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WINIFRED CURRAN

Abstract

This article argues that the flexibility, creativity, and innovation deemed to be hallmarks of the new 'creative' economy are also present in more traditional manufacturing enclaves. Here I use examples drawn from New York City, perhaps the quintessential global city, to demonstrate that our understanding of creativity and innovation needs to recognize a broader spectrum of economic activity encompassing both new and traditional manufacturing. This case study is an attempt to expand the heteronomy of current urban policy that promotes gentrification and the wooing of the 'creative class' as the only method of urban development.

Introduction

Much recent work in economic geography and on the economy of cities generally has centered on creativity and innovation in regional clusters (see Malmberg and Maskell, 2002; Rantisi, 2002; Power, 2003; Cumbers and MacKinnon, 2004; Knudsen, *et al.*, 2008; MacPherson, 2008; Weller, 2008) and what governments can do to foster these creative clusters (see Gordon and McCann, 2000; Eickelpasch and Fritsch, 2005; Fromhold-Eisebith and Eisebith, 2005; Funderburg and Boarnet, 2008; Lewis *et al.*, 2008). Frequently overlooked in these discussions is the role of long-standing industrial urban neighborhoods and the small-scale manufacturers in both new and mature industries (Tödtling and Trippel, 2004; Blay-Palmer and Donald, 2006) who have managed to stay and thrive there despite the larger trend of deindustrialization. Many of the characteristics attributed to new industrial spaces, such as flexibility, creativity and just-in-time production practices, are the same as those that made cities industrial centers. Though the deindustrialization of inner cities is often assumed to be complete, urban industrial neighborhoods remain good places to do business, exhibiting many of the advantages observed in newer industrial regions. Indeed, for many industrial business owners, it is the very urbanity of their location that makes business possible and successful. The importance of an urban location is the result of the historical development of business and social networks, as well as more recent market developments and population shifts. Even the rise of the 'creative class' can prove to be a boon to manufacturers, creating demand for high-end products manufactured in the

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city. Yet these old industrial spaces are largely invisible to policymakers, receiving none of the attention lavished on the new economy.

This article examines the importance of an urban location to small-scale manufacturers and the importance of small-scale manufacturers to the urban economy, arguing that the flexibility, creativity, and innovation deemed to be hallmarks of the new 'creative' economy are in fact also present in more traditional manufacturing enclaves. The examples used here are drawn from the Williamsburg neighborhood of Brooklyn, New York, which remains one of the most industrialized areas of New York City despite having also become one of the most gentrified, to demonstrate that our understanding of creativity and innovation needs to recognize a broader spectrum of economic activity that includes both new and traditional manufacturing. Newness and high technology do not in and of themselves constitute innovation or successful economic practice. It is necessary to look more broadly at innovation in place and to bring a more realistic and practical approach to policies related to clusters and innovation (Blay-Palmer and Donald, 2006). Case studies such as this one are necessary to challenge the heteronomy of both urban policy and urban research (Wacquant, 2008), where gentrification and the attraction of the creative class are presented as the only options for urban redevelopment (see Smith 2002; Peck, 2005; Slater, 2006).

Evidence of the new in old industrial spaces

Theorists of new industrial spaces such as Scott (1988a; 1988b; 2006) have argued the existence of a 'new economy' made up of sectors such as high-technology industry, neo-artisanal manufacturing, business and financial services and cultural products industries; these are differentiated from the 'massified' structures of production and rigid labor markets that typified Fordism. In these industries, extended networks of firms engage in flexible specialization, with product design that is always changing, a fluid workforce with many temporary and part-time workers, and products that compete not just on price but on qualitative attributes (Scott, 2006: 3). The importance of the knowledge-based economy to global competitiveness is seen as reinforcing the tendency towards urban and regional clusters (Cumbers and MacKinnon, 2004). The local embeddedness of networks is considered crucial to creating the institutional thickness that allows for the development and exchange of the tacit knowledge that underpins adaptation and innovation. These clusters are differentiated from those of the Fordist economy because they are not the result of the location of raw materials or certain transportation options but of harder to define locational advantages like the supply of creative talent. The industries that populate such clusters serve not only their natural hinterlands but a global audience.

