Towards Sustainability in the Livable City

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A R T I C L E I N F O	A B S T R A C T
	When livability became the key word for our regional planning, we knew we would have to find effective ways to deal with many problems, producing a plan and regulations would not be enough. We had to deal with long-term future livability, but also with people's ongoing satisfaction, their day-to-day experience of living in the region. Tomorrow's livability needed as much attention as the attainment of a better future. Hence, the aim of this paper is to present the history and evolution in thinking within planning for the greater Vancouver area and making cities more livable: ideas and action.

1. Introduction

Why then do so many people choose to live in cities? People come to cities for many reasons: to seek a good job, to send their children to better schools, to get health care, for recreation, to meet friends, and so on. Due to their concentrated populations, cities offer many advantages that cannot be replicated in the countryside: a similar quality and quantity of jobs, educational institutions, health care services, and recreational opportunities simply cannot exist in rural areas. Similarly, such diverse opportunities for meeting, mixing with, and learning from different people cannot, by definition, exist in less densely-populated areas.(citiesPLUS, 2003). It is thus difficult and unfair to attempt to stop migration to cities entirely, though certainly improving conditions in other parts of the country could help alleviate some of the rush on cities. At the same time, city life could be drastically improved not through attempting to stop migration, but rather through addressing the reasons that urban life is so problematic.

According to David Engwicht, an Australian writer and advocate, the city is "an invention to

maximize exchange opportunities and to minimize travel." That is, in cities we have access to ideas, goods, food, money, friendship, and hopes, without having to travel far to reach them.

How then should cities be? Places where we can easily encounter many people and ideas; good schools and jobs; art, music, drama…in short, all the advantages one obtains from having many people and objects within a relatively small place. Cities should be pleasant, fun, and livable. A well-designed city, one that is meant for people, would be a city we could all love.

So why are so many of our cities such wretched places to live, if they could be so wonderful? What has gone wrong? In the words of Jan Gehl, famous Danish architect and professor, "Automobiles have invaded our cities and squeezed everyone else to the side." By giving center space—and priority—to the car, we have forced people to the margins. It is not cities themselves that are the problem, but the fact that they are designed to suit cars, not people.(citiesPLUS. 2003)

Figure 1: The livable city. (Source: Efroymson and Shama, (2007))

We need to believe that we can make cities good places, which involves remembering or recognizing the positive attributes of cities. Related to this, we shouldn't allow transport to destroy our quality of life. By focusing so much of our energy on ensuring that people can get from here to there, we forget about the rest of our lives, the time spent not in transport. If we destroy our city to enable people to travel long distances, we no longer have destinations worth arriving at. Our focus should be on creating a good city, where people can access places and things nearby; transport should serve our needs, rather than being the first priority in urban planning.(Allen, M. 1997)

2.   What is Sustainable Development?

The 1972 UN Stockholm Conference focused international attention on environmental issues, especially those relating to environmental degradation and "trans boundary pollution." Over the decades following Stockholm, this concept was broadened to encompass environmental issues that are truly transnational in scope, requiring concerted action by all countries and all regions of the world in a universal manner in order to deal with them effectively.

Such important global environmental problems include, for example, all kinds of pollution, climate change, the depletion of the ozone layer, the use and management of oceans and fresh water resources, excessive deforestation, desertification and land degradation, hazardous waste and depleting biological diversity. In the years that followed, it also came to be recognized that regional or local environmental problems, such as extensive urbanization, deforestation, desertification, and general natural resource scarcity, can spread to pose serious repercussions for broader international security. Environmental Degradation in diverse parts of the developing as well as the developed world can affect the political, economic and social interests of the world as a whole. International recognition of the fact that environmental protection and natural resources management must be integrated with socio-economic issues of poverty and underdevelopment culminated in the 1992 Rio Earth Summit. This idea was captured in the definition of "sustainable development," as defined by the World Commission on Environment and Development, also known as the Brundtland Commission, in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." The concept was designed to meet the requirements of both the supporters of economic development as well as of those concerned primarily with environmental conservation. Today, it is recognized that social, economic and environmental considerations are completely interconnected. In the city context, this means that sustainable urban development is not a choice but a necessity if cities are to meet the needs of their citizens. Urban centers must be socially equitable, economically successful and environmentally sustainable if cities are indeed to be the home of humanity's future.

3. Existing Cities

Big cities are home to many inter-related problems. Addressing some key issues will facilitate efforts to improve many aspects of cities, including aspects not covered in this publication. The following list, rather than being comprehensive, is meant to be illustrative of problems of many cities currently—problems often at the root of many other urban crises.(Cadman, D. and G. Payne. 1990).

