way the Medici's seem to have been; indeed, their role seems largely to have emerged as an unintended consequence.

Intended or not, the role these few key civic organizations played Allentown was vital in shaping the cities' post-industrial trajectory. In Allentown, serving on the boards of organizations like the Boy Scouts and local universities provided local economic actors who did not have intersecting economic interests a forum in which to develop, enact and reproduce community-oriented identities and values. This is suggested by the fact that much of the staff for both the most powerful organizations to have emerged from this period of uncertainty—the Lehigh Valley Partnership whose members are CEOs of major area companies, as well as of the eventually independent Lehigh Valley Industrial Parks was recruited primarily from among the ranks of Boy Scout staff. In Youngstown, on the other hand, the data show the most prominent civic organization to be the Youngstown Garden Club. This organization was populated mainly by the wives of the business elite in Youngstown. Perusing the list of names associated with it and other prominent civic organizations in Youngstown, it becomes clear that a number of names are repeated: Wick, Campbell, Tod and Stambaugh; the names of the families that founded the original steel mills in the late 1850s; families that had settled in a small neighborhood near the center of Youngstown and then turned their attention to founding and running the city's prominent banks (most importantly, Union National Bank) and elite cultural institutions such as the Butler Art Institute (located near the corner of Wick and Campbell Streets).

By the 1970s, Youngstown's dense economic and social core was populated by the third and fourth generations of the city's original elite; relatively little "turnover" had occurred. Yet, it is also clear that by this time those ties had grown increasingly brittle. Families maintained their names and faces in the community through such memberships, but their time and effort were spent outside of it. The implication is that, although the network indicates a strong and highly dense network, in fact the ties were quite brittle. When, ultimately, those ties were tested during the crisis of the 1970s, the dense core played no significant role in the formulating a response and, indeed, was largely destroyed by it. Instead, the response was left for the disjointed elements of the network on its periphery. These elements of the network, however, lacked the history of interaction—particularly through the forum of civic associational ties—which existed in Allentown. By the time the crisis hit, it was too late to establish those ties. The fragmented response that emerged was a reflection of the underlying weakness of the community's social networks.

CONCLUSION

This paper has addressed one aspect of how social capital influences trajectories of economic change focusing mainly on how the configuration of economic and civic relationships influences collective action. It examined two well matched cities which simultaneously faced acute economic crisis in the late

1970s and early 1980s. The data show that these cities—which shared remarkably parallel histories—have had very different experiences since those crises erupted. Allentown can be characterized as having adhered to the "high-road" which has involved the transformation of existing companies to make them competitive on a global scale, attracting inward investment of high-skill jobs and the emergence of a strong entrepreneurial sector. Youngstown, on the other hand, has suffered from an inability to develop a coherent approach to attracting inward investment, a lack of entrepreneurship and the inability of major local employers to transform in ways that benefit the community.

The results speak to the literature on social capital which highlights the importance of civic organizations. The data presented here suggest that civic organizations play very different roles depending on the broader networks within which they are embedded. In Allentown, a few key organizations including the Boy Scouts and local universities became focal points in which key actors were able t interact toward addressing problems facing the community. In Youngstown, the most central civic organizations like the Garden Club and the Red Cross failed to play such a role in part because actors who interacted within them had a multitude of other social, economic and civic opportunities to interact. Rather then being forums of interaction, then, these were simply places where social status was affirmed. In the end, this may have done more harm than good by strengthening the ability of a small group of actors to assert narrow interests over those of the community more broadly. Moreover, these ties ultimately proved extremely brittle leaving the community without strong leadership when it was absolutely necessary to have it.

The rich picture painted here is necessarily only a part of the overall tableau. Subsequent research will pursue the question of how embeddedness in these networks affected strategic choices at the organizational level and how those choices have helped to produce the community level outcomes we observe today.[6] Nevertheless, what it does suggest is that moments of conflict-ridden crisis have the potential to fundamentally alter the structure of social networks as the victor's relationships come to the

[6] This research focuses on the strategic choices of organizations including large employers, universities and important civic associations. It is worth noting, for instance, that the severity of the shutdowns was not necessarily predestined. In a multivariate analysis of plant closures among the top twenty steel producers, Deily (1991) found that plant and equipment age were the most significant factors driving closure decisions. Controlling for these and other factors, her analysis found that Bethlehem Steel held off longer in making the decision to close its older plants while Youngstown Sheet and Tube closed its facilities earlier; they represented the two extreme outliers in her analysis of major steel companies. In the case of Bethlehem Steel, the plant that stayed open longer than its 'natural' lifespan (thus driving the results) was the home plant in South Bethlehem. Conversely, in the case of Youngstown Sheet and Tube, the decision to close the facilities was surprising (and anomalous from the perspective of Diely's analysis) due to the fact that the company had invested in equipment upgrades within ten years of the announcement. Indeed, this fact had lulled many in the community to believe that the company was likely to remain an active part of the city's economic future.

fore and become entrenched in practice. The ebb and flow of utilization, combination and confrontation creates the unique patterns of relationships that are characteristic of a given community. This paper shows that the *configuration* of social capital is key in shaping these dynamics. This paper also suggests an important element of what makes civic society vibrant: particular organizations must connect actors who are not otherwise well connected in order to serve as a focus of civic engagement. The results therefore move us closer to understanding how agency and social capital interact to explain divergent socio-economic histories by highlighting the ways in which actors negotiate emergent social orders and adapt them in the process. This has important implications for policy. Rather than simply increasing the number of civic organizations or even participation in them, it suggests that what is most important is how social capital is deployed, called upon and realized by actors within communities (Bourdieu 1986; Emirbayer and Goodwim 1994; DeFilliipis 2001) in the context of emerging global realities communities are increasingly forced to confront.

