

THE UNIVERSITY OF MANITOBA

URBAN PLANNING AND COMMUNICATION:
MEETING THE CHALLENGES OF THE
ELECTRONIC AGE

by

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A THESIS

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the University of Manitoba in partial fulfillment of the requirements
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To my wife, Simone

To affect the quality of the day,
that is the highest of the arts...

-- Thoreau (On Man & Nature)

ACKNOWLEDGEMENTS

It has taken a long time to write this thesis; its origins reaching back five years. Many people and events have influenced its content and many revisions have been made. The struggle to maintain the central proposition, namely that society is undergoing a "communications revolution," has been eased by the fact that such an urban metamorphosis can now be detected. The author owes much to the University of Manitoba's Department of City Planning; specifically, to the contribution of his advisor, Professor Basil Rotoff, without whose encouragement, faith and enduring patience, this thesis would not have been written. Finally, the author expresses his appreciation to his committee for their critical response and to his family and friends for their lasting support.

* * * *

INTRODUCTION

The purpose of this thesis is to make connections between City Planning and Communication where none consciously existed beforehand, to discuss the importance of communication to urban culture and development and to explore the impact of the electronic media upon planning and urbanism. Specifically, it weaves into one coherent document the relations between planner-citizen, sender-receiver and broadcaster-viewer. It premises its entire length upon one major principle: that the quality of communication critically determines the effectiveness of urban planning. This is a vital tenet which all planners must support by becoming better communicators. Rational, pragmatic and humane planning depends upon unmitigated clarity of choice, expression, action and feedback.

It is suggested that society is undergoing a metamorphosis, due to technological advances, where the rate of change and the resultant form are difficult to predict, let alone control. Society is entering a "communications revolution" where information in electronic form is becoming available to the general populace on an unprecedented scale. This does not mean that the perennial problems confronting society and its cities will magically transform themselves into ether simply because rapid advances in communication would seem to provide the impetus.

Serious and pressing urban issues, such as poverty, housing shortages, pollution, crime, urban decay and fiscal squeeze, will not readily resolve themselves, regardless of having had applied to them a remarkable and powerful technology. In fact, the communications revolution may add a plethora of unforeseen problems, the solutions of which may elude even the most adept and perceptive of urban problem-solvers. Job redundancy, loss of privacy, increased alienation, stress, information concentration, amongst others, are all possibilities of an exploding electronics technology. As society must cope with this and with diligence sort it out, so will urban planners face the greatest challenge of their profession.

At present, they face a basic problem:

(p)rofessional planners who should know better persist today in conventional predictions of future land use and population movement without sufficiently examining the net set of communication variables that turn their predictions topsy-turvy. ¹

And further,

(a) vast chasm of mutual incomprehension separates the style of the rationalist planner from the frenetic style of the contempo mod. Young people regard the bureaucratic planner as a living fossil. ²

Clearly, this must change. If planners do not adapt to a world where "no group is unavoidably bound up with the welfare of the others,"³ they will be eclipsed by the communications revolution. Planners must be at the leading edge of society. They must not only cultivate the essential skills of basic communication but assimilate those required in this electronic age. It is a challenge singularly met by incorporating into their planning philosophies a tenet of rapid learning.

A new info-sphere is emerging alongside the new techno-sphere. And this will have a far-reaching impact on the most important sphere of all, the one inside our skulls. For taken together, these changes revolutionize our images of the world and our ability to make sense of it.⁴

Planners must adapt and make sense of these changes. Without dialogue, without the capacity to "acquire new knowledge about reality,"⁵ without clearly-understood planning policies and action strategies, without effective and meaningful feedback, planners will stagnate at a most fascinating time when "communications advance will be the basic technological fact around which the cities of the next decades will take their basic shape."⁶

* * * *

METHODOLOGY

This thesis employs a methodology which is "exploratory" in nature. It concerns the observation, explanation and clarification of certain relationships between the practice of planning and the process of communication. Specifically, it seeks an explicit and conscious understanding of those communicative forces which shape and influence the discipline of urban planning. As such, it is necessary to form a consensus regarding "urban planning" and what part is played by communication. It should be noted that no attempt is made to propose a personal and unique definition; instead, the author defers to experts in general planning theory. This is followed by an examination of the profession with respect to its role in society, including its internal structure, inherent noise constraints and use of citizen participation. Secondly, it is necessary to determine what is meant by "human communication." This involves an analysis of its components from a theoretical perspective and, like planning, is derived from specialists in the field. The concept is then discussed with respect to its history, its current technological innovations and its continuing impact upon the urban environment. Television is also discussed in detail. It is the most powerful form of mass communication known to man; it affects virtually everyone; it colours their urban perception.

Because many planning issues are media issues and because they are best understood by understanding television, especially television journalism, this electronic medium is analysed from the same perspective as planning. Its role in society, its internal structure and its inherent noise constraints are all examined. Added to this is a treatise on "objective journalism." It is important that planners recognise when a news story is factually presented or the work advocate reporters who have some personal point to make. Sometimes, the distinctions are frightfully unclear. Following this, both planners and concerned citizens are shown ways to enhance their involvement in planning issues through a rudimentary knowledge of the television process and its many applications in the field. A script, illustrating a fictional but plausible relation between planning and television, is also provided with appropriate comment. Finally, it is stressed that planners must be prepared for an urban environment characterised by the electronic exchange of ideas and information on an unprecedented scale. If planners are to be at the leading edge of society, then they must become firmly grounded in communication. They must understand communication theory, the relation between communication and urbanism, the new video technology and the impact of television upon society. Only from these many avenues can there emerge a vital, relevant and human concept of planning; a communications medium in its own right.

* * * *

A synopsis of discussion includes these following main points:

- A) A consensus of City Planning
- B) An emphasis on planning and communication
- C) A consensus of Human Communication
- D) A discussion of communication and urbanism
- E) An analysis of television and TV journalism
- F) An overview of planning and video
- G) A new understanding of planning and communication

* * * *

FOOTNOTES -- INTRODUCTION

- 1) Jerome Aumente, "Planning for the Communications Revolution" in City, Vol.5 #5 (Washington, D.C.: The National Urban Coalition, 1971) p.58.
- 2) John Friedmann, Retracking America: A Theory of Transactive Planning (New York: Anchor Press/Doubleday, 1973) p.86.
- 3) Melvin M. Webber, "The Post-City Age" in Daedalus, Vol.97 #4 (American Academy of Arts and Sciences, Fall, 1968) p.1107.
- 4) Alvin Toffler, The Third Wave (New York: Bantam Books, 1981) p.165.
- 5) Supra, Note 3, p.183.
- 6) Nicholas Johnson, "Urban Man & the Communications Revolution" in Nation's Cities, Vol.6 #7 (Washington, D.C.: National League of Cities, July, 1968) p.11.

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Technological advances in communication shape
society and make its members more interdependent...

-- John R. Pierce ("Communication")

* * * *

"URBAN PLANNING & COMMUNICATION:
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ELECTRONIC AGE"

CHAPTER I

PLANNING

HEAR the voice of the Bard!

Who Present, Past & Future sees...

-- William Blake

("Songs of Experience" - Introduction)

INTRODUCTION

The purpose of this chapter is threefold. Firstly, it will examine the relation between planning as a general activity and planning as a professional discipline. As both forms are inextricably involved with the future, it is suggested that the practice of planning can only exist by virtue of deliberate forethought and subsequent action. This chapter does not presume or attempt a personal definition of urban planning. Instead, and most importantly, it strives at a consensus based upon the writings of a number of distinguished planners and practitioners in general planning theory. Secondly, in a discussion which encompasses the discipline of urban planning in daily professional life, its organisational hierarchy and those noise constraints inherent in the system, it will be demonstrated that clear, effective and open communication is a pre-requisite to rational, pragmatic and humane planning. It is suggested that good planning can only prevail in an atmosphere premised upon the meaningful exchange of ideas and information. Thirdly, by way of example, this chapter will briefly examine the issue of citizen participation to demonstrate how the practice of planning and the act of communication are vitally linked. It is suggested that a positive relationship between planner and citizen will result in an enlightened future, not one characterised by an apathetic populace and an elitist bureaucracy.

* * * *

A) THE ROLE OF PLANNING IN SOCIETY

Man is, by nature, a planning animal. No other worldly creature can lay claim to that fact because no other creature possesses such a large and wonderful brain whose primary consequence is the power of thought! It is an incredible gift whose power is a wholly unique and human activity. When used in conjunction with his upright stance and opposing thumbs, characteristics that are also his alone, man has the remarkable ability to raise himself out of the purely instinctual sphere and into the societal realm of community where human hopes, dreams and aspirations abound. He has the critical capacity to evaluate his present condition by comparing it to an envisaged future world. If the vision appears bright and full of promise, then man constructs a series of steps which, he reasons, will eventually lead him to this better land. Similarly, if the vision portends doom and possible destruction, then man is at liberty to plan a course-change so as to avoid this seemingly inevitable end. Planning, then, is a strictly human, social and purposive activity which does not terminate once a certain set of goals has been reached. To be meaningful, planning is compelled to reassess the future through the process of feedback. New goals are created, new assessments are made, new modifications are introduced and new adaptations of old strategies are implemented. Planning, like time and life, exists in a continuum of change. As such, planning is actively pursued by man for man because it allows him to take a

vigorous part in his own personal and perceived view of destiny. Planning is concerned specifically and optimistically for the future.

Several authors concur with this concept of planning. John Friedmann in his essay entitled, "Planning as a Vocation," refers to this universal tendency to plan as "the application of intelligence to the future."¹ In his opinion, it is the essential human condition to plan for a better world because it captures man's imagination and stands as a challenge to his intellect. Planning, seen by Friedmann as a rational activity, is performed on a constant basis by individuals and collectives alike, all to one ideological end:

... it is the means for gaining a substantial measure of mastery over man's destiny. The utopian element in human thought has fastened on to planning as its particular vehicle and method of expression.²

Aaron Wildavsky in his essay entitled, "If Planning is Everything, Maybe It's Nothing," addresses planning as "the ability to control the future by current acts,"³ providing that the initial goals and objectives are dignified by action. Anything less is simply the attempt to plan and people engaged in this fruitless activity are not planners but dreamers with no means to implement their visions. Wildavsky recognises that most reasonable men plan a future course of action and that some rational plans fail, but the determination of whether planning has actually occurred must, for him, "rest on an assessment of whether and

to what degree future control has been achieved." ⁴

Seymour J. Mandelbaum in his essay entitled, "A Complete General Theory of Planning is Impossible." presents planning as an activity "built upon the energies of a great variety of men and women shaping the future." ⁵ In his opinion, planning is a ubiquitous force which underlies all individual and collective human behaviour alike. Since man, in the midst of an ever-changing environment, is continually struggling to anticipate future events so as to avoid certain pitfalls in the present, he must possess a world-view that provides for a concept of orderliness and control over any possible variation. For Mandelbaum, man is a "schemer" whose inherent planning nature, which casts him in the role of "constantly assessing alternatives, watching for clues, calculating future possibilities, entering bargains and suffering under them," ⁶ ensures and perpetuates his very survival.

Goerge Chadwick in his book entitled, A Systems View of Planning, sees planning as a process:

... a process of human thought and action based upon that thought -- in point of fact, forethought, thought for the future. ⁷

While other animals seek to optimise their relation with the environment through continuous adaptation, man is at liberty to modify his through intellectual acuity. For Chadwick, "man is a superior optimising animal" ⁸ precisely because he can envisage a future state and plan for

its eventual realisation. Planning, then, is a dynamic expression of man's desire for a better world and, as such, is seen as "a human activity, squarely based on human attributes." ⁹

This human activity, which is by no means confined to the profession of urban planning, is nevertheless embodied in it. Urban planning, as distinct from the daily planning done by architects, lawyers, businessmen and administrators, exists as a specific discipline because man, the planning animal, is also "a shaper of the landscape." ¹⁰ By continually making new discoveries about his world, by inventing new technologies that further his heuristic pleasure and earthly comforts, by combining new talents in powerful and exciting ways, by creating new plans that envisage a more enlightened and humane future, man develops a community which, in its complexity and flux, more than accommodates his basic needs for food, warmth and shelter. Unlike other animals, he is not locked into the environment. It is his intellect that provides him with the unique ability to adapt space to suit his own particular purpose. As his cities, towns and rural areas become increasingly intricate and interdependent, as his future becomes more enigmatic and unpredictable, as his values and goals become less rigid and defined, so his need grows for a guiding light; someone who can draw from a wide and synthetic range of knowledge in addition to having the right mix of pragmatism and humanism. Therefore, planning, in its ideological and general sense, is a natural activity practiced by

anyone concerned with charting a future course of action but urban planning, in its vocational and particular context, is practised by a select few who are professionally trained to dwell upon the future physical, social and economic development of man's communal and spatial environment. It is a discipline which, in turn, depends upon good communication. This thesis seeks to explore the nature of that dependence but, in doing so, it does not lay claim to any personal definition of urban planning, deferring instead to the expertise of professional planners and practitioners. They are of the collective opinion, maintained throughout this thesis, that it is the essential business of urban planning to provide society with choices for the future and to communicate them as effectively as possible. This is the basis for a working model of planning practice.

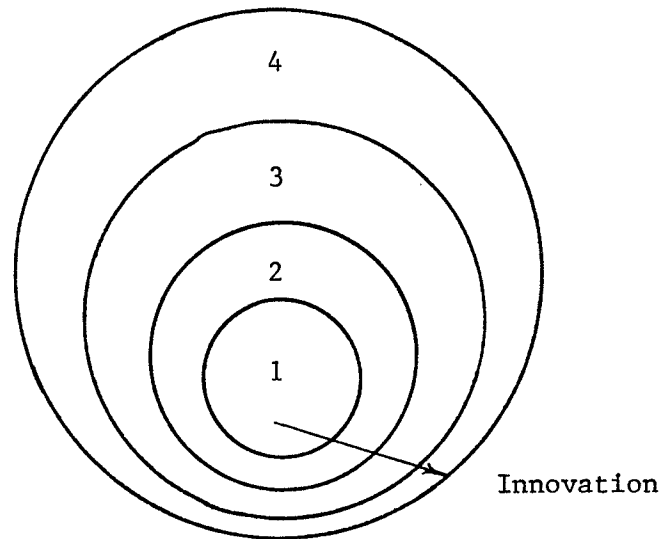
Erich Jantsch in his book entitled, Technological Planning and Social Futures, calls this choice theory "the process of rational creative action," or more simply, "the human action model." ¹¹ As illustrated by Fig. 1, there are four basic activities, namely forecasting, planning, decision-making and action. These activities are considered symbiotic as all must act in mutual harmony if the process is to work. Jantsch explains that "forecasting" is normative in nature because it "selects values, invents objectives (and) defines goals." ¹² "Planning," in turn, is concerned with system design because it must provide a framework for normative aspirations. "Decision-making" deals

with those systems proposed by planning to translate normative goals into possible realities. "Rational creative action" involves the creation of institutions, such as government, to implement a particular action strategy for the future. The four activities are in a constant state of flux but their influence generally radiates outward from the forecasting mode to the action sphere. The model relies on human free will to formulate what future is desired and what policies are necessary to attain that future. Since the entire model is set within a communications network of transmission and feedback, normative values and goals are forever subject to re-evaluation and revision. As such, new policies are formed and permeate, through innovation of design and implementation, the entire model. It is therefore rational in its logic and creative in its result.

The model operates on a variety of scales, from the grand to the personal, but this thesis is primarily concerned with its place within the realm of urban planning. In this context, "forecasting" is an innovative process relying on open communication and the free flow of ideas and thoughts. It involves the perception of certain community needs based on an assessment of "what ought to be" as opposed to "what is." For example, an old neighbourhood may be dying as witnessed by a number of factors. With the exception of the elderly, there is a steady outward exodus of residents. There is a corresponding physical deterioration of property including the overall housing stock. There is

Figure 1.
HUMAN ACTION MODEL

-- Erich Jantsch
(Technological
Planning and
Social Futures)



- 1) Forecasting
- 2) Planning
- 3) Decision-making
- 4) Rational Creative Action

Forecasting plus planning = Planning Process

Forecasting plus planning plus decision-making = Decision-making Process

Forecasting plus planning plus decision-making plus action
= Process of Rational Creative Action

a marked increase in frustration, anger and alienation brought about by a combination of things beyond the immediate control of any one individual. In short, neighbourhood pride is gradually being replaced, like a cancer, by a sense of despair and helplessness. This perception is usually generated by community planners, social workers, the media and the citizens themselves. No one wants to live in or be associated with a slum. It is generally agreed that the gap between "what is" and "what ought to be" must be lessened. How that can be accomplished is a function of what pressure can be placed upon government: the greater their subsequent cooperation, the greater the potential for innovative solutions. Here, communication assumes a narrative role.

"Planning," in this example, is concerned with designing creative options for the community's future. Given a dying neighbourhood and a normative desire to reverse this trend, several plans may be proposed. If the malady affecting this particular community is deemed indicative of a city-wide deterioration of old neighbourhoods, then the solution may become the responsibility of a "general development plans branch." This planning unit, usually inter-departmental in accountability, would be charged with the review-study, development, support and drafting of a city master-plan which attempts to remedy all the old neighbourhoods in question. If, on the other hand, it is sufficient to deal with this specific neighbourhood on an individual basis, then the solution may

become the responsibility of a different planning branch. In Winnipeg, the "Housing and Community Improvement Branch" is concerned with general community improvement planning by directing public funds and appropriate expertise, such as planners, social workers and building advisors, to neighbourhoods in need of help. In short, planning is future-oriented and involves the formulation of innovative alternatives. These are generally the work of experts, such as professional planners and outside consultants, but they owe some influence to the process of citizen participation and the power of media pressure. Here, communication assumes a creative exchange of ideas and information.

"Decision-making" evaluates the alternatives designed by planning and, ideally, chooses the one best suited to solve a particular problem. For example, given a normative goal to rejuvenate an old, dying neighbourhood, one plan may call for an infusion of funds aimed specifically at the beautification of housing and property. In Winnipeg, there is a "Residential Rehabilitation Assistance Programme" which is a service available to home-owners and landlords who are in need of renovation assistance in their neighbourhoods.¹³ Other plans may be designed to encourage a population influx, such as re-zoning certain areas for boutiques, small restaurants, parks and playgrounds in addition to providing incentive grants to prospective home-owners. In short, decision-making is generally a twofold process designed to minimise

discord and to realise a normative objective. Unfortunately, it is usually an elitist process as well. Planners have long planned for the people, not with them. While some provisions have been made to facilitate communication between planner and citizen, planners in general have not moved very far from their traditional stance. It is a position which casts them as the only real expert and it avoids creating, at all costs, any room for participatory discussion of alternatives or compromises. It is "paternalistic" planning by substituting the goal of public collaboration for public acquiescence.¹⁴ In short, it is an ingrained professional confidence that prevents any genuine conciliation that citizens do have something important to add to planning decisions. In fact, many planners still hold the view that "people foul up systems, they get in the way. They make things untidy, they have whims, ideas, loves, hates, emotions."¹⁵ all of which interfere with the planner's job. Fortunately, this elitist viewpoint is deteriorating as citizens become more aware of their power and, equally important, more inclined to use it, especially in the presence of the news media. The model only works if innovation is present at this stage as it is in forecasting and planning. Without it, communication tends to be rigid and formal as views become entrenched and dogmatic. With innovation exerting a strong influence, communication becomes participatory in tone. A consensus is possible.

"Rational creative action" is concerned with implementing a strategy designed by planning and chosen by the decision-makers as being the best way to realise a particular normative value. It carries the innovative spirit, first envisaged in the forecasting stage, to its logical conclusion. For example, in the case of a neighbourhood on the verge of becoming a slum, it has been a policy objective to lessen the gap between "what is" and "what ought to be." Rational creative action could involve the implementation of an assistance programme, such as renovation, incentive or re-zoning, by setting up administrative mechanisms necessary to its subsequent operation. In short, it is designed to enable a certain future, in this case, the saving of an otherwise dying neighbourhood. This is usually accomplished under an inter-departmental umbrella that includes a variety of people, such as community planners, social workers and operations personnel. Citizens often have some input, either personally or through media exposure. While feedback is present throughout the model, here it plays its most important role. If the action does not facilitate a better future by attaining the original normative objective, then the resultant feedback forces a re-evaluation of the decision, the plan and the policy. As such, it is a complete cycle of forethought and action, rational in its logic and creative in its consequence.

Jantsch's process of rational creative action, which is the working

model of this thesis, is supported by Friedmann's view that planning lends control over one's destiny, Wildavsky's view that the future is controlled by current acts, Mandelbaum's view that survival is premised upon rigorous planning and, finally, Chadwick's view that planning embraces man's passion for a better world. Unfortunately, Jantsch's model is relatively simple in theory but very complicated in reality. As stated earlier, it is the essential business of urban planning to provide society with choices for the future and to communicate them as effectively as possible. This is not an easy task but it will be argued that it is a wholly approachable goal.

In short, urban planners are members of a difficult and demanding profession embracing the fundamentals of basic communication, a vital philosophy of humanism and a stoic praxis of problem-solving. All three aspects must work together if planning is to remain necessary and worthwhile in the eyes of the public. No longer are the traditional and subjective approaches to planning problems enough in a world grown complex with an inundation of electronic change. No longer is the Philistine self-assurance displayed in past planning solutions acceptable in a world racked by disorder, self-interest and sorrow. To paraphrase Robert Theobald,¹⁶ it is no longer a case of planning for people as it is planning with people. This implies that effective, efficient and qualitative communication is of paramount importance to the discipline.

Without it, planning becomes vacuous and society blind to the future. Planners must be privy to current and reliable flows of information which describe the needs of society in the context of a fluctuating, spatial environment. Since the role of planning in society has generally grown beyond the popular and traditional goals of "health, happiness, prosperity and justice,"¹⁷ to encompass

... those public values that are fragile and hard to maintain in competition with values that are sturdier because they command more predictable acceptance,¹⁸

planners, more than ever, must cultivate the essential skills of communication. Relations between planner/planner, planner/politician and planner/client are shallow, bureaucratic, tedious and even counter-productive in the absence of select and meaningful dialogue. Communication is a dynamic process. It is fundamental to the dynamism inherent in Jantsch's model. Therefore, planners who speak or write poorly stifle their best chances for a creative exchange of information. Planners who do not listen raise barriers to understanding. Similarly, planners who are insensitive to non-verbal modes of communication isolate themselves from important data-sources and planners who ignore feedback are impervious to further learning. Planners who are guilty of these serious communication failures fail their profession which, in turn, fails society.

