Urban Acupuncture – Curitiba as an Allegory

Yael Arbel
“Can I make a correction?

We are not waste pickers; we are pickers of recyclable materials. Waste is what you can’t re-use, but with recyclable materials you can!

Tião Santos, Curitiba
Abstract

The article describes the city of Curitiba, Brazil, as an Education City. It examines the city's unique initiatives and demonstrates that it is consistent with the Education City model, from the planning process to the main principles that the city promotes.

The article begins by describing the change that Curitiba underwent when the city's new master plan was conceived during the 1960's and the civilian protests that ensued. The article emphasizes the importance of urban leadership as a key to change and the decisive influence of a mayor committed to the entire city. The article also critically examines the non-democratic aspects of the city, where the mayor knows what's best for the citizens, and how to present changes to citizens that are reluctant to adopt them.

The body of the article analyzes Curitiba's planning and leading processes according to central elements in the Education City model: mapping and planning, identifying the city's story, commitment to the education of all its citizens, urban involvement, and the commitment to the self-actualization of all citizens.

The article presents the city’s mapping and planning process, considered by many as a manifestation of dialogue, involvement, and the correct balance between macro and micro issues. We will also present the opinions of critics that see Curitiba as a city controlled by technocrats.

The article then discusses the process of identifying the city’s story, which is a basic and important part of planning a suitable Education City for its citizens. We will also mention the active process of spinning the desired urban story, where the old story of the city is preserved but also paves the way for the new story, a story of success.

Using examples from the urban planning process and the city’s policy, the article shows Curitiba promoted belonging and solidarity, and how the new master plan revived the old city center and promoted a policy to increase social wealth. The article will also address researchers such as Putnam, who think that the more opportunities that the city's inhabitants have to meet in public and develop relationships, the greater their chances of acquiring a larger amount of social wealth.

Curitiba is committed to the education of all its citizens. The article presents examples of this and shows how education is perceived as a means to integrate all the citizens in the urban community and as a civic engagement tool. One of the important means mentioned in the article is city-wide collaboration of the educational institutions and commercial, government, and private entities operating in the city.

Curitiba places special emphasis on sustainability education. The article will briefly describe Curitiba’s system for sustainability education and will show how schools can be a springboard for city-wide change. In the context of the Four Teachers Model, the article will illustrate how the entire city is a learning environment for sustainability for all ages. The article will mention several main tools used by the city planners, including the charrette and the urban acupuncture perspective.

At the end of the article we will discuss the importance of continued learning and the need to constantly identify the city's story and current needs while preserving the city's grand vision.

Curitiba, the city that became a sustainable development legend, is an Education City in every sense of the word. Already from the mid 1960's the mayors placed the individual at the center and succeeded in planning a model for sustainable development, whose measures include welfare, local economy, education, healthcare, and interpersonal relationships.

Jaime Lerner, the former mayor of Curitiba who was among the city planning leaders, spoke at an Education Cities conference that took place in Israel in 2010. Lerner described some of the basic principles of leading an Education City:
“One of the important roles that a leadership can take in this context is to promote a positive public agenda, to help conjure up the shared dream, to focus on it and to demonstrate how this scenario may come to pass. Without neglecting the citizens’ needs regarding health services, education, children and the elderly, the city will work to form a layout of strategic goals whose actualization will unite all the efforts of the entire generation.”

Curitiba’s claim to fame was the efficient and inexpensive public transportation system that it built, but the city has also won many sustainability awards: Its recycling rates are one of the highest in the world; the city was planned in a sustainable manner with one of the highest ratios of open space per capita in the world; it has one of the lowest illiteracy rates in Brazil and its education and healthcare projects received international publicity and recognition. Researchers that examined Curitiba’s exceptional achievements have stated that the citizens were proud of their city and that a profound cultural change occurred in the city over the years.

The crucial change that turned Curitiba into what many considered to be an exemplary city was a perceptual rather than a planned change: the principle guiding the city’s planning was the welfare of all its citizens. Its leaders aspired to not only increase the city’s economic wealth but to increase its social wealth as well. This decision was not so obvious at a time when competition and wealth were central factors in shaping public policy in liberal democracies. In its heyday, Curitiba’s leading team turned the city into a learning institution, promoted educational processes by means of formal and informal frameworks, and in certain cases even encouraged experts to listen to citizens and learn from them. For years, Curitiba was a city with leaders that also viewed it also a future-facing planning challenge, rather than just an administrative challenge rooted in present problems.