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TABLES

Table 1a. Demographic and Economic Descriptive Statistics: 1950

	Allentown	Youngstown
Metropolitan Area Population	437,824	528,498
Population of Major Cities	208,728	218,186
Mean Years of Schooling	8.9	9.7
High School Graduates	29%	35%
Employed in Steel	20%	36%
Median Income	$ 3,360	$ 3,447

Table 1b. Industrial Composition: 1950

	Allentown	Youngstown
Agriculture	5%	4%
Mining	1%	0%
Construction	0%	5%
Manufacturing	55%	52%
Transportation	7%	7%
Wholesale	17%	18%
Finance	2%	2%
Business services	5%	5%
Professional Services	8%	7%

Table 2. Companies in the 1954 Fortune 500

Allentown	**Youngstown**
Bethlehem Steel (11)	Republic Steel (28)
Mack Truck (258)	Youngstown Sheet and Tube (70)
Lehigh Portland Cement (429)	Mullins Manufacturing (485)

Table 3. Economic Organizations Descriptive Statistics (Standard Deviations): 1950

	Allentown	Youngstown
No. of Economic Organizations	37	39
Average Age	54 (30.3)	41 (20.9)
Employees	5,789 (18,824)	5,635 (13,809)
Stockholders	7,782 (21,313)	5,691 (14,490)
Income	$58,128,721 ($229,508,180)	$49,141,948 ($133,255,344)
Assets	$66,660,345 ($202,947,043)	$40,836,463 ($88,762,391)
Insiders	39% (0.16)	40% (0.21)
Family	9% (0.15)	11% (0.19)
No. of Officers	7 (3.1)	8 (4.2)
No. of Directors	9 (2.9)	10 (3.7)

Table 4. Economic Organizations: Normalized Eigenvector Centrality

Allentown		Youngstown	
Merchants National Bank	0.316	Union National Bank	0.200
Allentown National Bank	0.310	Bessemer Securities Co.	0.199
Bethlehem Steel	0.270	Y. & Southern Railroad	0.196
Heilman Boiler Works	0.267	Mahoning National Bank	0.189
Allentown-Bethlehem Gas	0.261	Youngstown Steel Car	0.189
Bethlehem National Bank	0.258	Y. Welding and Eng.	0.188
Penn. Power & Light	0.236	Dollar Savings	0.185
Lehigh Valley Transit Co.	0.220	Mullins Manufacturing	0.180
Lehigh Valley Trust	0.215	Niles Rolling Mill Co.	0.180
Traylor Engineering	0.215	Youngstown Steel Door	0.178
Lehigh Coal and Navigation	0.214	Commercial Shearing	0.176
Air Products & Chemicals	0.208	Y. Sheet & Tube	0.176
Lehigh Portland Cement	0.200	Home Savings and Loan	0.175

Table 5. Civic Organizations: 1950

Allentown	Youngstown
Allentown Art Museum	Am. Assn. of University Women
Allentown Chamber of Commerce	American Legion
Allentown Hospital	Boy Scouts
Allentown Old Home Week Cmt	Butler Institute
Allentown Redevelopment Auth.	Chamber of Commerce
Bethlehem Chamber of Commerce	Christ Mission
Bethlehem DAR	Fresh Air Camp
Bethlehem Library	Goodwill Industries
Bethlehem Municipal Band	Greater Y. Area Foundation
Bethlehem Recreation Cmsn.	Junior League
Boys Club	Mahoning V. Industrial Council
Cedar Crest College	Red Cross
Citizen's Urban Renewal	Rotary
Community Chest	Trumbull Library
Girls Clubs of Bethlehem	United Way
Historic Bethlehem	Y. Metro. Area Dev. Corp.
Lehigh County Historical Society	Youngstown Area Heart Assn.
Muhlenberg College	Youngstown Hospital Bd.
Northampton County Bar	Youngstown Hosp Women's Bd
Weisenberg Church	Youngstown Sesquicentennial

Table 6. Multiplexity: 1950

	Strength of Economic Ties	Strength of Civic Ties	Economic and civic combined	n	Obs
Allentown	0.886	0.88	0.447	54	2862
Youngstown	0.783	0.805	0.763	56	3162

Table 7. Economic Organizations Descriptive Statistics (Standard Deviations): 1975

	Youngstown	Allentown
No. of Orgs	27	29
Average Age	53 (28.9)	82 (38.2)
Employees	4,624 (8,672)	7,612 (25,284)
Stockholders	13,222 (29,773.9)	16,177 (42,184.1)
Income	$266,490,700 ($476,114,809)	$428,859,577 ($1,225,921,381)
Assets	$360,944,296 ($586,611,174)	$458,602,696 ($982,824,681)
Insiders	38% (0.23)	28% (0.19)
Family	13% (0.21)	7% (0.14)
No. of Officers	10 (4.8)	12 (7.0)
No. of Directors	11 (5.3)	12 (6.7)

Table 8. Normalized Eigenvector Centrality of Economic Organizations: 1975

Allentown		Youngstown	
First Valley Bank	0.456	Dollar Savings	0.319
Penn. Power and Light	0.361	Mahoning National Bank	0.312
Bethlehem Steel	0.331	Commercial Shearing	0.300
Merchants National Bank	0.245	GF Business Equipment	0.292
First Natl. Bank of Allentown	0.220	Union National Bank	0.286
Air Products	0.206	Home Savings and Loan	0.278
Union Bank & Trust of Beth.	0.190	Ajax Magnethermic	0.238
Bethlehem Acceptance Corp.	0.189	Youngstown R& D Corp	0.211
AFL-CIO	0.173	Lykes-Youngstown	0.211
Emmaus Building and Loan	0.169	Ohio Edison	0.206
Lehigh County	0.168	Youngstown Steel Door	0.200
Mack Trucks	0.166	AFL-CIO	0.195
State Legislatures	0.163	Youngstown Sheet & Tube	0.187

Table 9. Civic Organizations 1975

Allentown		Youngstown	
Allentown Art Museum	Economic Development Program Committee	4H	Mahoning County Medical Society
Allentown Human Relations Committee	Emmaus Bicentennial Committee	A. Phillip Randolph Institute	Manpower Planning Council
Allentown Planning Commission	Emmaus General Committee	AAUW	Masons
Allentown Public Library	Emmaus Girl scouts	American Cancer Society	Masons Anniversary Committee
Allentown Redevelopment Authority	Emmaus Interclub Coordinating Committee	American Heart Association	Mayor's Human Relations Committee
Allentown School Board	Episcopal Trustees	Big Brother	Red Cross
AAUW	Historic Bethlehem	Black People's Convention	Research Club
Bethlehem Authority	Hospital & Health Council of the Greater Lehigh Valley	Boy Scouts	Rotary
Bethlehem Citizens Committee	Joint Planning Commission Lehigh-Northampton	Boys Clubs	United Appeal
Bethlehem City Center Authority	Lehigh County Historical Society	Butler Institute	United Negro College Fund
Bethlehem DAR	Lehigh County Industrial Development Authority	Canfield Fair	United Way Campaign Committee
Bethlehem Housing Authority	Lehigh University	Catholic Charities	Urban League
Bethlehem Library	Lehigh Valley Committee	Chamber of Commerce	Western Reserve Economic Development Agency
Bethlehem Planning Commission	Lehigh-Northampton Airport Authority	Community Corporation	Western Reserve Transit Authority
Bethlehem Redevelopment Authority	Lehigh-Northampton Transportation Authority	Community Development Council	Youngstown Club
Bethlehem Schools	Muhlenberg College	Community Improvement Corporation	Youngstown Garden Club
Blue Shield Advisory Board	Northampton County Bar Association	Coterie Club	Youngstown Hospital
Boy Scouts	Northampton County Hospital Authority	Council of Churches	Youngstown Hospital Association
Citizen's Urban Renewal Enterprise	Northampton County Republican Committee	East Side Civic Club	Youngstown Hospital Women's Board
Community Chest	Public Committee for the Humanities	Ecumenical Council	Youngstown Planning and Administration Committee
Easton Authority	United Way	Goodwill Industries	Youngstown Society for the Blind
Easton Public Library	Women's Club of Bethlehem	Kiwanis	Youngstown State University
Easton Schools	YMCA	Mahoning Citizens Action Coalition	