The celebration of new industrial spaces ignores the existence of many of these same attributes in traditional manufacturing areas. The existence of manufacturing in an area has always spurred innovation, for manufacturing and its multiplier effects created employment opportunities that drew migrants to the city and led to further manufacturing growth by creating the potential for innovation (Pred, 1966; Glaeser, 2005). While it has been argued that the locational advantages have been transferred away from the traditional industrial city to areas with different site advantages (Borchert, 1967), much of the work on the postindustrial city ignores the fact that there are thriving industrial districts within some urban areas, both in global cities like New York and Los Angeles, but also in places like Charleston, South Carolina, Dubuque, Iowa, Fargo, North Dakota and Sioux Falls, South Dakota (Kotkin, 2008). An urban location provides the infrastructure, markets, and labor necessary for production. Indeed, urban industrial districts have long served to provide the locational advantages now attributed to new industrial districts. The following description of manufacturing in New York City in the 1940s serves to illustrate this point:

For manufacturers to be able to make use of what economists call 'external economies' — wholesalers, subcontractors, and service firms performing functions that otherwise would have been done in-house — they needed to be close together to allow the cheap, rapid transfer of material and frequent face-to-face communication to deal with the problems that inevitably arise when new products are made. This was why New York manufacturers tended to congregate in compact industrial districts . . . The constant exchange of ideas, techniques and personnel within industrial districts helped generate, attract, and retain firms that survived through flexibility (Freeman, 2000: 12, 14).

The workers within these industrial districts were 'more highly skilled and versatile' (Freeman, 2000: 11) than mass production company employees. It was the versatility of these industrial districts, their 'flexible specialization' that was the key to manufacturing success (Freeman, 2000). Freeman's description of the industrial districts of the 1940s could have been written about the manufacturers who continue to thrive in inner city locations. A recent study by the Federal Reserve Bank of New York (Deitz and Orr, 2006) finds that manufacturing workers have become increasingly high-skilled, especially in the Northeast.

The place-based nature of embeddedness and innovation

Mark Granovetter's (1985) work on the importance of the embeddedness of social relations in economic behavior has been particularly influential to the explanation of clusters. As Granovetter (*ibid.*: 507) suggests, 'small firms in a market setting may persist . . . because a dense network of social relations is overlaid on the business relations connecting such firms and reduces pressure for integration'. In the literature on clusters, an emphasis is placed on the close social ties of those doing business with each other, leading to information sharing and innovation. These social networks help to explain how small businesses can survive against larger corporate competitors despite broader macroeconomic trends (see also Romo and Schwartz, 1995; Stam, 2007). It is the existence of these networks, both among businesses and between businesses and employees, that allows some urban industrial districts to remain 'sticky places' (Markusen, 1999). Sticky places attract ~~to~~ both capital and labor and manage to keep both in place. Flexible local labor markets, local cultural identities and shared industrial expertise combine to create a spatial fix.

Inner cities no longer retain the political and infrastructural support of their industrial heyday. The industrial and cultural benefits of an urban location, however, continue to make cities sticky places. Longstanding market links to local niche markets like fashion, jewelry, and ethnic food production help to keep and attract both business and labor to urban locations. Even trends that are largely linked to the deindustrialization of cities, such as gentrification (Zukin, 1989; Curran, 2007; Brandes Gratz, 2008), can help certain manufacturers, creating demand for woodworkers, furniture makers, clothing or microbreweries. These businesses, and the markets they serve, are highly place-specific. Indeed, the creation of goods such as these in highly 'authentic' (Florida, 2002) places like inner city industrial neighborhoods helps to create favorable 'geographic stories' that make these goods more attractive than those from other places (Molotch, 2002: 678). The cultural and social embeddedness of small manufacturers in the city is related not only to historical business relationships and face-to-face interaction with their counterparts, but is a direct result of the city itself. Manufacturers are just as attracted to the amenities of the city as those who work in the service sector. Housing type, cultural amenities, food, friendships and family relations are all important factors for keeping manufactures in cities. Their ties are not just to the economic structures of the city, but to the entirety of the urban experience, even when better business opportunities may be available elsewhere.

The innovation that is assumed to accompany this embeddedness is also highly reliant on the urban. The forces of urbanization and localization remain strong. Especially important, argue Storper and Venables (2004), is the role of face-to-face interaction, particularly in environments where information is rapidly changing and imperfect, as in urban areas with an ever changing consumer base and a constant influx of new populations. This face-to-face interaction creates 'buzz' which allows for cross-fertilization between sectors. These dynamic and unplanned contacts are the result of urban diversity and create unique opportunities for innovation and collaboration (Jacobs 1969; Storper and Venables 2004).

Beyond this traditional understanding of the link between embeddedness and innovation, the literature on innovation has not been so successful in exploring the more mundane and everyday aspects of the city as generators of innovation (Blay-Palmer and Donald, 2006). Donald and Blay-Palmer (2006: 1916) argue that the urban dimension has multiple components: 'proximity, concentration, knowledge flows, buzz, cosmopolitanism, unorthodoxy, and boredom'. After all, the city is 'the space, place and scale' where demand for alternative products is greatest (*ibid.*: 1904). As such, local urban producers can embrace and support the diversity of the city through production.