The article will demonstrate how a change in Curitiba expresses the fundamental goals of Education Cities. We will see how an educational environment for all its inhabitants was created in Curitiba, promoting values of involvement and solidarity, sustainability and creativity, learning and quality of life. The article will show how the city’s initiatives express the principles of an Education City, and the democratic conduct in the city will be critically examined, including the tension between urban involvement and civic engagement for the rapid and effective promotion of change processes. From the three fundamental points of an Education City described in Dvir and Schwartzberg’s article, Curitiba offers an exemplary model of the first two points – the entire city is a school with a clear and consistent system of values that manifests in various aspects, and the municipality is truly committed to the education of all its citizens. Regarding the third section, the municipality clearly encouraged extensive collaboration between various entities in the city, but does it also encourage civic participation? This is a controversial topic that will be discussed later.

1 Abstract of Jaime Lerner’s lecture – Urban Acupuncture
Curitiba is the capital city in the state of Paraná, an affluent agricultural state in southern Brazil, which currently has over 1.8 million inhabitants. In the 1960’s there were 350,000 inhabitants and it was decided that the time had come for a new and modern master plan. The Urban Research and Planning Institute of Curitiba (IPPUC) presented a plan in the spirit of the period, which focused on developing infrastructures for car transportation and included a proposal to demolish the old city center in order to build a highway. Fortunately for Curitiba, a group of young city planners spoke out against the plan. One of them was the young architect Jaime Lerner. The group of dissidents wanted to protect the houses in the city center, which were built in the nostalgic turn of the century style, and to subsequently save a chapter of the city’s story and its unique character. Instead of the modernization program that was disqualified, the dissidents wanted to develop a plan that would compromise between the need for progress and the need for a sustainable city on a human scale. The protest eventually paid off and it was decided to develop a new master plan. Lerner also took part in the planning team, and he became a key figure in shaping the new face of the city. The new revolutionary plan was very different from master plans that were being developed at the time, and it was characterized by the development of a public transportation infrastructure and a democratic ethos that placed the individual, rather than the car, in the center. The plan, which was formed exactly during the coup d’état in Brazil, was not implemented until 1971, when the military dictatorship appointed architect and man of action Jaime Lerner as mayor.
Jaime Lerner, a native Curitiban and the son of a Jewish Polish immigrant, entered his position as Mayor in 1971 with full force and made numerous dramatic changes in a short period of time. He aspired to preserve the original urban planning visible in the area, but efficiently introduced innovative changes in how the city was run and how its roads were planned, and orchestrated the establishment of a quick and efficient bus system through the city’s main routes.

WHEN THE MAYOR KNOWS WHAT’S BEST FOR THE CITIZENS

The new master plan, which was identified to a great extent with the new mayor, placed the individual rather than the car in the center. In a move that symbolized the spirit of the entire plan, the planners decided to close a main road in the city and turn it into a pedestrian street. The merchants in the area were vehemently opposed to the plan and threatened to take legal action if the plan was executed. One year had passed since Lerner’s appointment, and in the meantime the municipality was gearing for the huge change, paved secondary roads and prepared a plan of action. Lerner recalls that the contractor estimated that he could complete building the pedestrian street within two months. In tough negotiations, Lerner insisted that the work be completed over the course of only one weekend. “I knew I was in for a tough battle”, he said in an interview. “Had I started and the work dragged on, anyone could have stopped it with legal action. Had they stopped the work, it would have been lost. I had to do it really quickly, at least partially.” In an interview with The Guardian, Lerner said that there was another aspect to the haste: during the dictatorship, you couldn’t plan ahead – “tomorrow we might not be here anymore.”

In order to appease the merchants, Lerner went out on a limb and offered to make the changes for a trial period – if they did not like the renovations after six months, the municipality would restore the previous situation. “I had no way of convincing the store owners that the pedestrian street was good for them, because at the time there were no commercial pedestrian streets in Brazil. But I knew that if they had the opportunity to see it in action, everyone would love it.” On Friday evening, the municipality closed off the street and started tearing up the road. By Monday morning they managed to pave the street with bricks and plant thousands of flowers. The pedestrian street opened on time.