Table 10. Multiplexity: 1975

	Strength of Economic Ties	Strength of Civic Ties	Economic and civic combined	n	Obs
Allentown	0.871	0.532	0.301	54	2862
Youngstown	0.771	0.724	0.619	56	3162

FIGURES

Figure 1a. Illustration of Network A

Figure 1. Manufacturing as a Percent of Total Employment

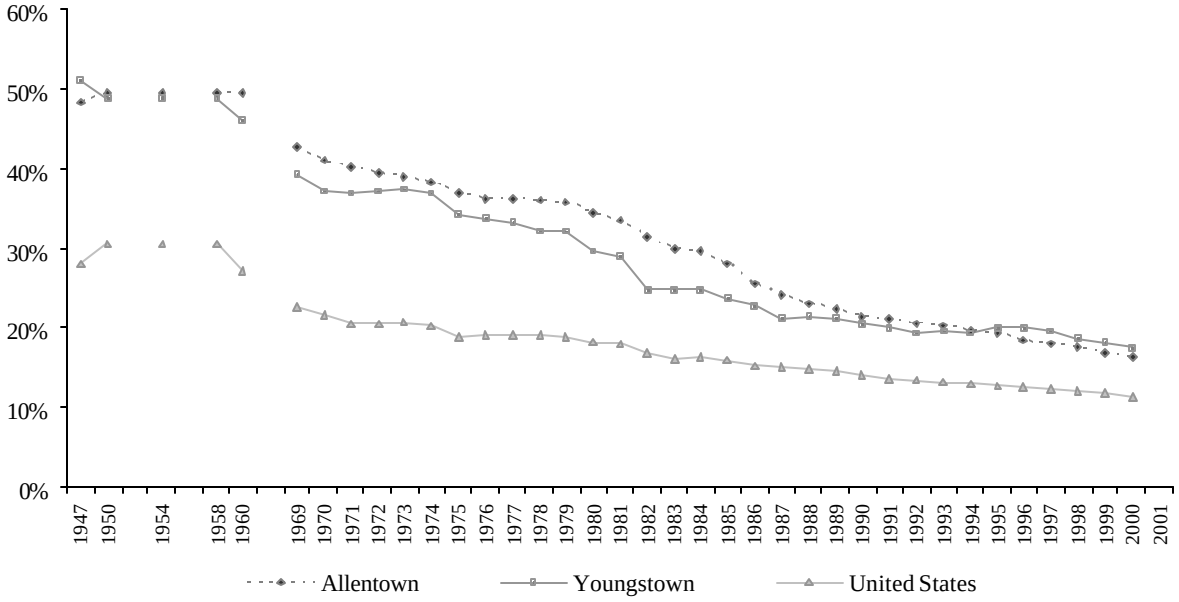

Figure 2. Steel, Autos, Textiles, Apparel and Cement as a percent of manufacturing employment: 1969-2000

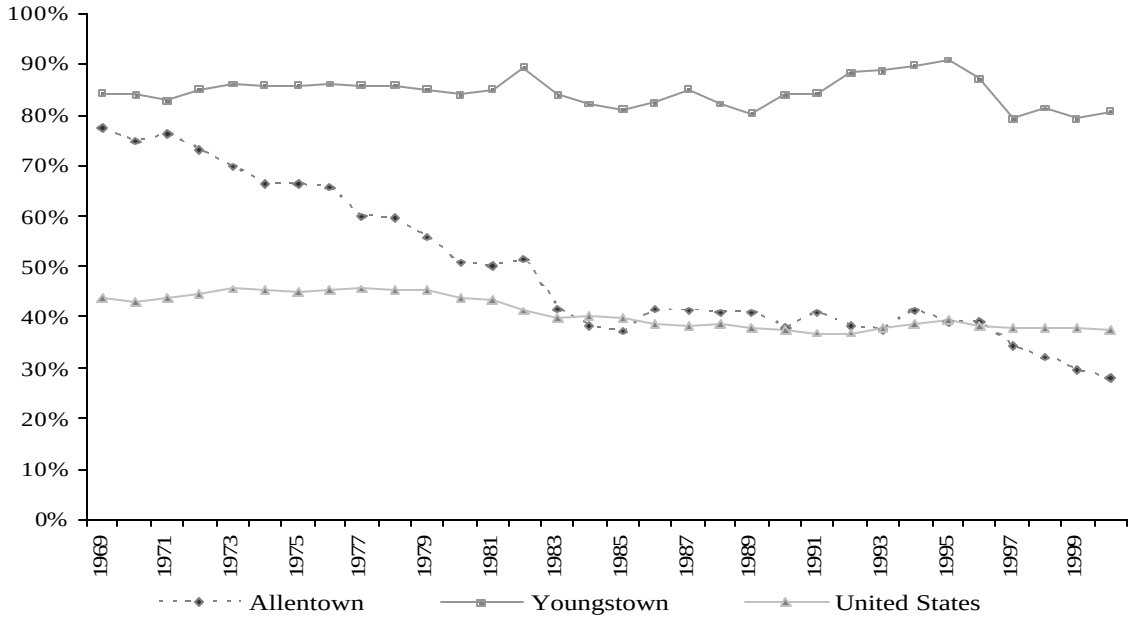

Figure 4. Electronics, Instruments and Specialty Chemicals as a percent of manufacturing employment: 1969-2000