Similarly, as Hanson (2003) argues, expanding the understanding of what constitutes economic creativity and innovation involves recognizing that the local impacts of local businesses in terms of meeting local needs is innovative and contributes to the community's attractiveness. Small-scale manufacturers often respond to local needs, without necessarily having external markets. This localness does not make them any less innovative. Taken together, the appreciation of the local and the mundane exhibited in manufacturing in old industrial spaces creates the potential for a different kind of city, one that resists the one-size-fits-all assumptions of much neoliberal urban theory (see Brenner and Theodore, 2002) and creates a truly diverse and more inclusive city.

Case study and methodology

This study on manufacturing and innovation is part of a larger study conducted from 2002 to 2004 on the effect of gentrification on small-scale manufacturers in the Williamsburg neighborhood of Brooklyn. My original research focused on the extent to which gentrification was accelerating industrial displacement, locating displaced businesses and their workers, and examined the role of public policy in encouraging this gentrification. In straddling both the old and new economies of the American city, Williamsburg provided an appropriate case study. Located in northern Brooklyn, just across the East River from the Lower East Side of Manhattan, Williamsburg was a traditionally immigrant, working-class neighborhood that experienced serious economic decline as a result of widespread deindustrialization in New York in the 1960s. Despite that, it retains a sizeable manufacturing sector, with an industrial park that has been successful in attracting businesses and employment even as illegal residential conversions take place within it. It is also a neighborhood experiencing rapid gentrification due to its proximity to the East Village, public transit access to Manhattan, waterfront views (see Figure 1) and a copious supply of historic loft space (see Figure 2).

Williamsburg is a neighborhood of incredible diversity in terms of race, ethnicity, religion and class. Williamsburg has a large and growing population of more than 120,000 people. The 2000 census shows the neighborhood to be 41% white, 43.6% Hispanic and 5.7% African-American. With gentrification has come social polarization. The average income is \$26,283, but 4.6% of the population make over \$100,000 with 0.5% earning over \$200,000, a category that did not exist in the 1990 census. While Williamsburg is the site of an increasing population of upwardly mobile residents, it is also the home to concentrations of poverty. Census data show that only 51.1% of adults

over 16 are in the labor force. Incomes are under \$10,000 for 25.3% of the population, and 47.7% of families with children live in poverty.

Industrial employment remains important for working-class residents of Williamsburg. Manufacturing and wholesale trade still account for a significant number of jobs, with 17.6% of Williamsburg's residents involved in these activities, compared with 10% for the city as a whole. Williamsburg was historically a walk-to-work community, and this is still true for 17.8% of the population.

In exploring the extent to which manufacturing still existed in Williamsburg, I was not looking for evidence of manufacturing innovation; quite the opposite. The study was focused on the ways in which gentrification was forcing out the small manufacturers who remained through increasing rents, stockpiling of industrial space, illegal and legal residential conversions of loft space, zoning changes and various nuisance policies, like parking violations, building violations and noise and smell complaints, that drove businesses out of business. And while I did find significant evidence of the ways in which gentrification and urban policy were causing the displacement of industrial businesses, I was surprised to find in many stories told by business owners a remarkable adaptability, creativity and resistance to the prevailing economic order. Small-scale manufacturers stay in Williamsburg through a combination of force of will, business and personal networks, flexibility and a ~~necessity~~ *need* for a New York City location.

If any city is a global city, it is surely New York, having welcomed a postindustrial economy decades before other cities. New York was a non-Fordist city even in the age of Ford (Freeman, 2000). And yet, it continues to have an important manufacturing sector, with one recent estimate putting the number of jobs provided by New York's industrial companies at 466,000 (Pristin, 2006), with 230,000 of these jobs classified as blue-collar jobs, making industry a larger segment of the economy than both the information and real estate industries (NYIRN, 2007). Table 1 shows the breakdown of employment by sector in both New York City as a whole and Brooklyn from 1975 to 1995, illustrating that despite its significant decline, manufacturing remains an important source of employment, especially in Brooklyn. According to James Parrott of the Fiscal Policy Institute, the number of jobs for niche manufacturing in Brooklyn rose by 17% between 2001 and 2007 (Haughney, 2009).