Although Lerner enjoyed the support of the military regime and he had been appointed rather than elected to his position, he also knew that the dissatisfaction of the merchant class would lead


3 Tom Phillips, “Quiet Revolution”, The Guardian, 26 March 2008. “I said: ‘We have to do things quickly because next week we might not be here anymore [because of the dictatorship].’”

to his dismissal. Fortunately for him, the gamble paid off and even exceeded expectations, and the merchants that had previously threatened to halt the process with legal action were amazed by the new pedestrian street and even requested that it be extended, since they discovered that the new design increased their revenues.

This symbolic step was a significant stage in Curitiba’s new path. Lerner sees the story of the pedestrian street as a parable of the sweeping changes that occurred to the city under his leadership. And yet, an examination of the story raises questions regarding citizen involvement. Was Lerner an enlightened despot or a democratic leader? He admits that he chose to act quickly before the citizens could oppose, even when he knew that his plan was not very popular. He believed that he knew better than the citizens what they needed – and indeed managed to convince them that he was right. The municipality and the IPPUC acted under his leadership as an avant-garde body, marching in front of the camp knowing that justice was on its side. Although the pedestrian street improved the city and the citizens’ quality of life, the actual move was neither democratic nor participatory. This tension is an inseparable part of the change processes in Curitiba. Later we will see how Lerner and his partners led a reform among the population living under a dictatorship and without the democratic tradition of making joint decisions, and understand that even under such conditions, high levels of civic involvement and responsibility can be attained.

"There is no endeavor more noble than the attempt to achieve a collective dream. When a city accepts as its mandate its quality of life; when it respects the people who live in it; when it respects the environment; when it prepares for future generations, the people share responsibility for that mandate, and this shared cause is the only way to achieve that collective dream" (Jaime Lerner).\(^5\)


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Mapping and Planning

The mapping stage is essential to building an Education City, and so it was with Curitiba’s city plan. To a certain degree, the learning process that the city planning team underwent embodied the change that the team generated in the city's character. Mang describes Curitiba’s planning and leading process as a unique process, since it had a significant element of dialogue and sharing and the right balance between micro and macro issues.\(^6\)

One of the factors of Curitiba’s success is the correct balance between planning for the present and planning for the future: Every morning, the leading team gathered in a wood hut in the forest to discuss the city’s broad vision. In the afternoon they returned to the heart of the city and met with citizens to discuss specific urgent problems in the community.
present. The team members stated that the inspira-
rational morning meetings gave them energy to
cope with the day to day problems, because they
had a vision that alluded to solutions for existing
problems.

An important tool in the leading team’s thinking
process was the charette: a quick brainstorm of
experts to finding creative solutions. The tool
is based on involving different echelons, from
involved citizens, to functionaries, and profes-
sional experts. Lerner recounts that they used
this method in every one of their planning meet-
ings. Every morning, they invited all the relevant
people to discuss a specific issue and thus a cre-
a tive and involved platform was created and the
city’s leading team had the opportunity to hear a
variety of voices.  

One of the city’s stories that demonstrates the

power of respecting the life experience of the cit-
zens and the willingness to rely not only on pro-
essionals, pertains to Curitiba’s efficient public
transit system. The city’s bus system was a huge
success and the number of passengers increased.
In the 1990’s, the municipality purchased buses
that were twice the size with wide doors that en-
abled more passengers to board the buses in a
shorter time. The stations were designed accord-
ing to the modern style and were elevated so that
passengers could board the bus without having
to climb any steps, and further decreasing the
waiting time. But then a new difficulty arose: How
could the buses navigate to stop exactly in front
of the automatic bus stop doors? Volvo offered to
integrate its sophisticated computerized system
in the buses, but the system cost almost as much
as the bus and so the proposal dismissed. The
planning team consulted with the local drivers
and found the perfect solution. One of the team
members recounts:

“Volvo wanted to sell us this system. It was
almost as expensive as the bus. So I called the
chief of drivers of the bus companies and I asked
him “could you park this bi-articulated bus in this
boarding tube?” He said, ‘of course I can do it.’ ‘You
can do it?’ ‘Yes.’ He took a piece of tape and put
it on the window of the bus and another piece of
tape on the boarding tube. And the moment they
were in the same line, he stopped. Since then,
they’ve never had an accident.”

