Media Technology as a Determinant of Urban Form

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In approximately 150 years, technologically assisted or mediated communication has altered concepts of work and home, public and private, urbanity and community. At times, mediated communication has become a substitute for interaction with others, while sometimes a distanced mediated mode has become the preferred mode. There is a connection between urban design and communication, between public space and media technology. Spaces are being modified and expropriated by developments in communication technology. Every media development alters the availability and nature of traditional private and public place. The newspaper influenced and defined, in part, the barbershop, the village green, and the café. The telephone shaped the division of home and work place. Radio altered the experiences of the living room, the car and the doctor’s office. The computer keyboard opens up distant retrievable vistas in cyberspace.

This paper superimposes a communication analysis of urban design and proposes an environmental planning paradigm integrating media technology and human social values by coordinating the physical landscape with the changing communication landscape. A survey of relevant communication theories will be provided and ethno-graphic methodology employed to explore the relationship of media and architecture in an age in which beepers, headsets, cellular phones and laptop computers have taken to the streets and an era in which many turn to a life lived in the spatial realm of cyberspace.

Keywords: media developments, public space, urban design, cellular phones, cyberspace.

Once upon a time, not so many years ago, people could go out into the city lights when the fancy struck them, when they had nothing better to do, when it occurred to them that it might be fun to be with others. They wandered out to the square to talk, to the café to contemplate their lives over a cup of coffee, to the park to stroll among others, to the pub to flirt with those who were there, to rush the blood, to the bench where ancient memories reside, to the chess tables to advise and criticize, to the public realm to vanquish loneliness, discuss politics or simply talk.

But it is no longer that time past and the old familiar has become alien, often hostile and menacing. We sadly step back and find other possibilities — less threatening opportunities to play and frolic — safely ... often alone.

The forces and influences of change that have altered the urban landscape are complex and dynamic. Increasingly we live in an electronically connected world in which telegraphy, telephony, radio, television, facsimile, computers, and satellite communication are readily accepted options. At risk are the public spaces which once were the primary venues of political activity, those places where the “joy of interaction” and the magic of unplanned contact could be found.

The paradigm of social interaction as a primary characteristic of a vital urban culture has been fundamentally altered by the extraordinary acceleration of communication technology. Communication, while influenced and shaped by the context in which it occurs, is no longer restricted by the limitations of place. The electronics of telegraphy, telephony, radio, television, facsimile, computers and satellites transcend the walls of home and work. Paradoxically, while the innovations of media technology facilitate communication, they also alter the need, form and location of interpersonal contact. Space is no longer measured in terms of distance, but in the cost to electronically connect. De-emphasized is the place once used for the purpose of social, commercial intercourse and entertainment.

The media cornucopia has been welcomed
all over the world. Readily accepted are new communication opportunities (actually no one is given every choice). The media offer alternative forms of interaction. No one wants to hand in their facsimile machine, answering machine, telephone, television, CD ROM, cassette player, radio, beeper, video games, cellular phone, laser discs, VCR, walkman or dismantle the electronic highway and its potential store of activities. There is something seductive about the technology of communication and in approximately 150 years we have begun to rely upon technologically assisted or mediated communication and even to prefer that mode to the old, particularly because it is safe, because it is convenient, because it is efficient and requires less physical anger. The concepts of public space and community are closely related. In their traditional sense they are mutually dependent. One of the signs of modernity is that physical community devalues public space as the ascending values of suburbia elevate privacy and security in place of variety and the serendipitous. In his The Virtual Community Howard Rheingold notes the fear critics have regarding the different reality of future cyberspace communities. “There is a seed of truth in this fear, for communities at some point require more than words on a screen if they are to be other than ersatz” (Rheingold, p. 62).

The new connections alter our perceptions of obligations to others. The mediated home becomes the center of each person’s universe from which radiate the antennae of involvement through which one gains world-wide connection. Mobile communication, connection regardless of place, fosters interaction but dislodges individuals and institutions from the fabric of the immediate space and geographically bound community. Attitudes and the value placed on the physical environment begin to change as options provide the choice of turning way from the physical environment to escape to the safety and security of controlled private spaces. Our relationships to family, neighbors, friends, co-workers and institutions are being redefined.

Urban life, once the core of social interaction has been radically altered by the confluence of the transportation and communication revolutions. At the same time, the value of privacy shaped by the technologies of design and communication has emerged as a primary dominating value that directs social interaction. We have retreated inward and the streets of urban life have become increasingly hostile arenas. For some, the older world of public social interaction has been reduced to a romantic idealized fragment of the past.