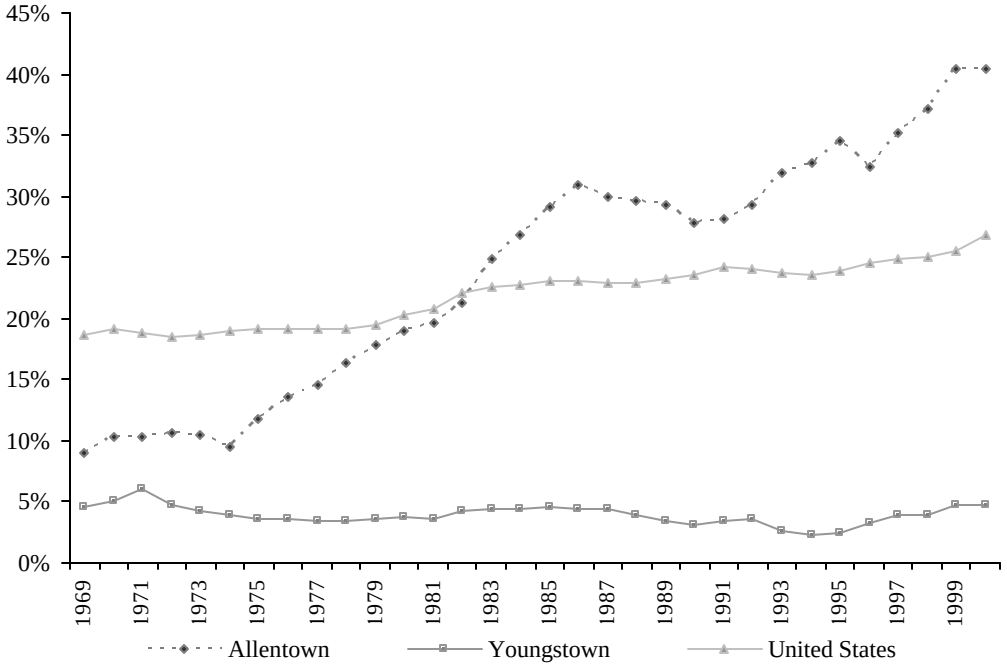

Figure 5. Finance, Insurance and Real Estate as a percent of total employment

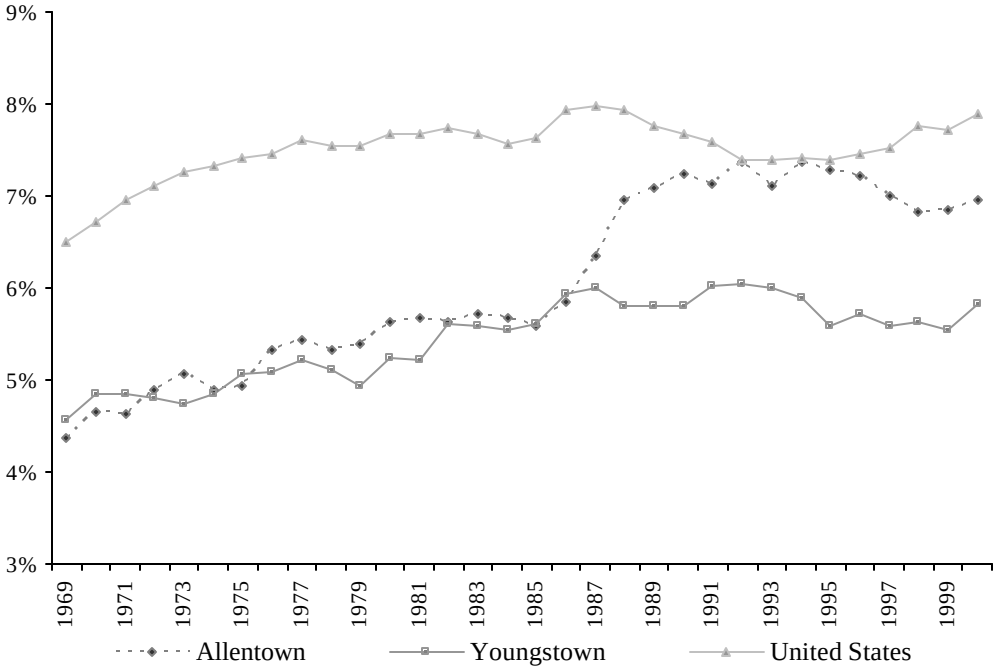

Figure 6. Average Earnings per Worker: 1969-2000

(adjusted for regional CPI, 1984 dollars)

