

Building the Future: Editors' Notes

Building cities belong to the polysystem domain of design thinking where repertoires of heterogeneous cultures, techniques, texts, and contexts correlate with each other and shape complexes of socio-spatial entities. Cities are the largest and the most sophisticated artifacts that have ever been made throughout the history of mankind. An increasing number of the world population are born, live and die in cities. Cities are the sensitive recipients and the leading carriers of values and norms of civilizations. They are the vital ideological, cultural, political, economic, social, and technological indicators of societies. Through cumulated values and norms, cities take shape and when values and norms change the forms, meanings, contents, identities, and functions of cities will be affected as well. But, these constantly altering processes should be conceived as reciprocal. Cities also are the dynamic generators inaugurating new concepts, new meanings, new norms and new values to human culture.

Technology has always been one of the most influential forces to transform norms and values in societies. Technology is also among the powerful factors that puts its impacts on the design ideals of cities. Due to massive technological changes on the horizon, the design of the future cities is foreseen to be highly complex, unique, uncertain, and full of new value conflicts. The abilities of cities to harness opportunities arising from new technological innovations are divergent and their paths are different. The emerging conditions are instigating considerable socio-spatial decompositions and conflicts in the future cities. Simultaneously, new technological outcomes are entailing genuine possibilities unrevealed to conventional urban design theories, methods and processes inherited from the past Industrial Age.

In pace with different decisive technological innovations, at least four major transformational stages of cities can be traced, each stage with particular impacts on the social, spatial and geometrical structures of cities.

The earliest cities began to evolve when a surplus of production began to occur and the inhabitants more than being farmers in their surrounding agricultural areas became engaged in crafts, arts, sciences, defense, commerce, divinity, and many other specialized occupations. The first known cities in Mesopotamia such as Ur, Eridu, Uruk, and Susa can testify the very historical importance of technologies in their urbanity. The earliest and perhaps the most significant information recording and communication technology in history, the lettering and writing technology, that appeared in Mesopotamia and along the Nile river bred the ground for further development and more effective exchange and distribution of ideas, values and products. It also created an enhanced condition for arts, sciences and technologies to flourish much faster and wider. At this stage and for the first time, the world began to be aware of its existence, its size, and its dimension.

During the second stage, from the latter years of the 14th century A.D. to the middle of the 18th century A.D., by the advent of the large scale shipbuilding industries, Europe began to benefit from its superior water-based movability and trade. Shipbuilding technology created a tremendous possibility for commerce to grow and for civilizations to meet, to fight, to coexist, and to learn from each other. It shrank the size of the world and bred the ground for large and populated cities to be built and grow mainly along the water passages. At this stage of urbanization many old potential towns and cities grew from size small to size medium. Looking within the city walls at this pre-modern stage, workplaces and dwellings were usually mixed and often shaped interrelated entities. The distance between home and workplace was limited by the fact that people usually walked the distances inside the cities. Pedestrians' accessibility to urban amenities kept the geographic dimensions of the city relatively limited.

At the third stage, from about the 1850 to the early 1970s, the mechanical and electrical revolution engendered mass production and became the driving engine behind urban transformations. Automobile became a necessity for mobility and communication within and between cities. It became a crucial instrument for modern life, a symbol of prosperity and freedom for the most of urban inhabitants and a determinant factor in urban design. The era was characterized by greater concentration of power and wealth that was led by powerful industrial investors and corporations colonizing non-western countries targeted to control cheap labor and new markets. At the third stage of development, people came closer to each other and could exchange ideas and information in a more meliorated way. They could also experience more diversity of cultures and products. While the world reduced in size and became more flat, cities expanded their magnitude and size, from medium to large. They became more complex, very populated and expanded further behind the city walls.

During this stage of technological development huge capital investments demanding a controllable market and labor concentrated production activities in the rapidly growing urban landscapes. The new conditions gradually created dense urban areas for work separated from the locations allocated primarily for housing. By the dawn of industrialization, housing construction which was a local-based

and bottom-up initiative became a centrally administrated activity, with planning and location decisions controlled by a top-down planning system. By the turn of the century, the pre-modern, walled, and decentralized urban communities were history. “Development policies” were focused on the pre-selected strategic cities and forced the urban design practice to enter into an entirely technocratic and bureaucratic condition.