Manufacturing in New York tends to be a small-scale operation, with an average of 43 employees. These firms are 'flexible, resourceful, and able to respond quickly to consumer markets' (PICCED, 2001: 17–18). Many are linked to designers, engineers, and other knowledge and creative-based sectors. Manufacturers are tied in with the retail, distribution and service sectors of the economy. Small-scale local manufacturers with flexibility and quick turnover times who can provide products on demand are vital to these industries that would otherwise have to import products over long distances, thereby adding expense, as well as traffic and pollution on New York's streets. The PICCED (2001: 20) report also links manufacturing as a 'silent partner' to industries like publishing, marketing, and advertising. Recent press coverage of the manufacturing sector in New York points out the diversity and creativity at work in this sector, from a biodiesel fuel manufacturer (Rivera, 2007), concrete manufacturer (Mooney, 2007) and precision metal fabricator (Bagli, 2006) to a frame builder, candle manufacturer and woodworking company (Gonzalez, 2005), a car parts maker, fuel shipping company, medical equipment manufacturer and shoe designer and manufacturer (Phan, 2005) and a company that turns recycled glass into countertops (Zimmer, 2006).

To explore the business environment for small-scale manufacturers in the study area of Williamsburg, I began by creating a database of businesses from the *Dun and Bradstreet (D&B) Regional Business Directory - New York Metropolitan Area* that had either moved from Williamsburg or closed altogether during the period 1998 to 2002. This time period was chosen because multiple key informants, and particularly those with experience of the industrial make-up of the area, identified those years as the time frame with the most intense industrial displacement and gentrification. The businesses included in the database were those involved in manufacturing and wholesale trade, SIC

Table 1 Employment by sector in Brooklyn, compared with NYC total, 1975-95

	Brooklyn	NYC	BK %
<i>Manufacturing</i>			
1975	118,179	533,591	22
1985	80,746	406,777	20
1995	52,048	271,419	19
<i>Retail</i>			
1975	73,980	376,527	20
1985	68,428	390,646	18
1995	60,418	358,964	17
<i>Services</i>			
1975	103,124	783,924	13
1985	149,714	1,236,998	12
1995	193,451	1,366,571	14
<i>Wholesale Trade</i>			
1975	23,721	247,390	10
1985	25,462	233,339	11
1995	27,376	182,351	15
<i>FIRE</i>			
1975	26,502	417,720	6
1985	21,591	520,321	4
1995	26,458	489,343	5

Source: Solidelle Fortier Wasser Bureau of Labor Statistics, 2003

codes 20 to 3999 and 50 to 5999. I then located those businesses I could and interviewed willing business owners, as well as some of their employees where possible. Tables 2 and 3 detail the number and types of business interviewed as well as information on how long these businesses were in business, how many they employ, what they earn, and how many times they have moved.

In-depth, semi-structured interviews are the backbone of this research. There are two major reasons for this. Firstly, it is very difficult to get an accurate and complete count of manufacturing businesses and employment. As the authors of *Making It in New York: The Manufacturing and Land Use Initiative* (PICCED, 2001) recognize in their work, part of the difficulty in making a case for manufacturing in New York is the paucity of accurate data at the appropriate scale. Secondly, my purpose was to concentrate not just on large-scale global forces and their impact on the economy of the city and the neighborhood of Williamsburg, but also on the day-to-day aspects of life in the community and the repercussions of industrial displacement and gentrification and the attempts of individuals and the community to cope with these changes.

In addition to interviews with owners of manufacturing and wholesale trade enterprises, I interviewed informants drawn from community organizations, manufacturing groups, industrial retention groups, labor groups, churches, policy makers, industrial-real estate agents, representatives for elected officials, and job placement and training programs. In all, over 70 interviews were conducted. These interviews present a picture of businesses embedded in the urban, intimately linked with its opportunities and challenges, to help an often ignored sector of the economy survive and even thrive through innovation and adaptation.

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Table 2 Types of businesses interviewed

SIC (Business Type)	Number of Businesses Interviewed
2041 (flour products)	1
2051 (bakery products)	1
2062 (sugar refining)	1
2066 (chocolate products)	1
2082 (malt beverages)	1
2084 (wines)	1
2258 (knit fabric mill)	1
2269 (finishers of textiles)	1
2311 (men's and boy's suits, coats)	1
2387 (apparel belts)	1
2653 (corrugated boxes)	1
2673 (plastic bags)	1
2782 (blankbooks, looseleaf binders)	1
3089 (plastic products)	1
3469 (metal stampings)	1
3499 (fabricated metal products)	1
5063 (electrical apparatus and construction materials)	1
5074 (plumbing equipment)	1
5085 (industrial supplies)	1
5111 (printing and writing paper)	1
5113 (industrial paper)	1
5131 (piece goods, notions, & other dry goods)	2
5611 (clothing design and retail store)	2
5812 (eating place)	1