In the United States, the state of the modern urban landscape is not well. The streets have been abandoned to cars and the disenfranchised. Retail has begun to function behind closed doors and transactions under the scrutiny of security guards. Public space has been de-emphasized and is plausible only when controlled. The mall and suburbia transform economic and social life. The mall becomes a safe haven in which interaction occurs under the scrutiny of electronic supervision. Suburbia dominates while urban life deteriorates to such an extent that we seek refuge from the street. The villages of rural America decay and crumble, humbled by the interstate highway system which passes them by. Our streets separate rather than connect while transporting folks from place of work to place of residence, from home to mall, from outside threat to inside safety.

A vital social life offered by an urban environment replete with busy streets, markets, parks, promenades and squares has long been a defining characteristic of urban culture, but media technology from telephone to computer and cable continue to shift interaction inward, away from the unpredictability of public life. The electronic highway creates a safe alternative to the frightening reality of urban public spaces. Virtual realities become increasingly appealing but the allure of electronic spaces threaten the traditional conception of streets, squares, highways, and communities. The loop is self-perpetuating. A controlled electronic environment stimulates chaos in the physical realm. The absence of safety in the traditional physical environment drives people inward.

One of the signs of modernity is that the physical environment has been devalued, particularly public spaces which long served as vital sites of social contact and community formation. Every media development alters the availability and nature of traditional private and public places. The newspaper influenced and defined, in part, the barbershop, the village green and the cafe. The telephone shaped the nature of courtship. Radio altered the experiences of the living room, the car and the doctor’s office. Television defined the cinema both as an event and a place. In addition, television reconfigured the public forum in terms of political communication. The computer keyboard opens up distant retrievable vistas. Currently, a great deal of attention has been directed towards new aspatial virtual communities. Yet there is a symbiotic relationship existing between physical space and media developments. 

David Nasaw, a professor of History and American Studies at the Graduate Center of the
City University of New York explored the late nineteenth and early twentieth century in Going Out: The Rise and Fall of Public Amusements. (Nasaw, 1993). Nasaw examines how an era of new public life was created around new technologies which helped introduce the concept of leisure time and the rise of vacations. He notes, “the rise of public amusements was an urban phenomenon, a by-product of the enormous expansion of the cities” (p.3), inextricably linked to the fortunes of the city.

Between 1870 and 1920 American cities grew tremendously as the urban population increased from less than ten to over 54 million people (p.3). This rich history is described as the story of “the vanished world of phonograph and kinetoscope parlors; of vaudeville halls and ten-twenty-thirty-cent melodrama theaters; of World's Fair midways, of amusement parks, ballparks, dance halls, and picture palaces” (p.2). The rise of the suburb is blamed in great measure for the demise of this world of yesteryear so well described in this volume. Along with suburbanization came the rise of television. The author argues that these two powerful forces did not by themselves leave the inner cities desolate, the ghosts of former public life they are today. Nasaw attributes the great fear of the city filled with its poor, “the others” (i.e. minorities), violence, and crime to the creation of an association with the underside of city life rather than its glamour and excitement.

The role of public places in the process of introduction and acceptance of new technologies resonates of both historical and future significance as first time users are described thrilling to the novelty of hearing machines sing or play music in phonograph parlors (p.126) or see machines providing moving images through peepholes (p. 130). Nasaw's observations on the short life-span of such sites of public entertainment as the initial novelty of the technology wore off (p.133) would appear timely when considering the recent innovations offering an introduction to Cyberspace and the world of Virtual Reality. Public establishments, sometimes associated with cafes are opening in sites from Harvard Square to Paris in locations offering a friendly cyberspace expert who can help you find your way around the Internet.

THE LITERATURE OF COMMUNICATION

The literature of the communications discipline has much to offer environmental design researchers and planners in terms of understanding the dynamics of face-to-face and mediated interpersonal communication. Perhaps best known of the theorists is the late Marshall McLuhan. The heart of his message was not complex. He posed some basic questions. Do human beings think and perceive the world differently because of the media which exist in their environment. Do media alter the way we use our senses?

In 1963 he sent Gary Gumpert (who was the producer of The Gutenberg Galaxy featuring McLuhan) a letter in which he wrote:

... I have begun to direct a new [graduate] Center here ... for the “Study of the Extensions of Man. That includes all technologies whatever, from speech and clothing to computers. Have a new book ready on this subject, which should be out in the Spring. [He was referring to Understanding Media]. The advantage of the concept of the Extensions of Man is that everybody can see at once that any extension modifies the existing sense ratios, whether in the individual or the society. It also becomes easy to see why the extension is the crux in effecting change, and not the “content” The “content” is always another medium which had its impact earlier” (McLuhan, 1963).