There are disagreements regarding this ideal
description of urban cooperation. Moore, for
example, claims that the decision to entrust the
IPPUC with the planning and execution of all the
changes in the city gave the IPPUC a great deal
of autonomy and it could make many changes
quickly and without resistance. Moreover, Moore
thinks that Lerner’s leadership was professional—
citizens were the “customers” of decision making
experts and not involved “citizens”. In contrast
to other researchers that praise the cooperative
nature of the city, Moore describes Curitiba as
a city run in an exemplary sustainable manner,
however technocratically not democratically;
However, Curitiba’s technocrats are not purely
technical decision makers or agents of civic en-
gagement, but rather a hybrid.

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8 Cited in: Mang, p. 100.
9 Steven A. Moore, Alternative Routes to the Sustainable City:
10 Moore, p. 103.
Identifying the city's story (or narrative) in the present and the future is an important part in the Education City's planning. Using the city's story, the city's leading team can identify the city's strengths and use them to develop the areas important to its citizens. When Lerner and his partners stood up to protect the old city center, they consciously protected the core of the city’s story: “They (the city planners at the time) were trying to throw away the story of the city, they were trying to emulate, on a much smaller scale, the ‘tabula rasa’ miracle of Brasilia”, said Lerner.11

Despite Lerner and his friends’ nostalgia toward Curitiba, most people saw it as a boring middle class city, a place to pass through on route to more interesting cities. Carlos Rischbieter, Chairman of the investment company that financed the new master plan, likes to tell an anecdote from the 1980’s that expresses the turning point well:

“I always tell a story of the ‘80s. A friend from São Paulo came with his wife and son to visit Curitiba. He did not know this city. I took my car and showed him Curitiba for three hours. When I left him at the hotel, he said, ‘What did you show people before Jaime Lerner?’”12

Although Curitiba took measures to preserve its stories from the past, it mainly told its success story from the 1970’s onward. From a non-descript city, it became a city that actively told its story according to the new narrative imbedded in the values of its master plan. Since the 1980’s, Curitiba has been a center of attraction for city planners and environmental activists. In 1990 it declared itself as the green capital of Brazil and has since branded itself as an international success story and a source of pride for its citizens. An environmental activist in the city said to an American journalist:

“The mayor told people that they live in an excellent city, and they believed him”.13

The following sections will review several actions that lent Curitiba this status and gave it the distinct characteristics of an Education City.
What makes an Excellent city?

**BELONGING AND SOLIDARITY**

The new master plan and Curitiba’s municipal policy in the decades following consistently pursued a policy of developing the local pride and reviving the city center. For example, the municipality encourages the preservation and restoration of old houses and converting them for new uses rather than demolishing them and constructing new buildings in their place. Thus, the city has kept its past identity and saved resources as well. Many consider these moves as key factors in the cultural change that occurred in the city. Many researchers and writers that visited Curitiba were amazed at the cultural change that occurred there and linked between the planning and the city’s policy and the sense of community and the citizen’s place attachment. The numbers speak for themselves: In a survey conducted in Curitiba in the 1990’s, 99% of citizens said that if they could choose to live anywhere in the world, they would choose to live in Curitiba. This is an exceptional and special statistic. In a similar survey in New York, 60% responded that they would like to live elsewhere, and in Sao Paulo, 70% of respondents said they would like to live in Curitiba...

**POLICY TO INCREASE SOCIAL WEALTH**

The master plan of the 1960’s allocated mixed destinations in every area to prevent the creation of bedroom suburbs and to keep the city center lively, combining residential, commercial and recreational sites. In the 1990’s, years after the pedestrian street was built, Curitiba launched the Streets of Citizenship program, which further

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15 Mang, p. 4.
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What makes an Excellent city?