Frequent traffic jams waste fuel and time, make travel difficult and unpleasant, make bus service inefficient, and add to noise and air pollution. Travel time can vary greatly from day to day and at different times of the day, making trip planning extremely difficult.

Very few children, disabled, or elderly people can be seen moving independently in the streets. This leads to a series of problems: lack of independence and self-confidence for the young and elderly; a burden on those who must escort them; and limited ability for vulnerable

groups to access education, income-earning opportunities, health care, and recreation (Cadman and Payne, 1990)

People live in fear of crime and accidents. People living in the same building rarely know their neighbors; social isolation leads to unhappiness. Crime increases when people do not know or interact with their neighbors, when streets are empty of people (albeit filled with motorized vehicles), and when alienation prevents people from looking out for or taking an interest in others. Serious accidents occur as a result of the weight and speed of vehicles; while it is almost impossible for a rickshaw or cyclist to kill someone, a fast-moving car or truck can easily do so. In Dhaka, 76% of traffic fatalities involve a pedestrian being hit by a fuel-dependent vehicle. Beyond the actual rate of crime and crashes, fear restricts people's freedom of movement, and leads to anxiety and depression.(Cities Alliance, 2005)

People who cycle, whether to save money, because it is the quickest way to get around, or for other reasons, do so in very unpleasant conditions at the risk of their lives. People are disturbed day and night by noise pollution; the noise disrupts children's study, adults' work, and everyone's sleep, leading to what may be a significant decline in productivity.(Lennard and Lennard, 1987)

Children have little or no opportunity to play outside, and few if any schools have playgrounds, meaning that children grow up with few physically active recreational opportunities and few chances to socialize with other children or with adults. Youth and adults have few opportunities to enjoy outdoor, free recreation, and may utilize shopping malls as places to meet friends.

Figure 2: Cities and the urban environment (source: The Cities Alliance, (2007))

4. Defining a livable city

What is a city? Surely not a municipality, but the whole urbanized area in an urban region. What is livability and what elements compose a livable city? As is apparent in Item 1, definitions of livability include an array of different issues that are underpinned by a common set of guiding principles: accessibility, equity, and participation that give substance to the concepts of livability. The quality of life experienced by citizens living in a city is tied to their ability to access infrastructure (transportation, communication, water, and sanitation); food; clean air; affordable

housing; meaningful employment; and green space and parks. The differential access of people within a city to the infrastructure and amenities highlights questions of equity. The livability of a city is also determined by the access that its residents have to participate in decision-making to meet their needs.(Lennard and Lennard, 1987).

5. Definitions of Livability and a Livable City

there are those social groups for whom a livable city is one where those elements have been preserved or renewed which have always been an integral part of people friendly places. These are, as Peter Smithson once beautifully said 'relationships between streets and buildings, and buildings amongst themselves, and trees, and seasons of the year, and ornamentation, and events and other people. (A. Palej, 2000. "Architecture for, by and with Children: A Way to Teach Livable City).

The livable city as a link between the past and the future: the livable city respects the imprint of history (our roots) and respects those who are not born yet (our posterity). A livable city is a city that preserves the signs (the sites, the buildings, the layouts) of history… A livable city is also a city that fights against any waste of the natural resources and that we must leave intact for the humankind, that is, for our posterity. Therefore a livable city is also a 'sustainable city': a city that satisfies the needs of the present inhabitants without reducing the capacity of the future generation to satisfy their needs. In the livable city both social and physical elements must collaborate for the wellbeing and progress of the community, and of the individual persons as members of the community… A livable city is a city where common spaces are the centers of social life and the foci of the entire community. A livable city must be built up, or restored, as a continuous network – from the central areas to the more distant settlements – where pedestrian paths and bicycle-paths bind together all the sites of social quality and of the Community life.(Casellati, 1997)

The coin of livability has two faces. Livelihood is one of them. Ecological sustainability is the other. Livelihood means jobs close enough to decent housing with wages Commensurate with rents and access to the services that make for a healthful habitat. Livelihoods must also be sustainable. If the quest for jobs and housing is solved in ways That progressively and irreparably degrade the environment of the city, then the livelihood problem is not really being solved. Ecological degradation buys livelihood at the expense of quality of life, with citizens forced to trade green space and breathable air for wages. To be livable, a city must put both sides of the coin together, providing livelihoods for its Citizens, ordinary as well as affluent, in ways that preserve the quality of the Environment.(Quick and Pistorius, 1994).

Principles of a Livable City

1- It is the opposite of the dead city, where people are segregated and isolated.

2- Dialogue is important.

3- the public realm offers many activities, celebrations, festivals that bring all of its inhabitants together, events that bring opportunities for its citizens to be together, not in the specialized roles and functions that they usually occupy, but as full human beings.