However, this failure may be a function of how planning departments are organised and what noise constraints are generated as a result of that organisation. It is to that exploration that this thesis now turns.

B) DEPARTMENT ORGANISATION

Planning departments are responsible to the governing body and the planning commission. They are also indirectly accountable, for some of their actions, to appropriate committees of council and various boards, including finance and administration, operations and zoning appeals. Their duties encompass a broad spectrum of activities which range from the study and formulation of land use reports, plans, designs and policies to the investigation and documentation of social factors affecting various aspects of the urban setting. They subscribe to a philosophy which, in its simplest sense, provides for an orderly formula of civic growth and development. In the physical and economic context, this is concomitant with the development policies of most cities. In the cultural and social sphere, it is the rationale behind the creation of neighbourhood community planning centres which, in the case of the City of Vancouver's "Distant Early Warning" system, "keep(s) the administration aware of the pressure point in the community and permit(s) it to forewarn Council of community change."¹⁹ In short, urban planning departments have important functions to fulfil, both traditional and

innovative, according to Jantsch's model. However, they must operate within a realistic framework that, to paraphrase James A. Spencer, establishes a known purpose, department standing, a daily work routine, clear lines of authority, unobtrusive communication channels, financial substance and human resources.²⁰ While this framework may vary depending upon regional nuances, legislative requirements, organisational structure and relative position within the corporate sphere of community, urban planning departments generally share similar compositional characteristics.

Unlike provincial planning field-agencies whose small staff perform a variety of overlapping roles, their large urban counterparts divide responsibilities and assign specialists to each category. In charge of the entire department is the planning director. This person acts as the official office spokesman in matters of public concern and as a department liaison within the metropolitan corporate hierarchy. For example, in the public capacity, the director may, at the discretion of the chief executive and civil service policy, speak freely with citizens, interest groups and members of the media. In the internal civic capacity, the director may report to various elected, non-elected and appointed representatives, including the mayor, city aldermen, planning commissioners and board officials. In addition, the planning director is responsible for general office supervision and routine, work assignment, high-level policy analysis and interpretation,

short and long-term programme planning, budgeting and finance, special projects planning and current operation duties, such as subdivision reviews, zoning amendments and building regulations. How well the overall role is met influences the worth and performance of the entire planning department.

Subordinate to the planning director is an internal echelon of staff-members whose complement varies depending upon the number of specialist categories to be filled over a given length of time. James Spencer in his essay entitled, "Planning Agency Management," divides this hierarchy into three major groupings: "support" which includes those skilled as secretaries, bookkeepers and draftsmen; "paraprofessionals" which includes university-educated graduates who are not planners but are skilled in data collection, surveys, computer programmes and procedural studies; and finally, "professionals" which includes both urban planners and those holding professionally-related degrees, such as engineering, architecture, economics, public administration or sociology. ²¹

Occasionally, situations arise which call for outside expertise. The city meets this temporary demand by engaging private consultants who are specialists skilled in precise areas of economics, energy, transportation, demography, sanitation, water supply and housing. These experts are commissioned by various civic officials to produce certain reports that, taken together, provide the city with a unique urban perspective. Generally, these studies are beyond the immediate

range of the planning department for reasons of time, economy, skill or bureaucratic prerogative but they will become that department's fundamental reference source when preparing a major plan or formulating some new comprehensive policy. In the case of "Plan Winnipeg," which is a twenty-year development proposal coordinated by four civic departments, private consultants were used extensively to gather facts and provide in-depth analyses leading to the plan's eventual drafting and implementation. For example, James F. Maclaren Ltd. produced studies from sewage and pollution control to water supply and distribution while Damas and Smith concentrated exclusively on transportation. Similarly, Hildebrandt, Young and Associates worked on energy price changes within the energy crisis while Drew McArton tackled urban finance and Peter Barnard and Associates focussed on housing.²² In short, out of thirty-eight reports that form the background review to Plan Winnipeg, twenty-two are the work of consultants.²³

Planning departments, staffed as they are with personnel of various skills and relying, from time to time, on outside expertise, share a common internal structure which is subdivided into specialist planning units. This, according to Spencer, has certain advantages. Firstly, "it allows easier identification and contact of key staff people by outsiders."²⁴ This encourages people to approach a planning unit that best approximates their needs while, at the same time, frees the

department director from contacts that could better be facilitated at this more appropriate lower level. For example, a person intending to develop a parcel of land in Winnipeg must contact the "Development Examination Branch" who are prepared at first glance to give the person a simple yes/no answer. Contacting the planning director would be of no benefit in this initial instance.

The second advantage "protects the continuity of long-range work assignments."²⁵ It is an unnerving fact that, in most urban planning departments, major comprehensive planning can be disrupted by high-profile, short-gain political requests that detract from routine and place incredible but wholly artificial pressure on all personnel concerned. Needleman and Needleman in their book entitled, Guerillas in the Bureaucracy, concur:

Few staff members work consistently on one assignment until its completion; instead, everyone jumps around madly from project to project, often abandoning in midstream assignments never to be finished.²⁶

And further, in conversation with a community planner,

Around here we respond to crisis demands; we're always putting out brushfires. I've been trying to get into general studies of my area, but I get interrupted by a variety of other studies.²⁷

Spencer maintains that department subdivision permits the creation and effective functioning of a long-range plan unit which is not subject to "brushfire" interruption.

In short, these are the essential components of an urban planning department: the main actors, the specialised units and the various activities but, in truth, they do not form the complete picture. To fit successfully into Jantsch's model, they are in need of a "lifesblood;" some vital and dynamic force that causes the overall organisation to act as a holism: one whose sum is greater than its parts. Communication is such a key. It lies at the hub of any successful structure equipped with a clear purpose, a flexible strategy, a repertoire of action and reflection, a public morality and an unequivocal sense of worth. Without communication, there is no forethought and, therefore, no innovation leading to rational creative action. Communication is paramount to department organisation.

Most urban planning departments fall within two organisational extremes: the "elite" concept and the "arena" concept.²⁸ In the former, communication is basically one-way but is effective precisely because it is a closed system. Information, in this case, flows from the top downwards in pyramidal fashion and is premised on the fact that one central authority-figure communicates with all subordinates on a "need-to-know" basis. The message is conveyed quickly but with the risk

that some are unclear to its intent. Feedback is limited and usually perfunctory.

The "arena" concept employs an open two-way communication network whose members are relatively free to communicate in democratic fashion, both collectively and individually. Work is generally effective, morale usually high and commitment beyond reproach providing the participants know exactly what is expected of them. Unfortunately, this is not always clear but there is a remedy which mitigates any undesired noise. It consists of multiple information paths and feedback loops which are prevalent throughout the system. Both the elite and arena concepts work well, given their respective roles and responsibilities, but this effectiveness is largely dependent upon the maintenance of good, basic communication.

Communication, in whatever form it is manifest, conveys information. It is the primary cement with which the attendant units and participants are bonded together, both at the formal and informal levels. In the first case, communication generally takes an authoritarian tack of supervisory memos, public notices and briefs, press releases, official statements and declarations of policy, including the publication of reports, studies and plans. In the second case, that of the informal level, it concerns itself primarily with dialogue and examples of this are as numerous as there are encounters. They include private/conference

telephone calls, telex messages, informal inter-unit memos, off-record conversations at lunch, coffee-breaks and over drinks, unexpected contacts, such as a "planner's sidewalk meeting with a developer,"²⁹ small staff meetings, low-key philosophical debates, individual correspondence and media fact-finding sessions. How well the formal and informal modes complement each other determines the time with which a planning department can respond and resolve a particular problem; moreover, this interaction of information determines the degree of effectiveness and impact that the planning department has on urban issues in general.

C) NOISE CONSTRAINTS

In communication theory, anything that interferes with the transfer and comprehension of a message from sender to receiver is called "noise." Ranging from the phrasing of a signal in a code foreign to the recipient to atmospheric disturbance in radio waves, noise is the result of constraints placed upon the system. For example, the antenna may be improperly tuned, the radio may be underpowered, the sender may be unskilled in a particular language or the receiver may be preoccupied. In any case, noise is a condition to be eliminated entirely or, at least, reduced to a tolerable level. Where noise triumphs, effective communication most certainly fails.

Similarly, urban planning departments are burdened with "noise" because they are essentially communication hierarchies. In meeting common and perceived goals in the course of daily routine, planners send and receive messages of every size, shape, sound and significance, each utterance carrying with it the danger of being misunderstood or wrongly ignored. A dysfunctioning of this vital communication system anywhere in the organisation can cause serious problems, the sum of which may override the successful achievement of department objectives.

Constraints, such as poor need/response time, a dichotomy between physical and social responsibilities, resistance to change, low morale and inefficient use of technical abilities are major contributors to noise in urban planning offices. These are serious problems. For example, planners are often involved in areas of social concern which are more aptly the domain of health, welfare, educational and legal agencies. According to Needleman and Needleman,

(a)lthough planners can sometimes influence the location of schools, they have little to say about whether the schools function as multipurpose centres, provide adult education in the evening, open their recreation facilities during the summer vacation, or bus children for racial balance. 30

Similarly, planners can provide parks, recreation centres or even

hospitals and health-care clinics in their plans but they have no control over the operational aspects once these facilities are in place. Without much argument,

... the operational aspects of city government are the jurisdiction of other city agencies: departments of education, streets and roads, parks and recreation, sanitation, public health, the city police.³¹

Unfortunately, some of these "on-line" operations agencies responsible for these functions are ill-equipped to handle specific community social problems arising on a daily basis in planning. It remains for the planner to cope with them as best he can. Sometimes, the results are disappointing: more schools do not necessarily result in better education nor do more recreational centres reduce the incidence of juvenile crime. Nevertheless, the planner tries to remedy various social problems by walking a tight-rope between those physical responsibilities prescribed by his employer and those social responsibilities, outside his immediate jurisdiction, but encountered in the context of his job.

Occasionally, the results are encouraging and the balance is maintained. Winnipeg's chief planner tells this story: community planners approached an elderly home-owner whose house qualified for civic-sponsored renovation under the auspices of a neighbourhood improvement grant. The man refused to talk to them until finally,

after numerous visits, he relented. It was not a case of declining the offer of free renovation as it was a case of avoiding personal embarrassment: the elderly gentleman had just lost his false teeth, could not afford to replace them and felt self-conscious at having to answer his door to strangers. The community planners contacted the appropriate welfare office. The man received a new set of false teeth and the planners were able to fulfill their original physical-oriented goal which was one of general neighbourhood improvement. Through their acute perception and adept handling of a social concern outside their power, these community planners eliminated a potentially-destructive noise constraint. 32

Other noise constraints are not so easily remedied. "Resistance to change" is such a constraint whose inhibiting characteristics are found throughout the system. It is a condition where innovation, as presented in Jantsch's model, is muted at lower levels through ignorance of a particular problem or where personality frictions prevent any meaningful change from occurring in procedure and policy. "Low morale" is a condition where some planners have no real input in department decisions or where management has lost the confidence and respect of subordinates. "Lack of feedback" is a condition where the consequences of an action are neither monitored nor sought. "Inefficient use of technical abilities" is a condition where a planner's unique expertise is not put to the test

or where the various planning units fail to coordinate their activities when pursuing a common department objective. "Need/response time" is a condition where an inordinate amount of delay in responding to a pressing urban issue can increase its order of severity. "Bias" is a condition where the political clout of a community often determines the degree of planner attention. The constraints are numerous and potent. Each, in its own special manner, leads to a communications breakdown which, in turn, stems the flow of information and weakens the quality of analysis.

The ideal solution to this problem is to remove the constraint, thereby reducing or eliminating the noise. Unfortunately, in the case of most urban planning departments, the structure is pyramidal in nature, with the lower levels enjoying considerably less autonomy than the higher orders. As information filters downward, the capacity for noise increases and the capacity for innovation increases. Similarly, the interdependency of communication within the organisation: planning departments are usually subdivided to better facilitate the workload and overall planning objectives. While selective communication may actually decrease noise by being more precise in its delivery, how and what messages are passed between the various units, the motives behind these exchanges and the nature of the channels that carry them are all factors influencing the degree of noise operating in the system. Further, planners who

suppress information for personal reasons, who do not contribute to the group process, who do not support reasonable innovation and who deliberately prefer to preserve the status-quo at all costs are, in no small way, encouraging noise. For a planning department to function effectively, both from a large civic perspective and from a small-scale human level, noise-free communication must be an integral component. It is possible only by recognising the constraints and dealing with them in the most positive of fashions. The stakes are always high. Where communication fails, planning founders. No where is that seen more clearly than in the case of citizen participation.

D) CITIZEN PARTICIPATION

Rational, humane and pragmatic planning depends principally upon open, clear and effective communication which is essentially and ideally "noise-free." These two activities, the process of planning and the act of communication, are vitally linked in the practice of "citizen participation" which, according to John Hulchanski, "means an opening up of the processes of government to the people, and an end to the 'closed shop' atmosphere of decision making." ³³ Here citizens communicate their ideas and concerns to planners who, in turn, reciprocate. In this context of respect and teamwork, planning assumes

a new dimension of cooperation and harmony, the end result of which is a mutually-supported comprehensive plan. This is "citizen participation" at its best.

Unfortunately, the link between urban planning and communication is often negative. Citizens are invited to participate, to communicate, only to learn that crucial decisions regarding their neighbourhoods have been made by the planners beforehand. Communication, in this most common of instances, is reduced to the status of "tokenism."

Robert Goodman in his book entitled, After the Planners, provides the reason:

... those in power can afford to let everybody talk as much as they like because in the end they decide who should be taken seriously. ³⁴

For Goodman, the pretense of "keeping the channels open" ³⁵ is a useful but unethical political device. It gives the impression of accessibility while, in reality, acts contrary to the very intent. It is nothing more than a public relations tool. It is often confused with genuine citizen participation because those in power view it as a means for conveying select information to the public in return for moot approval of their plans.

Communication must be two-way and it must afford the opportunity for feedback if citizen participation in the planning process is to be a

valid and productive exercise. Both participants, citizen and planner, have much to offer each other. The former brings with him a plethora of skills, insights, values and goals, all relating to the community as he experiences them, while the latter brings with him not only important technical expertise and social skills but values and goals as well. Good communication is essential if the citizen and planner are to cooperate mutually and beneficially.

Josephine Reynolds in her essay entitled, "Public Participation in Planning," addresses the issue of communication in citizen participation.³⁶ She is concerned with the methods by which the public may better understand and react to planning problems and the means by which they are kept abreast of them throughout the entire planning process. Reynolds recognises that education takes time but eventually it will enable a greater number of citizens to respond to planners in a more meaningful manner than is now possible. Unfortunately, it is a long-term process whose effects are not immediately visible. In the interim, she emphasises the need for planners to provide better information and to use better modes of communication. Both are closely related and both must be developed if citizen participation is to work well.

Traditionally, the most accessible source of information is radio. Reynolds states that American surveys have linked the

relatively uneducated with this medium over all other forms because it transmits information with speed and ease. Little effort is required of its patrons other than the activity of listening and even that can be cursory. The more educated, on the other hand, tend to supplement their fare with newspapers and magazines in their quest for more information. Television has the broadest appeal when considering the uneducated and the educated as one group. Its "picture" medium not only aids the uneducated in appreciating complex urban problems but provides the educated with another source of information in the way of visual detail. Taken together, radio, newspapers, magazines and television saturate the information market. They reach everybody. Nevertheless, in spite of their documented, mass appeal, planners continue to rely on less effective modes of communication. To paraphrase Grove and Procter,³⁷ these take the form of press releases, glossy and colourful brochures, public speeches and exhibitions. Reynolds adds posters, notices and the distribution of pamphlets to homes, none of which are particularly successful.

If communication is to play a central role in planning, then planners have a responsibility to explore more ways of involving citizens in the planning process. This can be accomplished by doing two things. Firstly, planners must thoroughly educate themselves in the subject of citizen participation. The logical place to begin is in the planning

schools but Michael Fagence in his essay entitled, "The Planner and Citizen Participation," says this is not occurring. In a survey of twenty-one planning schools, eighteen of which responded, Fagence found that less than half offered any realistic training in skills deemed essential to the issue of citizen participation, namely graphics, report writing and public speaking. In fact, most schools expected their students to develop these skills on their own. Fagence considers this the "Achilles heel of planning"³⁸ and cautions planning schools to adopt a more reasonable attitude toward educating future planners about the importance of citizen participation.

... (C)onsiderable effort, both conceptual and actual, is needed to improve the situation so that future planners have a realistic and sympathetic attitude towards the aspirations of the public and have a competence to enable these aspirations to be properly heard, assessed and acted upon.³⁹

Before the public can be successfully educated in citizen participation, planners must be educated as well.

Secondly, planners must make use of the press and broadcast media, especially television, because the business of those media is the business of communication, whether to inform or to sell. Planners would be wise to understand and appreciate that simple fact. By opening

up another channel of communication through the use of the media, planners help educate the public by bringing planning concerns to their living rooms and they facilitate better planning through better transmission of information. The opposite of this whereby the media "creates" a planning issue simply by being present at a planning event will be discussed later in this thesis.

Citizen participation is a fact of life. It is not about to dissolve into oblivion. Given an environment of mutual respect, given a chance to participate fully in the process of rational creative action and given the opportunity for open, clear communication, planners and citizens can not only envisage a future filled with less tension and more harmony, they can actively plan for it hand in hand.

* * * *

CONCLUSION

This chapter has not proposed a personal or unique definition of urban planning. Instead, it has examined the writings of a number of professional planners and practitioners who collectively assert that planning, in its general and vocational context, is concerned specifically and purposively with the future. In accordance with this

viewpoint, it has adopted as a working model a process which not only combines the activities of forecasting, planning, decision-making and action into one cohesive unit, but emphasises innovation throughout its entire operation. It is a process of rational creative action and is dependent upon the maintenance of a dynamic communications network into which the model is set. This process reinforces the view that planning is a ubiquitous force which affords man the opportunity to take a vigorous and personal part in the physical, social and economic development of his communal and spatial environment. It is an activity premised upon forethought, action and communication. It combines rationality with experience and instinct in a praxis which stresses not so much planning for people as planning with people. It is a singularly new challenge as citizens take a more humane and optimistic view of their future.

This chapter has also shown that planning, from an organisational perspective, suffers from many "noise" constraints. While its relation to civic government need not undergo any significant change because planning is necessarily caught up in legislative constraints, planning departments must incorporate, in the most fundamental of senses, the priority of clear, effective and open communication. In fact, they must incorporate a system which provides for the free exchange of ideas and information within the organisation or risk a forfeiture of credibility

and action.

This chapter has briefly examined the issue of citizen participation to show how planning and communication are vitally linked. It has suggested that planners have long planned for people but not with them, the result being that many citizens have become suspicious or indifferent to planning decisions in general. Citizen participation encourages two-way communication with solid emphasis upon feedback. It is a means by which citizens and planners can meet halfway on issues affecting a particular community or an entire city. Since it is the essential business of urban planning to provide society with choices for the future and to communicate them as effectively as possible, this chapter has suggested that planners would do well to encourage better citizen participation through methods that take advantage of educational programmes and media exposure.

In short, the practice of planning, premised upon forethought and action, shares a bond with the process of communication. It is now necessary to determine the nature and extent of this process, including its effect upon the urban environment.

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FOOTNOTES -- CHAPTER I

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* * * *

CHAPTER II

WHAT IS COMMUNICATION, ANYWAY?

Speaking and writing is an ever renewed
struggle to be both apposite and intelligible,
and every word that is finally uttered is
a confession of our incapacity to do better...

-- Michael Polanyi (Personal Knowledge)

INTRODUCTION

The purpose of this chapter is to examine the fundamental role of communication in the social process. As it will be seen to pervade and influence every strata of human existence, from the molecular level of the intrapersonal to the societal level of the mass media, it is a major contention that basic communication must be thoroughly understood within a framework of applied theory. Only then can planners become better communicators; in essence, better planners by applying its lessons and skills in the context of daily professional practice.

* * * *

A) UNDERSTANDING HUMAN COMMUNICATION

Communication is the essence of all social process. It conveys a sense of meaning, provides for the creation of mutual awareness and facilitates the establishment of social purpose. Without meaning, there can be no agreement or disagreement; without awareness, there is no enlightenment; without purpose, there is mere existence and darkness. Communication underlies all group activity and encourages the fruitful exchange of ideas and custom. It is a sharing behaviour. It gives man a sense of community and worth. According to John Pierce in his



essay entitled, "Communication,"

... human communication takes place within a community of interest made up of human beings. Within that community people think and act, and they communicate in moving others toward or away from what they regard as appropriate thoughts and actions.¹

In other words, man is a communicative social being. Like other animals, he tacitly communicates with his environment in a manner so basic and internal to himself that he is largely unaware of the process. It is as unconscious and natural an activity as breathing. Unlike other animals, his superior brain possesses the faculty of speculation and the gift of language. He alone can "think" about how he communicates and, having formulated those thoughts, can simply and eloquently articulate them to his fellow man. The more effective and adept this thinking, the more effective and clear the communication. How well the message is received and understood depends upon the willingness of the other party to share and digest the information.

Communication can take place only between people with a common aim, a common problem, a common curiosity, a common interest; something in

common that is meaningful and important or fascinating to both.²

Geoffrey Vickers in his essay entitled, "Levels of Human Communication," calls this "common bond" the "appreciative system" and he considers it to be not only the goal of all communication but the power-force underlying its interpretation.

We spend a vast amount of time and energy in informing and persuading others and in accepting, resisting or trying to understand the information and persuasion which comes to us from them. We spend no less time in assuring ourselves and others that we share common ways of appreciating matters of common concern and in repairing any divergencies which these exchanges reveal.³

The fact that this dynamic exchange is possible is the basis of social organisation, from the most rudimentary societal unit to the most complex and modern megalopolis. It is the intelligent use of language and thought, according to Colin Cherry in his book entitled, On Human Communication, that facilitates self-awareness and responsibility, with its attendant customs, morals, laws and new ideas.⁴ Where these social traits broadly overlap those of another individual or culture, communication is generally meaningful and significant. Communication reinforces a sense of common knowledge. Its function is to "establish change or maintain the relationship of the parties."⁵ In

other words, it is possible to establish and maintain a rich flow of communication between two dynamic individuals or cultures that share similar perspectives. This essential sharing characteristic of communication, for Cherry, implies a type of "unity" where the two parties or cultures "are of one mind;"⁶ where they understand one another; where they can grow and benefit from the exchange. On the other hand, where there is little overlap, Cherry states that misunderstanding may appear and with it arises a possible failure of communication and an ensuing breakdown in social organisation. It is vital to recognise and resolve this gap.