Embedded in Williamsburg

Williamsburg has a series of important locational advantages for businesses wanting access to the markets of New York City. The first is zoning. For certain businesses, Williamsburg is one of the few places they could be in the city, and they are too small to warrant moving to other industrial locations outside the city. One metal fabricator explains: 'This particular area is . . . I think it's rated [M3, for heavy manufacturing]. We can make A bombs in the backyard (laughter) and nobody will bother us, which is just to our liking. We make noise, we belch smoke, we do this and that. There are no residents nearby to complain, etc., except for the fellow businessmen who have the same problems, situations'. Manufacturing remains strong in those areas which have some protection from zoning changes to industrial use. The Department of City Planning in a presentation at a community board meeting (11 December 2002) reported that the East Williamsburg Valley Industrial Park had experienced a 10% increase in employment from 1991 to 2000. The industrial park includes 500 businesses which employ between 15,000 and 18,000 people. The Greenpoint Manufacturing and Design Center (Figure 1) has a waiting list of 70 businesses (www.rezoned2006.com, accessed 17 October 2006). The Brooklyn Navy Yard (Figure 2) is also bustling, with 200 firms employing 3,500 workers. Businesses

Table 3 Business Characteristics

Year Opened	Employees	Sales	Rent/Own
1923	3	480,000	Rent
1940	1	0	Rent
1954	85	25 million	Own
1989	33	11 million	Own
1946	30	2 million	Own
1959	65	6 million	Own
1994	90	8 million	Rent
1860s	250	N/A	Own
1904	3	N/A	Own
1978	150	7 million	Own
1962	20	N/A	Own
1992	26	N/A	Rent
1961	47	2 million	Rent
1920	13	N/A	Own
1997	38	10 million	Rent
2000	20	N/A	Rent
N/A	10	N/A	Rent
1940s	3	N/A	Rent
N/A	3	N/A	Rent
1946	1	N/A	Rent
N/A	4	N/A	Rent
1954	30	3.5 million	Rent
1975	65	10 million	Rent
N/A	30	N/A	Rent
1960	100	N/A	Own
2002	30	N/A	Rent

include a billboard and graphics company, a seafood distributor and several specialty furniture makers (Hu, 2004). The administration has plans to expand that to three times as many jobs (Bahrapour, 2001). The mayor recognized the Navy Yard's success recently, proclaiming: 'In fact, the Navy Yard is bursting at the seams' (quoted in Hu, 2004: B2). This success is consistent with the experience of many industrial districts throughout the city, as the vacancy rate for industrial space is lower than the vacancy rate for Class A office space in midtown or downtown Manhattan (NYIRN, 2005).

Williamsburg's physical location within New York City is another important consideration. As the owner of a wholesale bakery explained to me: 'We're sitting in the middle of the best market in the world. Even though costs of doing business are high, the opportunities are more. People pay more in NY. Where else will people pay \$2 for a muffin? Williamsburg is an excellent place to do business. It's very well located. We're in Brooklyn, across from Queens. It's easy to get to the Bronx, Manhattan, and New Jersey. Only Staten Island is not convenient. We have a Manhattan-oriented business, and business is good . . . We're going to do more of the same thing. Investing in new equipment. Increase production'.

1 A garment manufacturer expresses the same opinion, noting that not only is
2 Williamsburg convenient for trucks coming from Manhattan over the Williamsburg
3 Bridge, but it is also convenient for his workers, because of the three subway lines (J, M,
4 Z) that serve his factory. A fabric wholesaler agrees, saying: 'this was the area we wanted
5 to be in. We wanted to be closer to New York, so our customers could still come. And so
6 that we could park'. For one immigrant business owner who runs a tortilla factory,
7 Williamsburg was the obvious choice to locate the business: 'I decided to locate in this
8 neighborhood because I'm living in this neighborhood'. Williamsburg is home to a large
9 Latino community, so the location of this tortilla business in Williamsburg is convenient
10 not only for the owner, but for his workers and customers. As he saw it, it made perfect
11 sense for him to be in the neighborhood where his product was needed, and he had long
12 term plans to stay and grow in Williamsburg. As he explained: 'Yes, I want to expand.
13 I work very hard to get this company . . . The customer, they need a good tortilla. And
14 that's the way we make it, we try to do our best, the best always'.

