e-topia

"URBAN LIFE, JIM—BUT NOT AS WE KNOW IT"

Marshall McLuhan, 1967: "The city no longer exists, except as a cultural ghost for tourists."[1]

Yes, yes, I know; it's a familiar trope—death of God, death of the subject, death of the author, death of the drive-in, end of history, exhaustion of science, whatever. But he turned out to be right—though a few decades ahead of his time, as usual.

It's finally flatlining. The city—as understood by urban theorists from Plato and Aristotle to Lewis Mumford and Jane Jacobs—can no longer hang together and function as it could in earlier times.[2] It's due to bits; they've done it in. Traditional urban patterns cannot coexist with cyberspace.

But long live the new, network-mediated metropolis of the digital electronic era.

The First Mourner's Eulogy

DOA at Y2K! Whatever happened to the city as we know it?

I'll tell the tale.

Long ago, there was a desert village with a well at its center. The houses clustered within the distance that a jar of water could comfortably be carried. In the cool of the evening the people came to the well to collect the next day's supply of water, and they lingered there to exchange gossip and conduct business with one another. The well supplied a scarce and necessary resource, and in doing so also became the social center—the gathering place that held the community together.

Then the piped water supply came. Who could deny the practical advantages? It was more convenient, and kids no longer got cholera. Population grew, and the village expanded into a large town, since houses could be supplied with water wherever the pipes could run.

Dwellings no longer had to concentrate themselves in the old center. And the people ceased to gather at the well, since they could get water anytime, anyplace. So the space around the wellhead lost its ancient communal function, and the people invented some new, more up-to-date and specialized sites for socializing—a piazza, a market, and a cafe.

History replays—this time because the information supply system has changed. Once, we had to go places to do things; we went to work, we went home, we went to the theater, we went to conferences, we went to the local bar—and sometimes we just went out. Now we have pipes for bits—high-capacity digital networks to deliver information whenever and wherever we want it. These allow us to do many things without going anywhere. So the old gathering places no longer attract us. Organizations fragment and disperse. Urban centers cannot hold. Public life seems to be slipping away.

Take something as simple but telling as a day at the races. Before telecommunications, this involved traveling to the racecourse, mixing with punters in the stands, placing your bets with bookies on the rails, watching the horses with your own eyes, and settling your wagers face to face. Then, when radio and the telephone came along, races were broadcast, off-track betting (both legal and illegal) flourished, and on race days you could hang out at different places—at pubs and betting shops. Now, the ever-entrepreneurial Hong Kong Jockey Club has reconfigured the system once again by introducing handheld, electronic, networked devices that allow you to place your bets from anywhere in the city, at any time of day. You just need a telephone jack or a wireless connection to log in, and the system settles your accounts automatically. It is extraordinarily efficient, but it also eliminates occasions that going to the track had provided for making contacts, socializing, building trust, and doing deals.

Once again, we need to innovate—to reinvent public places, towns, and cities for the twenty-first century.

The Second Mourner's Eulogy

And that's not all. Digital communication also remakes the traditional rhythms of daily life.

Not so long ago, a family of the North lived in a fine clapboard house. There was a chimney at the heart of it, and to keep in the warmth the walls formed a simple surrounding box. In the winter, family members gathered round the fireplace—which was the only source of heat and light. Here, the

children studied, the parents exchanged news of the day, and Grandma worked at her embroidery. The hearth held the extended family together.

Then pipes for delivering energy were put in—electrical wiring and central heating ducts. Family members could be warm and have light to read by everywhere. The fire was no longer kindled, except as a kind of nostalgic entertainment on festive occasions. The kids withdrew to their rooms to do their homework and listen to their stereos. The parents began to work different shifts, and would leave testy notes for each other on the refrigerator door. Grandma got bored and cranky, and soon moved out to an air-conditioned nursing home near Phoenix where she could play bingo with her similarly sidelined cronies. The fireside circle could no longer serve as social glue.

Informatization is following hard on the heels of electrification, with social consequences that are at least as profound. As the engineers figure out the technology, and the venture capitalists keep the IPOs popping, tiny telecommunications and information-processing devices are becoming as commonplace as lightbulbs and electric motors. You can call just about anyone, anywhere in the world, at any moment, from your digital cell phone. You can have twenty-four-hour news delivered digitally, by satellite, to your hotel room TV. You can pick up your email, whenever you want it, at any telephone jack. You can get cash at any ATM, any time. Your domestic appliances have embedded processors, and will increasingly require network connections as well as electrical and plumbing hookups. Your car is crammed with sophisticated electronics, and the guy who fixes it needs a computer as well as a wrench. The early industrial age of dumb devices is over; things now tirelessly, twenty-four/seven, think and link.