B) INTRAPERSONAL COMMUNICATION

Intrapersonal communication is communication within the organism, both in the mind and at the cellular level. In human physiology, this unique process gives man the ability to think and allows for a private interpretation of the world. Human communication between two external parties cannot take place without each first having formulated thoughts or ideas internally, in the intrapersonal context.

In biology, there are three basic types of intrapersonal communication, namely genetic, metabolic and nervous. Genetic communication serves one important purpose: to facilitate natural selection. According to

Gunther Stent in his essay entitled, "Cellular Communication," this is accomplished in a number of ways depending upon the complexity of the organism. The most primitive types employ a genetic transfer either by releasing DNA into the vicinity of another cell, building a bridge between two cells or using a virus as a middle party. Stent states that more intricate organisms, such as fungi and man, use an elaborate genetic mechanism where the entire DNA complement of one cell is sexually transferred to another. All these methods statistically vary the gene pool where the stronger variants of the species survive and the lesser ones do not.

While genetic communication occurs over generations, metabolic communication occurs over the life-span of a single individual. Metabolism is a chemical process where nutritive material is used to sustain the life of a cell and hormones are the elements of communication. In metabolism, hormones have two functions. They serve to "control the orderly development of multicellular plants and animals" ⁷ and, secondly, they maintain homeostasis which is a cellular state of internal and external harmony. In a constantly changing external environment, cells must adapt to a variety of potentially lethal effects, including the lack of oxygen and food, temperature change, chemical imbalances, nervous disorders and so forth. Hormones are the regulatory mechanisms which communicate the changes a cell must make in its internal environment if that cell is to function properly in the life of the organism.

Nervous communication is the fastest form of communication known to the organism. Its transmission/reception time constitutes a communication event as it can only be measured accurately in milliseconds. The principal mechanism is a special cell known as the neuron which consists primarily of dendrites and axons. Dendrites are branches of the neuron that carry electrical impulses toward the cell body. Axons are long extensions that carry electrical impulses away from the cell body. Taken together, these form large and complex nervous networks which are interconnected and conduct information throughout the organism. The nervous system can be classified, according to Stent, in three ways. Sensory or afferent neurons transmit stimuli inward from the various receptors. This incoming information serves as an indicator of the internal and external environment, Motor or efferent neurons convey output impulses to the muscles, thus effecting motion in the organism. Association or internuncial neurons are the third type. They are found between the afferent and efferent neurons and serve to relay impulses from the former to the latter. In their most concentrated state, these messenger or central neurons compose the organism's brain.

Electrical impulses of information are transferred from one neuron to another at a junction called a synapse by means of a chemical transmitter. Depending upon the nature of this transmitter and its effect on the receiving neuron, the synapse assumes either an excitatory or inhibitory mode. In the former, the transfer of the impulse is not

impeded while in the latter, it is prevented from occurring. In this way, useful nervous information is channelled to its end with the upmost of efficiency and expediency.

Genetic, metabolic and nervous processes are the main particulars of a system whose successful interaction is measured by how well the organism communicates with his external and internal environment. The highest expression of this system is embodied in man. He has the largest and most convoluted brain of all animals and, as a consequence, is the only intellectual being on earth. He alone possesses the capacity of abstraction and the power to create meaning and order from apparent chaos. From this, the basic terms of communication can be derived. In the perception, abstraction, accommodation and articulation of a phenomenon, the eyes, ears, hands and mouth act as the "sender". The particular stimulus is the "message", the autonomic and central nervous systems form the "channel", the brain acts as the "receiver" and the electro-chemical impulses of the nervous systems work as "language". The resultant motor and/or mental reaction functions as "feedback". All of this occurs within a certain duration of time depending upon the nature of the initial perception. Any interference in this process constitutes a "noise" and the message is either lost or inhibited. Similarly, when this process is carried beyond an individual into the realm of another, it ceases to be internal. In this context, intrapersonal communication becomes, instead, interpersonal.

C) INTERPERSONAL COMMUNICATION

Interpersonal communication represents a direct face-to-face or person-to-person exchange of information between two parties that momentarily share a common purpose and understanding as indicated in their conversation and body language. This exchange is dependent upon two things, both occurring simultaneously. One concerns the behaviour of each individual including the likely effects of sending or receiving a message while the other is concerned with the communicative process itself.

This first aspect of interpersonal communication refers to message predictions. According to Gerald Miller in his essay entitled, "Interpersonal Communication: A Conceptual Perspective,"

... whenever we communicate with others,
we make predictions about the probable
consequences, or outcomes, of our messages. ⁸

While most of these predictions are, to some degree, erroneous, people continue to make them. This is because communication is a purposive activity and, thus, it is important to select the best particular message strategy to achieve a favourable end, whether done consciously by the individual or otherwise. ⁹ Geoffrey Vickers concurs. He believes that human communication is based in assumptions about the sender, the

meaning of the words used, the topic of discussion and the level of interest. For him, communication is "directed to discovering, confirming or changing the assumptions by which it is to be interpreted." ¹⁰

Miller classifies these predictions or assumptions in three ways, namely cultural, sociological and psychological.

Cultural judgments are based on the perception of an individual's morals, beliefs and customs. To the extent that these traits are shared between two parties, some reasonable message predictions can be made. Where they are different, communication is inhibited and difficult. Mistakes are easily made and cultural stereotyping can readily occur unless both parties are able to recognise and willing to accommodate each other's differences. Miller states that such stereotyping, while appearing to explain away a particular society in tacit cliches, breaks down when applied to an individual. For example, one may consider the general population of a certain country to be loud and opinionated and yet be surprised to meet an individual citizen clearly not cast in this mould. Cultural stereotyping, admittedly useful in some instances, basically does one an injustice because it sees only the generalisation and fails to recognise the merits of the specific person.

The chief assumption concerns a person's social background, his present status and his future aspirations; in short, his sociological profile. Miller states that most conversations are grounded in this type of reference with indicators including one's job, family, car, home, memberships, religion and so forth. Like the dangers of stereotyping,

erroneous generalisations can be easily made when one party treats another according to some preconceived set of sociological traits that that individual is expected to typify. For example, some people are surprised to learn that not all doctors and lawyers are rich. Similarly, Miller states that a person of one apparent persuasion may belong to groups with different or even opposing viewpoints. A farmer might support a socialist political party and yet be a member of the local chamber of commerce. A university professor may be a member of an ecological group while enjoying the sportsman pleasures of hunting and fishing. All things are relative and, out of courtesy if nothing else, one should extend to the other the benefit of the doubt. While some predictions based on sociological fact are correct, such as "an Englishman should speak English" or "Catholic priests are not married", they are for the most part generally wrong. As such, by not approaching another individual with as clear and open a mind as possible, one does that person the same injustice found in cultural stereotyping:

... the other person is perceived not as an individual, but rather as a bundle of role behaviors which serve as common behavioral currency for all members of his particular group. ¹¹

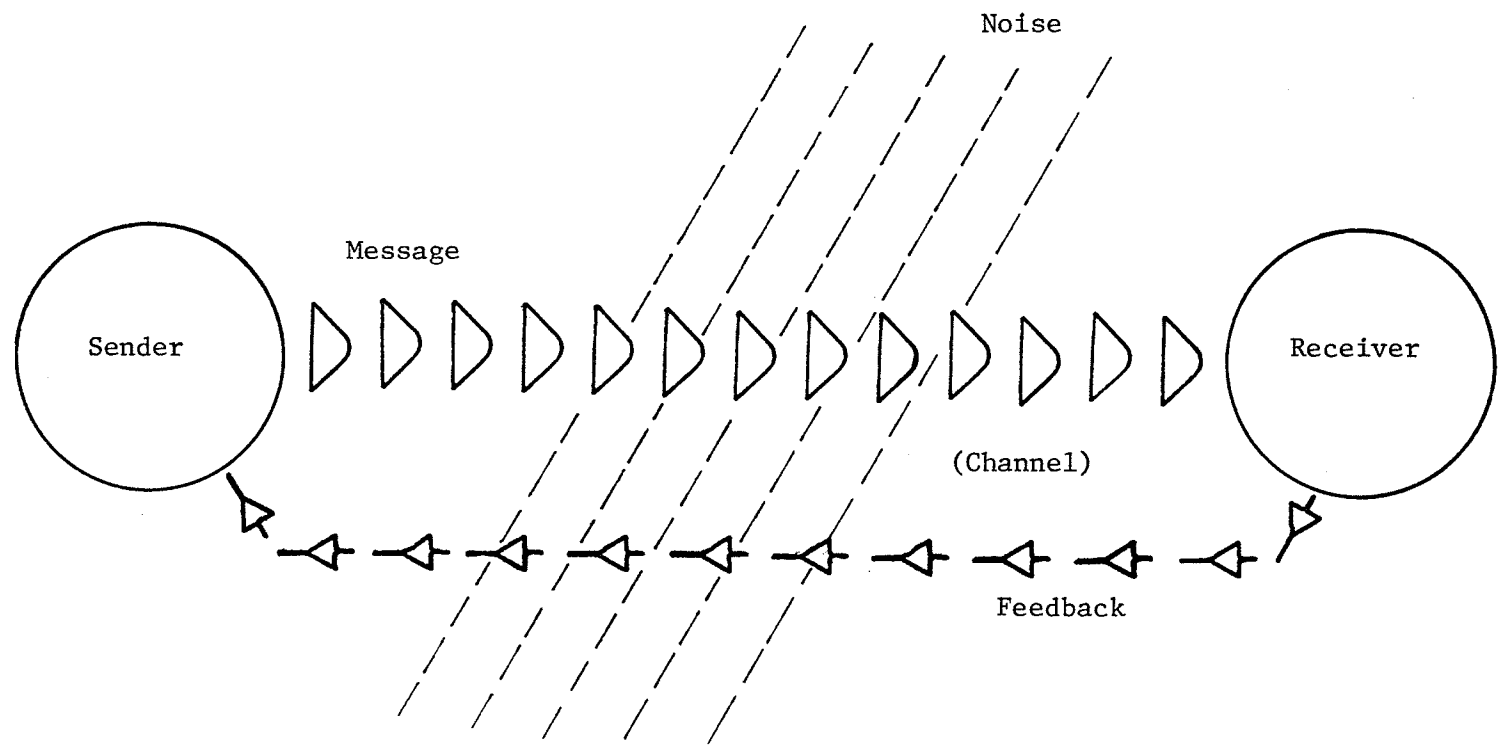
For Miller, this is more a case of interpersonal non-communication.

The third way communication predictions are classified is psychological. Unlike those based strictly on the cultural or sociological, here the concern is with how two individuals, in conversation, differ from one another if each shares a common background. Miller states that this is the most difficult type of prediction to make but often the most successful. Because one must be able to perceive certain characteristics, some obvious and some extremely subtle, and because this can only happen during the exchange, one must work at one's viewpoint. One must be prepared to defend or modify it should the other party either disagree or suggest alternative approaches to the subject-matter. In short, one must take his cues from the other person. He must be able to read him. Miller believes this psychological approach to be the best example of interpersonal communication. Both parties in conversation must relate personally to one another, deriving their information from verbal exchange and body language. Here cultural and sociological traits have no significant role.

The second aspect of interpersonal communication refers to the communicative process. It can be broken down into a number of components, each playing a vital part in any information exchange between two or more parties. They include the sender, message, channel, receiver, language, setting, purpose, feedback and noise, and are illustrated in Figure 2 which is a generalised example of a two-way communications model.

Figure 2.
BASIC TWO-WAY COMMUNICATION MODEL

-- Source (the author)



Consider the following case. A new city master-plan has been developed and the planners are eager that it be officially ratified. In an attempt to publicise the proposal and because citizen participation is a statutory requirement in its formulation, the planners decide to hold a series of public meetings, each in a particular neighbourhood. They give notice that the first meeting will be held in the local school of "district #1". The date and time arrive. The public attend, both out of curiosity and a concern as to how the plan might directly affect them. The planners welcome the citizen participants, give them a slide presentation of the plan, send them into small discussion groups for their required reaction and later discuss with them their questions and recommendations over coffee and donuts. The meeting has run its course and is subsequently adjourned; the public is relieved that the plan does not affect them directly and the planners are relieved that the first of ten such meetings are successfully behind them.

Given the above example, anyone attending the meeting can be a "sender" at any time although certain people may defer in favour of a professional sender or spokesperson, such as a planner, a lawyer, a real estate representative or a knowledgeable and vocal private citizen and so forth. The only stipulation is that all senders have "locus standi" or a recognised and legitimate interest to speak at that particular meeting. In short, a "sender" transmits a message or emits a stimulus and, as such, can be referred to as a communicator, an

encoder, a source, an actor and so forth.¹² A sender can include an intrapersonal mental thought or a genetic command in the recombination of DNA. It also encompasses everything from someone mailing a letter to a policeman admonishing a motorist stopped for speeding. In certain instances, a sender can be inanimate because, in communication, all things are relative. In other words, as a sender can abruptly switch roles and act as a receiver, so a sender could include the initial and actual notice of the planning meeting, whether it was published in the local newspaper, displayed as a sign, distributed as a leaflet or broadcast on radio and television.

A "message" is a coherent group of signals transmitted from the sender to the receiver or, as Colin Cherry states, "an ordered selection from an agreed set of SIGNS (ALPHABET) intended to communicate information."¹³ These signals or signs are encoded in an agreed and recognised language form which has meaning and interest for the two parties. Without meaning, the message constitutes "jibberish" and without interest, curiosity or doubt, the message is generally lost on the receiver. A message can be verbal, non-verbal or both simultaneously, depending upon the situation. For example, what a person does not say can be interpreted as a powerful message in the same context as "reading between the lines" can be construed as a more meaningful communication than the words themselves. Similarly, the conscious or unconscious use of one's body during conversation, such as hand gestures, posture, eye

movement and so forth, may convey more relevant information than the actual verbal counterpart. In the case of the planning meeting, a number of messages are operating, each with its own distinct role and purpose. There are the social grace messages, such as the exchange of greetings between the planners and the citizen participants including the presence of coffee and donuts, that serve to foster conviviality during the course of the meeting. There are the one-way information or bulletin messages, such as the slide presentation, colourful mounted charts and diagrams, commentary and so forth, designed to acquaint the citizens with the proposed plan. There are the feedback and rebuttal messages, such as the concerns and merits raised in the study groups and the general review following, that both fulfil the statutory requirement of citizen participation and indicate to the planners the amount of opposition the proposed plan might receive in its present guise. There are also more subtle messages operating at the "Machiavellian" level, such as what the planners want to accomplish but leave unstated -- ie. "no changes to the plan as the planners are the professionals, not the citizens and consequently know what is best for them" -- or the citizens' motives for attending the meeting in the first place -- ie. "will a group home for retardates or alcoholics be situated in their neighbourhood thus driving down property values and scaring the children?" -- that may underlie how the meeting is formally structured on behalf of the planners and how the citizen

participants respond to its content. Finally, to paraphrase McLuhan,¹⁴ the meeting itself is the message. It is important because the planners and the citizens cannot come away from it without having been affected in some manner by the encounter, whether considered a waste of time for some or a valuable learning experience by others.

A "channel" is the medium which relays a message from the sender to the receiver and, as such, creates what Colin Cherry has referred to as a "unity" between the two.¹⁵ In other words, both sender and receiver are linked in communication by sharing a common channel. In face-to-face communication, the channel is simply the air through which the sound waves move from speaker to listener, including the vibration of that listener's tympanic membrane and the subsequent transfer of this information, via the cochlear nerve, to the brain for dissemination.¹⁶ A visual human communication channel works in a similar fashion. A person perceives an image whose light waves, through the lens, are received by the photoreceptor cells of the retina. This image is subsequently transferred, via the optic nerve, to the brain for interpretation.¹⁷ In person-to-person contact, where two people are in communication with each other, but separated in time and distance, the channel may be a telephone, teletype, computer or videotex line as well as a television, photographic or cinematic image. Similarly, in intrapersonal communication, the link may be a neuron, a hormone or a genetic transfer of some sort. A channel may also be the post-

office service or air-courier express. In short, a channel is any means by which information can be carried that has meaning for the senses.

Channels have several characteristics, according to Reed Blake in his book entitled, A Taxonomy of Concepts in Communication. They include such traits as "credibility" or a channel's propensity for plausibility and accuracy; "feedback" or the opportunity for equal rebuttal; "participation" or the effort required to comprehend and assimilate the information carried by the channel; "permanency" or the durability of a message over time; "availability" or the blanket capacity of a channel; "multiplicative power" or the ability to bring a message to the greatest number of people over a large distance in the shortest amount of time; and, "complementarity" or the potential for supplementing and expediting other communication channels.¹⁸ Channels can also be formal and informal. Blake states that the latter is used amongst strangers with a momentary common aim or curiosity and between friends who share long-term commitments and common bonds. Informal channels are generally verifiable and, consequently, it is often difficult to identify the message source. Formal channels, on the other hand, are considered by Blake to be authoritative and thus corroborative. Official organisations, such as governments, private companies, radio and television news stations and so forth, maintain this type of channel. Because they convey information whose source

can be identified if necessary, a strong air of accountability and credence is lent to the institution. Correspondingly, people have a strong tendency to believe the information if there is no previous reason for doubt. In the planning meeting, while informal channels are present, such as the convivial interpersonal network including unknown intrapersonal nuances, the major channels are of a formal nature including the slide projector, charts, diagrams and the meeting itself. The sole purpose of these formal channels is to convey information of specific nature, ie. "the city master-plan", from one group to another; from the planners to the citizen participants and, later, from the planners to the city officials responsible for ratifying it in council.

A "receiver" is a receptor of the sender's message or that component of the communications process that will act on the receipt of the incoming stimulus. In the example of the planning meeting, anyone can be a receiver without the necessity of official status afforded by "locus standi" simply by tuning into a particular message channel, such as a greeting, a slide presentation, a discussion of options and so forth. The citizen participants themselves are basically receivers as they are the major beneficiaries of the planners' proposed city master-plan. As such, and in a manner similar to the sender, the receiver can be referred to as a decoder, a destination, an audience and so forth. Typically, there are more receivers than

senders, according to Richard Meier in his book entitled, A Communication Theory of Urban Growth,¹⁹ as in the case of a political figure speaking to delegates at a party leadership convention, a mother addressing her children, a teacher administering a class or a message broadcast over radio and television to a mass audience. Like the sender, who must first decide how to convey his information, the receiver can equally choose the channels of incoming reception. The communication occurs when there is agreement over the means of transmission, a common language and meaning and a willingness to participate in the exchange. The receiver can also switch roles by imparting a message and thus becoming, consciously or otherwise, a sender. Similarly, a receiver can be inanimate as in the case of two computers updating each other's memory banks or a teletype machine at one office automatically relaying a message to its counterpart at another office at a specific pre-arranged time.

"Language", according to Denis McQuail in his book entitled, Communication, is sequential in that speech and writing occur only in linear succession. It is systematic in that language can only be meaningful if it observes the rules of grammar, syntax and logic intrinsic to that language. Moreover, it is differential in that it is concerned with describing the various degrees of contrast perceived between one phenomenon and another. It is also arbitrary in that there is no correlation between the object named and the object itself. Finally, it is conventional in that two or more users must agree to

abide by the rules governing its meaning and usage.²⁰ Language at the planning meeting includes written and spoken English while charts, maps, diagrams and PR kits supplement the planners' message about their proposed city master-plan. Further, there is the language of gestures, movement and posture which McQuail calls "paralanguage"²¹ and is very well-documented in Edward Hall's book entitled, Silent Language.²²

As such, language is the principal component of human communication. It is the chief way of describing the relationship between the individual and the world-at-large, whether in verbal, graphic or pictorial terms. It is a cultural prism through which the individual learns to perceive, partake, catalogue and communicate various experiences. Because every successive generation, or necessity, inherits the civilisation of the preceding one, language gives man the capacity to record the past which

... makes possible the growth and transmission of culture, the continuity of societies, and the effective functioning and control of social groups.²³

Because every successive generation is at the forefront of civilisation, language affords man a certain perspective of the present: "we see the world as our language conditions us to do."²⁴ It is a continuously-changing phenomenon which reflects the malleability and flux of society. Because every successive generation strives for power, wealth, comfort and, altruistically, the advancement of knowledge in the pursuit of

excellence, language extends to man a feeling for the future: the gift of speech is accompanied by the remarkable gift of speculation. Man, through manipulating and reorganising signs in speech and writing, is free to reinterpret the world; to discover new information about it at will. This is the advantage of language. This is the advantage of that audible, visual and tactile vocabulary of signs that convey meaning, in an isomorphic sense, when transmitted from sender to receiver according to a pre-arranged, mutually-accepted system of rules.

"Setting" refers to the place and conditions surrounding the communications act. It has a definite effect on the relationship established between the sender and receiver. In theatre, set design is a very important element in any production because it suspends the audience's immediate reality and offers, in return, something ephemeral but credible. It creates a particular mood and raises certain expectations. Before the production begins, the audience is ready to be drawn into the first scene. The actors, subsequently, either confirm, deny or play with the mood through the course of their lines and action, building dramatic tension. Changing the backdrops for the next scene simply repeats this process.

Settings can also be subtle or overt. In the former, there is the privacy afforded by a conversation in a small office, a gathering in a church basement or the curiosity of a traveller in a foreign city. Here, the setting is relaxed and generally informal although one could

argue that they constitute extremely rigid and formal settings should circumstances warrant. In the overt case, consider Albert Speer's "Cathedral of Ice" at Nuremburg in 1935 which set the eerie and overwhelming scene for Hitler's greatest Nazi rally. Speer, Hitler's chief architect, used rows of searchlights, pointed skyward, to achieve a column-like perimeter around Nazi supporters, who themselves had been arranged in straight lines facing the speaker's podium and a host of swastika banners. The infamous assembly was nothing less than awesome, fearful and completely effective. As such, a particular setting can, in large part, pre-determine the event. For example, a courtroom can be hostile and intimidating to some, such as witnesses and defendants, while natural and familiar to others, such as judges, lawyers and law-clerks. Similarly, a meeting held in a local school should be more relaxed and informative for citizen participants than one conducted in the board-room of a municipal office or the council chambers of a town hall. In short, a setting is relative for the actors and can, in some instances, consciously or otherwise, influence the character of the information exchange.