15 For other business owners, their history in the neighborhood, and their reliance on
16 local labor markets, makes leaving inconceivable. When asked, 'Would you ever
17 consider selling the building and moving the business elsewhere?', one high-end garment
18 manufacturer responded: 'Not really because we've been established here for so long,
19 and we have people. It's like . . . if you look at our employees where they live, it's like
20 a circle around this place. So to move out from the middle of the circle, we'd cause
21 problems for ourselves. It's like a craftsmanship job that we do here, and it's good to
22 have those skilled people to do it. It's not so easy. Certain types of industry, you get rid
23 of these people, and you get other people. And you start someplace else. It's like nothing.
24 Our business is different than that'. Long-term business owners are loyal not just to their
25 employees, but to the place itself. Martin Greenfield, owner of a hand-tailored menswear
26 company said: 'There isn't a day that I don't get invitations to relocate, but I'm a
27 Brooklyn man' (quoted in Retkwa, 1993: 26).

29 The 'geographic story' of Williamsburg

30 The previous quotations from business owners reflect a traditional view of the function
31 Williamsburg has served as an industrial, working-class, immigrant community, reliant
32 on zoning policies, local labor markets, transportation infrastructure and other local
33 businesses for the success of urban manufacturing. In this way, Williamsburg is a
34 textbook case of how cities functioned in the industrial economy. Despite widespread
35 urban deindustrialization, these businesses continue to thrive, at least in part because of
36 this historic connection to the neighborhood and the locational advantages it offers.

37 The continued existence of an industrial sector in Williamsburg is not, however,
38 simply a holdout of a mythologized or nostalgic industrial past. The industrial sector in
39 Williamsburg is one that continues to change and adapt to the wider changes in New
40 York's economy. Perhaps no neighborhood so crystallizes the experience of transition
41 from industrial to global city as does Williamsburg. The story told about this transition
42 is central to the image of the neighborhood as well as to industry's ability to remain there.

43 Williamsburg is hot. Named the third hippest place to live in America, the
44 neighborhood has experienced an amazing resurgence since the 1970s, when it was
45 known as the Brooklyn Badlands (Alvarez, 1974). The L train that serves the
46 neighborhood is 'the hippest train in the subway', achieving 'the highest concentration of
47 hipness . . . between just two stops, Bedford and the First Avenue station in the East
48 Village' (Kennedy, 2001: B3). Canada's *Globe and Mail* declared: 'Anyone who knew
49 what was what was hanging out in Brooklyn's Williamsburg' (Aria, 2002: T1). Real
50 estate headlines proclaimed: 'Builders Have Lofty Plans for Edgy Williamsburg'
51 (Croghan, 1999); and a 'Williamsburg Reinvented' (Bahney, 2005). The neighborhood is
52 so hot as to spur *The New York Times* to ask: 'Has Billburg [an abbreviation for the
53 neighborhood] Lost Its Cool?' (Lee, 2003).

Williamsburg's history as an industrial neighborhood is central to its new hip image. The attraction of capital to industrial space is hardly unique to Williamsburg; 'loft living' has defined a major trend in neighborhoods that are attractive for gentrification (Jackson, 1985; Zukin, 1989; Podmore, 1998). What distinguishes Williamsburg is the continued presence of an industrial sector, a presence that reinforces the neighborhood's image of cool, and the fact that it was the continued presence of an industrial sector, the loyalty of small manufacturers to the neighborhood, that was part of the renewal of the area before gentrification took hold.

The manager of a kosher winery which had a long history in Williamsburg (before moving to Bayonne, NJ because of a lack of space in which to expand) sees the current gentrification of Williamsburg as part of a progression, in which manufacturers have played an important role. He explained: 'It's a progression. You have a run-down commercial area. You have some businesses who stay through the tough times. They grow. It's a good place to do business. It becomes a vibrant commercial area. That attracts residential'. It is the manufacturers who stayed, who served as eyes on the street (Jacobs, 1961) and brought foot and truck traffic to the neighborhood which kept it alive during periods of disinvestment. The owner of a pub now popular with gentrifiers started her business as a place to serve industrial workers, 'our best customers', and attributes the neighborhood's resurgence, at least in part, to workers' needs for places to eat and drink during lunch breaks and after work.

The continued existence of an industrial grittiness in Williamsburg is part of the attraction of the neighborhood. It is part of the authenticity deemed so important in distinguishing oneself from the masses. A fashion layout in *The New York Times Magazine* (2002) uses the industrial landscape of Williamsburg as the background for a story on how to achieve 'that downtown I'm-so-cool-but-don't-put-myself-together look'. The caption asks: 'Trekking to Williamsburg? Worried about looking like a tourist?'; and then advises how to achieve 'the perfect grunge-clash-grease monkey ensemble' that distinguishes an industrial neighborhood like Williamsburg.