The industrial stage of development dispersed significant urban functions and institutions. It grounded for the demolition of walls and fortifications around the cities. It outmoded craftsman workshops, small-scale retail stores, semi-rural markets and traditional bazaars from cityscapes. Capital-intensive enterprises took over the mass production and distribution of goods, moving these activities from the central business districts to low cost urban peripheral sites near orbital motorways and close to middle- and lower-class suburbia. Urban design policies and the localization of houses, offices, factories and other strategic urban priorities were dominated by the interests of influential industrial capitals such as banks, mortgage corporations, mass-producing construction companies, and transport industries.

In the advanced industrialized world, a series of interconnected technological innovations led to an upsurge in use of motor vehicles and to the rapid spread of telegraph and telephone brought on a gradual acceptance of the compartmentalization of urban functions. The leading urban designers of the Modern Movement while advocating the functional zoning of socio-spatial organization of cities, they were also in favor of a powerful design and planning authority which they believed could bring about good urban forms and would lead to better housing, good contents and healthy social behaviors.

Decades after the World War One, the increasing influence of the west countries had a disastrous effect on the traditional urban life. Remarkably in the non-western cultural hemisphere, militarized governments took over the urban design and planning initiatives. With brutal methods the old urban textures were tore down and instead an imitated version of zoning and separating urban functions was imposed.

The fourth stage of urban transformation and technological jump began in the early years of the 1970s and as it is still going on. A new overall paradigm shift became a matter of serious consideration through the legitimacy crisis of the Project of Modernity that Charles Jencks symbolically declares its end when on July 15, 1972 in St. Louis, Missouri several blocks of the Pruitt-Igoe urban scheme, constructed according to the most progressive ideals of CIAM (Congrès Internationaux d'Architecture Moderne), leveled to the ground by dynamite. Coincidentally, it followed by the OPEC oil embargo in 1973 entailing a sudden energy crisis worldwide and the decisive invention of microchips in microelectronic technology in the same year that began to revolutionize the speed and quality of recording, generating and transmitting data and information. In 1973, Daniel Bell introduced the concept of the “post-industrial society” to define the radical shifting from the industrial mode of production to a higher level, post-modern, and knowledge-based

society. The years 1972–1973 can be seen as the turning juncture of the industrial organization in the western countries to a new mode of development, to a post-industrial, post-Fordism and flexible accumulation of capital.

The new information and communication technology, *the heartland technology*, while shrinking the world and making it very small, it is also changing the size, the forms, and the perceived characteristics of cities worldwide. Cities are becoming much larger, more crowded, more diversified, more individualized, more sophisticated, and more intelligent communities that are connecting to each other through networks. The emerging cities are changing from industrial cities, metropolises, and megalopolises of today into globally connected multinodal networks of metroplexes and probably metapolises of tomorrow. The unique dynamic forces behind the ongoing transformations are small networks of individuals empowered by the new information and communications technologies. These individuals are competing and collaborating with each other for new opportunities globally.

As the prizewinning columnist, Thomas Friedman reflects in an article in the *New York Times* (April 3, 2005), the new process is not only going to be driven by more individuals but also by a much more diverse group of individuals, people with every color of the human rainbow. People with sufficient education or skill, with computer literacy, and with an affordable laptop connectable to the net and ideally from a prosperous city, can join the game. It is no need to emigrate to succeed, if ones' life is not threatened by backward political regimes. One may play the game from anywhere.

Citizens of the Nordic cities have all possibilities to adapt the new technological changes, enter the game, compete, and do well. A very recent report released by the Statistical Office of the European Communities (Eurostat) indicates that the popular use of information and communication technology is expanding rapidly in Europe and especially among the Nordic citizens.

