

Christina Amoroso
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Professor Tom Schrand
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Urbanization in the Developing World

As urbanization begins to alter the developing world, cities continue to evolve into places that are full of new opportunities for advancements in the social and fiscal realms. Although this evolution is producing great opportunities, it is also creating problems as populations increase and resources and available space decrease. In order to stem the negative impact of urbanization, efforts must be made to implement governmental programs of change that address such issues as poverty, ecology, and growth. If these initiatives are formulated correctly, with the primary importance placed on improving the lives of urban dwellers, then urbanization will become less of a problem and more of an opportunity for sustainable development.

As the world progresses in to the twenty-first century, the preconceived notions of urbanization will be challenged. Presently, 47% of the world's population resides in bustling metropolises. It is suggested that by the year 2025 this figure will increase to almost 60%. It is the under developed nations that will experience the most drastic forms of urbanization (Ghadar 14). According to Patricia Annez, author of "Livable Cities for the 21st Century": "cities in the developing world are thus expanding at a rate of 62 million inhabitants annually, which is the equivalent to adding a county the size of France or Egypt every year" (Annez 45). Considering the magnitude of such expansion, in the next 22 years urban populations will double; this all means the most densely populated areas will be concentrated within the developing world (Dieker 15). These staggering

statistics prove that attention must be focused within these regions. By examining the negative aspects of urban growth, programs can be developed and positive change can occur.

It is estimated that in the next decade there will be 27 metropolitan centers and the populations within developing nations to surpass four billion (Annez & Friendly 12). Without government assistance, one billion of those people will be forced to live in poverty; that is without running water, reliable electricity, and paved roads. Couple these conditions with uncollected garbage, open drains, and no form of public transportation and soon a feeling of hopelessness pervades the community. This kind of poverty is a way of life for many inhabitants of the developing world; they cannot rise out of these conditions without the aid of local and national government programs. And the lack of support denies these impoverished communities the basic necessities a society needs to foster a better life (Annez 45).

The scholars, who have extensively studied urbanization as a global trend, realize that there are ways in which poverty can be curbed. For example, Patricia Annez and Alfred Friendly argue: “The growth of cities and the urbanization of poverty now go hand in hand, but a parallel trend in the developing world toward widening participation in the global economy opens up an avenue of hope” (Annez and Friendly 13). Programs that address this idea offer the urban poor an opportunity to produce goods and services; therefore making them assets to their community and country. By participating in the global markets they reach out beyond their villages and towns and extend their services into areas never imagined. In turn, these individuals not only better their own impoverished states but they also participate in strengthening their communities. Thus,

ground-level involvement is key. It has been proven that programs where the poor are directly involved become the most successful (Annez 46). Annez writes: “No one knows better than the residents of blighted neighborhoods what services they lack and what level of service will improve their health and well being. No one is better positioned to engage an entire community in the work of improvement and self improvement” (Annez 46).

Improving the urban environment is yet another component to building livable cities. The year 2005, according to the United Nations, is the first time in recorded history that more than half of the population lives in metropolitan areas (Utne 61). In the article titled, “The Urban Green Revolution,” Leif Utne writes: “...urban areas consume some three-quarters of the planets resources. With developed countries living far beyond their ecological means, many now realize that our cities must dramatically reduce their ecological footprints...to avoid disaster” (Utne 61). Cities have depleted many of their natural resources and in turn environmental degradation is occurring. Pollution is often described as a waste of both human and physical resources. In urban areas, thick air laden with lead shortens lives and stunts mental growth. Drinking water filled with impurities and filthy streets littered with refuse breed disease (Annez 46). The urban poor exist amid these unsafe, even perilous, conditions. Without proper education, unsustainable habits become an accepted way of life, and the cycle continues.