The "purpose" in communication is to inform. Where the interests of the sender are less than honourable, it may also be the purpose in cocommunication to misinform or deliberately mislead. Rumours, propaganda, lies, deceit and subterfuge are all designed to impart a non-truth and, in doing so, achieve some nefarious goal, or, where there is a truth,

to circumvent specific channels of information. In cases where the purpose is generally credible, it can range from a seemingly trivial and insignificant exchange, such as something that has no direct bearing on the parties concerned, to a serious and important conversation whose contents and implications have a marked effect on the participants. It is a matter of relative distance. For example, news of a proposed city master-plan, together with the supporting announcements of various tri-level agreements, phases of implementation and infusions of capital into the core-area, may only be a passing interest to a suburbanite who will not be directly affected, could care less or simply does not understand the proposed plan's "raison d'être". Similarly, a war in Lebanon, a famine in East Africa, a plane crash in Louisiana or a sweepstakes winner in Toronto are all too removed from the daily routine of a Winnipeg housewife and, as such, do not command much attention by her.

On the contrary, a proposed city master-plan which calls for neighbourhood re-zoning, municipal tax increases, school shut-downs and so forth, will prompt vigorous action from those citizens so affected. Similarly, action will arise from those who believe that distant events concern us as well. The Lebanese conflict is seen as an affront to those who seriously strive for peace in a world wrought by war and injustices. Starvation is seen as a moral outrage in a country whose marketing boards dump food surpluses on fields rather than

distributing them to the needy and poor. Plane crashes belie the adequacy of current aviation safety laws while sweepstakes winners demonstrate that hard work and productivity do not add up to the price of a lottery ticket.

In short, the purpose in communication or "the intention of sending a particular message", to paraphrase Richard Meier,²⁵ is to inform the receiver of some occurrence which may or may not directly affect him. Meier is of the opinion that the ensuing exchange is an attempt by the sender to persuade the receiver to accept a specific viewpoint. He believes that an empathy exists in certain relationships, such as "student-teacher" or "publisher-reader", where both have mutual purposes for reacting to one another. In this case, communication between sender and receiver is often easier and more free of noise than where that empathy did not exist.

The imputation of purpose on the part of sender and receiver as a matter of empathy -- putting oneself in the other's position to see what motivates him -- adds to the efficiency of the communication process because it sets up expectations regarding what images should be transmitted next.²⁶

Meier also states that because purpose in communication is relative and observes the respective interests of the sender and receiver, it is up to a nominal and impartial third party to determine the actual

intention of each. Arbitrators are important in this context.

"Feedback" refers to that set of responses elicited from the receiver by the sender who subsequently uses it to monitor and, if necessary, alter his message. Feedback is essential to human communication and makes the process circular rather than linear. Feedback completes the message cycle between sender and receiver. Unlike ordinary communication where the direction of the message flows from sender to receiver, feedback according to Melvin deFleur in his book entitled, Theories of Mass Communication, runs the opposite way. It constitutes a reverse set of communications components where

... the destination (receiver) also operates as a source of feedback and the source (sender) as a destination for feedback messages.²⁷

For example, feedback may include what Denis McQuail calls "the other half of a conversation"²⁸ or that set of responses issued when the sender and receiver change roles in the course of an interpersonal exchange. It may also include the set of gestures, movements and posturing referred to earlier as "paralanguages".²⁹

...(I)f the communicatee winces, grins, raises an eyebrow, or just looks blank as the communicator enunciates his words, this constitutes a kind of message returning to the communicator. He may choose to illustrate further, use a less complex

vocabulary, or otherwise alter his presentation because of this feedback.³⁰

Letters to the editor, market research results, accidents, the response of citizen participants at a planning meeting and so forth are similar examples of feedback.

"Noise," according to Colin Cherry, "is the destroyer of information and sets the upper limit to the information capacity of a channel."³¹ Noise, which must be considered as an integral part of the communication process because it is almost always present in any message exchange, can be classified in either a semantic or channel sense.³² In the former, since the isomorphism of meaning, in a "bit-by-bit" context, is seldom possible between sender and receiver, noise in human communication is that degree of difference between what is relayed by the sender and what is subsequently assimilated by the receiver, or, "the degree to which (the isomorphism of meaning) is less than absolutely identical, element for element."³³ This loss of absolute congruity is due to the sender and receiver using slightly different codes of interpretation and reasoning during the exchange. Differences of interests, personalities, backgrounds, education, language and so forth all contribute, in various respects, to this problem. Reed Blake states that semantic noise also includes the generally unwitting but misappropriate use of difficult words and concepts, confusing sentence patterns and message organisations and perplexing cultural mannerisms.³⁴ Similarly, semantic noise in the planning meeting

example may result from the planners pursuing interests different from those of the citizen participants, using a type of expert "jargonese" which is foreign and perhaps offensive to non-planners, failing to recognise the various cultural and social forces at work, being unprepared or unwilling to discuss frankly certain aspects of the proposed city master-plan and so forth.

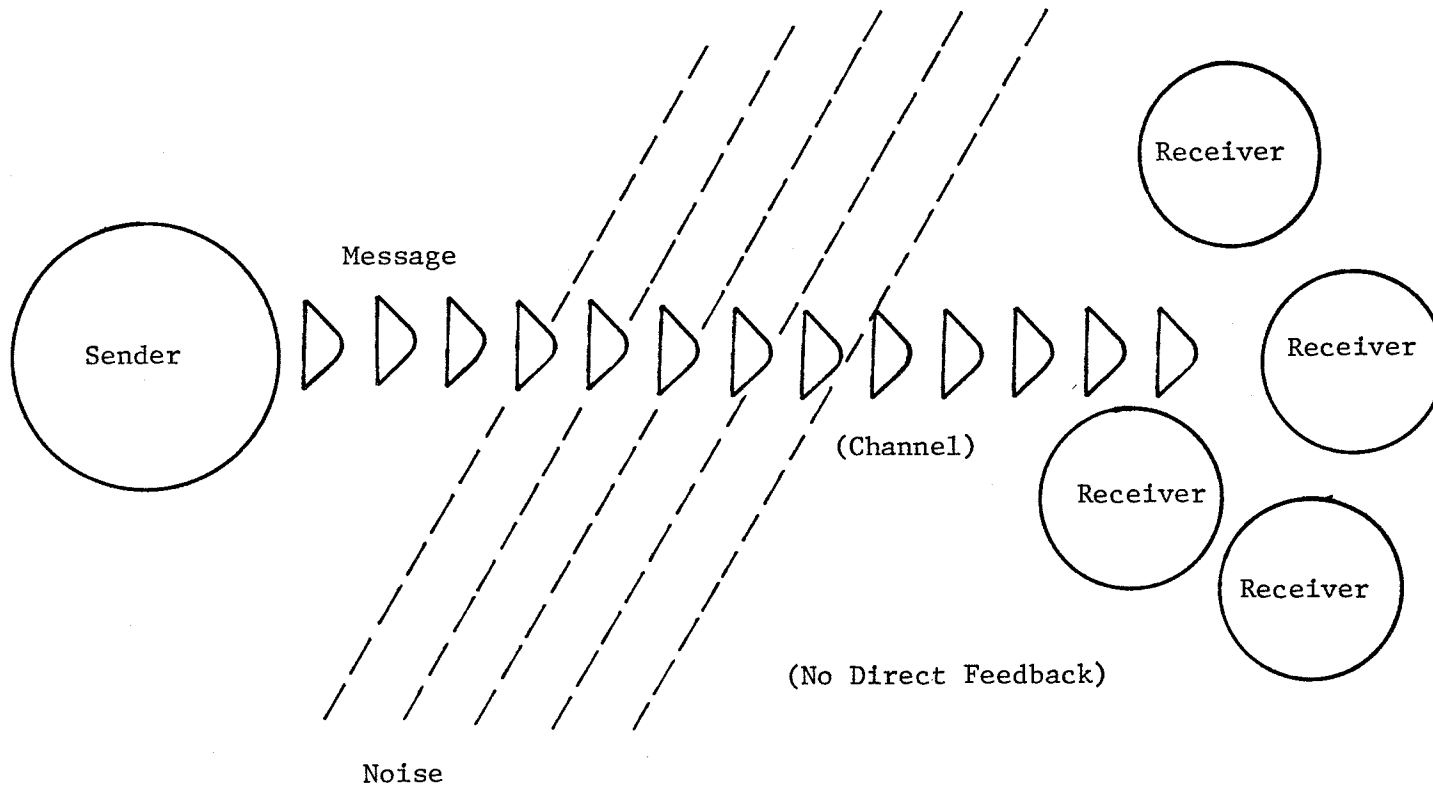
Channel noise refers to a type of disturbance that is usually beyond the control of the sender and receiver and concerns any reduction of a channel's physical capacity to transmit or relay a message from one point to another, including any apparent or real loss in quality, quantity, accuracy and speed. Examples of channel noise range from atmospheric disturbances, such as frequency distortion occasionally experienced in radio and television transmission, the intermittent loss of signal strength in telephone lines, power black-outs and so on, to what Colin Cherry refers to as "cross-talk"³⁵ which is a type of interference present in interpersonal communication. "Cross-talk" would include situations where the sender and receiver are attempting to hold a conversation in a noisy room, on a telephone party line or where they are part of a large audience. Channel noise at the planning meeting may include the fact that not everyone can clearly hear the proposal or adequately see the slide presentation. It may also include the time the meeting is begun and subsequently adjourned. Some people may have other commitments prior to or following the meeting and these

may interfere with the attention they devote to the proceedings.

D) MASS COMMUNICATION

Mass communication is designed to convey a message to a group of receivers by means of a mass medium. It is a complex and powerful collective process because it concerns numbers of people rather than individuals as illustrated by Figure 3. According to Denis McQuail, there is, on one hand, an organised group of senders whose main advantages over the receivers include a common work experience, similar norms and values, an internal network of communication, a shared work location and a sophisticated perspective of its own goals, rights, obligations and its target audience. The receivers, on the other hand, are less likely to have a perceived collective identity or a clear conception of their rights.³⁶ The senders do not consider them to be individuals and, as such, characterise the audience by its large size, its general diversity, its basic anonymity and its remarkable predictability as measured by scores of statistically-reliable market research studies. Given this viewpoint, it is the senders who hold the advantage because the audience is at a loss to reply. The direction of the message in mass communication is one-way: from sender to receiver. Unfortunately, in this type of communicative relationship, the message tends to be mundane, formal and predictable: it is primarily structured to reach,

Figure 3.
BASIC ONE-WAY COMMUNICATION MODEL (MASS COMMUNICATION)
-- Source (the author)



with the least amount of resistance, the greatest number of people. As a result, both sides see each other in stereotypic roles and interpret the message in different, often inconsistent ways.

Unlike its interpersonal counterpart, where contact is of a direct face-to-face or person-to-person nature, the sender in mass communication is immediately removed from the receiver by transmitting its message through a mass medium, such as radio, television, newspapers, magazines and so forth. The interposition and use of these complex channels serves to isolate the two large-scale parties and to relay information to those too physically or socially distant to otherwise receive it in an interpersonal context. Further, this separation creates what McQuail calls "the mystery which attaches to the machine and the technology."³⁷ Many people outside the business of professional communication are awed by the apparent glamour of a foreign correspondent, a TV news anchorman, a feature reporter and so forth. There are a number of reasons for this. In the first place, the public is only exposed to the final product and not the actual "behind-the-scenes" process. Secondly, they are not particularly familiar with the technical aspects of broadcasting and publishing. Thirdly, they appear, at times, to be either intimidated or mesmerised by the apparent worldly expertise and charisma of various media personnel who, in the course of their jobs, are placed in many situations not entirely accessible to the ordinary

citizen. Were it any different, the mystery would soon dissipate or, perhaps, not exist at all.

The distance factor imposed by the technology of mass communication is reinforced by the "gatekeeper" concept. According to John Bittner in his book entitled, Mass Communication: An Introduction, a gatekeeper is

... any individual directly involved in the relay or transfer of information from one individual to another through the use of a mass medium.³⁸

This includes reporters, feature writers, "on-air" personalities, editors, producer/directors and cameramen because these are the media jobs that the public immediately recognise. It also includes type-setters, printers, lighting crews, VTR operators, engineers and so forth but the public only recognises them through their association with the former, more glamorous gatekeepers. Bittner states that gatekeepers, regardless of their roles and duties, impose a rigour on in-coming information by limiting, expanding or reinterpreting it. McQuail states that gatekeepers do this in either a purposive or non-purposive way. In the latter, they simply relay the events to an audience as they occur, such as a political figure addressing a delegation in a live broadcast. In the former, they exercise control over the information released to the public. While not necessarily intentional or expedient, this control could lead to distortions, especially in a gatekeeper chain.

For example, a story may be rewritten several times by several people as it circulates, via the wire and cable news services, to various destinations. It is thus extremely important to be sure of the facts before they are subsequently published or broadcast. Facts not verifiable are tantamount to "rumour-mongering". Where there is deliberate intent to mislead and persuade, it is nothing less than "propaganda".

In short, mass communication operates in a complex social environment where interpersonal communication is simply not sufficient on its own. Its greatest strength lies in simultaneously reaching large groups of people although the noise factor, such as signal distortion, blurred print and so forth, can limit its accuracy and efficiency. Its major corresponding weakness, according to McQuail,

... stems largely from the voluntary character of reception -- without attention from an audience there can be no power and attention cannot easily be compelled. ³⁹

Maintaining the audience is the key bearing in mind that mass communication is not designed so much to alter society, of which that audience is an integral part, as it is to generally sustain and enhance it.

* * * *

CONCLUSION

This chapter has determined that communication pervades all living things and is important to planning because it is the essence of all social process. Without communication, there can be no self-awareness, responsibility or common knowledge. Without communication, there can be no concept of the future and certainly no need to plan for one. Only where there exists a community of interest in which people think and act, where there is a common bond, is the dynamic exchange of ideas and information possible. Man is programmed, genetically, to communicate with his environment. It is a genetic characteristic that remains intact throughout every strata of human existence, from the molecular through the personal to the societal. Each builds upon the next, each seeking to reinforce the other in a life-sustaining, harmonious partnership of communication. By transferring data from one ideation source to another, without significant loss in meaning and intent, man can reflect upon the present and envisage his future. In this sense, communication makes planning possible.

* * * *

FOOTNOTES -- CHAPTER II

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CHAPTER III

COMMUNICATION TECHNOLOGY & URBANISM

Communication is the chief distinguishing
mark and evolutionary force of our species...

-- George Gerbner, "Communication:
Society is the Message"

INTRODUCTION

The purpose of this chapter, in a discussion which emphasises the role of communications in urbanism, is to demonstrate that the electronic "communications revolution" is a highly significant continuation of an historical process that casts urban development and communication in a symbiotic partnership. Like those remarkable communication advances of the past, such as the calendar, writing, the printing press, the town-crier, newspapers, the telephone and radio, it is proposed that innovations of the current electronic age, such as television and videotex, also exert a tremendous impact upon the urban environment. To grasp the nature and extent of this impact, planners must become fluent with the components of present and advanced video technology, including their scope and potential.

* * * *

A) RHETORIC

Primitive, tribal, nomadic man lived in an oral culture whose language was at once poetic in its description and complex in its meaning. It was not given to philosophic abstraction as primitive man had no historical sense of himself in the absence of script. For him,

retrospection was an alien concept known only to those cultures that kept records. Instead, his life and his language were grounded firmly in the physical, eternal present. His was the world of cycles and rebirth whose myths and legends were passed from generation to generation by word-of-mouth. Only when man made the creative and decisive leap from nomad and hunter to villager and farmer did he undergo a fundamental cultural change that could not be accommodated without a corresponding change in the nature of social communication. No longer would a purely oral tradition suffice.

Agrarian man, rooted in the land, invented the calendar and developed writing. That he was a book-keeper was made possible by an original and significant abstraction. He thought of time in a sense different from his nomadic ancestors. Where they saw time as immemorial, he perceived the seemingly endless cycles of nature as linear and sequential with a definable past, present and future in terms of the harvest. He could predict the seasons of growth and abundance while avoiding, at all costs, those of floods and famine. This could only be facilitated by devising a method of keeping reliable records of the harvest so that a surplus could be created and distributed when needed. In this way could men gather in the company of other men, for once not preoccupied with the hunt for food but with the building of urban habitats. Grain surpluses, facilitated by the calendar and writing, allowed a concentration of population previously unknown. Small cities

evolved as it became possible to provision them which, in turn, gave their citizens the luxury of pursuing other activities, such as trade, politics, crafts and leisure. In short, the calendar afforded man control over time while writing facilitated a more complex, specialist culture from the kingly builders of storehouses to the priestly keepers of scribal accounts. In this new society of records and thinkers, not everyone had to farm to eat.

The earliest form of writing, cuneiform, used by the Egyptians, Assyrians and Persians, consisted of vertical, wedge-shaped marks made by a reed stylus on wet clay or a chisel on stone. It was a difficult but durable script and gave rise to a powerful and central priesthood kept in check only by imperial force. This imperial force was determined to reign supreme and, with the invention of the calendar, the straight, bland marks of cuneiform gave way to a picture script which at once "froze" time by providing a visual account of events through symbolic imagery. Picture drawings or hieroglyphics, which are best preserved in the tombs of the great pharaohs, gradually acquired a purely phonetic value. With the development of a new, highly-portable writing apparatus, papyrus and brush, imperial force finally yielded to imperial religion and phonetics became the widespread language of priests.

The use of phonetics made possible another great advance in social communication: the invention of the alphabet. Harold Innis in his book

entitled, The Bias of Communication, states that the alphabet was developed near the Phoenician coast by the Hebrews around 1500 B.C. to accommodate a flourishing maritime trade that used papyrus as a major tool of business. This led to the establishment of great trading centres, the emergence of new nations with distinct languages and, finally, the evolution of a 24-letter script in Greece by 800 B.C.¹

T.F. Carney & B. Zajac in their book entitled, From Fable to Cable: How Messages Shape Society, state that this specific innovation, a simple yet effective alphabet based upon sound principles, enabled the Greeks to become "philosopher-kings."

Superbly verbal abstract conceptualization, then, was what the alphabet encouraged. And, in fact, there was a positive explosion of creativity in this regard in the brief Axial Age, when most of today's literary genres, and the bases of theoretical science evolved - overnight, in terms of the time-scale of cultural evolution to date.²

No longer was writing the strict and tedious domain of priests. Instead, the citizen could, for the first time, become literate with the welcome result that the cultural pool could be greatly expanded, moulded and re-moulded by the addition of new and fresh ideas; ideas spun by the joy of pure thinking. The 24-letter alphabet had brought man, through the Greeks, an intellectual self-awareness and freedom never before possible.

In this Hellenic antiquity, it radiated everywhere. Historical epic poems with their lyrical and chronological portrayal of events replaced old tribal folklore. Comic and tragic theatre with its mirror images of life provided dramatic introspection. Abstract philosophy with its deductive reasoning and logical empiricism created the religion of insight and truth. Science and mathematics with the geometry of Pythagoras, the lever and screw of Archimedes and the medicine of Hippocrates overthrew the superstitious shamans and their tribal withcraft. Rhetoric with its polemical emphasis on the dialectic brought new meaning into politics and law; democracy and common ordinance replaced despotism and divine rule.

In short, the widespread use of the alphabet led to the first city-state republics where "discussion could be free and wide ranging."³ It was this meaningful exchange of ideas, information, civic events and announcements that was facilitated interpersonally between the speaker and his audience. In those cases where the limits of rhetorical communication were reached in one centre, where the level of noise superseded the vital interpersonal exchange, new urban habitats were established and new emphasis placed upon the pursuit of excellence. That Greece was a land where schools could be formed, books written, theories developed, masterpieces created and new labour skills honed was due to the extent of its literacy and its devotion to the spoken word.

After the decline of Greece and later Rome, it was the monastery, from Italy to Ireland, that served to foster intellectual communication

and achievement, albeit subject to strict Christian ideals. Not only was a monastery a keeper of knowledge, a teacher of literacy and a haven for uninterrupted thought, it was a recorder of events and advancements throughout the Dark Ages. In short, it was a spiritual oasis in a dull and brutal world. It was here that miniscule, a small cursive script originating in the time of Charlemagne, became the uniform writing style. Beautiful, hand-lettered Latin manuscripts with exquisite gilt decorations were laboriously and painstakingly created by monks. These rare books were used by clerics in formal education. It was this religious tutoring that allowed learned men all over Europe to communicate intelligently despite the myriad of "mutually unintelligible vernaculars, each split into (often equally unintelligible) dialects."⁴

For the majority of citizens with no formal education, it was a different matter. These people were more concerned with the fundamentals of daily life. They had neither the opportunity nor the time to engage in intellectual pursuits. For them, urban communication was facilitated not by monastic books and letters but by church-bells and town-criers. For example, their knowledge of religion was provided by clerics and "passion-play" caravans travelling throughout the countryside. Similarly, their knowledge of peace, war, law and taxes was provided by pronouncements from the castle ramparts and village squares. In short, theirs was a limited world punctuated by ignorance and death. Only with the

introduction of print would their feudal existence undergo fundamental change and the town-crier assume a more substantial role in the community.

Paralleling monasteries and parchment was commerce and paper. Where the monasteries had retreated into the safe world of cloisters, books and Latin, the rest of Europe, through successive Viking invasions, Norman conquests and crusades to the Holy Land, vigorously expanded into a network of cities, towns and villages. With the introduction of paper from China through Bagdad and the Moorish centres of Spain, the logic of Aristotle was re-introduced to the western world and made compatible with Christian teachings by St. Thomas Aquinas. Similarly, Arabic numerals replaced their Roman counterparts while Greek and Muslim mathematics, astronomy, science and medicine, all preserved on paper, caused lay schools to be founded outside the sanctity of monastic walls since the Church was slow to accept this revived influx of "pagan knowledge." These schools, some of which became the great universities of Paris, Oxford and Cambridge, met the needs of the cities and towns by teaching not Latin-on-parchment but "vernacular-on-paper."⁵ As trade flourished and cities, such as Florence, Venice, Paris and London, grew in proper response, so a corresponding surge of paper manufacture from linen rags occasioned "the shift of writing from the monasteries to urban communities."⁶ The monasteries had no need of commercial accounting and vernacular masterpieces, such as Chaucer's Canterbury Tales and Dante's

Divine Comedy,⁷ but the cities did and men, trained in the lay schools and universities, provided the wherewithal. As the Church's grip on daily life weakened in the wake of this new "literati," despite the emergence of Latin masterpieces, such as Aquinas' Summa Theologica,⁸ so the demand for books increased, including many outside the clerical norm. The response to this, like the invention of Summarian cuneiform, the calendar, the Greek alphabet and the first parchment books, was another remarkable advance in social communication: the printing press.