Today, ubiquitously present telecommunications networks, smart machines, and intelligent buildings combine with water supply and waste removal, energy distribution, and transportation systems to create a wherever, whenever, globally interlinked world. The old social fabric—tied together by enforced commonalties of location and schedule—no longer coheres.

What shall replace it?

The Third Mourner's Eulogy

Once, the Buddha sat under a bo tree. Disciples gathered in the shade and listened to his voice. To learn, they had to come within earshot. And in that place they formed their community of believers.

There was no other way.

Then his words were written down. First, the laboriously hand-written holy books were kept in monastery libraries, where the faithful could come to read; long after he was dead, they could travel to these book-centered communities as their predecessors had once come to the bo tree. Later, the books were printed, and the word could be delivered worldwide, to anyone who sought it. It was the same with other faiths. Though journeying to the holy sites survived as a spiritual exercise, and places like Santiago de Compostela and Mecca retained their magnetism, pilgrimage lost its more directly practical function.

As printed books proliferated and literacy spread, elaborate systems for storage and distribution of texts—both sacred and secular—sprang up everywhere. These took many scales and forms; there were national libraries, monastery libraries, university libraries, subscription libraries, municipal free libraries, suburban branch libraries, Carnegie libraries, Christian Science reading rooms, book-lined studies, book clubs, and bookmobiles. Main Streets had their bookstores and newsstands. Waiting rooms had their stacks of dog-eared magazines. Businesses depended on orders, ledgers, and invoices. Offices overflowed with files, briefcases were stuffed with paperwork, and even pockets held notes, cards, photographs, and paper money. Mail systems moved all this ink-on-cellulose around. Information was mobilized, and access to it was decentralized.

Today, text and images float free even from paper, and are pumped around at amazing speed through computer networks. We have online databases, Web sites, FAQs, and search engines. Email is rapidly replacing snail mail. In our technological age, seekers of enlightenment no longer need to embark on wearisome trips to distant sources of information. They don't even have to go to their local libraries. Bookstores, newsstands, magazine racks, theaters, temples, and churches—even bo trees—have their virtual equivalents. Students surf into electronic encyclopedias. Professors put their lecture notes

up on the Web. Retailers put catalogs and order forms online. Stock markets speed quotes electronically to the screens of traders.

Mindwork no longer demands legwork. Commerce isn't impeded by distance. Community doesn't have to depend on propinquity. Links among people are formed in hitherto unimaginable ways.

Perhaps this new social glue can be turned to our advantage. Maybe homes and workplaces, transportation systems, and the emerging digital telecommunications infrastructure can be reconnected and reorganized to create fresh urban relationships, processes, and patterns that have the social and cultural qualities we seek for the twenty-first century. Maybe there's another way—a graceful, sustainable, and liberating one.

Two tentative cheers for the global village!

■ Mondo 2K+

How will it all play out? And what is to be done?

The buildings, neighborhoods, towns, and cities that emerge from the unfolding digital revolution will retain much of what is familiar to us today. But superimposed on the residues and remnants of the past, like the newer neural structures over that old lizard brain of ours, will be a global construction of high-speed telecommunications links, smart places, and increasingly indispensable software.

This latest layer will shift the functions and values of existing urban elements, and radically remake their relationships. The resulting new urban tissues will be characterized by live/work dwellings, twenty-four-hour neighborhoods, loose-knit, far-flung configurations of electronically mediated meeting places, flexible, decentralized production, marketing and distribution systems, and electronically summoned and delivered services. This will redefine the intellectual and professional agenda of architects, urban designers, and others who care about the spaces and places in which we spend our daily lives.

Doing Your Bit

This new agenda separates itself naturally into several distinct levels—the subjects of following chapters. We must put in the necessary digital telecommunications *infrastructure,* create innovative *smart places* from electronic hardware as well as traditional architectural elements, and develop the *software* that activates those places and makes them useful. Finally, we must imagine the architectural, neighborhood, urban, and regional *spatial configurations* that will be sustainable and will make economic, social, and cultural sense in an electronically interconnected and shrunken world—a world in which distance has lost some of its old sting, but also much of its capacity to keep challenges and threats comfortably removed.

To pursue this agenda effectively, we must extend the definitions of architecture and urban design to encompass virtual places as well as physical ones, software as well as hardware, and interconnection by means of telecommunications links as well as by physical adjacencies and transportation systems. And we must recognize that the fundamental web of relationships among homes, workplaces, and sources of everyday supplies and services—the essential bonds that hold cities together—may now be formed in new and unorthodox ways.

It is, I suggest, a moment to reinvent urban design and development and to rethink the role of architecture. The payoffs are high, and so are the risks. But we have no choice; we cannot realistically opt out. We must learn to build e-topias—electronically serviced, globally linked cities for the dawning *début de K.*