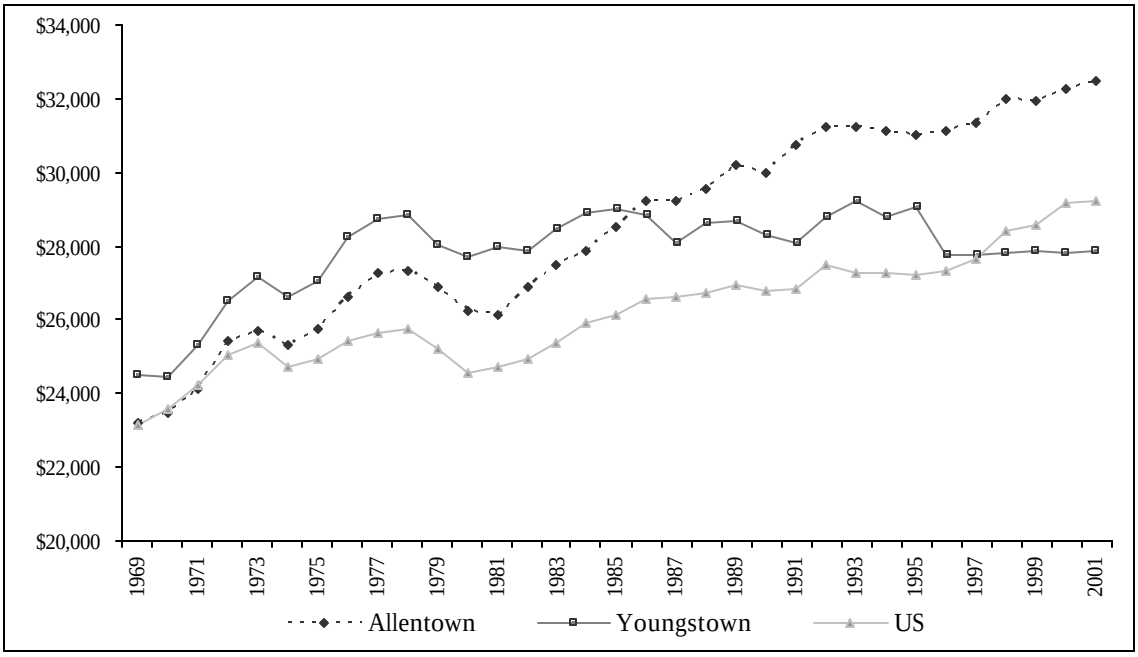

Figure 7a. Economic Interlocks: Allentown 1950

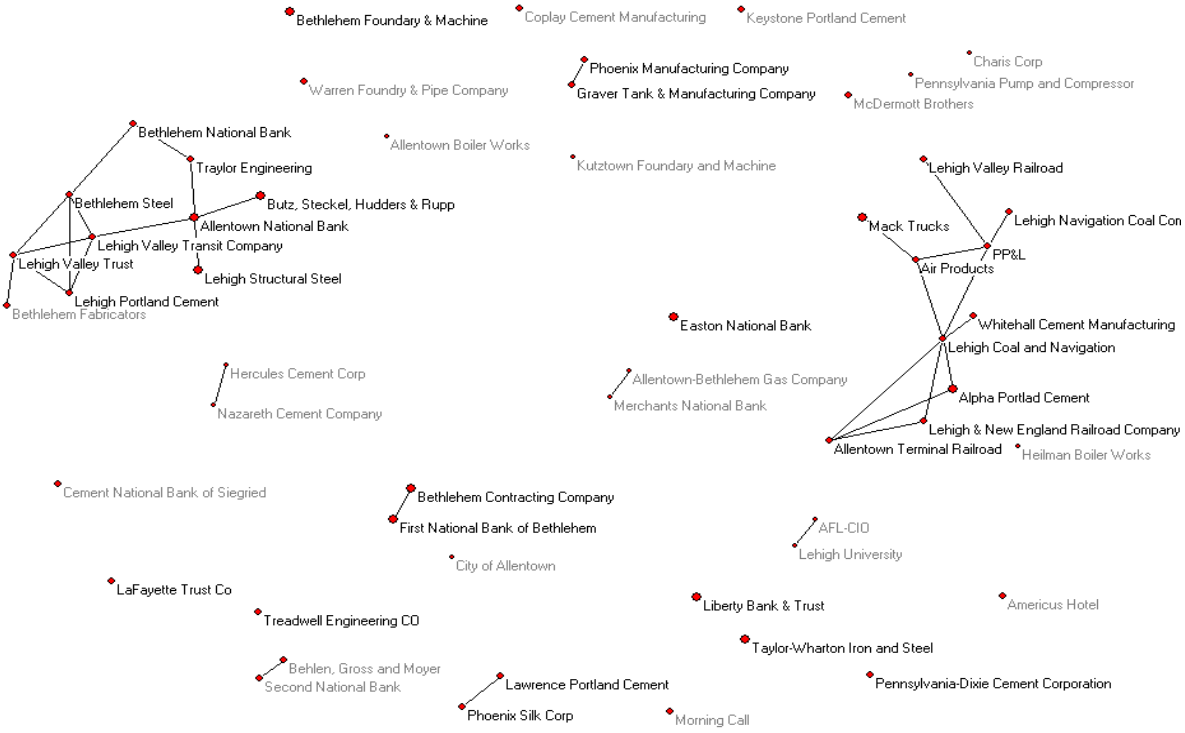

Figure 7b. Economic Interlocks: Youngstown 1950

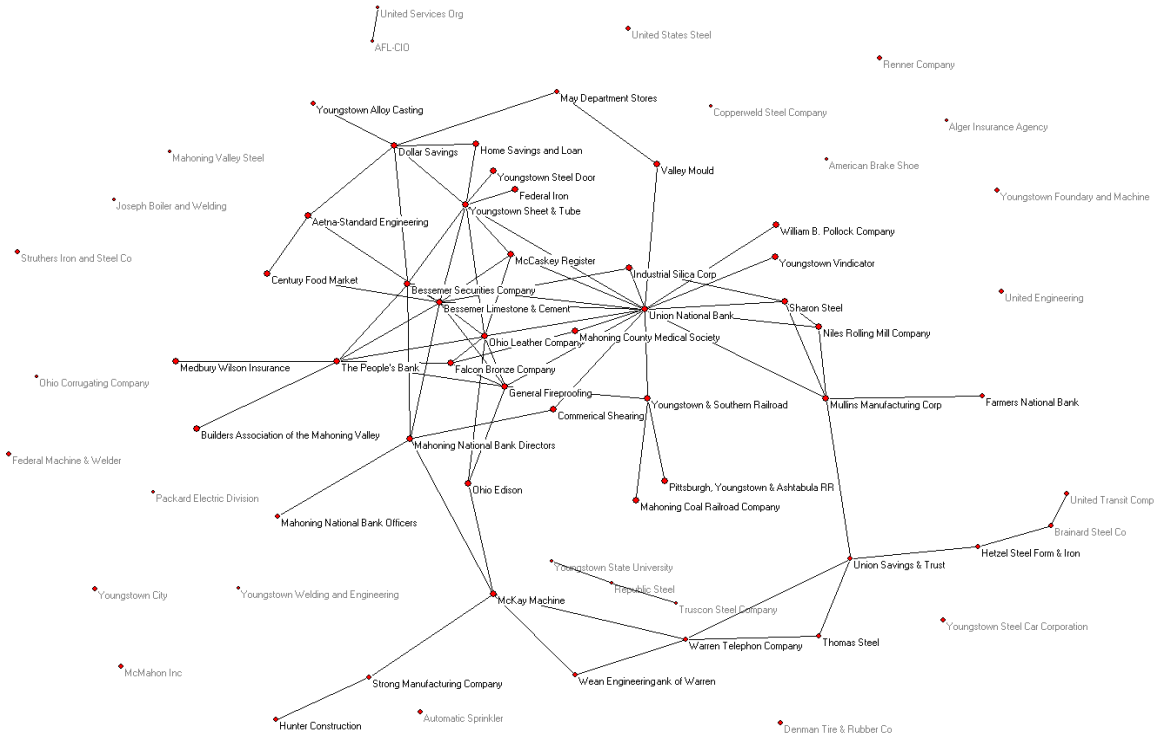

Figure 8a. Allentown: Economic and Civic Organizations, 1950

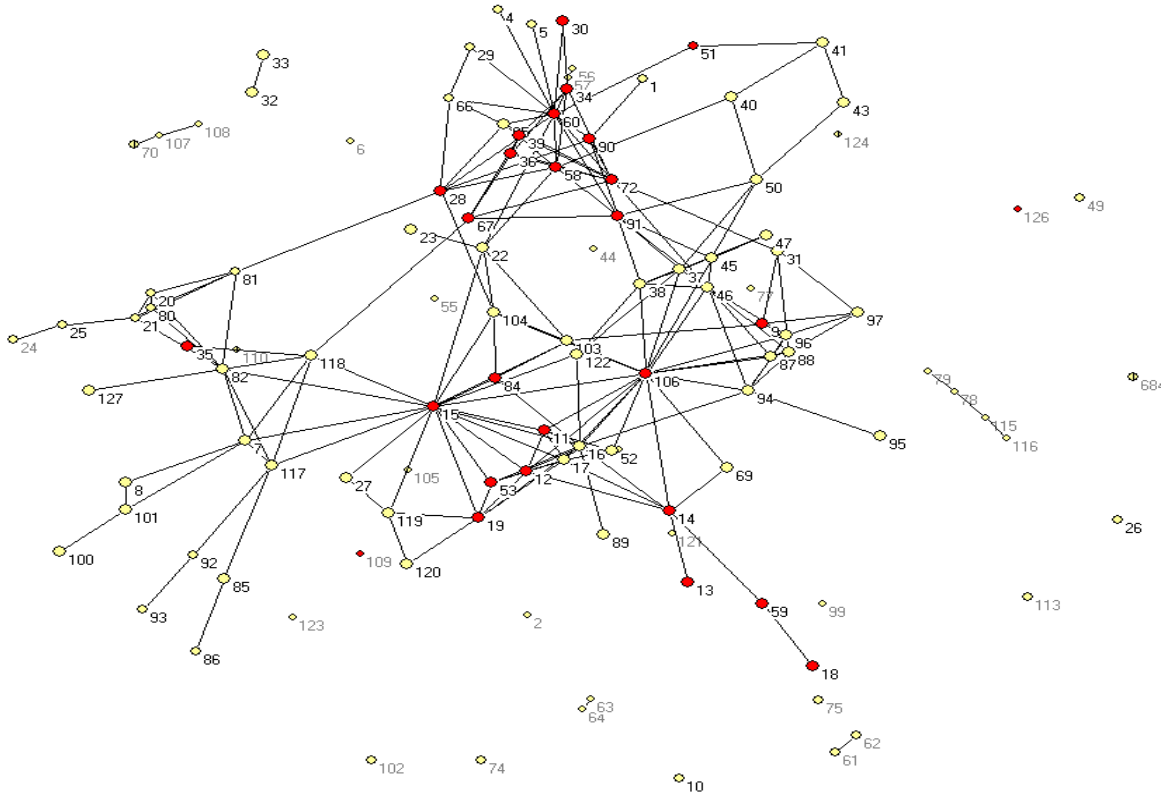

Figure 8b. Youngstown Economic and Civic Ties: 1950

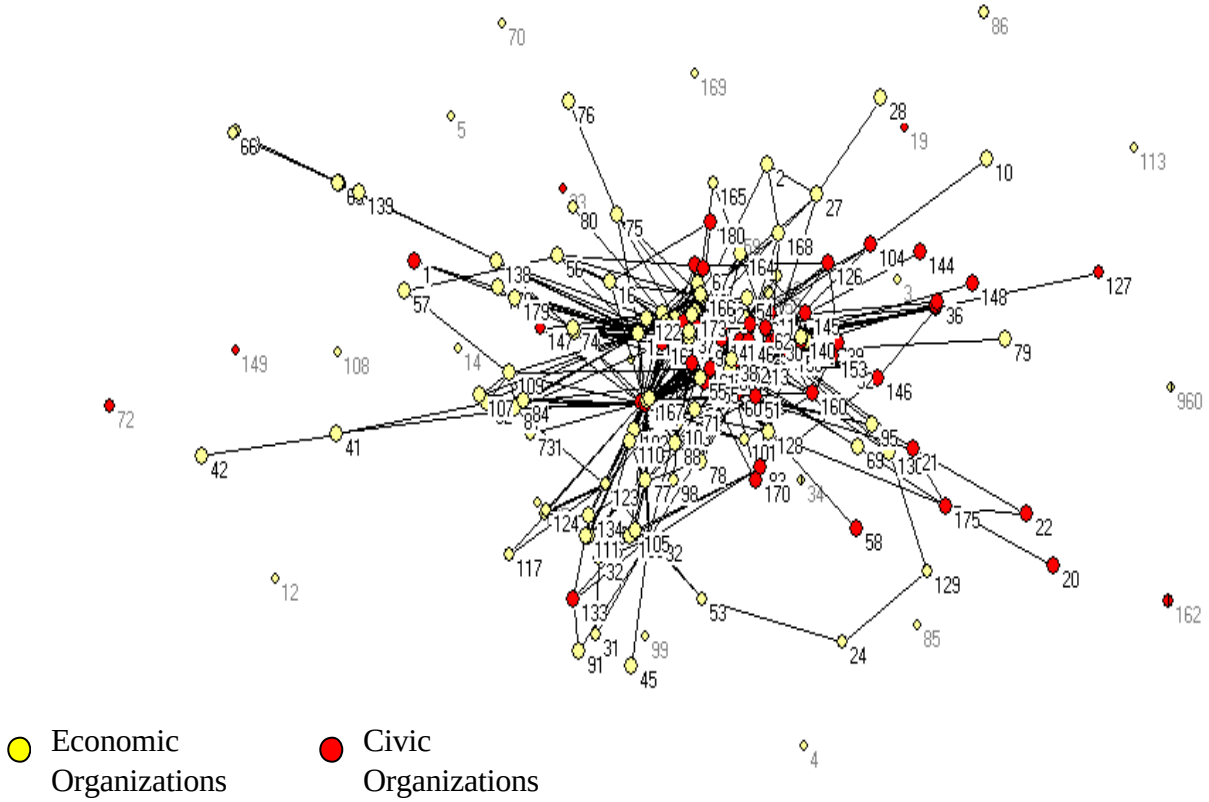

Figure 9. Civic Organizations Normalized Centrality: 1950

Allentown	
Lehigh University	0.06
Muhlenberg College	0.023
Historic Bethlehem	0.01
Citizen's Urban Renewal	0.007
Boys Club	0.004
Allentown Hospital	0.001
Community Chest	0.001
Youngstown	
Red Cross Trumbull	0.025
Red Cross Mahoning	0.023
Gtr. Y. Area Foundation	0.016
Youngstown Chamber	0.005
Christ Mission	0.002
Fresh Air Camp	0.002
Goodwill Industries	0.002