B) PRINT

The impact of the printing press on communication was staggering in its effect since the Gutenberg Bible became the world's first printed text in 1455. Marshall McLuhan in his book entitled, Understanding Media, says of it:

Like any extension of man, typography had psychic and social consequences that suddenly shifted the previous boundaries and patterns of culture. In bringing the ancient and medieval worlds into fusion -- or, as some would say, confusion -- the printed book created a third world, the modern world.⁹

In this new world, the printing press was an instrument of mass production whose product was knowledge; knowledge for as wide a readership as possible and imparted either through the printed word or the spoken

word of the town-crier. The reason is simple. Printing on paper was much cheaper than the tedious hand-copying of a manuscript on parchment and it offered a great range of topics previously unknown to the reader. Writers emerged to document descriptive manuals and pamphlets on science, medicine and new inventions, such as gunpowder, marine architecture, clocks, lenses and compasses. Where books were not available on a mass scale, town-criers brought to the general populace information concerning this wealth of secular subjects. By doing so, he assumed an importance greater than that afforded before the printing press. In addition to his traditional role of bringing news of the realm to each village square, he also read various treatises and critical discourses to those who had the time and inclination to listen. Engaged in these pursuits, the town-crier brought information to citizens; he was both a purveyor of ideas and a principal catalyst in urban communication.

As a result of this influx and subsequent assimilation of new knowledge, and a corresponding increase of literacy in the vernaculars of the lands, the public grew more restless within the bounds of the Catholic Church. What was once committed to and recited from memory was now accomplished on paper, facilitated by the printed word. The public thus became more learned, more independently-minded and more demanding because each reader could mull over a passage at his own leisure. "Works of imagination" and non-fiction "now came to be written rather than orally produced, developed and maintained."¹⁰

Similarly, the printing press facilitated the widespread acceptance of English as a national language in England; a language whose greatest aesthetic achievements were the poems of John Donne and the plays of Shakespeare. In a wider context, it had also brought about the demise of the monasteries as repositories of knowledge; the growth and intellectual power of the universities; the duality of state and church where common and civil law co-existed with canon law; the development of economics and finance with its complex money and trade markets; the emergence of the republic as an instrument of credit, demonstrated by "the establishment of the Bank of England in 1694";¹¹ the reformation of education with its introduction of the classroom, lecturer and dictionary; the critique of government through the publication and distribution of political literature; the embellishment of man with a sense of "Renaissance" or rebirth; and, the rise of the popular newspaper with its hard-won assurance of "freedom of the press."

With its inception in the early eighteenth century, the newspaper became a powerful instrument of urban communication. It not only assumed the traditional role of the town-crier by bringing the news of the realm into the community, it virtually replaced him by extending the spoken word into the printed word. By doing so, newspapers realised a much larger audience than any town-crier could have reached and reduced the noise inherent in any exchange between the speaker and listener. In short, newspapers were more efficient than the town-criers by

becoming extensions of them. Except where illiteracy occasioned his specific services, the image of the town-crier was transformed from a person reciting the news to a tabloid printing it. The resultant success of the newspaper, as a new urban voice measured by circulation and impact, was based upon an organised public opinion first created in the clubs and coffee-houses by journalists like Dafoe, Addison and Steele¹² and by an important reliance on the pronouncements of the town-crier.

Newspaper circulation in the United States increased dramatically in the nineteenth century as a result of new technological advances in printing, the making of paper from pulp instead of linen rags, the fast and inexpensive transportation of newspapers by railway, the vast expansion of the post-office and the advent of the "wired-city" in the form of the telegraph, submarine cable and telephone.¹³ These innovations brought to the metropolitan dailies and their rural counterparts a sense of journalistic fraternity and nation-wide purpose. It was important and prestigious for newspapers of all sizes to pool and relay great news stories across the country with unerring speed and accuracy. The public had come to expect and demand it and journalism was quick to be concerned with the "immediate." By forming huge wire services, such as Associated Press in America and Reuters in Europe, a news event anywhere in the world could be made "public" within a matter of hours. These agencies, acting as gatekeepers, thus exercised

tremendous influence on large sectors of the newspaper industry and, in turn, on public opinion by determining what and what not to forward. Despite these monopolistic tendencies, the wire services and their newspapers encouraged nationalism by giving shape and meaning to public opinion through editorials, letters and journalistic style. They expanded the cultural pool of ideas by communicating to their readers the diversity of that readership's thoughts and expressions. They fostered the myth of unending prosperity through their advertising policies and provided a mass world-view through the many stories printed about distant and foreign lands. In short, the newspaper and printing industry, like the town-crier it replaced, shrank the world into manageable terms. Newspapers and books, instruments of mass communication, provided important social comment on a plethora of topics by crusading for reform and making the reader aware of his surroundings. They did so by passively placing that reader at the centre of an active, sometimes fearful world. Only with the transition of the narrative from print-form to electronic-form would the world seem even smaller and society more fragile, unstable and tentative.

C) ELECTRONIC: THE AUDIO-VISUAL REVOLUTION

The electronic age of social communication actually began in the first part of the nineteenth century when the magnetic field of electric

current was discovered. According to the book entitled, How Things Work, Volume I, this led to the first telegraph whose compass needle was deflected by an electro-magnetic field in response to the depressing of its transmitter key.¹⁴ In the 1830's, Samuel Morse developed a more sophisticated model using a stylus and a special alphabetic code, both named after him and incorporating a remarkable system of dots and dashes. Morse made possible the first reliable two-way instantaneous exchange of information over long distances and, in doing so, changed the face of history. From that day forth, information would be the world's most sought-after commodity, seconded only by accuracy and speed.

Initially, telegraphs were installed along railway lines to supplement the physical transportation of people and goods. The newspapers were quick to recognise the benefits of this service and used it to gather, pool and transmit news stories from one centre to another. Gradually, the telegraph linked cities and towns in large communication networks that measured time in minutes rather than days. It brought to the people concerned the immediacy and horrors of war by being extensively employed in the American Civil War and by the British at Crimea. It introduced the secret business of cryptography by means of submarine cables and thus aided a number of activities, including government diplomacy, foreign news services and transoceanic shipping. In short, the telegraph enabled nations to be in touch with one another; it lent an audible voice to lands criss-crossed with its wires but it remained for Alexander Graham Bell to give this voice a distinctly human sound.

Unlike the telegraph which is more "digital" in nature because it sends pulses of electrical information down the wires, the telephone is a true analog system. At the sender end, it relies on either a carbon or condenser microphone which converts, through a diaphragm, an acoustic voice signal into measurable electronic waves. These waves are passed along the line to the receiver which consists of a U-shaped electromagnetic repeater coil and another diaphragm. Disturbances in the coil's magnetic field which, in turn, cause the diaphragm to vibrate, the electronic waves are converted back to an audible acoustic one.¹⁵ In short, the device permits one not only to hear another human voice, especially over long distances, but to converse with it as well! As such, this remarkable but relatively simple communications system, patented by Bell in 1876, had a phenomenal effect upon daily life.

By the late-1890's, the telephone connected cities, towns and villages alike. People everywhere were caught up in the convenience and immediacy of telephone communication. It became a vital extension of themselves in both a private and public sense: private because the sender had direct and personal access to the receiver's ear in a manner normally reserved for lovers and secret-sharers and, paradoxically, public because the telephone also afforded the impersonal exchange of information without face-to-face contact. It had become such an important and powerful tool of communication that by 1983, just over one hundred years since its invention, a telephone could be found in

virtually all homes and businesses in North America. In fact, by this date, most of these had two in possession!

The telephone facilitated the rise of the complex central business districts and skyscrapers because it kept one "tenth floor" in touch with another; it served as a catalyst for the development and extension of the suburbs because one could live away from the workplace and still remain within electronic "hailing" distance; it allowed for significant improvements in police and emergency services because it could "expedite (instant) contact between them and the public";¹⁶ it sustained friendships over long distances; it provided for the increased and efficient accessibility of government and bureaucracy; and, it played an important role in the growth of the news services. The telephone had come to serve society in a manner similar to the printing press but it had adverse effects as well. Amongst other things, it deprived people of direct human contact, invaded the privacy and sanctity of one's home and gave "loneliness" new meaning. In short, the telephone quickened the pace of life as more and more ordinary people "plugged into" its communications network. Messages that might have taken days by mail or hours by telegraph now took only seconds to send and receive. If the telegraph linked cities and bridged continents, the telephone imposed another order of magnitude on social communication by shrinking these distances and bringing the world into one's living room; essentially to one's fingertips.

With the telegraph and telephone, man had spun for himself a web of wires that, taken as a whole, formed a comprehensive, cohesive communications network which criss-crossed the country and relayed his messages from one point to another at the touch of a hand or the sound of a voice. The telegraph transmitted a continuum of dots and dashes while the telephone echoed them in distinctly human tones. It remained to extend this information labyrinth into the air; to free it from the confines of copper cable and make it omni-directional; invisible, yet accessible anywhere within the range of its signal. In 1901, Guglielmo Marconi successfully tested his invention which he called the "wireless," better known as the radio. Its signal could span the Atlantic!

The radio was first used in a two-way capacity as a ship-to-shore and ship-to-ship communications aid. Because messages in either human voice or Morse code could be sent and received over large distances, it was ideally suited to broadcast marine weather reports, issue SOS distress calls and, in one dramatic case, to facilitate the arrest of an infamous murderer, Dr. Hawley H. Crippen, in 1910.¹⁷ The radio worked so well that by the advent of World War II, it had become a familiar and useful urban communications tool.

Throughout the war years, radio continued to enjoy mass popularity airing shows such as "Amos 'n Andy," "George Burns & Gracie Allen," "The Shadow," "Kraft Theatre" and "The Lone Ranger," to name a few. However, it began to undergo a journalistic revolution. Besides its

entertainment format, it also carried the first news of the Nazi invasion of Poland, rallied an English sailing armada to Dunkirk, shocked its listeners with reports of a surprise attack on Pearl Harbor, brought the grim tidings of the fall of Hong Kong, Singapore and the Philippines, cheered an Allied world with stories of great victories at Midway, Sicily and Normandy, and brought to the public information from every front. Radio devoted all its resources to the war effort and, in doing so, became a vital, indispensable extension of government. In addition to the normal broadcast format of music and news, war correspondents used it to issue first-hand reports of a particular battle. Politicians, such as Winston Churchill and Franklin Roosevelt, considered it an ideal platform for patriotic and moving speeches. The military used it to issue information bulletins, the government used it to sell war bonds and the entertainment industry used it to boost civilian and troop morale.

As a direct result of its wartime contribution, radio, and journalism in general, achieved a respectability never before possible. People came to depend upon the medium as a vital, reliable and instant source of accurate, up-to-date information. During World War II, a radio was an important and precious possession. Stories abound with people precariously entering their bombed-out homes to salvage the family radio. Similarly, civilians in occupied countries and P.O.W.'s risked their lives by listening to forbidden frequencies and harbouring illegal sets, all to

monitor the war's progress. For these reasons and due, in equal part, to the "walkie-talkie," mobile communication field packs and "suitcase sets," such as the "Klatmotten" used by German agents, World War II was called the first "radio" war.

With the wide acceptance of American television in the 1950's, radio assumed a new urban role: one of "nervous information" complete with "news bulletins, time signals, traffic data and ... weather reports." ¹⁸ Advances in meteorology and improvements in the wire services made this "up-to-the-minute" urban information possible. Similarly, the invention of the transistor, which revolutionised the electronics industry, made the pocket-sized, inexpensive radio accessible to everyone. People were now privy to all sorts of data concerning their urban habitat. They could listen to it anytime and anywhere they chose and these broadcasts were available twenty-four hours per day on AM and FM frequencies. Radio also occasioned advances in audio physics. This led to stereo recording, transmitting and receiving with such companies as "Sony," "Pioneer," "Blaupunkt" and "SAE" developing and marketing fantastic home component systems in response to stereo records, tapes and FM broadcasting. Currently, AM stereo is available in certain experimental areas while digital technology promises an even brighter future for radio and, in turn, urban communication.

Like all major technical communication innovations, from the alphabet to the telephone, radio shaped and re-shaped society. Everyone

listened and, in a sense, everyone participated in a cultural transformation. Radio brought information to the people and provided relief from the pressures of daily living through music, whether all-encompassing or background. It was therapy. It served as the voice of the city's collective subconscious. Radio was broadcast in a format recognisable anywhere and that was the essence of its power. It emphasised homogeneity. It assumed a standardised dialect and imposed it regardless of geographic location or societal distinction. In short, radio, due to its immense popularity and saturation, had a tremendous levelling effect in a cultural context by fostering a sameness in musical taste, social expectation, material consumption and political activity that has only been eclipsed by the power of television.

Radio also affected the listener's relation with the city by putting him in touch, personally and intimately, with its pulse. It was essentially a private experience involving only the auditory sense in subtle combination with one's imagination. It involved people in depth. It provided a means for immediate "escapism" yet firmly plugged one into McLuhan's "global village." Like the newspaper, radio placed the listener at the centre of an immense but ultimately familiar world. Like the newspaper, it accelerated the pace of in-coming information; in the process, shrinking distance and minimising time. More than the telegraph and the telephone, radio was an "extension of the central nervous system that (was) matched only by human speech itself."¹⁹

It was a potent form of mass communication yet it was a specialist's medium catering to a multiplicity of tastes and concerns. Radio, from an urban perspective, was the domain of the individual; the solitary man in a common world.

Notwithstanding radio's contribution to urban communications, film also provided audiences with entertainment and information; entertainment in the form of visual manuscripts complete with favourite "stars" and information in the form of news-reels complete with expert journalistic commentary. People religiously filed into their local cinemas to see the latest Hollywood extravaganza or, as was the case during World War II, to view the global struggle against the Axis in weekly installments.

Where radio encouraged the unfettered use of one's imagination, ears glued to the speaker, movies plunged one into a dream, supplying both the audio and visual elements. Unlike radio, which always remained in proximity with the real world, movies transported the passive participant into fantasy no matter how "real-world-like" that fantasy appeared to be. While radios were found in every household and designed to look like another piece of furniture, special buildings were created exclusively for motion-picture viewing. That audiences were obliged to seek out this particular form of entertainment and information, unlike radio which brought it into their homes, was a small price to pay for the all-important visual component. People willingly filled these movie-houses because they wanted a temporary albeit complete escape from

the pressures of daily living. For example, the "Dirty Thirties" was ironically considered to be the "Golden Age of Entertainment." With unemployment soaring and the soup-lines lengthening, audiences were effortlessly carried away with celluloid tales of justice, riches and happiness. Unfortunately, as with all mass media, it presented a vision of life not immediately accessible to the average citizen yet did everything to persuade him to the contrary. Like radio, the movies helped standardise "taste" and prompted a material sameness with no significant cultural distinction. Together with other forms of mass communication, such as telephones, newspapers, books, magazines and radio, film exerted a tremendous pressure on urban culture. As movies played across North America, each preaching similar messages, so cities gradually came to resemble one another both socially and architecturally. In short, film, like radio and newspapers, extended the town-crier image by adding still another dimension to urban communication: it lent its unique visual component to a collective vision of life, something television would take even further.

Even more than film, radio, newspapers and telephones, television changed the pace of urban life. It multiplied the number of information channels available to the individual and, most importantly, added a moving, visual reference not possible, by definition, in these other communications media with the exception of film. Unlike film, television passively placed the viewer in an "eye-witness" context; a

"voyeur" in the comfort and privacy of his own home. No longer did he have to seek out a special building to satisfy his entertainment and information needs. Even more than film and radio, television helped standardise mass behaviour by minimising cultural differences and emphasising a material sameness. Social expectations were made collective as never before.

Television acted as a societal window. Television audiences, in the sanctity of their living rooms, saw aspects of the world previously unknown to the vast majority of them. Seeing these events through the magic of television was to have a profound effect on people's attitudes and tolerances as they watched live and sometimes numbing coverage of crime hearings, political debates, election-night results, battle-zone reports, "McCarthyism," major public-figure assassinations and NASA moon-shots. This coverage was usually enhanced with editorials and "expert" commentary whose purpose was to clarify a certain issue or provide a fresh and informative interpretation of the particular event. Unfortunately, these supplementary viewpoints were all too often taken as "gospel" by viewers either too lazy or incapable of forming their own opinions about a specific news story. Other problems were created as well.

Television, in its constant quest for more newsworthy material, often found itself inadvertently transporting an otherwise "non-story" into mass prominence merely by being present at the scene. In fact,

many issues became "media-events" largely due to the power of the television camera to capture a plethora of images and the necessity of filling the station's daily news format. People were wont to perform. As such, it was not surprising to later learn that some participants had purposely called the media before deliberately staging an event. One might ask how effective demonstrations advocating this or that urban planning concern would be if the television media were not duly present. Added to this was the problem of some television journalists acting as crusaders of issues rather than reporters of facts. By their advocacy, certain news stories would surface that were not strong enough to stand on their own volition. Nevertheless, from the public's perspective, the more the audience saw and heard, the more they sought to enhance their two-dimensional, electronic view of the world. With its customary dexterity, television continued to oblige their appetite for information and commentary on an ever-expanding scale. The commonplace, now choreographed into the heroic, stood alongside the truly remarkable and the people loved it. Housewives, briefly caught in the camera's eye during a "man-in-the-street" interview, a minor public official contributing to a local story or a witness to some catastrophic event, became fleeting neighbourhood "stars." When "Team Canada" defeated the Soviet hockey team by one last-minute goal in Moscow, 1972, television was there to capture it for the North American audience. When people rioted through the streets of their ghetto leaving a wake of destruction

and misery, the viewer was electronically taken to the scene. When man first stepped on the surface of the moon, an event as fantastic as the 16th century Copernican revolution in which the sun, not the earth, was proved to be at the centre of man's universe, television was there as well. A whole world was able to see, through the power of video and the spaceships that carried the equipment, eerie and wondrous pictures of lunar landscapes, Martian terrain, Jupiter's surface and Saturn's rings. Like the effect of flight upon transportation, the effect of television upon the urban condition has been nothing short than incredible.

In the course of this success, the technology and programming techniques of the medium grew astronomically to meet the insatiable desire for more information, be it of a trivial variety or important journalistic coverage. The invention of the transistor, with its small physical size and tremendous ability to amplify weak current many ten-thousands of times over, occasioned the first-possible development of light-weight, portable video equipment just as it revolutionised radio manufacture. Television cameras and receivers became more manageable and sophisticated as solid-state technology relegated most vacuum tubes to history. By the mid-1950's, video-tape recording had become an industrial reality. By the mid-1970's, printed circuit boards had given the design and maintenance of television equipment new impetus. By the early 1980's, incorporating the most remarkable electronic advancement to date, the silicon micro-chip, television cameras had become the size of

their 16mm film counterparts; VTR and microwave equipment occupied the same space as a briefcase; and television receivers could be worn as wristwatches²⁰ with the invention of a wafer-thin LED "picture-tube." No longer were television origination, transmission and reception facilities confined to the traditional studio. Now, facilities were so portable that one could literally broadcast from anywhere one chose, be that a helicopter, a grain elevator or the steps of Parliament. By 1983, information gathering and broadcasting had become possible on a scale previously impossible to comprehend. It had even spilled out of the professional sector and into the personal realm of the consumer: home video equipment, including small colour cameras, cassette-recorders, games and disk-playback machines had become a further extension of the process which constantly courted the public's need to receive, store and disseminate information at and for one's exclusive pleasure.

In short, television had had a profound effect upon the citizen's perspective of urban life. It has made him intimately familiar with a range of complex issues concerning the social and spatial spheres of his habitat. It has transported him, via video imagery, into those areas of the urban and national environment he would otherwise have little cause to explore. It has put him "face-to-screen" with the immediate and the remote. It is a wholly remarkable medium.

Television is broadcast in high-resolution colour, saturates almost 100% of the North American market and will soon be available in stereo and higher-definition, large-screen brilliance. Similarly,

cable television provides a typical urban community with stations otherwise too distant to be received from that area and will soon assume a "two-way" status, via videotex. At present, satellite feeds carry items shot anywhere in the world; public broadcasting, such as the PBS Network, gives consumers a non-commercial alternative to major network programming; citizens are gaining important entry to the video airwaves via community cable television, such as Winnipeg's Cable 13 VPW, through better public-access regulations vigorously enforced by the Canadian Radio Television Commission and the U.S. Federal Communications Commission; pay-TV, for a user-fee, offers coverage of specific items, such as sporting events, first-run movies and twenty-four hour news; while video information systems, such as Telidon, Prestel and Antilope, connect home monitors to central computers. The list is limited only by one's imagination. It adds up to a video technology whose effects are not only felt by many people in many lands but, to a large degree, actually influences their perception of reality and their subsequent interactions. What effect videotex will have and to what extent it will change the urban environment remains to be seen. One thing is certain; if its social impact is anything like that of television, the change will be significant, far-reaching and durable.

"Videotex" is a newly-coined word that many people are beginning to use but few understand. In its simplest form, it describes

... a mass market, two-way information delivery system in which the user can call information to a TV screen from computer storage using a hand-held keypad. 21

"Videotex" becomes complex when it is used to describe a plethora of electronic "wizardry" that accommodates such future applications as opinion polling, telebanking and shopping, recreational education, electronic mail exchange, video games, specific news, weather, sports and market information and televoting; all employing a visually colorful and astonishing system of dots, text, alphabet and graphics. Specific examples are contained within the Appendix.

Basically, there are two types of videotex: "viewdata" and broadcast videotex or "teletex." While viewdata is correctly referred to as videotex, due to its two-way interactive nature, there is now consensus in the new industry that teletex, a one-way interactive system, also falls within the scope of videotex due to some overlapping of user-related services.

Broadcast videotex or teletex, according to Pierre Gaujard in his essay entitled, "Videotex 1980, State of the Art: France,"²² is a one-way interactive system where the user has no access to the data base and so chooses to select information from a continuously-broadcast electronic card index which loops every five to twenty seconds inside the terminal. If the index co-exists with commercial programming on an ordinary TV channel, allowing the simultaneous display of each, such as captioning for the deaf, its information pages are contained in the vertical blanking interval or the black spaces between each television frame. As such, this system can accommodate approximately 150 to 300

pages of material and is marketed, amongst others, by Antilope Didon of France, Ceefax and Oracle of Britain and Qube of the United States. If a broadcast channel were made exclusively available, such as those used by Reuters News Cable, Compuserve, Infoglobe and Newstex, then the amount of information continuously accessible by the user, via his keypad and video screen, has risen to approximately 5000 pages! The access to these pages, whether 150 or 5000, is a function of the bandwidth allocated for their transmission. If one wanted to access more pages, then more bandwidth would have to be made available.