This aesthetic is especially important to some of the newer, fashion-oriented manufacturers who have opened in Williamsburg in recent years. One manager of an apparel manufacturer explained to me that the owners had chosen a Williamsburg location because 'they love the neighborhood, the feel of the neighborhood'. Another apparel manufacturer explained: 'The factories are cool. That's the theme. That's the whole vibe we were trying to get at'. He described Williamsburg as 'like the East Village, but hipper'. One local clothing business, called Brooklyn Industries, explicitly refers to the industrial landscape of Williamsburg in its logo.

Elsewhere in Brooklyn, this celebration of industrial authenticity is bringing back businesses that left Brooklyn during the height of deindustrialization, creating interesting convergence between the industrial and the 'creative' economies. The Rheingold brewery, which fled Brooklyn in the 1960s, is returning production to the borough. The company's president declared: 'We're back in Brooklyn, we're bringing this great brand back to New York and we look to have this beer become New York's No. 1 beer once again' by targeting the brand to twenty-somethings who 'understand the great history' of the drink and 'love that aspect of it' (quoted in Cardwell, 2004; B3). The South Brooklyn Casket Company inspired a thrashing punk song called 'South Brooklyn Casket Company' by a band called the Moldy Figs, a sound installation titled 'South Brooklyn Casket Company' by another Brooklyn artist, and appears in the collection of a local poet (Mitchell, 2006). Creativity and innovation work in mysterious ways, with product, place and populations intermingling in ways that illustrate all the potential of the urban.

A neighborhood's 'resurgence' can have positive effects for some urban manufacturers even as gentrifiers and urban policymakers assume that manufacturing is obsolete. Many business owners commented on how the gentrification of the neighborhood brought more eyes on the street to reduce crime. The neighborhood is certainly much safer than it was in the 1970s, when crime was the major concern of businesses in the area. One manufacturing advocate sees gentrification as in some ways

1 making Williamsburg a better place to do business. As one manufacturing advocate
2 explained: 'There's a lot of business owners who aren't afraid to come here anymore. I
3 mean, there are still some manufacturers in Manhattan who we tried to relocate out here
4 and they just think the neighborhood looks terribly scary, low density, there's not enough
5 traffic to make them feel comfortable. But I think that's diminished a lot. Williamsburg
6 has become an acceptable, fine area to relocate business to'.

7 New businesses have been attracted to Williamsburg because of the creative, eclectic,
8 urban character of the neighborhood (Wolf-Powers, 2003). One manager of a clothing
9 design company which opened in 1997 enthused: 'We were attracted to Williamsburg
10 because the area was developing. There's no crime compared with other areas of
11 Brooklyn, and it's easy to get to from the city . . . It's [gentrification] great for the
12 neighborhood. New restaurants. It's the new SoHo'. Another business owner echoed this
13 sentiment, explaining that gentrification had 'made the area more interesting . . . You
14 have to change with the times'. Another manufacturer said of gentrifiers: 'I love them.
15 They buy my product'.

16 The influx of new populations has created new business opportunities, both for new
17 manufacturers and for business often considered industrial holdouts. Gentrification is
18 labor intensive (Sassen, 1988; 1991). It requires renovation of residential, commercial,
19 and industrial space, furniture design, woodworking, and other customized labor-
20 intensive goods and services. The gentrification of the neighborhood has created a
21 demand for custom furniture, high-end food products, fashion and any other number of
22 products. Even a steel fabricator, in business in Williamsburg for decades, has done work
23 for local artists. Gentrification creates a demand for products that local manufactures can
24 supply. Small, local manufacturers are ideally suited to the small-batch, flexible
25 production process necessary to respond to the ever changing demands of the population.

26 These types of firms have also been critical to the success of another hallmark of
27 gentrification, historic preservation. Roberta Brandes Gratz (2008) details the importance
28 of local firms to successful historic preservation as a key to green urbanism. Using the case
29 study of the Eldridge Street Synagogue on the Lower East Side of Manhattan, she lists the
30 number of local companies who bring particular sets of skills and innovations to histories
31 preservation, from Aurora Lampworks in Williamsburg, who restored the 237 brass
32 fixtures and 75-bulb chandelier, to Brooklyn Navy Yard-based Ice Stone's new lobby
33 countertop constructed of recycled glass. These businesses note that 'their biggest
34 advantage is being "just over the bridge"', and that whatever the challenges of doing
35 business in New York, they 'can't leave this labor pool' (Brandes Gratz, 2008).

36 Gentrification fuels a demand for labor that brings another important constituency to
37 industrial neighborhoods like Williamsburg — immigrants (Sassen, 1984; 1988). The
38 workforce for many of the goods and services necessary for gentrification is
39 overwhelmingly an immigrant workforce, a population that creates a demand for
40 additional goods. Williamsburg has always been an immigrant neighborhood, and that
41 has not changed with gentrification; hence the existence practically side by side of a
42 tortilla manufacturer, a wonton manufacturer, and a producer of kosher sweets.