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Nobel Education Network
The Institute for Democratic Education
C2City

deepened the plan to preserve the vitality of the city center. Streets were organized so that people could run all their errands within walking distance from each other. Thus, government buildings, stores, cafes, sports centers, playgrounds, free access to the Internet, community centers, and of course public transit stations were all built on the same street.16 This design made it easier for citizens to do various activities in the city center – while encouraging use of public transportation instead of at remote recreation and shopping centers that require access with a car and do not offer a place for shared meetings and encounters.

Various researchers have indicated that the more opportunities the citizens have to meet in the public sphere and develop relationships, the greater the chance that they will acquire more social wealth. Putnam showed that the most important asset of successful communities is not material wealth but social wealth. His study showed that social wealth is not only characterized by financial and social success, but can also predict them, as well as the level of personal happiness of the community members. In contrast to other types of wealth, social wealth increases when it is divided among the greatest number of people and therefore it has a distinct egalitarian foundation that is compatible with the democratic ethos. A community with a large amount of social wealth is characterized by high levels of solidarity, trust, interpersonal communication, civic collaboration, and social and public activity.17 These were the outcomes of building the controversial pedestrian street, and these were the considerations that stood at the basis of numerous other projects in Curitiba’s new plan.

One of the nice examples of Curitiba’s success in creating social wealth is the story of the establishment of the urban merchants association. A Curitiban citizen says: “In any other part of Brazil, if you talk to a merchant and ask him to pay three hundred dollars a month for an association, he will give you a big four letter word. Here, eighty percent joined up. Everything’s like that now. If you talk to Curitibans about separating garbage, they will do it, because they know they live in a different city. This is a mind condition”.18 This success is particularly impressive in the context of Brazil, where the trust index is among the lowest in the world19 and the tradition of democracy and civic society is not established.20

COMMITMENT TO EDUCATION OF ALL CITIZENS, ALL THE TIME

Curitiba’s education system is one of the best in Brazil. In 2007, the mayor announced that Curitiba had the third highest proportion of university students in Brazil and the highest literacy rates: while illiteracy rates in the state of Parana stood at more than 6%, Curitiba’s rate was less than 4%. This achievement stemmed not only from the quality of the city’s schools, but also from the municipality’s commitment to educate adults. The


18 Cited in: Mang, p. 4. (http://storyofplace.org/The_Story_of_Place_Institute/Resources_files/CuritibaCaseStudy.pdf)

19 International Trust Survey

20 Joseph L. Klesner, “Social Capital and Political Participation in Latin America”, Latin American Research Review, Vol. 42, June 2007. Klesner found that social wealth enhances civic engagement, but in South America it has a smaller effect than in established democracies, partially because the basic trust in these countries is much lower.
battle against illiteracy is not only an impressive data in global statistics, but a means to integrate all citizens in the community and a tool for civic engagement.

**EDUCATION AND DEMOCRACY**

Already in the 1960’s, Curitiba chose education as a significant tool for changing the city and its inhabitants. Education was perceived as a way to integrate all the citizens in the city's community and as a tool for civic engagement. Children and adults, wealthy and poor, formal and informal education – everyone acted according to the city’s new values.

This orchestrated process once again raises the special tension of Curitiba: On the one hand, the city managed and is managing collaboration between various entities in the city and is caring for the education of all the citizens based on its values of sustainability and civic responsibility; on the other hand, the educational process in Curitiba is characterized by a certain degree of patronage toward the citizens, and it is important to remember that this irony is mostly characteristic of the beginning of the process; in the 1980’s, with the end of the dictatorship and democratization process throughout Brazil, Curitiba also greatly expanded its plans to involve citizens and for active citizenship.

The irony of Curitiba stems from the municipality promoting democratic and sustainable values, but it did this in an entirely undemocratic manner since it chose a specific system of values, shaped the city and its citizens accordingly, and instilled these values to the citizens using top-down approach. This combination was an almost subversive move toward the military dictatorship, but also not a purely engaging move regarding the citizens. However, it is important to remember that this irony is mostly characteristic of the beginning of the process; in the 1980’s, with the end of the dictatorship and democratization process throughout Brazil, Curitiba also greatly expanded its plans to involve citizens and for active citizenship.