Imbedded in those few words are both the obvious and the not so obvious. The shifts and changes in communication that have occurred in the last 150 years alone (400 years after Gutenberg) are awesome — photography, motion pictures (from black and white to color), telegraphy, the typewriter (from the manual introduced by Remington in 1874 to electric typewriters to wordprocessors), telephony (from the party line to the cellular phone), sound recording (from acoustical to digital, from disc to tape to CD), radio (from wired to wireless, from AM to FM and short wave), typography and high-speed printing, television (from live to film to tape to disc), xerography (and copies galore), facsimile, high band and broad band satellite transmission, the computer and its countless variations of digitizing information.

It difficult to evaluate the short-term past and to place it in some sort of historical perspective. Anthony Smith has said that “in this era of technological change, the term revolution is often applied with indecent haste to mere innovation.” (Smith, 1980, p.3). But whether revolution or innovation, new developments in media technology have had an enormous impact upon the nature of form in our daily lives, but the degree of change, of influence, is difficult to measure. There is no magic meter assessing social and psychological media impact. Nevertheless, many resist the notion that we are not solely in control of our media environment, nor can we agree as to what constitutes such an envi-
ronment. Yet, the vast social changes that we are now a part of require that we accept the notion that media, in part, are determinants of behavior and structure, if we are to grapple with current problems and choreograph future developments.

In 1977 McLuhan offered a four-part schema in an article published in the journal of general semantics, et cetera. At that time McLuhan suggested that every human activity or technology forms four interrelated relationships with its surrounding world. These relationships can be uncovered by asking of the technology: “(a) what does it ENHANCE or INTENSIFY? (b) What does it OBSOLESCE or REPLACE? (c) What does it RETRIEVE that had been obsolesced earlier? (d) What does it REVERSE or FLIP INTO when pushed to its limits?”

These questions have stimulated our thinking with regard to concern for the evolution of public space. Perhaps we might be labeled as “media determinists” — espousing a belief that we are shaped in part by the technology that surrounds us. That is not a new idea. It is one eloquently expressed by Victor Hugo in Notredame of Paris (Hugo, 1978). It is a communication and environmental theory primer written in 1831 but describing events of the 16th century. Somewhere earlier in this volume the archdeacon has said “This will kill that. The book will kill the building.” Hugo explains:

As we see it, this thought has two facets. Firstly, it was the thought of a priest. It was the alarm felt by the priesthood before a new agent: the printing-press. It was the terror and bewilderment felt by a man of the sanctuary before the luminous press of Gutenberg. It was the pulpit and the manuscript, the spoken and the written word, taking fright at the printed word ... it meant the press will kill the church.

But beneath this first and no doubt simpler thought, there was, in our opinion, a second, newer one, a corollary of the first less easily perceived, but more easily challenged, an equally philosophical notion, no longer that of the priest alone but of the scientist and the artist too. This was the presentment that as human ideas changed their form they would change their mode of expression, that the crucial idea of each generation would no longer be written in the same material or in the same way, that the book of stone, so solid and durable, would give way to the book of paper, which was more solid and durable still. Seen thus, the archdeacon’s vague formula had a second meaning: it meant that one art was going to dethrone another art. It meant, printing will kill architecture.

The important insight that is explicated is the notion of an existing symbiotic relationship between invention and institution, between individuals and their social perspectives. The moveable type of Gutenberg had an enormous effect upon future social developments. While “printing will kill architecture” is a hyperbole, it inspires us to an addendum, “electronic space will kill the map.” The traditional spatial dimensions of the urban place are obliterated in Cyberspace. Geography become irrelevant — is transmogrified from a location to a directory — a list of functions united through nodes and gateways. Ironically, global association redefines local orientation. Global become local because local is defined by ease of access to formerly distant points. As global is perceived as local, global is homogenized. We are coupled to sources of information with no location and establish non-physical relationships constructed in the new geography of connections.

But there is an additional nuance linked to this revision of relationships and connection. Yes, there is a relationship between invention and institution, between individuals and their social perspective, but as McLuhan points out, there is also a sensory relationship. He stated that the

... media change at once the way in which we see or hear or touch or feel ourselves and our world. A slight change in one of our five senses alters the ratio among all of them. People suddenly begin to want and appreciate different things. They begin to think differently.