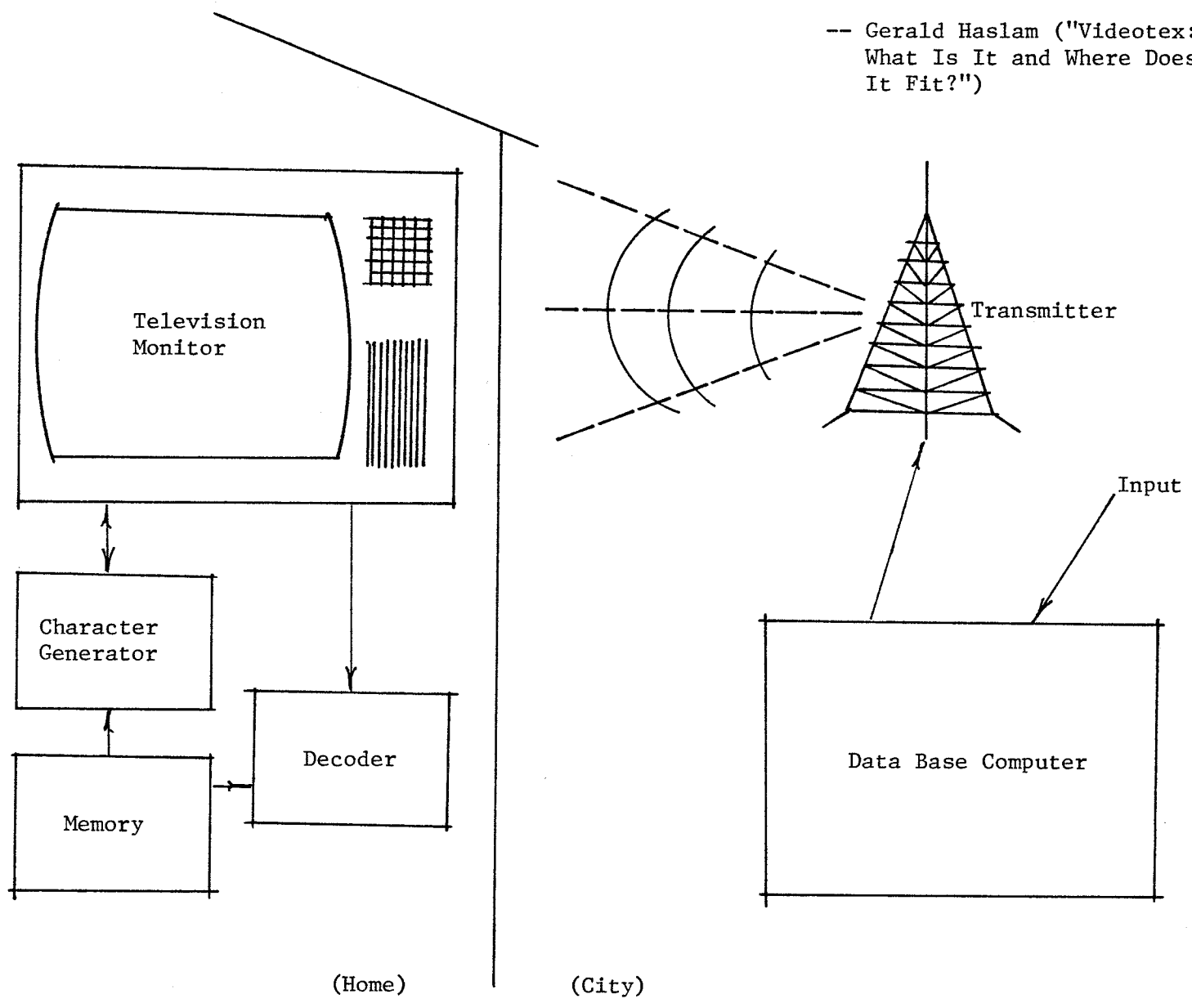
Figure 3. illustrates a general teletex system. A central computer contains a variety of electronically-coded information collected from many sources including magazines, books, newspapers, catalogues and technical papers. A user accesses this data by programming his keyboard to store pages from the mainstream central card index on his own personal memory unit. He also has the option of programming it to monitor the card index and store a piece of coded information only when it appears. This information can be up-dated as well. Unlike viewdata, teletex is transmitted one-way from the central computer to a user's home terminal. In this respect, it plays a role very similar to that of the town-crier by bringing information to the user.

Viewdata is a two-way interactive system that,

... in its present stage of development, utilizes a telephone line or a two-way coaxial cable to carry demands

Figure 4.
BROADCAST VIDEOTEX (TELETEX) SCHEMATIC

-- Gerald Haslam ("Videotex:
What Is It and Where Does
It Fit?")



for information to the computer from the computer back to the consumer. The amount of material available for retrieval is limited only by the storage capacity of the host computer and the imagination of those writing and drawing in this new medium.²³

Viewdata is an amazing medium because it can be used in a variety of ways: as an information retrieval system, like teletex, to an information input system such as the creation, display and transmission of fantastic video artforms. Unlike teletex, the viewdata user has direct and powerful access to the main data base. Figure 4. illustrates this system. In it, the data base, through a local interface, such as a keyboard terminal, CRT* screen and modem,+ may be modified by the addition, deletion, distribution or classification of information. For example,

Direct ordering of goods or services via videotex requires adding to the information stored in the central computer. A "yes" to read something is not the same as a "yes, I'll buy it." The latter is information that must be communicated to the seller, not just internalized by the computer's information management system.²⁴

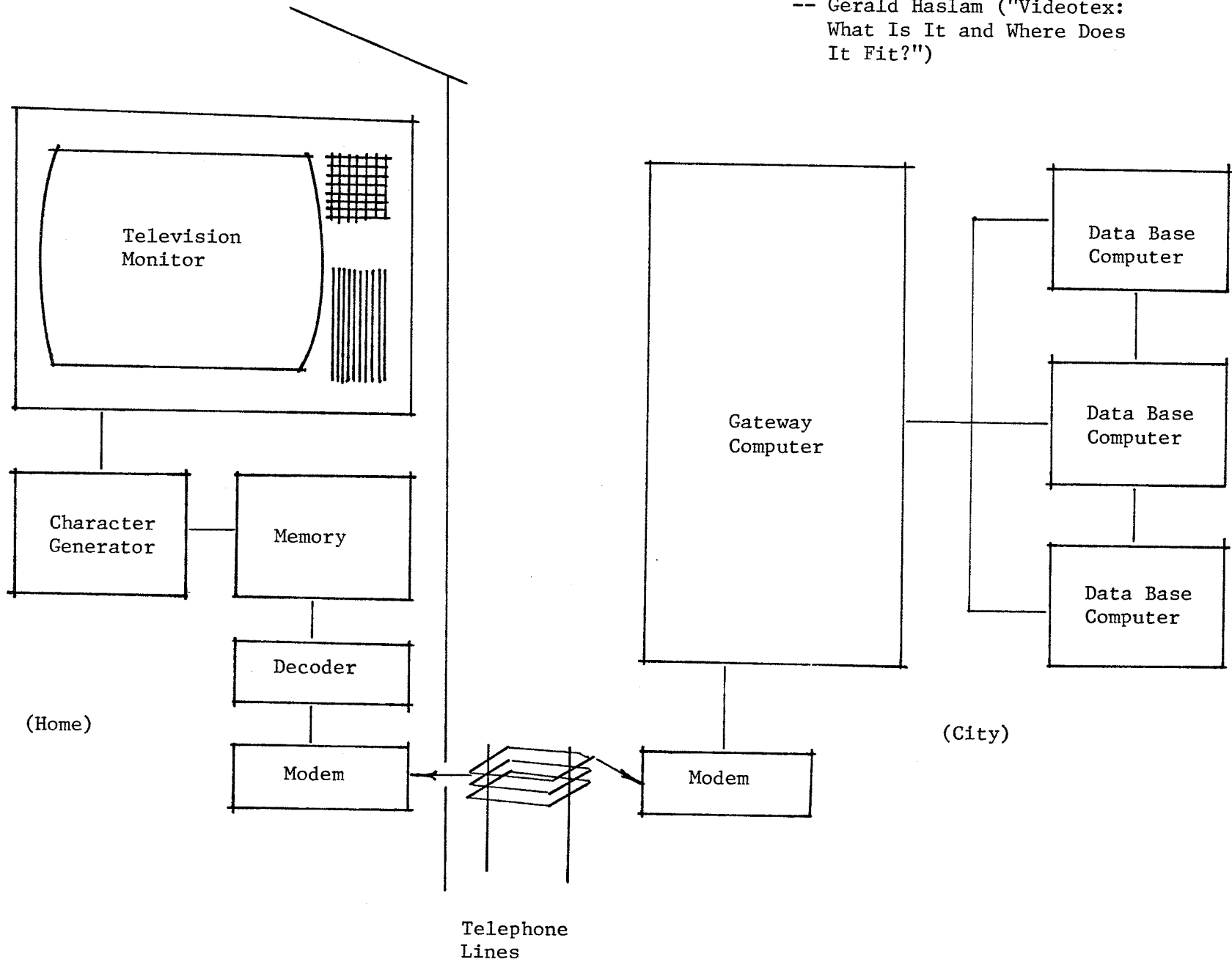
This is only possible with viewdata. By having direct access to the central computer, it subsequently has a two-way capacity to change a

* CRT: cathode ray tube -- the "picture" tube in a television set

+ modem: telephone hook-up or coaxial link to main computer

Figure 5.
INTERACTIVE VIDEOTEX (VIEWDATA) SCHEMATIC

-- Gerald Haslam ("Videotex:
What Is It and Where Does
It Fit?")



portion of its data base. The town-crier has become an out-moded image.

There are at present in the world two major first-generation and one major second-generation viewdata systems. They are, respectively, Prestel of Britain, Antilope Titan of France and Telidon of Canada.²⁵ While Prestel, which came on-stream in September of 1979, has been basically "de-bugged," its video display technology uses more primitive graphics than either the French or Canadian systems. Antilope Titan and Telidon use a complement of dots, text, alphabet and graphics which are very sophisticated in nature but it was Telidon that captured the lucrative American market in late-1981. The reason is simple. Telidon comes closest to meeting all the criteria of the ideal videotex system which includes, according to Douglas Parkhill in his essay entitled, "Videotex 1980, State of the Art: Canada," data/base/display independence, artistic flexibility, variable information production, efficient data transmission and storage, information processing, terminal-to-terminal (ie. client to client) communication, transmission over any media and, finally, open-ended growth as technology progresses.²⁶

In short, videotex technology promises to transform the urban environment from both an architectural and social perspective. Videotex terminals can be connected to central computers vis-à-vis vast electronic highways consisting of fibre-optics cabling.²⁷ This affords an important luxury: they can be located virtually anywhere, limited only by the speed

of light and the human interface. As such, it may be that for a large portion of the workforce not requiring direct face-to-face contact, the home will become the office of the future. Amongst other things, this will have a tremendous impact upon transportation and, in turn, on urban design. Traffic, as it is presently understood, may assume entirely new characteristics which would necessitate a re-thinking of traditional urban lay-outs. Similarly, the "electronic home-cottage," to paraphrase Alvin Toffler,²⁸ will also alter the traditional working arrangements between husband and wife. This, in turn, will place new emphasis on the family as the centre of society. With the right values imparted to future generations, urban habitats could assume a physical beauty once envisaged by the "City Beautiful" movement but later dismissed as unrealistic.

The services offered by videotex technology, as facilitated by a complex wired environment where urban and rural boundaries merge, are astounding in their variety and their implications for the future. Experimental programmes, such as Project Grassroots²⁹ and IDA,³⁰ Elie St. Eustache³¹ and Helicopter Bird,³² not only confirm the utilitarian potential of videotex and the electronic highways that carry its information, they open new vistas in human interaction. These include, in part, new approaches to education, new means of communication for the blind and deaf, new avenues for artists and writers, new areas of commerce for business, new emphasis on participatory democracy, new

forms of leisure and new opportunities for a planner/citizen communication. One could envisage various citizens dialing up information regarding certain zoning by-laws on their teletex system or discussing with a planner, via viewdata, development options on a particular piece of property. Similarly, it would not be unrealistic to imagine a citizen responding, through a videotex exchange, to a planning survey regarding a proposed master-plan. The possibilities are extraordinary. Like television, videotex technology will involve people in ways limited only by the imagination. Like television, it adds up to a significant societal transformation; ultimately, an urban transformation.

* * * *

CONCLUSION

This chapter has suggested that communication advances in the course of history have each had a profound impact upon the urban environment. The invention of the calendar placed man firmly in a linear and sequential tradition with a definable past, present and future. No longer would the concept of time appear unstructured and inconsequential. The calendar predicted the seasons so accurately that man was able to plan ahead. His nomadic wandering could cease in favour of a static community sustained by the fruits of a bountiful harvest. Each successive communications advance has had a similar effect. The invention of writing made possible

the recording and storing of grain surpluses. The development of the alphabet afforded unprecedented intellectual freedom and heuristic pleasure. The manufacturing of paper and the invention of the printing press occasioned a spread of knowledge, the emergence of large-scale urbanism and an insatiable scientific curiosity. Books and newspapers brought literacy to the masses. Telegraphs, telephones, and telexes put people in touch with one another over great distances while radio, film and television added a new dimension in the exchange of ideas and information. In short, these historical advances, from the most rudimentary to the most sophisticated, made urban development possible. They established, many times over, the city as an evolving centre of foodstores and material wealth; of trade and commerce; of philosophy and science; of religion and government; of industry and manufacturing; of learning and teaching; of literacy and enlightenment; of information and knowledge. The innovations of the current electronic age are a continuation of this metamorphic trend. Seen against a backdrop of past examples and impacts, there is ample evidence that present and advanced communications technology, with its implications for a wired city, will exert a powerful influence on future urban development. Planners must weigh this in an historical context by extrapolating the lessons of the past into the guidelines of the future. Television, videotex and the technology that they represent are but extensions of an on-going process of physical, societal and economic change.

* * * *

FOOTNOTES -- CHAPTER III

- 1) Harold Innis, The Bias of Communication (Toronto: University of Toronto Press, 1971) pp.39-40.
- 2) T.F. Carney & B. Zajac, From Fable to Cable: How Messages Shape Society (Winnipeg: The Natural Resources Institute, University of Manitoba, 1977) p.36.
- 3) Ibid, p.32.
- 4) Ibid, p.54.
- 5) Ibid, p.52.
- 6) Supra, Note 1, p.127.
- 7) Supra, Note 2, p.64.
- 8) Ibid.
- 9) Marshall McLuhan, Understanding Media: The Extensions of Man (New York: Signet Books, 1966) p.156.
- 10) Supra, Note 2, p.75.
- 11) Supra, note 1, p.25.
- 12) Ibid, p.145.
- 13) Supra, Note 2.
- 14) How Things Work: The Universal Encyclopedia of Machines, Vol. I (Frogmore, U.K.: Paladin Books, 1977) p.106.
- 15) Ibid, p.108.
- 16) Richard Meier, A Communications Theory of Urban Growth (Boston: The M.I.T. Press, 1965) p.99.
- 17) Supra, Note 9, p.217.
- 18) Ibid, p.260.

- 19) Ibid, p.264.
- 20) See Appendix -- Sony television wristwatch.
- 21) Richard Larratt, Ed., Inside Videotex: The Future...Now (Toronto: Infomart, 1980) p.7.
- 22) Pierre Gaujard, "Videotex 1980, State of the Art: France" in Inside Videotex: The Future...Now (Toronto: Infomart, 1980) p.8.
- 23) Gerald Haslam, "Videotex: What Is It and Where Does It Fit?" in Inside Videotex: The Future...Now (Toronto: Infomart, 1980) p.8.
- 24) Supra, Note 22, p.34.
- 25) See Appendix -- Telidon.
- 26) Douglas Parkhill, "Videotex 1980, State of the Art: Canada" in Inside Videotex: The Future...Now (Toronto: Infomart, 1980, pp. 12-13.
- 27) See Appendix -- fibre optics.
- 28) Alvin Toffler, The Third Wave (New York: Bantam Books, 1980) pp. 194-207.
- 29) See Appendix -- Project Grassroots.
- 30) See Appendix -- Project IDA.
- 31) See Appendix -- Elie-St.Eustache.
- 32) See Appendix -- Helicopter Bird.

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CHAPTER IV

TELEVISION

The abilities that we have in the way of memory and imagination, of symbolism and emblem, are all conditioned by the sense of sight. It is sight which dominates this kind of sequence, how we think of things that appear in the mind...

-- Jacob Bronowski (The Origins of Knowledge and Imagination)

INTRODUCTION

The purpose of this chapter is to examine the most powerful form of mass communication known to man: television. In a discussion which encompasses the place of television in society, including its journalistic function and its effect upon the viewer, it will be demonstrated that urban perception is coloured by this current electronic information medium. Planners, if they are to understand the nature and extent of this perception, must have no illusions as to the pervasive power of television in society. Not only is it a forum for bringing issues to the attention of the public and, contrariwise, a means through which concerns can reach government, it is a vital extension of society. It colours the collective consciousness. In fact, television is a cultural mirror but, most significantly, it is a shaper of the cultural image. It shapes opinion.

* * * *

A) THE ROLE OF TELEVISION IN SOCIETY

Television mirrors society. No other media form, including radio, has had such a side and far-reaching effect in such a short period of time. Television reflects, however imperfectly, society's values and norms; its dreams and fantasies; its tolerances and prejudices; its humour

and sadness; its many achievements and failures. Television has the capacity to distort the truth but it also has the ability to present it honestly and clearly. Television has the immense power to shock, to amaze, to frighten, to inform but it can also occasion an intimate and personal sense of participation. It reflects the culture; it interprets the culture; it shapes the culture. Television is a pervading force.

The number of viewing hours spent by each household is remarkable. People devote an average of five or six hours per day watching their sets and have done so for a significant portion of the last twenty-five years. The better educated in society may be more selective in their programming fare but they are generally within one hour of the viewing norm. This is not to say that these figures indicate constant and uninterrupted attention but merely to demonstrate that television is broadcast into most living rooms almost one-quarter of every day!

Given this not unwelcome invasion of privacy and the length of its daily duration, it is no surprise that several theories attempt to explain the semantic impact of television upon society. For Marchall McLuhan and Quentin Fiore in their book entitled, The Medium is the Massage (sic): An Inventory of Effects, man is a creature coloured by his perception of reality and his tacit cognizance of the unknown. He cannot step outside of himself. He is shaped by his senses; all personal energies flow through them; all awareness and experience is defined by them. Thus man, the thinking, sensorial organism, can only extend his being

by extending the limits of his senses with the proviso that his perception and cognizance are further coloured by this extension. It is the media which furnishes the means; McLuhan's "massage" (sic). It is so pervasive and enveloping in its "personal, political, economic, aesthetic, psychological, moral, ethical and social consequences"¹ that it cannot help but become an extension "of some human faculty -- psychic or physical."² As such, man is cast into a "whirlpool of information."³ His immediate and personal world has, through the media extension of his being, become a global village. His is a state of global being, a function of McLuhan's "simultaneous happening."⁴

Television is the principal media extension and the logical complement to the human senses. It is a new window of perception and cognizance; it demands the full attention and total participation of one's being; "it will not work as a background;" it must engage. In fact, television has been so successful that

... it has heightened our general awareness of the shape and meaning of lives and events to a level of extreme sensitivity.⁶

For McLuhan and Fiore, television, that vital extension of the central nervous system, has the capacity to alter man's view of the world; ultimately, his view of himself.

Another theory concerns television's potential as an instrument of

broad social reform, due to its immense popularity and near saturation. Its role is essentially no different from that traditionally played by newspapers. Amongst other things, both media forms give shape and meaning to public opinion, expand the cultural pool of ideas, create a mass world-view and provide important social and political commentary on issues of the day. If the power of television as a vehicle for reform is in any doubt, consider the staggering success of TV evangelism with its multitude of religious programming and its influx of viewer dollars. Consider the impact of various environmental groups voicing their anti-pollution concerns to the TV cameras. Similarly, consider the achievement of the federal government's "participaction" (sic) advertisements and the non-smoking campaigns sponsored by the lung, heart and cancer foundations. Television, through its power to inform, has the power to reform.

A novel but curious theory compares the imagery of television with the substance of dreams. In his essay entitled, "Television as Dream," Peter Woods argues that the two media have much in common.⁷ As dreams are highly visual and symbolic, giving expression and shape to the deepest human emotions, so television mirrors the collective psyche, lending matter and emphasis to the most basic of societal values. As dreams are wish-fulfilling, so television acts as a substitute for reality and experience by creating for the viewer a

more compelling version; by propelling him into a fantasy world made powerful by its "larger-than-life" appeal. As dreams were once dismissed as trivial and disjointed, so television is criticised for its banality and mindlessness pierced, only on the most rare of occasions, by moments of great beauty and significance. Like dreams, it may be in the triteness and repetitiveness of television that certain societal truths can be gleaned. As dreams are so powerful that the mind can only benefit by consciously forgetting them, so the subconscious weight of television can only be managed if packaged into the most inoffensive of forms. As dreams often incorporate material, however disguised, from recent experience, so television often draws upon events real and current to the viewer. Woods invokes these comparison to suggest that the interpretation of television as dream may have some therapeutic social value in the same way dream analysis produces helpful results in an individual.

For Woods, television is a dream-equivalent. He believes it to be a vivid expression of the collective subconscious in much the same way a dream is the product of an individual's innermost psyche. As the individual unconsciously creates his visual muses, so society creates its visual programmes. This is a shaping process involving underlying meanings and repressed truths. The object is to reveal them and learn by them. By understanding his dreams, an individual has a better grasp of his reality. Similarly, by understanding the imagery of television,

society has a better, more complete view of itself. For Woods, his "television as dream" theory involves comparisons that are necessary and sound because he believes television engulfs society by immersing it in a plethora of latent imagery. Like dreams, television surrounds the collective consciousness and, by penetrating to the very core, extends the collective subconscious.

Television is a reckoning force in society. An average of almost two thousand man-hours per year are devoted to television viewing. It has affected not only the form of other mass communication media but the very foundation and core of societal values. It plays such a vital role in entertainment, education and information, and its subsequent impact has been so tremendous, that it is largely taken for granted, being too pervasive to comprehend. While not ignoring the benefits of television, Louis Kronenberger in his essay entitled, "Television's Impact on Our Civilization," points to its many shortcomings. He stresses that as television is a huge entity, so its failures and indecencies are equally substantial and consequently significant. For him, this is the essential tragedy of television.

The particular nature of what is bad in what TV does, the particular nature of what is bad in the way it does it, indicates what seems to me the "outstanding" effect of TV upon our civilization -- which is that it has made it less civilized. ⁸

To support his point, he draws upon the predominance of mass programming characterised by mediocrity and triteness. Plot devices surrounding "sex, gossip, violence, material success, cash itself" ⁹ do nothing to enhance the civilised pursuit of excellence. Moreover, the indecent invasion of privacy under a guise of truth and the viewer's "right to know" is a sham. Candid shots of accident victims, "the sick, the unhappy and the doomed" ¹⁰ are more important for their entertaining shock value than for their therapeutic social value. Similarly, there is the business of television which is solidly built upon profit and pleasure; egocentricity and vanity.