**CITY-WIDE COLLABORATION**

In 1968, the IPPUC began developing collaboration between the various educational institutions: the chain of public schools, day cares, education for integrating detached youth, and municipal healthcare. In the **favelas** (poor neighborhoods, shanty towns), day centers for children were established that offered education relevant to the lives of street children as well as meals. The center workers taught the children and the youth that came there practical skills such as caring for their younger siblings and growing vegetables. Youth that participated in gardening courses later became gardening workers. The project increased the **favela** inhabitants’ trust in the municipality, and helped them integrate in the city as citizens with a trade and as partners in developing the city. In his article, Rabinovitch describes that the initiative was not easily accepted and at first, the street gangs attempted to sabotage the buildings and activities. The municipality decided not to involve the police and thus created trust among the citizens and reached an understanding with them that the project was helping them. With time, the youth from the street gangs also supported and participated in the program.¹¹

Another illustrious example of the combination of welfare, education, and sustainability in the **favelas** is establishing crafts workshops from recycled materials. Children and adults created artwork from materials that were collected off the streets, and sold their creations at a chain of stores for local art. Fanny Lerner, who led the welfare projects for children and youth, was in charge of the Children and Youth Department at the Curitiba municipality and was later appointed as the Minister of Children and Family Affairs in the State of Parana. She believed that investing in education and art was the most logical way

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to cope with social problems: “A society must decide what it wants to invest in – training people for creative life, or in jails that they will end up in if they don’t get an education and professional training.”

As usual in Curitiba, the means are as impressive as the results in the field of education as well. Consistent with the urban tradition of not throwing anything away that can still be used, old buses were converted into classrooms, and they were sent on fixed days to the various favelas around the city to teach adults basic literacy skills. In 2008, the city won the UNESCO Prize for its adult education program, which combined literacy studies with health education. The program involves young volunteers from the community that teach adults the basics of reading in the context of important hygiene and health topics.

Another planning move that emphasized the importance of education in the city was the establishment of a chain of municipal libraries, called Lighthouses of Knowledge. The libraries were designed as colorful lighthouses and they offered a wide assortment of books and free Internet access, in the first public network in Brazil. Every library housed the ten volumes of the Curitiba Encyclopedia, which tell the story of the city: the heritage, culture, environment, and the inhabitants of the city. This is another way to educate and mainly to develop local identification and pride. In addition to the books and access to knowledge, the Lighthouses of Knowledge run activities for all ages, from children’s activities to work centers and professional training, welfare services, and more.

EDUCATION FOR SUSTAINABILITY IN A SUSTAINABLE CITY

In an interview with architect Yudan Rofe, Lerner gave his advice to the planners of sustainable cities: “Plan your own city. Let every child plan his own city. This is very important because if we teach the children to think and plan their own city, they will appreciate it and love it more.” The learning process and the personal search of citizens is then a tool to improve life in the city. This advice is a prominent characteristic of an Education City, where all the citizens are involved in learning and are encouraged to be active participants with a sense of belonging and responsibility for the city and its future.

One of Curitiba’s greatest successes is in the field of urban recycling. Already in 1989, years before recycling programs cropped up in the wealthier cities of Europe and the United States, Curitiba boasted an unprecedented recycling rate by global standards – 70% of the city’s garbage. This impressive achievement is the result of a city-wide educational campaign that once again demonstrates that Curitiba is a true Education City.

In order to present the idea of garbage separation, the urban planning team contacted the elementary schools. The children learned about...
Already in 1989, years before recycling programs cropped up in the wealthier cities of Europe and the United States, Curitiba boasted an unprecedented recycling rate by global standards – 70% of the city's garbage. This impressive achievement is the result of a city-wide educational campaign that once again demonstrates that Curitiba is a true Education City.

Garbage separation and were encouraged to bring old batteries and tubes of toothpaste to the school. The schools became a springboard for urban change and within a few years achieved remarkable cooperation by the citizens. The Three Teachers Model is pertinent here, since not only is the environment designed as educational, but parents also learn from their children.

The Entire City as a Learning Environment for Sustainability

Curitiba is a learning environment for sustainability for all ages – any resident using the city's famous bus system learns daily that there is a convenient alternative to the car. Concurrent to the city's general planning, several educational projects for sustainability also operate in it.