And it is this re-allocation of senses or their displacement that deserves our attention, because, amid this extraordinary acceleration of mediated experience, the senses are certainly buffeted and bounced into a state of bewilderment. One example: What is the experiential difference between going into a store and buying the latest audio tape or simply ordering it through a swift telephone call? Functionally, there is no distinction, is there? But the quality of the interaction, the sensory relationship that we have to the event, is altered ... and some of us don’t care! What does such a sensory reallocation ultimately mean in terms of design and architectural form? Are expectations regarding style and form gradually transformed when the presence of place is placed in the background in electronic communication?

Joshua Meyrowitz’s No Sense of Place: The Impact of Electronic Media on Social Behavior (1985) has received wide-spread attention in a work which links modern communication technologies, spatial and social. Among communication scholars, the work of Amos Rapoport of
the University of Wisconsin School of Architecture and Urban Planning has been incorporated into mainstream Speech Communication texts. Rapoport’s interdisciplinary approach is perhaps best typified by his well-known work *The Meaning of the Built Environment: A Non-Verbal Communication Approach* (1982). Altman, Distinguished Professor of Psychology of the University of Utah, has written extensively about the interpersonal communication dimensions of space. He has co-edited a number of volumes in the Human Behavior and Environment series including *Public Places and Spaces* (1989) with Ervin H. Zube in which urban, suburban and rural settings are examined from contributors in a wide variety of disciplines as they emphasize the role of public places and spaces in everyday life. This body of work has generally received a great deal of recognition and appears to have been integrated into the literature of the field of communication, particularly relevant to those studying interpersonal communication and communication in organizations.

Much theoretical and quantitative research has been done examining the qualitative and functional nature of relationships that emerge in a media world. Of particular note is the concept of mediated interpersonal communication which accounts for the effect of technology upon the nature of face-to-face communication. The tendency of the communication field itself (and many outside the discipline) was to divide communication into non-media and mass media activities. In 1979 Gumpert and Cathcart edited the first of three editions of *Inter/Media: Interpersonal Communication in a Media World*. These works rested on several simple assumptions:

1. All media are not mass media.
2. Media are inextricably connected with any form of communication, from intrapersonal to interpersonal to public communication.
3. There is “a growing reliance upon media technology for self-assessment and image formation.”
4. And that the evolution of converging media, requires the total reassessment of what we characterize as distinct and definable media.

The term “mediated interpersonal communication” refers to any situation where the technology of a medium is introduced into face to face interaction. We further divided that general term into four sub-categories.

* Interpersonal Mediated Communication — included in this category are telephone conversations, letters, CB radio, voice mail (we originally referred to it as electronic mail), audio and video cassettes.

A technology is interposed between and is integral to the communicating partners. The interposed medium determines the quantity and quality of information and also shapes the relationships of the participants.

* Mediated simulated interpersonal communication — referring to para-social interactions, broadcast tele-participatory communication, etc.

Para-social interaction refers to situations in which the illusion of intimacy is created. “Broadcast teleparticipatory media” are a bit more complex. Included are radio and now television talk shows in which telephone call-in from listeners and viewers are integral; in which two parties are involved in an interpersonal act knowing that their intimate relationship is a public act.

* person-computer interpersonal communication: computers utilized as interpersonal proxies.

Originally this sub-category referred to any situation in which one party activated a computer which in turn responds appropriately in a graphic, alpha-numeric, or vocal mode (or combination thereof) thereby establishing a sender/receiver relationship. But recent technological development requires that even this amended typology must now be revised. Originally, communication through a computer was contrasted with interaction with a computer. But where do we place chat rooms in which people gather, generally anonymously, to talk with (to compute with) each other or with a guest personality? Computer Mediated Communication in which telephone, television, sound recordings and photography are integrated far outstrips the original conception covered even in the revised typology. Convergent technologies accelerates the complexity and the need for intelligent research and analysis.

* Unicommunication: The utilization of such artifacts as T-shirts and bumper stickers for interpersonal interaction.

It refers to communication mediated by objects of clothing, adornment, and personal possessions, which people select and display to communicate to others their status, affiliation, and self-esteem. Who wears the Dallas Cowboy football team hat (and wears it backwards), or the Chicago Bulls shirt with Michael Jordan’s number on it? And why?

The authors do not suggest that this provides a comprehensive representation of communication literature relevant to the study of the built environment. There is a rich body of literature examining family communication, organizational communication, health communication, and studies in human information technologies.
as well as into the unique needs of minority voices and the gender differences in communication needs and patterns.

CONCLUSIONS

The imposing task is to enter the twenty-first century embracing the new technology while preserving the positive social and psychological values of the past. Such a charge is difficult to achieve without the development of a cohesive interdisciplinary approach to the problems of urban life. Urban planners, environmental psychologists, architects, designers and communication specialists must join forces if tradition and vision are to co-exist.

REFERENCES