(T)he alluring daughters and nieces of art --
 Language and laughter, Melody and Declamation and
 Dancing -- are constantly bedded and wedded to the
 paunchy sons and nephews of Mammon. The general
 effect is about as civilized as gluttony. ¹¹

For Kronenberger, television is, with few exceptions, a wasteland of taste and intellect. "There has been nothing too elegant for it to coarsen, too artistic for it to vulgarize, too sacred for it to profane." ¹² His is a bleak picture closely punctuated by reality.

George Comstock in his book, Television in America, does not entirely disagree but, for him, the role of television in society is much more complex and permeating. He states that it is so completely meshed with the framework of society that it is often mistaken for a passive and unassuming minion. Comstock emphasises that this view could

not be farther from the truth. Given the dedication of time to television viewing that might otherwise be spent elsewhere, television is an immensely powerful force in society. It is a consuming medium, exploiting the best and worst of man's endeavours. It serves curiosity, a process that for Comstock enriches understanding and experience by imagining distant realities, but it also fosters materialism and vulgarity where life is reduced to meaningless simplicity and shameful poverty of expression. Television is a combination of contraries. It has changed society's view of itself by bringing it into focus with itself. This has caused a necessary re-shaping of the image and is, for Comstock, the essential truth of television, the centre of its awesome strength and influence. ¹³

Sterling and Kitross concur but they illustrate the power of television and its role in society from a slightly different perspective. Having spent the better part of a book ¹⁴ discussing the history of broadcasting, they briefly speculate on a society without television, and radio as well. It is a vision of a world in which two thousand hours per year per person are suddenly available for other, perhaps less passive, pursuits. It is a vision of a world not unlike that at the turn of the century. Family and community appear more stable owing to an absence of exposure to other lifestyles, distant and foreign. McLuhan's concept of "global village" pales in the light of a more intimate allegiance to one's immediate surroundings; it has no relevant meaning. Education is more concerned with literacy. News of national

and world events takes longer to reach the populace, their impact difficult to grasp in the first analysis. Similarly, fads and social trends travel slower and less pronounced; sports emphasis local participation and skill; and finally, injustices of all sorts prevail in a world lacking the means to expose them quickly and completely. As such, life would appear to proceed in a gradual and leisurely fashion but it would be a life more limited in scope and vision. Sterling and Kitross admit to the attraction of "reverse futuristics"¹⁵ modern society. For them, it is a cyclic viewer event.

The violence and sex, the beauty and the laughter, the emotion and the reason provided by its ambiguous mirror, which both reflects and projects, has affected and will affect (the viewer). They, in turn, will affect ... society, including, in full circle, the broadcasting media.¹⁶

It is a deep, not entirely beneficial effect and it is exercised daily.

In short, television is representative of a world characterised by instantaneous and "simultaneous happening."¹⁷ The old, historic world of order, points-of-view, familiarity and dependability has perished under a ferocious electronic onslaught. The new world, occasioned by the role of television, is one of amplified information which touches, surrounds and permeates. According to McLuhan and Fiore, it has widened the family circle by supplementing the parents; it has replaced

the old neighbourhood with one of global dimensions; it has exposed the folly of an outmoded classroom education, premised as it is on 19th-century concepts of information access, in the wake of 20th-century total information bombardment; it has exchanged jobs and objectives for the new function of role-playing "which consists of taking on a whole variety of jobs at once;" ¹⁸ it has encouraged a new forum of political participation and awareness by bringing the world into the living-room; it has extended the physical and psychic senses.

The wheel is an extension of the foot. The book is an extension of the eye; clothing, an extension of the skin; electric circuitry an extension of the central nervous system. ¹⁹

Television has changed everything, not so much by its content as by its nature; its positioning of the viewer. "In television, images are projected at you. You are the screen. The images wrap around you. You are the vanishing point." ²⁰ This is the fundamental role of television in society which is ultimately, its fundamental truth.

B) NEWSROOM ORGANISATION

Television news, be it network or local, is based upon a simple viewer-reinforced concept: what is televised must, by definition, be important and newsworthy. True or false, the concept works well for

television journalism. Television news is very popular and, like newspapers, very necessary in a complex society dependent upon instant communication and often distant knowledge.

"News" provides an individual with new information about his surroundings and encompasses all aspects of scale, whether international, domestic, regional or local. Because most people are insatiably curious and because television can reach many people simultaneously, news gathering and its subsequent presentation is a significant part of life. Television news contributes to an individual's sense of the world; it influences his thinking by supplementing, through its own unique imagery, those already the property of the individual. Consequently the power of television news is directly proportional to its diversity and range. In a society where most events occur outside the immediate domain of an individual, it transgresses differences of culture, economics, politics, religion, geography and so forth by bringing to the attention of that individual a variety of information that would otherwise go unheard and unnoticed. This variety becomes a common viewer experience and, ideally, gives the individual a more complete view of society. The better he is informed, the better will be his decisions and actions.

Television news has a traditional, almost universal format. With an appropriate slide as background, the news anchorman lends continuity to the newscast by reading some stories on camera, narrating others

over moving visuals and introducing supplementary but remote video/ audio reports. While there are minor variations, such as two anchor-persons instead of one, the format is found at both the network and local level with the latter adding sports and weather coverage to its package. Notwithstanding this similarity, it is a fact that the network newscast appears more prestigious. This is due to the scope of its respective coverage and the facilities available to it. Using national and international wire-feeds, satellite hook-ups and large staffs, including reporters stationed in every major Canadian city as well as throughout the world, network newscasts fulfil a role outside the realm of their local counterparts and, more importantly, beyond their resources. In contrast, the local stations derive the majority of their news events from local sources including press releases, newspapers, police/fire/ ambulance radio monitors, businessmen, government officials, politicians, citizen interest groups, eye-witnesses and so forth. Admittedly, local newscasts do use network news-feeds and carry items of national or international significance when not in immediate conflict with network coverage, but their main job is to present newsworthy events of local or regional concern.

Equipped with wire-copy telexes, network news-feeds, side-band monitors, typewriters, tape-recorders, lights, cameras and ENG* vehicles, news personnel have the responsibility to translate the events of the

*ENG: "Electronic News Gathering"

day into a narrative news form. While there is genuine difficulty in deciding which events are newsworthy and which are not, this question is overridden by the daily concern to fill the hour-long news format. As such, all of their efforts are directed toward the principal newscast, relying as it does on spontaneous occurrences, such as traffic accidents and fires, established in-coming news sources, such as wire-copy and network feeds, reporter features, such as strikes and worker discontent, and pre-planned events. In this last case, it is sometimes possible to anticipate news coverage. A large amount of news is generated through press conferences and releases, public briefs and notices, the publication of reports, studies and plans, official interviews and announcements and so forth. Since these events are scheduled, it is relatively easy to give reporters and cameramen such assignments well in advance. There is also some news generated through the use of informal, "off-the-record" contacts. Most reporters are privy to information leaked from government officials, police departments, businesses, unions, disgruntled citizens and the like. By following up these "anonymous" leads and by piecing together the resultant evidence, great investigative news stories emerge. The most celebrated is the Washington Post's exposure of the Watergate break-in scandal. Unfortunately, there is also the problem of "staged events". As previously discussed in Chapter III, the news camera has the power, through sheer presence, to generate into newsworthiness an otherwise

non-story. For example, the "spontaneous" demonstrations that occurred during the takeover of the U.S. Embassy in Teheran were expressly created for media coverage by the Iranian student participants. Every time a television news crew arrived at the scene, and until they left, anti-American chanting would be commonplace. There were even times when these crews, off-duty, were forced to point their cameras at the crowd or risk mob violence. Similarly, during an anti-cruise missile demonstration in front of the U.S. Consulate in Winnipeg, an American flag was burned when the perpetrator was sure the cameras were turned on him. There are many such examples but in all cases, morality aside, the result is still "news" and its subsequent communication to the viewer.

In short, news reporting is premised upon good communication. Communication is the essence of the news operation's business and it cements together all purpose. Newsrooms are organised on an open-communications model where all participants have the journalistic right to voice their opinions in democratic fashion, both individually and collectively. In this model, feedback is circular, continuous and usually instantaneous. Newsrooms are also organised for quick reaction to an event. Since news is "new information", it is a constant struggle to report it, objectively and accurately, as it happens. To this end, good communication and instant reaction collaborate to package and present a solid news story. Moreover, this interaction, built into the newsroom structure, determines the impact of the story upon the public.

C) NOISE CONSTRAINTS

Since the essential business of a television newsroom is the communication of information to its viewers, it is not surprising to find this same department burdened with "noise." "Noise" is defined as anything that interferes with the formulation, transfer and comprehension of a message from sender to receiver. It is a condition to be eliminated or reduced. In meeting the daily goal of an hour-long evening news broadcast, the news staff is caught up in a cauldron of communicative activity where information accuracy and understanding are vital. Any interruption or interference in the quality and flow of this exchange has the serious potential to jeopardise the news department's objective and the public's right to responsible, balanced journalism.

Major contributors to noise include such constraints as conflicting goals, compromised standards of excellence, deadlines, ratings and technical failures, all of which are pursuant to the most significant organisational constraint: the daily news format.²¹ Its purpose is to specify show order and all effort of the day, with the exception of long-range production, is directed toward the fulfilling of its requirements. Some formats include a standard news, weather and sports package with current event features and interviews making up the balance of the programme. Others devote the whole of the hour to news, weather and sports but break the news into a number of distinct segments and

include room for a station editorial. Similarly, some formats provide for two anchor-persons instead of one while others include time for "happy talk" amongst on-air personnel. Since the evening news not only informs but entertains, all format variations are an attempt to garnish more ratings. As such, formats appear stable on a daily basis, giving the viewers the assurance of long-term integrity, but in fact are adjusted over time to reflect changing viewer appeal.

There are also restrictions of time that the format imposes, such as deadlines and segment lengths. In the former, reporting and editing deadlines must be strictly observed. Reporters in the field are responsible for filing their stories in sufficient time to be edited and produced for the evening news. Anything that occurs after this filing is either lost or part of the next day's assignment follow-up. Similarly, VTR editors are responsible for packaging an item as quickly as possible so that its length can be calculated into the format. Deadlines also affect which stories are aired and which are not. Since the evening news is a "live" production, a late-breaking item is unlikely to be included in the line-up unless its significance is enough to disrupt the carefully-planned format.

Segment length is the latter constraint. Out of sixty minutes of programming, the actual news portion occupies an average of twenty-five minutes while sports has fifteen, weather five and editorials two. Where current event features and interviews are part of the

production, news coverage may be reduced to a maximum of fifteen minutes. Commercials are allotted a total of twelve minutes as per a CRTC restriction which limits the number in any one hour. Out of all the news stories contained within the twenty-five minutes of the first example, at least half are obtained from the wire services and the network's "daily news service" (DNS) which requires only a written introduction to each story. However, an individual station is at liberty to feed one of its own local or regional stories via the wire service or across the DNS network should that story warrant national attention. These daily-received DNS items and wire-copy account for fifteen to twenty minutes of the newscast leaving only five to ten minutes for locally-produced stories. If there is an abundance of local or regional stories available, the problem is one of choosing which items are suitable. If there is a corresponding scarcity, then the problem is one of filling holes in the format.

This preoccupation with the daily format, together with its bearing on ratings, deadlines and segment lengths, imposes other serious but related constraints, such as personality clashes, compromised standards of excellence and a conflict of goals. In an organisation where different personnel perform a variety of functions which, in the first analysis, must overlap and, in the final analysis, must neatly coincide, there is bound to be friction. For example, an assignment editor must first decide which events are newsworthy and,

secondly, how much of the available five to ten minutes should be devoted to its coverage. This can create a problem for the reporter who may consider the first choice to be erroneous or, conversely, feels the item deserves more time. On the other hand, it is the responsibility of the reporter to determine the angle with which to tackle and present his story. If that angle is inappropriate or if he has introduced an unnecessary bias to the report, this creates a problem for the assignment editor who needs the item but recognises its weakness. If these problems occur with severe regularity, then the news production will surely suffer. An assignment editor who wastes the talents of his reporters with frivolous assignments for the sake of format time will breed genuine discontent and indifference to quality. Reporters who consistently file stories premised upon expediency instead of professional journalistic integrity will encourage resentment and the gradual acceptance of mediocrity. From the public's perspective, this is clearly irresponsible and unacceptable. Callousness toward effort, sacrifice of quality, blindness to good taste, indifference and expediency all contribute to poor journalism whether in the gathering of news or in the presenting of it.

In short, noise constraints of all types are to be redressed. Whether they consist of poor feedback, low morale, confusing priorities, technical failures or the overall imposition of a daily format with its own set of problems, noise constraints are to be eliminated or, at

least, reduced to tolerable levels. News departments have a responsibility to the public that can only be met by the smooth exchange of information. Communication must be noise-free if that department is to provide, on a daily basis, a balanced, accurate newscast that is informative, entertaining and enlightening.

D) OBJECTIVITY: REPORTER OF FACTS OR CRUSADER OF ISSUES

Networks and local stations invest a great deal of time and money in the concept of objective journalism. Not to appear unbiased, dispassionate and unprejudiced is to risk credibility in the eyes of the viewer. This translates directly into lost ratings and, worse, lost commercial revenue. Therefore, it is in the industry's interest to promote, as widely as possible, the view that television news is factual, balanced and comprehensive. There are two devices, one being the development of the news narrative.

For George Comstock, the newscast is a form of visual drama. As television is a visual medium, so television news is a visual event. It flourishes on pictures, the more recent and spectacular, the better. Sometimes these visual supports overwhelm the commentary and become the stories themselves but they still fit the narrative mode.

The news of the world is not announced, but recounted as synopses suitable for fiction, with a precipitating

event, forces arrayed in opposition, and at the end a tentative resolution. Whether it is man against nature, God, or other men, television news gives structure to events. ²²

Sharon Lynn Sperry in her essay entitled, "Television News as Narrative," addresses this in greater detail. For her, the purpose of the narrative is to describe and give order to man's environment through some form of discourse. In the case of recounting a non-fictional occurrence, where some aspect of "Truth" is involved, firstly there must be tacit agreement between sender and receiver that the former will try to approximate reality as closely as he saw or heard it and that the latter will temporarily suspend his natural disbelief. Both understand that this approximation and subsequent belief of the "Truth" will, of necessity, occasion some simplification, shaping and interpretation of events. ²³ Secondly, the sender or narrator must be capable of being believed by the receiver. For Sperry, this mixture of credibility and authority is the mark of the television news anchorman and the structure of the actual newscast.

Like the storyteller who enraptures his audience with tales of wonder and amazement, the news anchorman is trusted and admired by his followers. By appearing to present the truth as it happens, by introducing each story and, moreover, by weaving them together throughout the entire newscast, he commands the daily attention of many. Sperry calls him "the ultimate narrator;" ²⁴ an omnipotent authority figure

who "alone provides the continuous thread of meaning."²⁵ Given the structure of the news programme, he seems to have the power to bring together the events of the world and to summon other story-tellers to relate their respective plots. Unfortunately, to the eternal disappointment of his viewers, he suffers from one major flaw: he is not the narrative hero. His position of apparent omnipotent knowledge of the world's events is undermined by his inability to solve the world's woes. His is merely a position of presentation, not resolution. For Sperry, the news anchorman "is limited to telling stories."²⁶

The second device used to promote balance and objectivity in television news is the "hero plot." According to Sperry, this is typified by "good" triumphing over "evil" through overt action. From the muddle of life, the main character or protagonist emerges to combat injustice and lead his followers to righteousness. Since most television programming subscribes to this simplistic view, it is no surprise to find the same myth working in the news narrative as well.

Each individual news story ... is a small but distinct narrative, with a recognizable plot of action which sets character against character in a struggle to redeem the world.²⁷ ... The (conflict) is to be solved by some representative protagonist whose activity on behalf of the people is designed to ensure that good will prevail.²⁸

The hero plot tacitly assumes that once the forces of evil are vanquished,

the world can again return to peace and order. Unfortunately, the world is never at rest and it is not so much a case of good prevailing over evil as it is a case of another, fresher story displacing the previous one. The failure of the hero plot in television news is again the failure of action.

The two devices of television news narrative and its use of the hero plot clearly support the notion of balanced and objective reporting but there is an opposite camp called "advocacy journalism." It subscribes to the view that "objectivity" is a myth and that all reporting is "subjective" by definition. Since a person cannot possibly know the world by literally stepping outside of himself, it follows that he can know it only through his own personal perception of reality. According to John Merril and Ralph Lowenstein in their book entitled, Media Messages and Men: New Perspectives in Communication, this perception is indelibly coloured by conditioning, selectivity, detachment, prejudice and opinion.²⁹ All affect the ability of a reporter to do his job. As such, objective journalism may be a myth but its concept can and does serve as an ideal. Merril and Lowenstein state that objectivity is not so much a pure goal as a pragmatic one; one that is approachable. It is precisely a question of attitude.

If a reporter sincerely wants to be fair, unbiased, balanced, and factual in his story, he can be -- at

least to the extent that the term "objectivity" is meaningful and valid.³⁰

For Merrill and Lowenstein, objectivity "is a show of good faith."³¹

Ray Hiebert et al in their book entitled, Mass Media: An Introduction to Modern Communication, concur. They base their argument on the premise that the public has the right to know the facts. In this sense, a good reporter

... must attribute to an authority -- an eye-witness an official, a participant, an expert -- anything that is not routine and readily verifiable knowledge.³²

It is a major criterion for objective journalism and it demands much in the way of hard work from the reporter. Still, a reporter will always project some part of himself into the story and in that sense, he is both a reporter of facts and a crusader of issues.

To the extent that this is true, Merrill and Lowenstein paint a gloomy picture of the future. They are of the opinion that while objective journalism will always be a noble endeavour, it will gradually be replaced by some form of advocacy journalism. The reason is simple: subjective reporting is infinitely saleable because people are more concerned with who said something as opposed to what was actually said. In other words, Merrill and Lowenstein predict that "opinions will become far more important than factual information."³³ As such they

foresee the narrative concept of news presentation, with its anchorman and hero plot, relegated to the "junkheap." In its place is seen a credibility vacuum; "a fuzzy kind of opinion world or journalistic dialectic with no solid foundation stones of verifiable fact."³⁴ Whether or not this will really happen remains shrouded. In any case, the main concern in a news story must always be the consecration of "Truth": its revelation, its justification and its perpetration.

* * * *

CONCLUSION

This chapter has suggested that television is the most powerful form of mass communication known to man. It is a pervading force of entertainment, information and education. To a large extent, it influences society's view of itself through its mirror-like properties of cultural and moral reflection. By acting as an extension of the senses, especially in the realm of television journalism, it plunges man into a malestrom of information; it forces him to cast off his parochialism in favour of global awareness. No longer will policies of deliberate isolation and imposed strategies of ignorance and avoidance suffice. Television influences man's immediate and personal behaviour.

It changes his world. In the case of planners, who must provide a strategem of choices for the future having first anticipated it, they are as influenced by the medium as any man. Only by being relatively familiar with its internal structure and its external impact can planners step outside the role of viewer and contemplate precisely the nature and extent of this change.

* * * *

FOOTNOTES -- CHAPTER IV

- 1) Marshall McLuhan and Quentin Fiore, The Medium is the Massage (sic): An Inventory of Effects (New York: Bantam Books, Inc., 1967) p.26.
- 2) Ibid, p. 27.
- 3) Ibid, p.14.
- 4) Ibid, p. 63.
- 5) Ibid, p. 125.
- 6) Ibid.
- 7) Peter Woods, "Television as Dream" in Richard Adler, Douglass Cater, Eds., Television as a Cultural Force (New York: Praeger Publishers, Inc., 1976) pp.17-35.
- 8) Louis Kronenberger, "Television's Impact on Our Civilization: in Barry G. Cole, Ed., Television: A Selection of Readings from TV Guide Magazine (New York: Collier-MacMillan Ltd., 1970) p.551.
- 9) Ibid, p. 552.
- 10) Ibid.
- 11) Ibid, p. 553.
- 12) Ibid.
- 13) George Comstock, Television in America (Beverly Hills: Sage Publications, Inc., 1980) pp. 125-133.
- 14) C.H. Sterling and J.M. Kitross, Stay Tuned: A Concise History of American Broadcasting (Belmont, Calif.:Wadsworth Publishing Company, Inc., 1978).
- 15) Ibid, p.478.
- 16) Ibid, p.479.

- 17) Supra, Note 1, p.63.
- 18) Marshall McLuhan, "Man and Media" in Pierre Juneau et al, Communications Canada 2000 (Toronto: York University Press, 1975) p.69.
- 19) Supra, Note 1, pp.31-40.
- 20) Ibid, p.125.
- 21) see appendix -- CKY-TV Daily News Format.
- 22) Supra, Note 13, p.44.
- 23) Sharon Lynn Sperry, "Television News as Narrative" in Richard Adler, Douglass Cater, eds., Television as a Cultural Force (New York: Praeger Publishers, Inc.,1976) p.132.
- 24) Ibid.
- 25) Ibid, p.133.
- 26) Ibid, p.142.
- 27) Ibid, p.137.
- 28) Ibid, p.135.
- 29) John Merril and Ralph Lowenstein, Media, Messages and Men: New Perspectives in Communication pp.231-232.
- 30) Ibid, p.233.
- 31) Ibid.
- 32) R.A. Hiebert, D.F. Ungurait and T.W. Bohn,eds.,Mass Media: An Introduction to Modern Communication (New York: David McKay Company, Inc.,1974) p.344.
- 33) Supra, Note 29,p.240.
- 34) Ibid, p.241.

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CHAPTER V

PLANNING & VIDEO

In planning, as in other broad-based activities, we must use the full range of human abilities, and this means not only doing things directly ourselves, but also setting up processes external to ourselves under our control and organisation...

-- George Chadwick, A Systems
View of Planning

INTRODUCTION

The purpose of this chapter is twofold. Firstly, it will examine how the practice of planning can be enhanced by an application of various video innovations, such as community cable television and ½-inch format "portapaks," to planning issues and education. It is proposed that fundamental knowledge of video techniques and skills will result in better communication between planner and citizen. It is a first but necessary step in a journey which will incorporate advanced communication technology into the planner's thinking; essentially, into the planning process of the future. Secondly, it will provide an illustration by means of a simulated television script concerning a real and newsworthy planning issue. It will be shown that any use of "portapak" units or cable television in planning must not only be based on sound knowledge of the equipment capabilities but firmly supplemented by story-board and script preparation. By observing certain practices in script format, it is possible for planners to arrange their material in such a way that the content speaks for itself. In this manner, the planning issue is done objective justice or, in the case of advocacy, can be powerfully projected in one argumentative form or another.