Environmental awareness is essential to improving the living conditions of the urban poor, and education and community involvement are crucial. Educational initiatives, in terms of hygiene, proper trash disposal, and sanitation, lead to small-scale successes, which in turn aid in greater economic development, cleaner cities, and therefore better lives (Annez and Friendly 14). The future success of these cities hinges

on implementing change with regard to environmental awareness. It is the people of the city who can make significant progress. In support of this idea Annez and Friendly write: “One key to progress in providing both a healthier environment and basic services to the urban poor of the developing world is recognizing the value of...the energies of the people living in cities” (Annez and Friendly 14).

Perhaps one of the primary reasons for this rapid urbanization is the influx from rural to urban environments, which in turn, create unmanageable and unsustainable megacities. A need to redirect growth is essential to the future development of these nations. Deborah Dieker in *Architecture Magazine* writes: “...more people in the developing world [will] migrate from impoverished rural areas to cities that, although overcrowded, offer better jobs and services than the countryside” (Dieker 15). Therefore, if this trend continues, rural communities will suffer greatly due to a drastic drop in population. A governmental attempt to slow the influx into the burgeoning cities would have to address the fact that rural communities offer little to the individuals who inhabit it (Ghader 14). If employment opportunities and better living conditions were offered closer to home perhaps this rush from rural to urban environments could be diminished.

Currently, new programs are being developed to provide rural communities with several modern amenities such as: paved roads, clean drinking water, electricity, public transit systems, and job opportunities. A viable plan would include keeping the youth of these communities in place and using their services to build a better rural environment (Ghadar 16). According to Rusi Khambatta, an expert on urban planning: “people in developing countries, being highly adaptable, accept the evils of social and environmental degradation in favor of city lights and better prospects...” (Khambatta

118). However, with the help of government officials the fusion of rural and urban society can be achieved with less negative impact on rural communities which, leaves the door open to a promising future for all urban citizens.

The future of the people of the developing world relies heavily on how urbanization is managed in the coming years. With the help of government assistance, new innovative programs, and increased education, the lives of those impacted most by this global trend will be positively affected. There is hope and promise for the future of the urban poor if action is taken now to further any sustainable development. Time is of crucial importance and if these issues are finally addressed, there can be optimistic results.

Curitiba: A case study of the world's most sustainable city

Clearly, in the past, city planning and urbanization have been at odds. In Brazil, during the early 1960's a team of Brazilian planners and architects implemented their abstract modern ideals and designed the city of Brasilia. They took an extravagant modernist approach to city planning complete with glass and steel skyscrapers, underground transit, concrete overpasses, and dramatically engineered suspension bridges. In 1970, it was a shining metropolis filled with promise; today it is a city of 2 million people residing in what soon may be considered uninhabitable conditions. In 1970, as many Brazilians were flocking to Brasilia, another group of architects and planners grew concerned about the new city's sustainability. They not only questioned whether or not abstract modernism was a viable planning mechanism for Brazil but also considered whether or not modernism's ideals could adequately accommodate the country's needs. Together, they believed they could design a city that would not only help the environment but also achieve sustainable, balanced growth. Out of these ideas blossomed the city of Curitiba. Although it is a city of 1.6 million, it maintains environmentally balanced growth and over the past thirty years has achieved what some would consider impossible: civic pride, environmental awareness, innovative public programs, and educational initiatives. As a result, Curitiba is perhaps the most unique city in Brazil and is often considered the model of what a Brazilian city should strive to become.

A city is nothing without the people who inhabit it and no one understood this better than Jamie Lerner, a trained architect, visionary, and former mayor of Curitiba. His first innovative approach to the future of the city was knowing that an architect

designs only the buildings but politics design the city (Kroll 92). In 1971 he ran for mayor and was elected; thereby committing himself along with a team of planners, engineers, and architects to build a city that would eventually exhibit some of the most remarkable urban achievements (Canty 25).