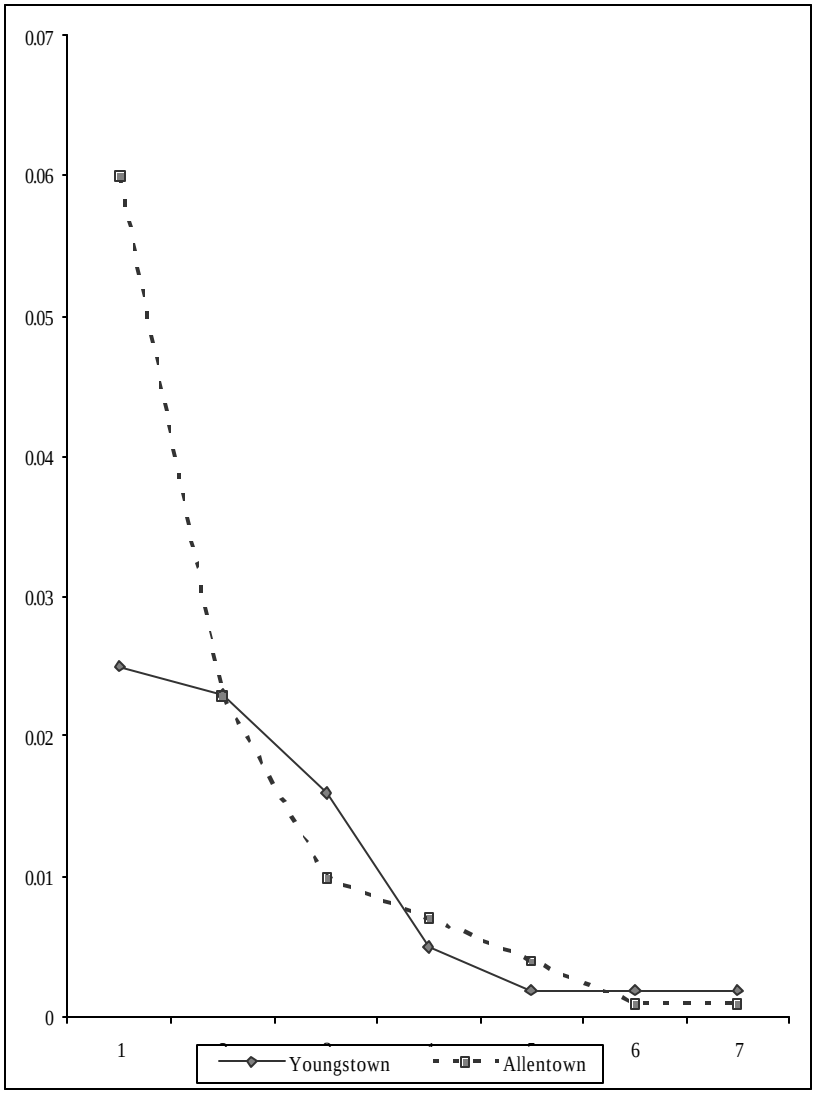

Figure 10a. Allentown Economic Organization Interlocks: 1975

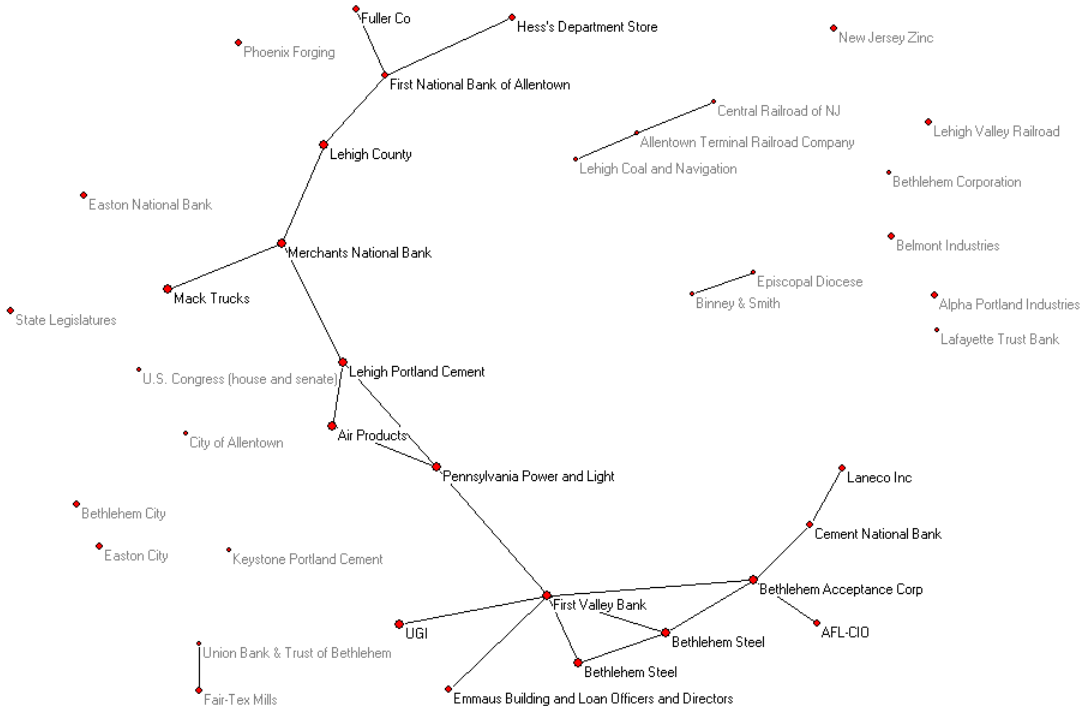

Figure 10b. Youngstown Economic Organization Interlocks

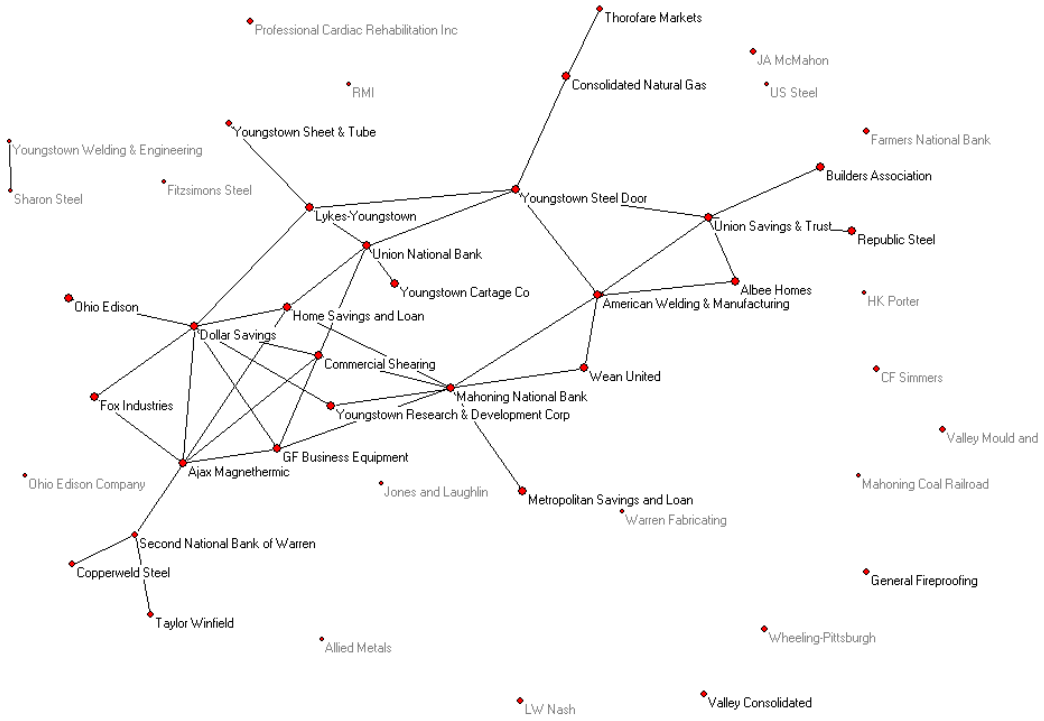

Figure 11a. Economic and Civic Organizations: Allentown, 1975

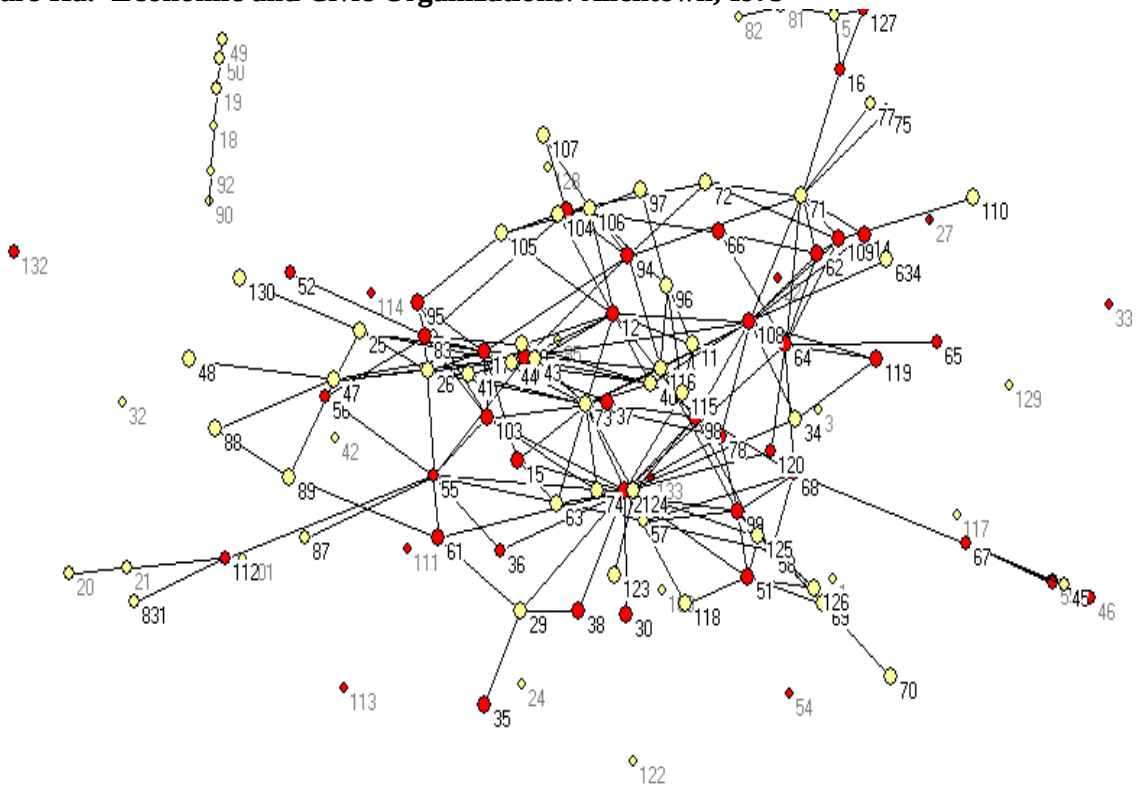

Figure 11b. Economic and Civic Organizations: Youngstown, 1975