4- A good city is *not* dominated by fear, *not* by a conception of fellow human beings as evil and subhuman.

5- A good city offers the public realm as a place of social learning and socialization that is indispensable for children and young people. All of the inhabitants of the community serve as models and teachers.

6- cities must meet many functions – economic, social and cultural. In so doing, however, there has been a trend for the modern city to over-specialize in one or two functions; other functions are being sacrificed.

7- All inhabitants confirm and value each other.

8- Aesthetic considerations, beauty, and meaning of the physical environment must have high priority. The physical and social environments are two aspects of the same reality. Just as it was a mistake to think that city inhabitants can have a good civic and social life in an ugly, brutal and physically inhospitable city.

9- The wisdom and knowledge of all inhabitants are appreciated and used.

People are not intimidated by experts, whether architects or planners, but show a sense of caution and distrust of those who make decisions about their lives.

6. The Livable Region Strategic Plan, Cities Planning for Long-Term Urban Sustainability

Just as the requirement to look out 100 years and develop a staged plan changed the way citiesPLUS approached planning, so did the requirement to address the urban system for the whole region. Traditional approaches and focusing on only one or two of the municipalities within the region would not do.

Communities built, organized, and operated to meet the needs of a relatively homogenous population now serve very different people. Our communities have grown more international and more economically diverse. As a result, in many significant ways, communities do not fit their populations. Institutions pursue outdated goals. Inappropriate services are provided, and potentially useful services are delivered ineffectively. The physical community – housing, roads, schools, recreation facilities, and water and sewage systems – may be inefficient, costly and inadequate to serve expanding community needs. Images of a desirable quality of life remain distant from the realities of daily life. (Cools, B. 1997)

The planning and urban development paradigm that characterized the 19th and 20th century, and is still present today, is based on a worldview that embraced linear thinking and that focuses on discrete elements of an urban system rather than a holistic approach to the system in its entirety. The large centralized water, transportation, sewage and energy grids were often developed separately and system-level problems were not addressed, nor were system-level opportunities harnessed. (Cadman and Payne, 1990)

Figure 3: The long-term plan begins the process of integrating and aligning existing policies and programs (Source: Allen (1997)).

7. Integrating Environmental Considerations into Urban Planning

We have seen how disregarding environmental issues has a significantly damaging effect on cities and urban settlements. What are the advantages and benefits of formally including environmental considerations in urban planning and management systems? Table 1 gives effects from environmental actions, as examples.

8. How to Integrate the Environment in Urban Planning Strategies

A variety of strategic approaches to integrating the environment into the urban planning process exist. A city can choose to target its environmental activities at different levels. It may choose to take action for the city as a whole, using *supra-sectorial concepts and strategies* such as Localizing Agenda 21, which has provided many local authorities with an innovative and effective approach to urban management which combines social, economic and environmental aspects, or the Eco-City Planning approach. It may chose to focus on integrated local environmental management, utilizing information systems, environmental monitoring and eco-budgeting. Urban managers may decide to implement *ecological construction and living policies,* using sustainable construction Material, technologies and supply systems and encouraging ecological user behavior.(Lennard, S. H. and H. L. Lennard. 1987)

Table 1: Examples of how environmental actions can help reduce poverty or the deprivations associated with it.

Environmental actions	Direct effects	Other effects
Improved provision of water and sanitation services	Can bring a very large drop in health burdens from water-related infectious and parasitic diseases and some vectorborne diseases—and also in premature deaths (especially for infants and young children). Safe disposal of excreta from home and neighbourhood is a great health bonus.	For income earners, less time off work from illness or from nursing sick family members. Better nutrition (for example, less food lost to diarrhoea and intestinal worms). Less physical effort needed in collecting water. Lower overall costs for those who, prior to improved supplies, had to rely on expensive water vendors.
Less crowded, better quality housing—through supporting low income groups to build, develop or buy less crowded, better quality housing	Can bring a large drop in household accidents(often a major cause of serious injury and accidental death in poor quality, overcrowded housing) and remove the necessity for low income groups to occupy land sites at high risk from floods, landslides or other hazards. Can also help reduce indoor air pollution.	Lower risk for low income groups to lose their homes and other capital assets to accidental fires or disasters. Secure, stimulating indoor space an enormous benefits for children's physical, mental and social development.
Avoidance of hazardous land sites for settlements	Reduces number of people at risk from loods, landslides or risks from other hazardous sites. The damage or destruction of housing and other assets from, for instance, floods or landslides can be the 'shock' which pushes low income households into absolute poverty.	Sites within cities that may be hazardous for settlements are often well-suited to parks or wildlife reserves.
Promotion of cleaner household fuels	Reductions in respiratory and other problems through reduced indoor and outdoor air pollution.	Reduced contribution of household stoves to city air pollution.
Improved provision of solid waste management services	Removes garbage from open sites and ditches in and around settlements. Greatly reduced risk of many animal and insect disease vectors and stops garbage blocking drains.	Considerable employment opportunities in well managed solid waste collection systems where recycling, reuse and reclamation are promoted.
Support for community action to improve local environment	If well managed, lots of low-cost ways to reduce environmental hazards and improve environmental quality in informal settlements.	Employment creation; minimum incomes help households avoid poverty. Can reduce sense of social exclusion.
Support for more participatory plans	Low income groups with more possibilities of influencing city authorities' priorities on environmental policy and investment.	Precedents set in participatory local Agenda 21s and other action plans can lead to low income groups getting greater influence in other sectors.
Improved public transport	Cheap, good quality public transport keeps down time and money costs forincome earners of low income groups getting to and from work.	Can reduce air pollution and its health impacts. Can reduce the disadvantages of living in peripheral locations and help keep down house prices.