As mayor of Curitiba for the next twenty years, Lerner stood at the helm of its transformation. During his tenure the city grew from 500,000 inhabitants to nearly 1.5 million. When he first took office, Curitiba was poverty stricken and in a state of extreme neglect (Canty 25). Lerner stated that his first move was “to make citizens aware of an ecological city” and to create a master plan that “gave priority to mass transportation over individual transportation” (Canty 25). According to Lerner, in order to understand the gravity of population control and environmental issues one must examine how people live and travel (Pedreira 6). He wrote: “I think it is fundamental for all cities to define where they are heading, where the people are going to live, and where the city’s growth is leading” (Pedreira 6). The people of Curitiba could relate and respond to his mission. They began to believe in the power of community and therefore turned Lerner’s dream into a reality.

In 1971, Curitiba had half a million private cars roaming the streets but now they are rarely seen (Kroll 93). In the late 1980’s, Lerner developed a new approach to public transportation, which relieved many of the cities traffic problems. They employed a simple technology that allows buses to operate as quickly and as efficiently as subways (Pedreira 8). It is a system of three primary avenues that radiate from the center of the city, which also serves as the downtown area, all the



way to the outskirts of town. This system was named a structural axis. Lerner and his team went on to develop five of these axes throughout the city, which intersect at intervals by bus lines. This type of transit system allowed the city to connect with all its sectors, leaving no section without adequate means of transportation or access to the downtown area (Pedreira 10).

This form of mass transit has many benefits well beyond the obvious. Mauricio Pedreira, author of the article “Blueprint for an Eco-Safe City” writes: “Public transportation has worked so effectively that ridership has increased by 28% in a year and the use of auto fuel in Curitiba, per capita, is now less than any other Brazilian city, despite the fact that it has more cars per capita than the national average” (Pedreira 10-11). Another reason Curitiba’s transit system is a success is because the structural axis extends to the outskirts of the city, which draws urban growth away from the densely populated downtown area (Pedreira 10). Lastly, Lerner and his team took the time to orient their transit system around the land, which allowed them to incorporate more than five large parks and therefore increases their amount of large open space. Currently, there are 50 square meters of green space per citizen in Curitiba. Compare that with the average three square meters for other urban centers and the significance of what Curitiba is achieving is realized (Di Giulio 84).

During the early 1980’s, Curitiba began inventing new building strategies that were unique to the specific goals that Curitiba focused on. (O’Brien 47-49). Each new project paid close attention to both social and environmental awareness. For example, the architect’s reused an old quarry to build a “university of the environment” that was constructed entirely out of old telegraph poles (O’Brien 49). This environmentally

minded university currently houses exhibitions, classrooms, and workspaces that all center on environmental education and awareness. The university prides itself on teaching the citizens of Curitiba about environmental issues and how each inhabitant can play a part in the ongoing mission to sustain the city's ecological progress (O'Brien 49). Brian O'Brien, in an article for *Irish Architect* states: "Curitiba achieves the goal of creating a self-supporting urban system. It successfully optimizes the competing demands of the environment and people, and adds up to an efficient, resilient urban experience" (O'Brien 49).

The people of Curitiba are not fined for refusing to recycle and yet 70% of the population does without enforcement. With such environmentally aware citizens staggering statistics can be attained. For example, Curitiba recycles about two-thirds of its trash (over 100 tons) every day and recycles enough paper to save 1,200 trees each day (Pedreira 15). According to Lerner, "that is six small forests" and "if every city in Brazil would do the same, we would save 500 forests every day" (Pedreira 15). By promoting this new, environmental approach to urban dwelling and creating programs that the people of Curitiba could relate to is the reason that Lerner's city is such a tremendous success. He knew that stimulating a sense of responsibility and educating people on the benefits of environmental awareness would lead Curitiba down a road of continued sustainable growth (Pedreira 15). By creating a tight-knit community dedicated to the future of their city, Lerner did what most mayors can only dream of...getting their citizen to not only respond but also to react.