The data from 25 European countries point out that 85% of young people, aged 16 or more in schools or universities, had possibility to use the Internet during the 2004. However, the data shows a digital gap among the different educational levels and by employment status. For instance, only 25% of those at the lowest levels of secondary education used the Internet in 2004, while the proportion rises to 52% for those who had completed secondary education and to 77% for those with a tertiary education. While 60% of European employees aged from 16 to 74 had access to computer and the Internet in 2004, the ratio for the unemployed people drops down to 40%.

Nordic citizens have the highest rate of accessibility to the advanced information and communication technologies. The highest ratio of the Internet use in 2004 is registered for students in Iceland (100%), in Norway (99%), in Finland (97%), and in Sweden and Denmark (both 96%). Employees in the Nordic countries generally registered the second highest proportion of the Internet use. The highest levels were observed in Sweden (86%), in Iceland and Norway (both 85%), in Denmark (83%), and in Finland (82%). The use of Internet among unemployed citizens in the Nordic countries is also very high. The rate for Sweden is (86%), for

Denmark (65%), for Norway (63%), and for Finland (62%). The so called “causes of the digital divide” such as unjust distribution of resources; sharp stratified social classes; inefficient infrastructure or access; missing incentives to use information and communication technologies; lack of the necessary computer literacy or skills; and resistance of old habits are less apparent in the Nordic countries than in the other European nations.

These new data tell us that the old industrial perceptions in the Nordic countries are changing very rapidly. People are learning to welcome the new information and communication technologies. They test the arising opportunities in a knowledge intensive global arena and try to find a superior stance in the fray.

Nordic cities that are designed on the most premises of modernism with distinct socio-spatial segregations, space price gradients, and functional zoning are reclaiming their special position as the major generator and carrier of these emerging changes. Nordic cities need to be treated with great care and have to be avoided from other design oversights. Urban designers need to grasp these huge changes and invent the future in their daily design activities, narratives, dialogues, and projects. They should predict, inspire, support, promote, criticize and strive to decipher the emerging multifaceted urban design problems with references to sustainable socio-spatial transformations. Urban designers have to evolve and sustain new norms and values and to weld them with the past history of design visions and ideals. It requires painstaking imagination, broad outlook, and far reaching foresight to reconciling conflicting values in sync with rapidly changing perceptions and meanings in design processes. Designing a desirable, appropriate, and sustainable community and generating theories and methods to this end expects capability to grasp and translate the future needs and tendencies as meticulous as possible. A different, flexible, holistic, and rigorous theoretical and methodological design foundation is needed.

As a matter of fact, urban designers are already overwhelmed by the conflicts of values, goals, purposes, and interests. They are embroiled in pressures by different interest groups for augmented design efficiency and quality improvement. Urban designers have to (re)frame the new problems of urban design, to solve them, and to implement and maintain solutions in the continuous changing conditions.

During the last century many brilliant artistic, scientific, and humanistic urban design approaches and ideas inspired the blueprints of good urban design solutions. Although a lot has been achieved, the reality exposes signs of doubt and uncertainty. The embedded complexity, uncertainty, instability, uniqueness, and value conflicts in urban design processes can make the design solutions extremely vulnerable to inappropriateness and mismatch. Indeed, some of the solutions advocated by the leading urban designers during the last decades were seen as having created more problems than those they have been designed to solve. Modern urban design remedies in form of functional zoning, gentrifications, urban upgrading, neighborhood units, suburbanization, low-cost housing, and urban sprawl have not reduced the socio-spatial problems as promised but they surfaced the ground for social disparities, historical neglects, spatial segregations, traffic con-

gestions, resource-wasting, and ecological damages. In spite of the most promising solutions that were sensitively worked out and advocated by urban designers, they were usually ineffective; they were based on technical rationality; they created new problems; they were derived from theories which were usually incomplete and problematic. The prevailing optimism towards technical rationality overlooked the social and environmental significances in urban development agenda. “Development” as a mystified and misinterpreted concept was aimed at “progress” through technological innovations for the sake of economic growth without particular concern in the hidden risks of such a confusing and ambiguous policy. The consequences of the past technological optimism are striking us now in a boomerang effect, in constant social and ecological turmoil, in form of urban-based social uprisings, juvenile delinquency, terrorism, green house effects, global warming, etc.