43 These businesses are indicative of a food manufacturing industry that is one of the
44 major industries in Williamsburg, and a good example of the success Williamsburg's
45 manufacturing has in creating a ripple effect on the rest of the city's economy. The food
46 industry has been particularly successful recently, generating \$5 billion in annual sales
47 and providing 33,800 jobs, with the wages and earnings of food company owners and
48 workers adding an additional 5,100 jobs (Frederickson, 2007). As *The New York Times*
49 enthused: 'Enjoy that Danish. It's lifting the City's employment rate' (Scott, 2003: B1).
50 One manufacturer, a producer of wontons and other Chinese foods, has tripled its
51 workforce in the 14 years it has been in Williamsburg, Brooklyn. Two thirds of the food
52 made in the city is purchased in the city, with the additional third exported elsewhere
53 consisting of mostly high-end products like chocolate and other gourmet or ethnic foods.
54 The average wage in food manufacturing was \$32,100, higher than in restaurant or retail
55 (Frederickson, 2007). While not often considered to be at the forefront of the 'new

economy' (but see Blay-Palmer and Donald, 2006; Donald and Blay-Palmer, 2006), food manufacturing has proven to be an important and innovative sector of the urban economy.

While the experience of Williamsburg has shown that there is room for both the old and new economies to co-exist, policymakers, developers, and many gentrifiers act as though they are antithetical, pushing for the rezoning of massive tracts of the neighborhood, complaining about the noise, smell and traffic associated with manufacturing, displacing the labor force necessary for small-scale manufacturers, and killing programs like relocation assistance when industrial business are displaced that have proven successful in the past. The value produced by small-scale manufacturers is not recognized, while the value of activities like real estate development is wildly inflated, as evidenced by the financial collapse of 2008.

Conclusion

The geographic story most often told about industrial cities is that they are doomed by the globalization that will move production overseas and reclaim the central city for higher-end uses. The experience of small manufacturers, while hardly uniform, shows that there is another story to be told about the globalization of cities and its effect on industrial spaces. Globalization of both capital and the population of cities has created possibilities for manufacturers whose flexible production methods, skilled labor and local knowledge make them uniquely capable to serve the needs of an ever-changing population. This adaptability is not new; it is how small manufacturers in a competitive market like New York have always done business.

The problem for manufacturers is that this flexibility and innovation goes largely unnoticed by policymakers. As has been detailed elsewhere (Curran and Hanson, 2005), the narrative of globalization has led city government to actively engage in policies that disadvantage small-scale manufacturers, from rezoning of industrial areas to changing parking regulations that make it more difficult for trucks to load and unload. In Williamsburg, there is a disjuncture between the success of industrial enterprises like the Brooklyn Navy Yard, East Williamsburg Valley Industrial Park and the Greenpoint Manufacturing and Design Center, and policies that bring luxury residential conversion of industrial space to their front doors. While policies such as grants to businesses that are displaced would be helpful to manufacturers, what would be most helpful to small-scale industrial businesses is to be left to do what they do without fear of major disruptions like rezoning.

While small-scale manufacturing has been the focus of this article, it is used as a case study to highlight the diversity of economic activities constituting the urban which have been ignored in policy circles because of the heteronomy of a neoliberal urbanism based on interurban competition, place marketing, property- and market-led development, gentrification and socio-spatial inequality (Peck, 2005). Increasingly, the discourse around urban redevelopment has served up cookie-cutter urban policies that present gentrification, creative clusters, and the attraction of the creative class as best practice scenarios that should be copied across scales and geographies. This article illustrates the ways in which place matters to the success of urban economies, recognizing the variety and creativity of economic actors outside of the 'creative class' with opportunities for, and recognition of, the skills and contributions of those who are working class. While the role that proximity plays in creativity and innovation is greatly valued by those advocating creative clusters, these advocates tend to ignore the ways in which the increasing price paid for this proximity by certain sectors of the economy can displace other vibrant economic actors. An overly narrow focus on gentrification and the service economy displaces a diverse range of economic actors with their own processes of innovation and contributions to the urban. Recognition of the industrial sectors that

continue to serve urban neighborhoods can potentially lead to a more diverse, stable and equitable city, for these businesses serve and employ a truly diverse population, are strongly committed to place and tend to pay more than their counterparts in the service sector.

Winifred Curran (wcurran@depaul.edu), Department of Geography, De Paul University, 1 E. Jackson Blvd., Chicago, IL 60604, USA.

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