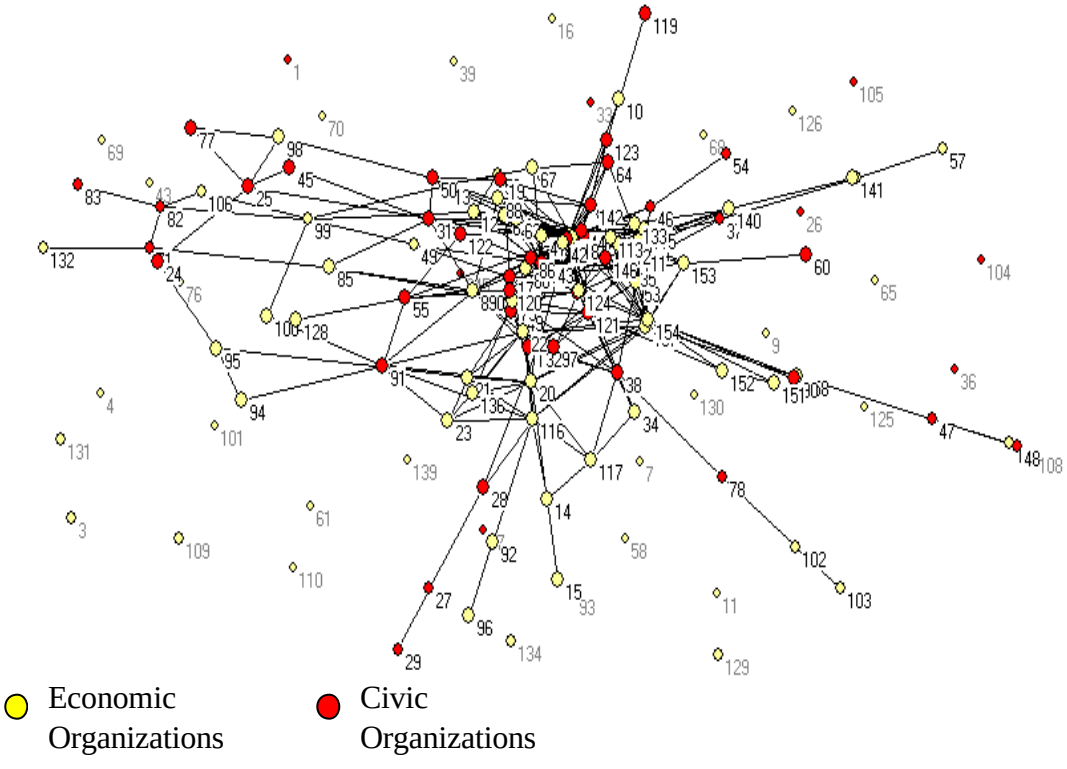

Figure 12. Civic Organizations Normalized Centrality: 1975

Allentown	
Muhlenberg College	0.297
Boy Scouts	0.138
Lehigh County	0.103
Historical Society	0.018
Allentown Planning	0.017
Bethlehem Citizen's	0.01
Youngstown	
Youngstown Garden Club	0.021
Butler Institute	0.016
Chamber of Commerce	0.015
United Appeal	0.009
United Way	0.008
Youngstown Hospital	0.008