Simultaneously, imaginations and visions on the future cities without technology is not more than utopias in vacuum. We are on the cusp of an incredible era of technological innovations from all corners of the world. The new innovations are powerful enough to connect all cultures and knowledge pools in the world together. Color of skin, nationality or place of birth will have less to do with individual partaking. It is of utmost importance to find out new communicative channels among individuals, networks, competences and interests to stimulate a sustainable flexibility and non-discriminatory design process when building the future cities.

Still, some visions for the future cities continue to be advocated by utopian, dystopian, shortsighted, simplistic, linear, and “technology-will-fix” concepts. Nevertheless, compared to the rigid urban design theories and methodologies of the 1960s and 1970s, the new mode of development promises greater prospects of creating cities in pace with the shifting realities. Professionals and scientists from a vast variety of disciplines and experiences are bridging over their fields of expertise. They are working together to introduce less uncertain, more collective and cross-disciplinary design theories and methods. They are generating new knowledge and experimenting with more adaptable infrastructures. Multifunctionality of urban spaces and mixed-use zoning are seen as a design enhancement that combines the emerging working condition with cultural activity, social diversity, recreation, and dwelling. New ideas are supporting a design approach allowing for the revitalization of local values, protection of historic and artistic wealth and respect to environment vitality.

Urban design educators have to develop curricula on ethical aspects of design and have to initiate projects with social responsibility as a prior design ingredient and requirement. Urban designers should be trained to develop their intellectual quality to look at their own profession with critical eyes and still remain inventive and open to new ideas, concepts, models, processes and technologies. They should gain experience to foresee the impediments of technical rationality and the future consequences of their profession in societies. It is a challenging task for urban designers and planners to reconcile different logics, to discover how new technological opportunities can best be diffused, success be achieved and pitfalls

be avoided at the very early stage. Farsightedness in urban design theories and methods considering technological opportunities with ethics and social values are very decisive means to building a better future.

Meeting the new challenges require a comprehensive, energetic and focused response. We need to act, learn and perform together and in advance. Instead of waiting for a future to come, we would be better off thinking about how we can raise ourselves into doing something superior. We have to attract younger generations to contemplate the hazards and possibilities, to envisage the beasts and beauties of the new technology when designing the future cities.

The Nordic Research Workshops, *Building the Future – Impacts of New Technologies on Urban Forms and Urban Design*, was an initiative aimed to abridge the distances and bring together professionals and researchers around few tables to exchange ideas on the emerging technological changes and future urban design issues. It was intended to turn on a light and let a dialogue be attained among designers and researchers from the Nordic countries. The Annual Meeting of the Nordic Association for Architectural Research in Stockholm was a great opportunity for us to join the event and host the meeting. The 2005 Year of Design in Sweden was also another major raison d'être to set up the meeting in Sweden.

During the April 22–24, 2005, a series of parallel workshops with two major themes were organized at the Royal Institute of Technology in Stockholm. The selection of themes and topics for the workshops was discussed thoroughly by the working committee during a long period of planning and preparation. The workshops were arranged in such a way that let the participants to meet each other both in formal and informal occasions and actively take part in discussions, comments and suggestions. The meeting was also intended to inaugurate PhD students to the activities as the vibrant souls and encourage them to be inured to the current research issues in urban design.

The many diverse research papers of high quality presented at the meeting reinforced our belief that such an arrangement is needed and should be continued and expanded in the future. However, due to the financial limitations we could not publish all of the submitted contributions in a book of proceedings. Subsequently, this issue of the Nordic Journal of Architectural Research is reflecting only a very tiny part of the presented papers at the workshops.

Noteworthy that the Nordic Research Workshops, *Building the Future*, came to being through the immense collegial supports from the key-note speakers, the members of the board at the Nordic Association for Architectural Research, Arc. Plan, and International Design & Environment Research Network (IDERN). The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (FORMAS) and the Royal Institute of Technology (KTH) sponsored a part of the overheads.

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