Another extremely successful project aimed at the ambitious goal of separating garbage was directed at the poor people of Curitiba. The Garbage that's not Garbage program is both a welfare and education project that changes the standard perception of garbage. The municipality offered to buy garbage from the citizens in a brilliant synergistic move: the poverty stricken favela citizens received bags of food and bus tickets in exchange for garbage bags that they collected in areas that had no access to the garbage trucks. The city gave an ongoing incentive to keep the city clean and subsequently improved the nutritional status of the city's poor. The food given to the citizens came from surpluses of local manufacturing, which kept revenues inside the city and supported local farmers, kept transportation costs low and therefore created less air pollution.

As can be seen in the quotation at the beginning of the article, this recycling project was incredibly successful with its target population: not only were tons of garbage collected, the citizens internalized the ecological value of their work and the importance of the raw materials they collected.

Another educational project is the water sources project, which began in 1996 to educate citizens to protect the cleanliness of the water sources by involving them in environmental monitoring. In addition to the numerous school children that participated in the monitoring project, other entities also participated, including universities, neighborhood committees, and environmental organizations. Thus, the project promoted education for children and also cared for the cleanliness of Curitiba's water system. A total of 5,100 volunteers participated in the project, who received technical support from the municipality. The project was funded by the municipality and the World Bank.²⁴ Curitiba also offers formal learning for citizens that want to learn more about sustainability at the Open University for Environmental Studies. The university, which was established in an inspirational building on the ruins of an abandoned mine, offers mature citizens courses for a low fee. In addition to studies about sustainability initiatives, the university also offers in-service training for professionals wanting to learn about the ecological aspects of their jobs.

Urban Acupuncture

The examples presented so far show that Curitiba is planned and run like a human mosaic where all the citizens are equally important. For years, the programs supporting the city’s poor stemmed from a sense of solidarity rather than a sense of justice or pity. This is an extremely important point, since it is the heart of the democratic perspective. “The city is the best human invention. But to make it work, a city’s society must be understood as a train that will go no faster than its slowest wagon or car. City governments exist to push the slowest car so the whole train will go faster.”

When Curitiba’s affluent support the poor, the sick, and the gang youth, they are not doing the underprivileged a favor, but caring for the welfare of the entire city.

A central characteristic in Curitiba’s incredible planning strategy is to aspiration to synergy and comprehensive planning. This approach is inseparably related to that the city leaders saw it as an entire organism and they took action that copes with several problems at once. A good example of an initiative that kills two birds with one stone is the garbage separation system in Curitiba, which was planned without needing to acquire expensive machinery and in a manner that ensures a livelihood for its citizens. In an interview to Globes, Lerner said “I believe that you don’t need to invest in a sophisticated and advanced garbage separation system when the citizens can do it themselves (...) the garbage is brought to the plant, which is also built from recycled materials, employs handicapped people, alcoholics, and other underprivileged people. The recyclable items are sold to local industry. Sponges and fabrics are ground up and become stuffing for blankets, given to the poor.”

Many cities dream about achieving what Curitiba did, but the city leaders suffice with small initiatives for budgetary reasons. Curitiba managed to achieve impressive results with a small budget, by identifying the points where a small action will cause a large and significant change. Lerner calls this model of creating synergy and positive mutual effect Urban Acupuncture: Strategic punctual interventions can create a new energy and help the desired scenario to be consolidated. This is “Urban Acupuncture”: it revitalizes a “sick” or “worn out” area and its surroundings through a simple touch of a key point. Just as in the medical approach, this intervention will trigger positive chain-reactions, helping to cure and enhance the whole system.

One of Curitiba’s emblematic symbols that clearly expresses the urban acupuncture concept is the Wire Opera House: a spectacular theater house built within two months on the ruins of another flooded mine in the city, made almost entirely out of recycled materials. The knowledge that such a fine cultural center can be built from inexpensive and readily available materials is a value statement that affects every visitor. Thus, Curitiba manages to be an Education City in the full sense of the word – inspirational and expressing its values at every opportunity.