Cities May also choose integrated strategies for certain sectors and environmental commodities. These can include reducing energy consumption, controlling air pollution in urban areas, reducing Industrial and traffic emissions, improving water quality, reducing the amount of solid waste generated, or developing overall strategies for traffic and transport which avoid negative impacts on the environment. Another way that urban decision-makers can make environmental

interventions is through the development of institutional, legal and market-policy frameworks.(Cools, B. 1997). *See* Table 2, for overview of instruments for environmental integration.

Table 2: Overview of Instruments for Environmental Integration.

Instrument type	Options	Tool examples
Policy instruments	Information: Written, internet, face-to-face advice, information offices, training, research and development, awareness raising campaigns, clearing house mechanisms	Internet, electronic newsletters, outreach media
	Voluntary: Product labeling, branding, voluntary codes of practice or standards, externally accredited environmental management standards or audits, voluntary agreements	EMAS, sustainable procurement, product life cycle analysis, eco-labelling
	Economic: Emission charges & taxes, tax refund schemes, deposit & refund schemes, tradable permits, public spending subsidies, fine, legal liability for environmental damage, bonds.	City twinning projects through which developed cities will support climate related initiatives in developing cities
	Regulatory: Controls on emissions, activities, resource use, toxic substance use through bans, permits, quotas and licensing, extended producer responsibility, mandatory environmental management standards, environmental audits, labeling or product standards, training and operator licensing	Regulations, polluter pays principle
Process instruments	● Visioning ● Participation	Metaplan, task forces, round tables, expert panels, workshops, etc.
Planning instruments	● Environmental profiles ● SWOT analysis ● Rapid Ecological Footprint Assessment ● Monitoring systems and indicators ● Strategic Environmental Assessment	Indicators, guidelines and documentation from a range of programmes and organisations (for example, UNEP's GEO Cities, UN-HABITAT's Rapid Urban Sector Profiles .
Management instruments	● Environmental budgets and audits ● Environment quality management	● ecoBUDGET ● Air quality management

9. Conclusion

It should come as no surprise that cities serve as a magnet. Cities provide opportunities that simply cannot be replicated in smaller towns or in the countryside. While the gathering of a large number of people in a small space can create many problems, it also gives rise to many opportunities that cannot be replicated in other ways. The types of work and educational opportunities, health care, leisure and socializing that occur in cities are by necessity unique to cities.(Cadman and Payne, 1990).

Cities today have to be competitive. They operate in a global marketplace, competing with other cities and urban settlements around the world for investment. A city cannot compete, however, if it cannot offer investors security, infrastructure and efficiency. Hardly any city can

offer these elements without incorporating environmental issues into its planning and management strategies. The environment and the urban economy are inextricably linked.

Cities which integrate the environment in urban planning and management benefit in many ways. Such cities prove more livable, more equitable, and more inviting to investors. Their citizens are healthier, and fewer working days are lost to environment-related illnesses. Urban space and infrastructure respond better to public needs. In addition, cities which integrate the environment into their planning and management support international action to combat global environmental threats such as climate change, which may endanger the future of many urban settlements. By incorporating the environment in urban planning and management, urban managers help to create cities which are prepared for, and more resilient to, environmental disasters. (citiesPLUS. 2003).

Today, cities and urban settlements around the world employ a range of urban planning and development approaches, all of which provide opportunities for the integration of environmental considerations. A city can chose to integrate environmental issues right across the city, using supra-sectoral concepts and strategies such as Localizing Agenda 21, or may focus on integrated local environmental management. Integrated strategies for certain sectors and environmental commodities are also an option, and institutional, legal and market-policy frameworks can be very useful in supporting environmental interventions. Ecological construction and living policies also offer a vehicle for introducing the environment to urban planning.

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