Today, Curitiba's main goal is planning for tomorrow. Although Lerner is no longer the mayor he laid the foundation for the next generation to build upon. Curitiba's

population continues to grow with each passing day and yet because of Lerner's ingenious and unique response to urban planning, the city is not self destructing. Instead it is flourishing and is able to face growth and urbanization with little concern. With the success of its transportation system, innovative public programs, and its extensive approach to environmental education, it is easy to understand why Curitiba is often called Brazil's "urban paradise." As Jamie Lerner was printing the blueprint for the world's most sustainable city, he was also demonstrating how other cities in developing nations can utilize small-scale initiatives to attain sustainable communities.

Architecture's Response to Urbanization

As the twenty-first century gains momentum, many of the world's cities are flagging under the burden of poor urban planning and development. For decades there has been a commitment to the building typologies of the past; architects and urban planners relied heavily on the dense urban grid to create cities that focused on fitting as many buildings, streets, and residences as possible into the smallest square footage. This type of built environment, coupled with increasing population, led to the current crisis seen in many of today's urban centers. In order to begin to stem the negative impact of urbanization, specifically in developing nations, architects and urban planners need to put into practice their ideas about the city of tomorrow. With the next generation of urban planners, an emphasis on sustainable development is needed in order for developing nations to achieve sustainable growth. While there are not many specific projects that directly correlate to this hypothesis, we can extrapolate some interesting conclusions about the future of urban design by examining case studies that implement such concepts as ecology, social cohesion in communities and fostering civic pride among citizens. These fundamental components are the solutions to building the cities of the future. When architects bear these principles in mind and forgo the strategies of the past, then the potential for building sustainable cities will increase significantly.

Despite the need for good design in the developing world, not many architects and planners are practicing there for such reasons as poor economic infrastructure, corrupt governments, and lack of the necessary funding. Yet, the importance of the role of the architect and planner cannot be underestimated if developing urban areas are to become the dynamic cities of the future. Urban planners and architects are often responsible for

providing a framework that enhances the lives of city dwellers. A healthy, well-organized environment can often foster civic pride, which can aid in the development of urban communities. In the past, architects and planners constructed buildings that were isolated from the environment. In turn, these buildings often isolated the public as well; they lacked any kind of public indoor or outdoor gathering space. In the future, the goal of the built environment will be to integrate it with the natural environment and therefore produce a new, more cohesive urban plan (Ryn and Calthorpe 10). Sim Van der Ryn and Peter Calthorpe agree: “Sustainable patterns break down the separations; buildings respond to climate rather than overpowering it, mixed uses draw activities and people together, and shared spaces reestablish communities” (Ryn and Calthorpe 10).

According to Roger Zetter and Rodney White, editors of Planning in Cities: “Urbanization is bringing about one of the greatest demographic and social transformations in history. By 2020...4.4 billion or 60 percent of the world’s population [will reside in urban areas]” (Zetter and White 116). Continued urbanization of this magnitude will deplete natural resources, slow waste disposal, and increase air pollution; therefore putting a tremendous strain on the city’s inhabitants and overall urban ecology (Pitts 9). Designers must be concerned with the well-being of humankind and aim to protect the natural environment from deterioration (Zetter and White 25). It is undeniable that the built environment is responsible for many of the environmental woes that most cities are now forced to endure. Buildings diminish resources in both construction and operation (Pitts 5). They often cause serious destruction to the surrounding land, thereby disrupting the natural ecology of the area (Pitts 18). The building industry must now begin to realize that our natural resources are finite. Changes with regard to building

efficiency are beginning to come into fruition. Ryn and Calthorpe, authors of Sustainable Communities write: “The emphasis shifts from design for consumption to design for efficiency, or doing more with less” (Ryn and Calthorpe 6). However, for the most part only the first and second worlds have the capital to implement techniques for sustainable development. The cost to build more efficiently is greater than to construct with little or no regard to ecology, meaning that the developing world will continue to suffer and the potential for continued wasteful practices will persist (Pitts 19). Architects and planners must begin to address the challenges that buildings present on a global scale. Finding ways to curb environmental destruction is only beneficial when it can be applied to all nations.

An interesting test case is taking place in Bangkok, Thailand, where government planners have managed to overcome tremendous obstacles in heightening an awareness of sustainable development and practices. In the article titled “Green Space Sustainability in Thailand,” Patricia Ryan states that what is “important is the need to recover a sense of interconnectedness between communities and the land” (Ryan 223). In Bangkok the need to redevelop “green space” is of primary importance to the longevity of the city. The working master plan incorporates open space into the urban landscape, which reduces urban congestion and creates a sense of community. Consequently, the city becomes more livable and healthier, and the devastating effects that industrialization has had on the environment begin to be ameliorated (Ryan 224).

Innovative practices are allowing architects and planners to become creative in their approach to urban design. By implementing sustainable initiatives they now have the ability to look beyond traditional and conventional planning and experiment with

ideas that can foster a new approach to urbanism. Architecture is not just about building and constructing glass and steel towers and squeezing them into the dense, grid-like urban fabric. It is more about changing people's perceptions about the urban environment. If the public perception is altered, then social cohesion has an opportunity to advance. The city's inhabitants are the architect's client. Building in response to regional traditions and customs will foster civic pride and perhaps avoid the onset of slums and shantytowns (Zetter and White 192). In the article titled "City Shifts," Peter Davey explains, "We can create new towns and cities...founded on new knowledge based industries. We can create beautiful places that are socially cohesive, avoiding disparity of opportunity and promoting equity and social solidarity" (Davey 42).

A case study implementing the idea of social cohesion is taking place in Indonesia. Still unknown by many, the Citra Niaga Urban Development Project in Samarinda, Indonesia, is beginning to illustrate the potential of a new concept called land sharing. In short, land sharing, whose name is deceptive because "land" is actually referring to urban space, calls for the division of squatter land between the original owner and the actual occupants. In Samarinda, often land is not occupied by the legal owners (the government) but instead by occupants who have inhabited the land for quite some time. Land sharing is meant to benefit both the original owner and the actual occupants (Danier 97). In turn, Citra Niaga with the cooperation of the government and the illegal occupants has been able to transform many urban slums into commercial venues. The program has helped Samarinda in developing its central urban space so well that the Citra Niaga project has been sent to Jombang in East Java to aid in the recreation of their urban slums (Danier 98).

In the future the need to advance the cause of sustainable design practices will be necessary for the development of urban areas. Learning how to manage and achieve sustainable growth is the goal and challenge for this and future generations of architects and urban planners. There are various design strategies that can achieve sustainable development; for example, urban environmental degradation can be avoided if designers consider the long-term functionality of a project and encourage local community involvement. If a community is involved in the process, it is more likely to be empowered and offer its support (Pitts 221). Consider for instance the city of Curitiba in Brazil. They have redefined the meaning of civic pride by turning innovative ideas into actual working solutions (Knoll 95). Everything from recycling to voluntarily using public transportation is important to the residents of Curitiba because they recognize and experience effects of a well-managed and well-planned city. The people of Curitiba are aware that the only way to achieve any widespread results, with regard to many issues that plague our urban areas is to provoke citizen involvement. Jamie Lerner, former mayor of Curitiba and visionary architect and planner behind the cities innovative solutions states: “The dream of a better town lives firstly in the heads of people “(Knoll 95).

Many urban planners are beginning to adopt the mantra first stated by Lerner: “The city is not the problem. The city is the solution” (Utne 61). The redevelopment of urban areas can succeed in bringing developing nations out from behind the dark shadows of poverty and deprivation. Designers have the unique opportunity to have a visual and social impact on cities. No other profession can succeed in altering the effects of urbanization on a large scale. Leif Utne, an expert on urbanization writes: “The city is

perhaps the most effective unit of social change these days, small enough to marshal social cohesion for getting things done yet large enough to be an engine of cultural influence on a wider stage” (Utne 63). Therefore, it is time for designers to take action and join the charge for environmental awareness, social change, and sustainable growth in the developing world.

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