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The Importance of Continued Learning

In recent years, some cracks in Curitiba’s success story have come to light. Some factors have led to significant difficulties, headed by the immense increase in the city’s population and the creation of neighboring suburbs. Curitiba has fallen victim to its own success, and there are currently more than 1.8 million citizens, and more than 2 million in its periphery. Add to this the improved economic status of the middle class in the entire country and the increased public transportation costs. For years, Curitiba has the highest rate of car owners among the Brazilian capitals, but until recently it did not have transportation problems since most of the car owners preferred to use public transit for their daily needs. In recent years, the number of cars on the roads has increased dramatically, buses are running at full capacity, and recycling rates have decreased to a mere 22%. The municipality is having a hard time safeguarding its past achievements and maintaining a sense of public responsibility.

If the city is viewed as a live and dynamic organism, it must be paid attention and be in a state of continued learning. Jorge Wilheim, the São Paulo architect who drafted Curitiba’s master plan in 1965, says: “When we made the plan, the population was 350,000. We thought in a few years it would reach 500,000. But it has grown much bigger.” The municipality of Curitiba currently has 1.8 million people, and the population of the metropolitan region is 3.2 million. “I know the plan of Curitiba is very famous, and I am the first to enjoy it, but that was in ’65,” Wilheim continues. “The metropolitan region must have a new vision.”

And indeed, critics of the changes in the city claim that one of the decisive causes for the undesirable change is the inflexible thinking and inertia among the city’s leaders. The critics claim that in recent years the mayors have rested on their laurels and are not adapting the existing urban planning to change. Others also claim that the IPPUC has begun adopting neoliberal approaches that see the city as a means for cash flow also at the expense of many of its citizens.

These changes teach about the importance of continued learning to the existence of a sustainable city – no plan can predict cultural, economic and democratic changes for dozens of years, and in order to preserve the vitality and relevancy of the urban planning, an ongoing dialogue with the citizens must be maintained and attention to the economic and social changes occurring in the city must be paid.

28 The car owner rate in Curitiba (Spanish) http://areadetrabalho.wordpress.com/2008/09/27/curitiba-tem-maior-frota-de-veiculos-por-habitantes-do-brasil
29 Rabinovich, p. 65.
31 Cited in: Lubow (Year? Page?).
Summary

Curitiba achieved a great deal, but it never called itself an Education City. However, Curitiba is an Education City in the full sense of the word. If we examine it according to the Four Teachers Model we will see that Curitiba has a strong and charismatic leadership that serves as a significant adult for its citizens, and instills values and ways of doing things. The municipality promotes collaboration between the various entities in it for the benefit of all its citizens and encourages learning and cooperation between the citizens - they are the peer group. The city itself is planned as a rich learning environment with numerous opportunities for personal and social growth, and many parts in it are meant to promote values of sustainability, equality and civic engagement. Daily life in Curitiba provides lessons in sustainability and collaboration. These conditions are optimal for individual development, which is the fourth teacher.

Education is seamlessly weaved into Curitiba’s planning. The municipality is committed to the education of all its citizens, from children in the formal and informal education to literacy and hygiene education among adults and the elderly. We saw how the various projects in Curitiba express an optimistic perspective that sees education as a tool for empowerment and social leadership, as demonstrated by the projects to connect detached youth and the municipal libraries project. We also saw how an educational move that started at the schools led Curitiba to the cutting edge of global recycling, with unprecedented rates of garbage separation.

We saw how Curitiba developed a welfare system where the weaker strata are not perceived as a burden to the more affluent tax payers, but as members of the community that must be nurtured for everyone’s benefit. Curitiba’s solutions kill two birds with one stone, like the project where the municipality paid for recyclable materials with food and bus tickets and thus promoted important goals of sustainability, sanitation, good nutrition, encouraging use of public transit, and involving detached populations. These moves made Curitiba a city that strives to advance all its inhabitants.

The article presented several tools that Curitiba’s leaders used in their work. One of them is what Lerner calls Urban Acupuncture: the ability to identify a weak point in the city and to generate a change that will have farther reaching effects beyond the actual point. This was the case of the abandoned mine that became an impressive opera house, for example. Another tool is the leading team’s work methods, which maintained the right balance between the future vision and present problem solving, and the charette, which expressed numerous voices in the planning process. Curitiba is an optimistic story because it shows how democratic values of equality and involvement can be promoted in a society without a democratic tradition and even under a dictatorship rule.

For further reading:
Jaime Lerner’s lecture: