WHOSE CREATIVE CAPITAL?
Providence charts a direction for the future of its economy. Who stands to gain, and who will be left out?

By Sophia Y. Li
Acknowledgements

I recently sat down to send some advice to an old friend who is moving to Providence in the fall. I gathered together a list of my most treasured places in the city: the bakery three friends and I went to every Friday morning for a whole semester, the coffee shop I visited whenever I craved a respite from the bustle of campus, even my preferred location for sledding in the wintertime.

Partway through, I stopped. I deleted some items from the list. It took me more than four years to accumulate that lengthy recitation of walks and views and sandwich shops and spice stores, and they were places I made my own by discovering them myself.

For four and a half years, I enjoyed the freedom of discovering what kind of education I wanted and making it my own. That culminated in this thesis, a project that joined my writing life to my academic pursuits.

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I owe my greatest debt of gratitude, however, to the newspaper office on Angell Street where I learned to ask questions about the campus and the city that I saw around me. They became the two principal characters in this story.
verything has an origins myth, a story explaining how it came to be what it is. In local lore, an uncle and his nephew founded the industry that put Providence on the map. In the late 1700s, Seril Dodge opened up a shop on North Main Street for the precious-metal wares he crafted: gold necklaces, silver spoons, silver-plated shoe buckles.¹

It wasn’t until later, however, that technological transformation brought about the changes that grew up into the city’s jewelry-manufacturing industry. After Seril’s retirement, his nephew, Nehemiah, entered the family business. At first, Nehemiah Dodge made jewelry, like his uncle. But soon he developed a process for plating gold, which he began to sell to other jewelers, specializing in plating instead of manufacturing finished pieces of jewelry.²

Then, in the 19th century, the Industrial Revolution came to Rhode Island, imported from the other side of the Atlantic.³ Machines transformed the jewelry-making trade. Manufacturers began constructing factories several stories high and employing increasing numbers of workers, large operations that were a far cry from the Dodges’ small business.⁴ In their time, only two partners managed most firms, and they did most of their work by hand.⁵

By the end of the century, tiny Rhode Island led the nation in the production of jewelry; in 1890, more than 200 manufacturers in Providence employed nearly 7,000 people. Jewelry makers began to move away from the bottom of the hill, where Seril Dodge had opened up his shop. They concentrated in an area across the Providence River and gave it its name: the Jewelry District, where brick buildings still make up a saw-toothed skyline. Companies in the new Jewelry District made gold rings, pipe fittings, jack knives, and metal watchbands, and over the years, inexpensive imitation jewelry became one of the district’s most important products. Even during the Great Depression, Providence’s jewelry industry continued to thrive, insulated in part by how cheap costume jewelry was.⁶

But within decades of the Depression, the city’s fortunes began to change. In the 1960s and 1970s, manufacturers of all stripes started moving their plants to East Providence, Warwick, and other suburbs where there was more room for the even larger buildings and parking lots they wanted to build.⁷ The people left, too. Between 1950 and 1970, Providence lost nearly 70,000 residents.⁸

The exodus of jobs continued, and it eventually extended to the rest of the state. Production plants all over Rhode Island closed down as manufacturers moved overseas, where labor was plentiful and cheap.⁹ The effect on the state’s residents is easy to track: In 1972, manufacturing employed 40 percent of Rhode Island’s workforce. In 1993, it accounted for 24 percent. Just two years ago, less than 9 percent of the state’s workers were employed in manufacturing.¹⁰ Jewelry — easy to pack, store, and ship — was one of the first industries to go.¹¹

⁴ While the number of manufacturers grew about fivefold from 1865 to 1890, the average number of workers each firm employed multiplied by nearly 10.
⁵ Connors and Greenwood.
⁶ Ibid.
⁷ Edward Connors, historic preservation consultant, Interview, October 31, 2011.
⁸ “Rhode Island History,” Rhode Island General Assembly, http://www.rilin.state.ri.us/RhodeIslandHistory/.
⁹ Connors.
¹⁰ Calculated using data from the U.S. Bureau of Labor.
¹¹ Katharine Flynn, director of business development for the Rhode Island Economic Development Corporation, Interview, October 27, 2011.
These days, visitors to the Jewelry District find drab, narrow streets. The buildings that once housed watch manufacturers and costume jewelers are now offices, condominiums, and research laboratories. Surface parking lots plague the district; they account for roughly 60 percent of the land in the area that is vacant or underutilized, according to the city’s planning department. And for more than half a century, a highway cut across central Providence, isolating the district from the city’s downtown.

Until the state knocked it down. By the end of the twentieth century, twice as many cars roared across Interstate 195 daily than it was originally built for. In 2003, Rhode Island’s Department of Transportation officially began the work of rerouting the highway to accommodate modern traffic patterns. More than $600 million later, traffic can now flow smoothly across the new stretches of highway that the state agency has constructed, and nearly 20 acres of land have opened up for development.

When the highway came down in 2010, Rhode Island was sunk deep into economic recession. That year, the state’s unemployment rate was 11.7 percent, the fourth highest in the nation. Faced with a stagnant economy, local politicians and policymakers are eyeing the empty land. Now that the barrier cutting the Jewelry District off from a crucial part of the city has come down, and acres of land are up for grabs, the area is Providence’s greatest opportunity in decades to transform itself, they say. After the highway came down, Governor Lincoln Chafee and the state legislature created a special seven-member commission to handle every step in the land’s development. “It’s a one-stop shop for developers,” says city planner Chris Riale.

City and state leaders dream of the land being used to help the biotechnology and life-sciences sectors of the economy grow. Hope for Providence’s future lies in laboratories and technology startups, in the city’s creative talent, not in factories or their workers, they say. They picture a vibrant office district filled with high-paying jobs, where researchers and entrepreneurs can mingle freely, swapping ideas and inspiration. Creating a new “Knowledge District,” cultivating a “knowledge-based economy,” could mean to Providence and Rhode Island what jewelry-making and other sectors of manufacturing once did. They could give a city in despair new life.

For years, city and state leaders had been cobbling together a way to reverse the region’s economic fortunes. In 2003, then-mayor David Cicilline began sketching out his vision for the city’s

12 Jason Martin and Chris Riale, Department of Planning and Development of the City of Providence, Interview, October 11, 2011.
13 “Iway podcasts,” Rhode Island Department of Transportation,
14 “Iway podcasts.”
19 Kate Bramson, “Room to grow now key to biotechnology,” Providence Journal, June 12, 2011.
21 Martin and Riale, Interview.
22 Bramson, “Room to grow.”
24 Growing the Knowledge Economy: The Power of Partnership, City of Providence, November 13, 2009.
economic salvation. The future lay in a “synergy” of the arts, technology, education and health-care sectors, according to his administration, which branded Providence as Rhode Island’s “Creative Capital.”

Over the years, the city’s strategy evolved. By 2008, the mayor, the governor and local business leaders refined their vision to focus on the city’s major research institutions. The government, local businesses, hospitals, and institutions of higher education would collaborate to move the fruits of research into the marketplace. “We’re home to so much higher ed,” then-governor Donald Carcieri told the local newspaper, the Providence Journal, in 2008. “The question is, how do you harness it?”

Conveniently, the city’s colleges and hospitals were looking to expand. Brown University, Providence’s largest academic institution, began buying up parcels in and near the Jewelry District in 2003, the same year that the highway’s relocation kicked into full gear. The university had not added any new research space for about a decade and a half, says Peter Holden, the head of facilities for Brown’s division of biology and medicine. But there was little room for the university to expand in the affluent residential neighborhood surrounding it.

So in 2003, Brown began expanding in earnest into the hodgepodge of nightclubs, office buildings and surface parking lots that make up the Jewelry District. The university bought 70 Ship St., a five-story concrete building first constructed in 1912 to make watch chains and bands, and converted it into laboratories for molecular-biology research.

The purchase heralded years of continuing expansion into the Jewelry District. In 2007, Brown netted several parcels of land on Richmond, Eddy, and Point Streets and in Davol Square, a collection of properties that added up to 260,000 square feet of new space for the university, with a price tag of $45.4 million. Last year, the university completed its most significant project: The new home of Brown’s medical school opened its doors, effectively an extension of the university’s campus.

The university renovated the Little Nemo Building, as 222 Richmond St. was once known, into a state-of-the-art medical school, complete with flat-screen televisions, a new anatomy lab and rooms for students to practice their clinical skills with mock patients. The university’s planners chose the Jewelry District as the medical school’s new location because of its proximity to the medical school’s teaching hospitals and to Brown’s existing campus, says Richard Spies, Brown’s executive vice president for planning. They wanted the site of the new medical school to be an extension of its current campus, instead of a satellite location.

Since its expansion into the Jewelry District began in earnest, Rhode Island’s largest private university has paid over $100 million to annex more than 500,000 square feet of building space in and

References:
29 Peter Holden, director of facilities planning and operations for the Division of Biology and Medicine at Brown University, Interview, November 21, 2011.
30 Connors and Greenwood.
32 Knowledge District Properties Purchased by Brown Since 2003.
33 Holden, Interview.
34 Richard Spies, executive vice president for planning at Brown University, Interview, November 1, 2011.
near the area, a presence that local politicians and policymakers hope will help transform the area. The success of their entire enterprise hinges on the private institutions’ presence.

“If you want to build a biotech industry, you’ve got to build a bioresearch enterprise,” said Richard G. Horan, senior managing director of the Slater Technology Fund, to the Providence Journal. “And a bioresearch enterprise is an academic enterprise.”

Arthur Salisbury moved his architecture firm into the Jewelry District in 1978, when he and a dozen or so other artists bought a building as a group and split it among themselves, renovating the interior to create units that could serve as artists’ studios and homes. They made themselves the owners of an unassuming brick building at 116 Chestnut St, built in 1888 and, within two decades, the home of seven companies in the jewelry industry.

The members of the cooperative were the first people to live in the district, Salisbury says. But over the years, as one manufacturer after another closed up shop, new owners bought their properties and began leasing them as offices and homes. Salisbury too has converted the space that was once his office into his home, a light-filled apartment with a lofty, chestnut-wood ceiling.

Salisbury is the president of the Jewelry District Association, a neighborhood group that the city and state have consulted extensively throughout the process of opening up the old highway’s land for development. He resists the moniker “Knowledge District” as a new name for the area. The association has suggested allowing the Jewelry District to retain its historic name and using “Knowledge Corridor” to refer to the district and the surrounding areas, he says.

After all, the Knowledge District is vaguely defined, and deliberately so. Its physical center includes the Jewelry District, Rhode Island Hospital, Hasbro Children’s Hospital, and Women & Infants Hospital, but a relevant business outside those physical bounds is by no means excluded from being a part of the Knowledge District, says Richard Spies, the head of planning for Brown, who is stepping down from his post in June of this year. He wants to avoid tying the Knowledge District to a spot on a map. “We don’t want to put boundaries on it,” he says. “It’s as much a concept as a physical place.”

Its many architects even hesitate to name exactly which industries they want to be a part of the engine of Providence’s economic rebirth. They intend to attract companies and encourage startups in biotechnology, health care and information technology, they say. But the arts — graphic design and digital media, for instance — belong in the Knowledge District, too, they insist. “I think the idea is to incorporate almost all sectors,” says Katharine Flynn, of the Rhode Island Economic Development Corporation.

No one is sure who came up with the name “Knowledge District.” It echoes the economic policy emphasis of former mayor Cicilline, which focused on building the city’s “knowledge economy” or “knowledge-based economy,” terms that are no less vague or better defined. They are used to signify, broadly, that a fundamental change in the state of economic and social affairs in developed nations is taking place. This change is not described as a pattern or shift but a restructuring that has something to do

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35 Knowledge District Properties Purchased by Brown Since 2003.
36 Bramson. “Room to grow.”
37 City directory from 1915, a document supplied by Arthur Salisbury.
38 Arthur Salisbury, Interview, November 16, 2011.
39 Spies, Interview.
40 Flynn, Interview.
with information, technology, and science. “Knowledge economy” can refer to economic globalization, including the movement of blue-collar jobs overseas; the increasing proportion of economic activity dedicated to high-technology sectors; and a shift in the workplace’s practices and organizational structures in response to the prevalence of highly-skilled workers. 41

Management theorist Peter Drucker first used the phrase “knowledge economy” in the late 1960s, when he published The Age of Discontinuity. In it Drucker describes his version of the progression of human civilization, a series of economic stages that mankind has passed through. At the beginning of the twentieth century, more people in the United States made their living in agriculture than in any other occupation, he writes. By 1940, industrial workers had become the biggest share of workers, and by 1960, they were white-collar workers, what the U.S. Census termed “professional, managerial, and technical people.” According to Drucker, they embody a new economic era, one in which knowledge forms the basis of personal and national wealth.

Knowledge, to Drucker, is not information but its application. Knowledge acquires social and economic relevance when it becomes a product, practice or service; it is a resource the way wood, crops and metals are natural resources that forestry, agriculture, and mining produce.

The news media and economic organizations eventually picked up Drucker’s basic formulation, an especially relevant way of looking at the world during the technology boom of the 1990s. “Roger Salquist may sell tomatoes and Henry Duignan may sell valves, but in reality they market the same product: information,” a reporter wrote in one Chicago Tribune article in 1993. By genetically modifying tomatoes and using computers to tailor valves to customers’ preferences and needs, the new economy’s entrepreneurs give physical objects their value, by altering them with knowledge’s application.

But Drucker’s successors struggled to define the other qualities that made the “knowledge economy” different from its predecessors. Some claimed the new economy is “weightless,” or at least, lighter, that it relies less on material resources. 42 Others called innovation a distinguishing characteristic of the knowledge economy. 43 And still others found a third way to defend the knowledge economy as an unprecedented shift: It requires workers with a formal education, not just on-the-job training. 44 To those who trumpet its advent, the knowledge economy is nothing short of the dawn of a new age, a fundamental transformation in how commodities are made and made valuable.

Some of their suggestions about what distinguishes the knowledge economy are specious at best. Manufacturers competed, and still compete, by refining production processes and inventing new machines. In short, they come up with innovations to boost productivity. Providence’s jewelry manufacturers developed new techniques for plating gold, and these innovations positioned the city to become a leading manufacturer of inexpensive jewelry. The knowledge economy does not have a unique claim to innovation.

Nor is it true that the global economy is becoming less and less material. Even techniques that use information to add value make a physical product, be they tomatoes or valves. And looking at only the first point of consumption of a metal — that is, when a metal is used to make something rather than the purchase of the finished product — the consumption of copper and finished steel has grown very little.

44 Drucker, Age of Discontinuity.
since the 1970s, according to a U.S. Geological Survey report. But the same report notes that more copper, aluminum, iron and steel is being consumed in the world overall, and their consumption in China accounts for much of the growth.\(^{45}\) Our domestic economy only appears less material, and partly because the plants that make the products we consume have moved elsewhere.

One of the knowledge economy’s supposed attributes holds up: Formal education pays, and even more now than it used to. In the early 1980s, the average college graduate earned about 50 percent more in his or her weekly wages than a high school graduate. The “wage premium” that came with a college degree rose steadily in the years that followed. By 2008, someone with a college degree earned, on average, nearly twice as much as a high school graduate.\(^{46}\)

That doesn’t mean that only high-wage jobs for highly educated workers are increasing in number, as the growth of a knowledge-based economy might suggest. According to an analysis of employment and earnings in the U.S. by MIT economist David Autor, more and more workers are being employed in high-skill and low-skill jobs. The jobs in the middle — such as clerical, administrative and machine operation positions — are disappearing. The job market is “hollowing out,” which contributes to increasingly unequal wages for workers with different levels of education.\(^{47}\) The advent of the so-called knowledge economy, or at least the continual evolution of our economy, does not mean a world in which everyone can have more and more. It creates a society where the gap between the wealthy and the poor, the haves and the have-nots, is widening. People who can take the high-skill jobs that a knowledge-based economy creates are earning higher salaries, but not everyone can participate in a labor market that puts a premium on knowledge, however it is defined.

It’s a divide that the name Knowledge District implies. Even the leaders responsible for promoting the strategies — representatives of economic policy groups, the private institutions, and the city’s planning department — call the name “elitist” and “off-putting.” It suggests a slight to the rest of the city, says Edward Connors, a local resident and a historic preservation consultant. “By extension, is the rest the Ignorance District?” he asks.\(^{48}\)

The cry of elitism taps into longstanding tensions between Providence and its universities, a sense of resentment toward institutions that come across as feeling entitled to behave as they please. Nonprofit institutions are exempt from paying property taxes in all 50 states in the U.S.\(^{49}\) Even as the city and the state encourage research institutions’ growth, their expansion eats away at the city’s tax base, prompting calls for the colleges to contribute more to the city’s coffers. They currently make voluntary annual payments to the city, and the state provides payments in lieu of taxes to the city, based on the estimated value of the institutions’ properties. In all, between the two kinds of payments, Providence received about $23.3 million of compensation in 2010. That same year, property taxes on the land they


\(^{46}\) Figure 1.7a, College-to-High School Weekly Wage Premium, 1963-2008, in Education Pays 2010, College Board Advocacy & Policy Center.


\(^{48}\) Connors, Interview.

owned would have amounted to an estimated $82.8 million, a difference that is no small sum for a city with a $618 million budget; it’s equivalent to nearly 10 percent of its budget.\(^{50}\)

The universities agreed to make payments to the city for the first time in 2003, after a highly public battle with the city. Cicilline, the mayor of Providence at the time, had implemented a series of measures to rein in the city’s budget deficit, projected to be about $59 million for the next fiscal year.\(^{51}\) He cut jobs in city government, froze wages for management positions in city government, slashed $6 million from the budget for Providence’s public schools and put into place new schemes to generate revenue for the city, including installing cameras at stoplights to fine drivers who ran red lights. Together, those measures reduced the projected budget shortfall by about $34 million. The city still had to come up with more than $24 million in savings.\(^{52}\)

Meanwhile, the hospitals and universities were making significant purchases in the Jewelry District, drawing the attention of the mayor and the city council. In 2002, a hospital bought the Coro Building in the Jewelry District. The city lost $1 million in annual tax revenue as a result. The next year, the governing body of Brown, which at the time already owned the most tax-exempt property in the city, voted to continue expanding.\(^{53}\)

In the first few months of his administration, Cicilline hoped the private colleges and universities would voluntarily agree to make payments to the city. But by April, he began to call publicly for the colleges and universities to pay the city what it owed. He announced that he planned to introduce a bill in the state legislature that would levy a “student impact” fee on private colleges and universities, to be assessed per student, or as a percentage of students’ tuition, room, and board.\(^{54}\) Cicilline called the measure the “Fair Share Act” and said it had the potential to make the city $30 million annually.\(^{55}\)

State leaders seemed sympathetic to Cicilline’s proposal. “They have been getting a free ride in the city for years,” one state legislator told the \textit{Providence Journal}. “It is about time the colleges did their fair share.”\(^{56}\)

The colleges and their students were a drain on the city because of the services the municipal government provided them without compensation in the form of property taxes, Cicilline contended, building an image of college students as disruptive, irresponsible neighbors who often deliberately pulled fire alarms and threw noisy parties that the city police had to respond to.\(^{57}\) He tapped into the resentment of many residents who perceived the institutions, Brown in particular, to be inconsiderate neighbors.

Brown can afford to pay the city, wrote one Providence resident in a letter to the editor in the \textit{Providence Journal} that May. “Hardly a day passes without Brown’s boasting of fancy new property acquisitions, expensive faculty hirings and major facility expansions,” he wrote.\(^{58}\)

\(^{50}\) Commission to Study Tax-Exempt Institutions, \textit{A Call to Build the Capital City Partnership for Economic Growth: Report to the Providence City Council}, November 2010.
\(^{54}\) Smith, “Providence’s high-wire budget act.”
\(^{56}\) MacKay, “Cicilline, colleges spar.”
Cicilline’s threat to place the matter in the state legislature’s hands worked: The colleges capitulated on April 24, just hours before a press conference announcing the Fair Share Act’s introduction in Rhode Island’s General Assembly. They were willing to negotiate a compromise. That summer, the city signed a memorandum of understanding with Brown, Johnson & Wales, Providence College, and RISD. The schools agreed to make voluntary payments to the city for the next two decades: an annual payment based on the size of its budget, and payments in lieu of property taxes for 15 years on any taxable properties they bought. Their contribution the next year came to about $3.9 million, far short of the budget gap the city needed to close.59,60

In truth, the colleges never challenged the city’s claim that they had financial and civic obligations to Providence. Instead, they agreed that they ought to contribute to the city, but argued that they already brought sufficient benefit to Providence. Making direct payments as well would be an unnecessary burden. When Cicilline was threatening to push the Fair Share Act into legislators’ hands, an economic-development consulting firm conducted a study on behalf of eight of the city’s schools and hospitals. The eight nonprofits included in Appleseed Inc.’s study — Brown, Johnson & Wales, Miriam Hospital, Providence College, RISD, Roger Williams Medical Center, and Women and Infants Hospital — employed more than 20,000 people, or a quarter of the city’s private-sector jobs. They collectively paid more than $629 million to their employees, generating $24.6 million in tax revenue that went to the state, not to the city. In 2001, they received more than $150 million in research funding, which helped produce local spin-off companies. In short, the universities and hospitals were an economic boon to the city, offsetting the property taxes they would have paid, the study argued.62

Their argument — that university research drove economic growth — dates back to the emergence of federal funding for university research. Before World War II, there were fewer than 20 research universities in the U.S. A diverse array of sources provided funding for their projects, and funding from the federal government only supported a very narrow set of fields.63 During the Second World War and after, federal funding for university-based research grew considerably for defense-related projects.64,65 More and more universities sought intellectual property rights to inventions coming out of their research.66 By the beginning of the 1970s, universities could apply for the rights to an invention from some agencies, on the condition that they demonstrated that they had the capacity to develop a product and market it. Other federal agencies obtained full title to all inventions coming out of the projects they sponsored.67

In December 1980, the federal government finally established a uniform patent policy for universities. President Jimmy Carter signed the bipartisan Bayh-Dole Act, also known as the Patent and Trademarks Amendments Act, into law. The bill allowed small businesses and nonprofit organizations, including universities, to obtain the rights to any patents on inventions resulting from federally-supported research, ostensibly facilitating the commercialization of useful products and allowing taxpayers to reap

59 MacKay, “Cicilline, colleges spar.”
64 Matkin, 63-5.
66 Mowery and Nelson, 50.
67 Matkin, 63-5.
the benefits of research that federal agencies funded. The research university, in the eyes of the public, became incubators for socially useful inventions, and commentators and policymakers attributed the U.S.’s economic growth in the 1990s to the Bayh-Doyle bill. The Economist wrote that “this single policy measure helped reverse America’s precipitous slide into industrial irrelevance.”

The city’s research institutions say they make useful what would otherwise lie empty. They make a run-down district attractive real estate for businesses looking for a new location. They bring value to a state with an ailing economy, turning around Providence’s slide into economic irrelevance, or so the proponents of the Knowledge District say. From one point of view, they’re not so far off the mark: In 2010, seven of the city’s top ten private employers were tax-exempt institutions. Either health care and education are the industries of the future, or they are all Providence has left. Or they are both, the only options for growth, given the departure of large-scale manufacturing.

Brown and Providence’s tax-exempt institutions originally publicized the story that they were engines of economic development as a defense against the city’s efforts to wrangle them into paying property taxes. But even after the city won the battle for the colleges to pay up, their story survived. When the state tore down the highway, it found a physical base in the so-called “Knowledge District.”

The city is now pushing for an increase in payments, but reviving that old battle ignores the structural problems that have led to the city’s budget crisis. State aid to the city has dwindled in recent years, and the city of Providence faces nearly $1 billion in worker pensions that it cannot pay. Trying to convince the city’s colleges to cough up more in regular payments is only a short-term fix for its precarious financial position. The public tussle distracts from the details of how the institutions are to produce economic growth.

Providence’s colleges and hospitals are large employers, but their activity in the Jewelry District has not necessarily created jobs. The opening of Brown’s new medical school, for instance, created only a handful of janitorial positions for the renovated building it now occupies. The actual effect of transplanting the medical school into the Jewelry District is that it brings to the area several hundred students, faculty, and other staff members. The real benefit of the institutions’ presence is that they can act as a catalyst: Spinoff companies licensing an invention that Brown researchers developed will want to locate near the area the university is in. Other companies will want to set up their offices there, too, where they can talk to like-minded scientists or entrepreneurs. The research that institutions undertake results in products that are valuable in and of themselves, and it brings to Providence the business of making them.

Local leaders often point to a few fledgling companies as signs that the Knowledge District has already gotten off the ground: Isis Biopolymer, across the street from Brown’s medical school, which makes transdermal patches that deliver drugs through a person’s skin into the bloodstream, and NABsys, Inc., founded by a Brown physics professor to develop a quicker, cheaper, and more accurate device to sequence DNA.

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68 Mowery and Nelson, 87-93.  
69 Mowery and Nelson, 93-4.  
70 Commission to Study Tax-Exempt Institutions, *A Call to Build the Capital City Partnership*.  
72 Commission to Study Tax-Exempt Institutions, *A Call to Build the Capital City Partnership*.  
73 Michael McCormick, assistant vice president for planning, design, and construction at Brown University, interview, November 29, 2011.  
The lure of companies in the “knowledge-based” industries, if they do locate in the Knowledge District, is that they create high-wage jobs.\textsuperscript{78,79} But this is also the weakness of the city’s strategy: Workers need a high level of education and, often, specialized training for the jobs policymakers hope to create. The proponents of the Knowledge District concede in quiet tones that not many Rhode Islanders are qualified for the jobs their strategy would create. Providence can’t only import workers from other places to take the knowledge economy’s new jobs, says Spies, Brown’s head of planning. “That’s something we’re really struggling with.”

About two-thirds of Providence’s adult population were high school graduates, and under a quarter had earned a bachelor’s degree, according to the 2000 U.S. Census, markedly lower than the state overall.\textsuperscript{80} Providence’s public high schools have a four-year graduation rate of 68 percent, according to data from the state education department.\textsuperscript{81} Recently the district has experienced a tumultuous few years. In February of last year, Mayor Angel Taveras came under fire when every one of the school district’s teachers received termination notices. Nearly 2,000 teachers were “pink-slipped,” instead of laid off, as a cost-cutting measure. The majority was rehired in May,\textsuperscript{82} and the rest eventually found new jobs or were reassigned as support staff in the district and its schools.\textsuperscript{83}

But the teachers’ firing, which drew national attention, was only the first round in the district’s most recent bout of troubles. Tom Brady, the district’s superintendent, resigned in March, along with his chief of staff, chief operating officer and director of communications.\textsuperscript{84} In July, the president of the school board stepped down, too.\textsuperscript{85} Brady and his three predecessors each lasted three years in the position,\textsuperscript{86} the average tenure for a superintendent of urban school districts across the U.S.\textsuperscript{87}

Meanwhile, the school board voted to close five schools to try to reduce the city’s yawning budget deficit: Asa Messer Elementary, Flynn Elementary, West Broadway Elementary, Windmill Elementary and Bridgham Middle School.\textsuperscript{88} The middle school, Bridgham, was converted to house Asa Messer’s students and teachers.\textsuperscript{89} The educational achievement of the district’s students, and the highly politicized tussles between parents, teachers, the school board and the city, are not separate from Providence’s strategy for economic development. Their outcomes are part and parcel of any attempt to build a truly inclusive knowledge-

\textsuperscript{80} Data from the 2010 Census not yet available. Sources: “Rhode Island City & Town Educational Attainment,” Rhode Island Department of Labor and Training, http://www.dlt.ri.gov/lmi/census/edu/edu.htm and Table 233 from the National Data Book, U.S. Census Bureau, http://www.census.gov/compendia/statatab/cats/education/educational_attainment.html.
\textsuperscript{81} “2010 Graduation Rates by Cohort, by NCLB Subgroups. 4-year cohort,” Rhode Island Department of Elementary and Secondary Education, http://www.ride.ri.gov/ride/GraduationRates.aspx
\textsuperscript{83} Linda Borg, “Superintendent says all teachers will be working,” \textit{Providence Journal}, September 11, 2011.
\textsuperscript{87} Borg, “Setbacks for schools.”
\textsuperscript{88} Linda Borg, “Board votes to close 5 schools,” \textit{Providence Journal}, April 29, 2011.
\textsuperscript{89} Linda Borg, “Schools open with few glitches despite tough trials,” \textit{Providence Journal}, September 1, 2011.
based economy. As the final report of the city commission that studied tax-exempt institutions says, “while Providence is home to institutions employing world-class scholars, scientists, and healthcare specialists, there are whole communities in this majority-minority city who feel separated from the knowledge economy and its potential for economic growth.”

As a result, local leaders must revise how they think about economic development if they are to be successful. The economy does not exist as an abstract, autonomous entity. Its growth and decline, its expansion and contraction, are embodied in people, in the work they do, in the money they make, in the goods they consume and the services or products they provide. If any government agency, private institution or company creates jobs, it must also consider who will hold those jobs. Otherwise, the Knowledge District only has the potential to deepen the divide between the haves and the have-nots in Providence.

When confronted with the “skills gap” in Rhode Island, nobody denies that education and workforce development are crucial to including most of Providence’s population in the future that the Knowledge District promises. But when asked about specific initiatives that tie education and training to the Knowledge District, policymakers stumble.

No one has a clear idea of what has to be done to match the skills of the local workforce to the jobs that are being created, or even who should do it. “All of us,” says Brown administrator Dick Spies. But he is quick to add that public education is the city’s responsibility, and its budget problems hardly absolve the city of Providence of its obligation to provide a quality education to its residents.

The shift to a knowledge-based economy and the creation of the Knowledge District in Providence are two stories that people tell, myths based in fact and shaped to serve the tellers’ own ends. For the nascent Knowledge District to achieve true success in revitalizing Providence’s economy, public and private leaders must put a different spin on their story.

Part of the strength of the idea of the Knowledge District, part of its appeal for entrepreneurs and collaborative researchers, is its existence as a physical place. A successful research district is more than a concept with buzzy boundaries. If developers pay attention to the physical environment of the Knowledge District — if it includes public spaces where people can meet and interact, if it welcomes pedestrians or encourages employees to drive in and leave at the end of the workday, and if it has a geographic center or if it is diffuse — the concept has real potential to become an attractive place to spend time in, and companies have an incentive to set themselves up there.

Another essential element is workforce development: job training for Providence’s adult population and improvement in the city’s public schools. This requires commitment and funding from the city and the state, but it would also not be unprecedented for Providence’s private colleges and universities to make contributions dedicated to workforce development. This could take one of many forms: They could support public education, help create specialized K-12 programs in science, technology and engineering, or help staff job training programs for the city’s adult population.

Brown has already created small programs to those ends, but none of them are at all connected to the creation of a Knowledge District. Brown covers full tuition for eight candidates for master’s degrees

90 Commission to Study Tax-Exempt Institutions, A Call to Build the Capital City Partnership.
92 e.g. Christine Smith, executive director of the Science and Technology Advisory Council, Interview, October 18, 2011.
93 Spies, Interview.
in teaching if they commit to working for three years in Providence’s public schools afterward as part of its response to the findings of a special committee on the university’s historical ties to the slave trade. Brown also created an education fund for the city’s schools following the committee report’s release, but six years later, the fund has raised $1.26 million of its $10 million target. Tying such initiatives to the development of the Knowledge District could galvanize their implementation.

Investment in Providence’s public education system could help persuade employees relocating because of a job in the Knowledge District to move to the city, instead of a nearby suburb. It could also convince the companies that the city, the state, and Providence’s private institutions to come to the Knowledge District in the first place: A pipeline of qualified workers would help attract businesses with specialized operations, while its absence would only deter them.

The story of the Knowledge District has the potential to transform the city, but only if it includes a close look at how that transformation will take place. The city does not make economic gains as an undifferentiated whole. The distribution of the profits that are made and the wages that are paid is the difference between a strategy that addresses a city’s most pressing economic needs and a strategy that papers them over. In the new economy, some things are still irreplaceable: namely, a place and its people.

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Afterword

Writing is never done. In working on this piece, I grappled with many questions of craft along the way: How do I structure the story? How much do I tell my readers from the beginning? What is the story’s conflict, and where does it come in? Am I aiming for description or prescription? Do I write myself in as a character, acknowledging myself as either a journalist or a Brown student? In many cases, I did not have the answers to my questions before I sat down to write; they worked themselves out in the process of writing.

I have chosen in the version I have settled on, the version that I am submitting, to abandon a linear narrative. Instead, the story wanders from one element to another. Hopefully, some serve to support each other; hopefully, some pick up on the threads that others have begun.
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