* * * *

A) THE PLANNER'S USE OF VIDEO

While a new generation of computers capable of producing simulated, three-dimensional graphics has the potential of replacing the drawing board of the architect, so a portable video unit capable of recording images of the urban environment for later playback and analysis has the potential to augment the traditional tools of the city planner. Until recently, planners have had to rely on their dexterity with the written word and a myriad of coloured pens in the preparation of reports, studies and plans. They have also had to rely on personally-acquired skills to communicate clearly, accurately and comprehensibly this information to others. Now planners have the remarkable opportunity to supplement their already impressive panoply of techniques, such as systems analysis, modelling, surveys, mathematical forecasting and mapping, with those afforded by a relatively inexpensive video technology.

Armed with a $\frac{1}{2}$ -inch Beta or VHS "portapak" camera and video-cassette recorder (VCR), a planner can go into the field and shoot aspects of the urban environment that will serve as first-hand reference material for his report or be used in a presentation of planning policy and design for the benefit of his peers and, later, the public. The quality of his video information depends upon a thorough knowledge of the medium but, once learnt, the possibilities are endless. Hartmut Gerdes and Peter Bosselmann in their essay entitled, "You Ought to be in Pictures," agree

so emphatically that they base a business on it. Both are proponents of advocacy planning and both use the visual medium to communicate large amounts of information to their clients in a relatively short period of time; information that is designed, in part, to educate and, in some instances, to endorse a particular viewpoint. Gerdes and Bosselmann premise their work upon an observation of McLuhan that

... a generation brought up on television is more likely to respond to an interactive medium like film and video than to traditional means of communication.¹

As such, they have produced a number of visual treatises. For example, one was made in 1979 to support a proposed by-law which would regulate the height and bulk of buildings in downtown San Francisco. By combining footage of the actual city with scale-model simulation and animation, effects made popular by the new genre of space adventure films, they were able to contrast the present urban topography with an envisaged future one. The film was subsequently televised. Unfortunately, the proposed by-law was defeated but the film itself was highly instrumental in helping "the public to understand the growth alternatives the city faced."²

Another example concerned a film that was commissioned by a city's redevelopment agency. This agency had drawn up a master-plan for developing an industrial wasteland into a new waterfront community. It wished to advocate its plan to the various regulatory bodies and planning commissions in addition to providing certain design and construction

guidelines for architects and planners. The film employed a small optical camera probe and a scale model of the project site to demonstrate the importance of

... ensuring public access to the bay, of maintaining the visibility of the waterfront from approach roads, and of ensuring the compatibility of the proposed housing and commercial development.³

Like the previous example, this film focussed attention on an issue in a unique way and, in doing so, served as a powerful tool in the decision-making process.

Paul Frame and Clive Scollay in their essay entitled, "Videotape Gives More Power to the People," provide similar examples, albeit from a slightly different perspective. In addition to using video in policy planning, they advocate its use in planning design and problem research, specifically, in exploring the types of problems that need to be solved not from the planner or architect's point of view but from that of the user. Too often the wrong problems are posed by the professionals while it is the consumer who must bear the consequences. Frame and Scollay consider the use of video in areas where hard data is traditionally weak but where planning and architectural decisions are most felt. For example, they document its potential use in the planning and subsequent design of housing projects. They stress the value of taped interviews with future occupants in order to learn of their "ideas, concepts, (and)

shortfalls in their previous experience."⁴ They state that where this has been done, the results have been worth the very considerable effort. In one housing project where video was extensively used throughout the entire design process, "the degree of user identification and pride with the finished ... batch of houses was surprisingly high."⁵

Frame and Scollay document other examples of the planner's use of video. In one case, involving Australian aboriginal land-rights, the users were given access to the portapak equipment and told to elicit taped responses to various planning proposals affecting their territories. The object was to determine what the users themselves required of the planners. The finished tape constituted a lay-person's hard view of reality and was not easily ignored by the professionals who watched it on the television monitor. A similar case involved a series of taped interviews conducted by members of a low-rental highrise apartment complex for the benefit of a concerned community planner. For years the tenants' poor living conditions, including non-functioning elevators, faulty wiring and inadequate plumbing and heating, had gone unheeded by the local council. By using video equipment supplied by the planner to document their longstanding plight, in addition to supplementing it with statistical fact-sheets, the tenants were finally able to generate a negotiated solution. For Frame and Scollay, this special use of video constitutes a "powerful tool for the involvement of citizens in the development of their local areas enabling them to participate forcefully in the planning process."⁶

Indeed, it is a method by which community participation might become more meaningful, certainly from a planning perspective where this type of visual data, at once available and retrievable, has always been a planning priority.

Gerdes and Bosselmann also comment on the use of video in a community application. For them, the principal value lies in education and information. In one case, people from a community were shown a model for a proposed waterfront development. They were asked to record their comments and ideas onto the audio track of a videotape which, in turn, was played before a group of university design students. For each audio image contained on the tape, the students were to create a corresponding video image. This was possible because of the versatility of videotape recording. Gerdes and Bosselmann knew that they could record an audio track separately from a video track. By re-winding the tape, they could subsequently re-record a video track without disturbing the original audio bed. Given the community videotape project, the students were able to listen to various planning concerns on the audio track and, subsequently, to illustrate them in a complementary visual context. The completed montage was duly shown to the community group and, from their critique, a final videotape was produced accordingly. It later played a significant role in the development of a waterfront master-plan.⁷

Similarly, where planning issues have been severely politicised, distorted and confused, "planners using film and video may be able to

help by presenting a balanced picture of the alternatives that have been proposed."⁸ In short, the planner's use of video is extremely important in areas of policy planning, where a massing of similar nationwide projects can contribute to policy development at all levels; alternative planning, where professional and community input can be solicited on the basis of realistic scenario simulation and scale-model animation; document planning, where the plan and its environmental impact can be illustrated, reviews expedited and guidelines introduced for the benefit of planners, advisors, officials, developers, architects, the public and so forth; and, finally, pilot-project planning, where public and financial support is necessary for innovative development schemes.⁹ Gerdes and Bosselmann quite correctly point out that this use of video in planning is new but ultimately flexible in its application.

Material can be recorded, edited, and re-edited to suit the requirements of various stages of a project, responding to such diverse needs as public and in-house communication, marketing and grant preparation. Once recorded, film and video material can be reused, as a project moves through the reconnaissance, research, analysis, and design phases into the environmental impact report, construction, marketing and public relations phases.¹⁰

For Gerdes and Bosselmann, like Frame and Scollay, video has the power to attract and hold people's undivided attention. In their opinion, it is

a necessary and welcome planning tool.

Video also has another use. By monitoring a presentation, it has the power to mirror the quality of a planner's ability to communicate information to an assembled audience. Did he make himself understood or heard by all? Was his audience attentive or bored? Were they supportive or hostile to certain segments? Was he well-organized? Did he convey the right information? Was there an opportunity for feedback? These and many other questions are of vital importance in any such presentation, be it an in-house seminar or a public meeting. A videotape recording of the event will not only provide some of the answers but, in turn, will generate new questions as well. It is an educational tool of observation and analysis. It can reflect certain competencies and deficiencies in the planner's delivery. It can reveal the strengths and weaknesses of the overall structure of his information. It can promote better communication which is, after all, the essence of better planning.

B) ELECTRONIC PARTICIPATION & VIDEO

As video technology will enhance the quality of planning, so it will provide new avenues for public communication and community involvement. No one will argue that there has always been a need for citizens to be in close contact with their civic government because its actions are principally concerned with an urban quality of life; one to which each

citizen contributes. Unfortunately, the means for maintaining this close contact was limited until recent advances in electronics technology occasioned new possibilities in communication.

One such possibility promotes participation through cable television, William Rushton in his essay entitled, "Turn On the Tube; Plug Your Community into Cable TV," states that many cities are considering the potential of a cable channel reserved strictly for municipal affairs. In Winnipeg, VPW-13 is a community-access cable channel that includes coverage of various city council meetings while New York devotes a whole channel to such events.

New York's Department of City Planning produces programs over Municipal Channel L, an interactive cable television service channel reaching 157,000 homes in Manhattan (the largest such operation in the country).¹¹

Broadcasting from a television studio equipped with a computer polling system and telephones suitable for "phone-in" programming, including telethons, Channel L is used by various city agencies, urban officials, non-profit civic organisations and citizen planning advisory groups who wish to solicit a public response to their information. Programme formats are kept similar, with a host interviewing guests and inviting viewers to call in their questions and comments. Rushton states that sometimes short visual presentations are made by way of introduction to these discussions in addition to the periodic running of a community calendar listing cultural events, civic meetings and so forth. He also states that where cable television is not available to individual

subscribers, it could be connected to large, local public viewing centres, such as schools and libraries. Similarly, in countries such as India, where per capita income precludes individual ownership of television sets, collective television viewing in a localised setting is a viable alternative.

As such, a municipal cable television channel is an important and welcome facet of daily city life because it can serve as a vehicle for televising city hall proceedings, for conveying large amounts of information to a city-wide audience, for providing access to a videotex opinion poll and urban computer library and for airing private and publically-produced videotapes, slides and film containing, amongst other things, certain planning issues as subject-matter. Winnipeg's Cable 13 and New York's Channel L, while local in character, have opened up a new era in community participation and promise even greater citizen involvement in urban affairs as video technology becomes more advanced. These channels are one answer to the distressing degree of frustration, alienation and apathy expressed by most citizens toward civic government and bureaucracy. As one outlet, they provide an avenue for discussion and response in local issues.

Taken a step further, this avenue could assume nationwide planning significance. Hartford Gunn in his essay entitled, "New Technology for Public Communications," proposes the creation of a national cable network of neighbourhood-level television production centres. He envisages an exchange of programmes made by various small communities via special-interest satellite broadcasting from one city to another, ¹² Rushton

agrees. He also considers the exciting possibilities of a multi-city municipal cable television network whose various stations and viewers would be linked, simultaneously, via satellite. For Rushton,

such a system would allow regions to concentrate on their unique problems, to share discussions about solutions with two or more other regions, and to conduct full-scale national teleconferences -- all the while feeding information directly to local communities for the reactions and decisions necessary to make the system work.¹³

It would be a complex but flexible system of municipal communication and participation.

Hartford Gunn also foresees the possibilities accruing from what he calls the "video-cassette revolution." He believes that low-cost VCR units for home consumption will "vastly increase the capabilities of television in areas of training and education."¹⁴ The National Municipal League believes in this as well. They have developed a video library consisting of topics which address certain civic issues faced by a typical neighbourhood community in the United States. One programme demonstrates how citizen involvement in local affairs contributes to a better community environment while another concentrates on the benefits and limits of citizen involvement in the official urban decision-making process, including the roles played by the city in citizen action efforts.¹⁵ The League also plans to produce a ten-programme series in

which various ethnic groups will record their own personal stories regarding "the quality and quantity of services they receive and the decisions made about and for them."¹⁶ These videotapes, along with written supplements, are to be made available to schools, civic and service clubs, urban agencies, city councillors, members of the public and so forth. Their purpose is to help "citizens and officials pinpoint potential ground for improved communication and understanding."¹⁷ Gunn would also make these videotapes available to a public library. This library would either lend the tape as they would a book or, depending upon costs, may act as a media resource centre in which a viewer would select his choice and have the library broadcast it via a special cable television channel.¹⁸ The viewer, depending upon copyright laws, may be able to make a duplicate as it is transmitted to his VCR and monitor.

Robert Smith, while concurring with Gunn, takes this "video resource centre" one "giant-step" further. In his essay entitled, "A Funny Thing is Happening to the Library on its Way to the Future," he writes about libraries whose massive information systems may be available to the public via a computer terminal as well as to an individual's VCR unit. As publishers print manuscripts, reports, documents, plans and so forth, so they can also encode the contents onto computer tape in machine-readable language. Similarly, the library itself may produce programming on a variety of topics, including reference indices, that would be available to its patrons through a videotex connection such as Telidon.

In conjunction with this, videotapes and videodiscs would also be available for loan. Smith and Gunn both argue that information on a scale never before envisaged will shortly enter public domain to be disseminated and harvested at will. Smith, in particular, predicts that such "instant-access" knowledge will have a major impact upon society within the next two decades. Libraries may indeed become known as "media resource centres" where anyone would be able to

... tap huge collections of related data -- typically taking the form of abstracts, citations, or even full-text records -- that are stored in computer memory banks at central locations throughout the United States. Most of these data collections contain information that is specialized or technical ... but immensely valuable to certain users.¹⁹

As such, city planners, whose job it is to provide society with a stratum of choices for the future, must stay in touch with a public whose overall awareness and knowledge is about to grow astronomically.

Accordingly, "citizen participation" will also enter a new phase. Amitai Etzioni in his essay entitled, "Minerva: An Electronic Town Hall," presents an electronics communication system that facilitates a mass public discussion and decision-making process in which the participants do not have to leave the comforts of their own homes. This "optimal mass dialogue and response system" is referred to as "MINERVA" or a "Multiple Input Network for Evaluating Reactions, Votes and Attitudes."²⁰

It works by creating a communications tree whose branches represent four levels of citizen participation and technical interaction. For example, Etzioni details a four-level system where "level one" consists of a small group or groups, 30 people or less, in contact with each other via telephone conferencing; "level two," a small community or communities of 300-2000 persons each using two-way cable TV; "level three," an intermediate community or communities of 6000-40,000 persons each using a combination of radio or television with telephone input; and, finally, "level four," a national or even international entity using a television network linked by cable, microwave, satellite and so forth. The purpose of this organisation is to create discussion, response and resolution at one branch and then to delegate representatives to the next until level four is reached. Etzioni envisages a "priming broadcast" to be made at the national or international level but recognises that dialogue can prompt activation in any direction. He states that "the process might move up, down, from the middle down and up, or sideways."²¹ In any case, the basic idea is to initiate participation in issues that affect the daily lives of each individual citizen and to vote, via videotex, on the various resolutions forthcoming from this involvement.

While MINERVA may seem far-fetched and implausible on such a grandiose plane, Etzioni argues that each of his four levels of the communications tree is already operating but, as yet, distinct from one another. For example, audio teleconferencing, relying only on the

spoken word, connects many business offices throughout North America and telephone companies have recently made this service available to the general public. For a nominal charge, whole families, separated by geography, can talk to each other on the same line, simultaneously. Similarly, two-way cable television is available on a limited but growing basis through such videotex systems as Canada's "Telidon," Britain's "Prestel" and France's "Antilope." Home computers interconnected through telephone modems are but another example. Radio and television programmes incorporating telephone "call-in" systems have been popular for some time, the best examples of which are PBS television's "PBS Latenight" and CBC radio's "Cross-Canada Checkup." Given these existing services, Etzioni envisages a citizens' communications system that features the best of these technologies. It is a complex but profound vision of electronic, democratic participation. Like that of Rushton, Gunn, the National Municipal League and Smith's, it has at its essence a fundamental belief that the quality of urban life is sustained by the degree of citizen involvement in urban affairs. It is based upon a commitment of better understanding and increased awareness through communication.

C) A CASE STUDY IN SCRIPTING

It is one thing for planners to be familiar with video equipment and cable television but it is quite another to make it perform according to

original expectations. Without adequate preparation, these potentially powerful communication tools are so much novelty. They invite only cursory interest rather than significantly augmenting basic planning techniques. A good video presentation can reach people by immediately capturing their attention, especially those brought up after the advent of television. Unfortunately, few planners have realised the importance of this medium in their daily work. If planners were to devote to it the same energies as they do other activities, such as report-writing and map-colouring, they would have at their disposal a powerful tool of communication. For example, reports and maps could be summarily presented on videotape, illustrated with various images and supplemented with appropriate music, sound and narration. It is a dynamism hard to ignore from a viewer perspective.

Like film, video has the tremendous ability not only to tell a story but to unfold it visually as well. Unlike film, video is relatively inexpensive, easy to use and the results are immediately available as no developing of the recording medium is necessary. However, no video or film programme will hold anyone's attention for very long if the content is unorganised, the logic vague and the presentation boring. As with any other sophisticated planning techniques, care must be taken in all aspects. from the initial preparation to the final product. One must have no doubt as to its intent. Similarly, the programme should be specifically designed with a particular audience in mind. For example, if the

purpose is to mitigate any confusion surrounding a certain issue, such as the Shoal Lake problem discussed later, then the script should reflect, in its content and logic, all sides of the controversy. If the subsequent program is to be shown strictly in-house to planners and officials, then it may incorporate more professional jargon than that necessary for general community release via cable television. In short, scripting is a versatile activity but the central advantage of any script must be clarity. "What is intended," "Why this is so" and "for whom" should be immediately clear. The purpose of a script is to achieve order in presentation. It is a working document to be translated dynamically into an audio and video context. How well a script is initially crafted determines the success of the translation and the impact of its message. Given a rudimentary knowledge of the medium and a belief in the power of video presentation, planners do not have to rely on the professional expertise of media personnel. Instead, they are at liberty to assimilate a new set of skills and act as "producers" themselves. Visual imagery is no longer the exclusive domain of movie moguls and television pundits.

The following serves as a typical example from both a professional and an amateur perspective. While planning issues are not immediately involved, the script illustrates a problem between two adversaries, the solution of which will include planning expertise. The actual programme is designed for an in-house audience and serves in an educational capacity. Since it is impossible to transport all concerned to the

source of the problem some eighty miles away, the programme is intended to remedy this logistical deficiency by acting as a trip-substitute. It is also intended that the programme be followed by relevant discussion amongst the viewers, including the introduction of necessary reports, charts, maps and slides.

This video case study concerns an Indian band's proposal to develop 350 cottage sites on the shores of Shoal Lake which serves as water supply for Winnipeg, a large city of 600,000 people.²² Because the cottage sites are to be located on reserve land, they are very close to that area of the lake which serves as water intake to the city's 80-mile-long aqueduct. The band has made the proposal because it feels it has the right to make a better living and sees the cottage development as a way to attract tourist dollars. The band has also had a traditional garbage and sewage disposal problem which, they argue, could be solved by building a road from the reserve through a tract of city-owned land to the main highway. That this road could provide access to the cottage site is another reason for its immediate construction. The city maintains that any cottage development or tourist access to the water intake area poses a potential health threat to its urban residents and is consequently opposed to such a plan. The city has offered to remove the waste via its railway used to service the aqueduct but this has been refused by the band.

The federal government, which has the necessary jurisdiction, has

authorised the possibility of having the city participate in paying compensation to the Indian band in lieu of cottage development but the city has refused until the band files an environmental impact assessment study. The band will not do so but, in an attempt to force an immediate and favourable resolution to the whole dispute, it has built a temporary sanitation lagoon near the water intake. While this seems to pose no serious environmental threat in the dead of winter, an early spring, coupled with a rapid thaw, could create a pollution hazard. Since time is of the essence and the health of many is a concern, the story is particularly newsworthy. A television script for a thirty-minute documentary might be as follows: ²³

SUBJECT: SHOAL LAKE DOCUMENTARY
 LENGTH: 27:55 MINUTES
 TITLE: "THE ROAD TO HAPPINESS"
 RECORDING/PLAYBACK DATES: TBA

RUNNING TIME	ITEM TIME		PAGE ___ OF ___
00:00	00:45	VTR CUT #1 (opening billboard, music theme, title & credits)	
00:45		HOLD TO TIME & DISSOLVE	
		VTR CUT #2 (series of announcer voice/overs & talking head sound-on-tape with music BG throughout)	

RUNNING TIME	ITEM TIME		
00:47	00:03	ANNC V/O (shot of glass of water)	THE CITY SHOULD NOT BE HELD FOR RANSOM... ////
00:56	00:09	SOUND ON TAPE (talking head - Mayor) OUT CUE:	"A city's water supply... ... out position is untenable."
00:59	00:03	ANNC V/O (shot of two people on reserve)	BUT NO ONE SHOULD LIVE IN SQUALOR... ////
01:10	00:11	SOUND ON TAPE (talking head - Chief) OUT CUE:	"Why shouldn't we have the same opportunities... ... it is our right."
01:13	00:03	ANNC V/O (shot of Indian Affairs office)	THE FEDERAL GOVERNMENT SEEMS CAUGHT IN THE MIDDLE... ////
01:25	00:12	SOUND ON TAPE (talking head-official) OUT CUE:	"The sewage clean-up is... ... only solved for another year or so."
	00:35	HOST ON CAMERA (could be studio or	GOOD EVENING. I'M _____. THE SAFETY OF TAP WATER IS SOME- THING MOST OF US TAKE FOR GRANTED IN THESE TIMES OF POLLUTION TREATMENT PLANTS AND ENVIRONMENTAL CONCERN. WE USE GALLONS OF WATER

RUNNING TIME	ITEM TIME	
02:00		<p>EACH DAY -- WE DRINK IT; WE COOK WITH IT; WE USE IT TO CLEAN THINGS; WE BATHE AND PLAY IN IT. WATER IS A VITAL, LIFE-SUSTAINING COMMODITY AND WITHOUT IT, THE CITY WOULD CERTAINLY PERISH. WINNIPEG IS DEPENDENT ON A WATER SUPPLY SOME 80 MILES AWAY -- A SUPPLY THAT IS AMONGST THE PUREST IN THE WORLD. UNFORTUNATELY, CITY OFFICIALS FEAR IT MAY NOW BE THREATENED...</p> <p style="text-align: center;">////</p>
	00:05	<p>STING (video of sewage lagoon, music & title-super)</p>
09:54	07:49	<p>VTR CUT #3 (VTR item shows proximity of lagoon to water intake of aqueduct, reasons for lagoon location and potential health hazard; item then seques to interview with the Indian band leader, shots of reserve poverty and finally seques to the proposal for cottage development and highway access)</p> <p>IN: "This is a temporary sewage lagoon that services members of the Shoal Lake Indian reserve...</p> <p>OUT CUE: ... what else can we do? Nothing. It's our only hope."</p>
09:59	00:05	<p>STING (video of water-skiers on lake, music & title-super)</p>

RUNNING TIME	ITEM TIME	PAGE ____ OF ____
19:01	07:00	<p>HOST & MAYOR INTERVIEW (could be studio or remote setting)</p> <p>POTENTIAL QUESTIONS:</p> <ul style="list-style-type: none"> - what's wrong with the proposed cottage development? - who created this problem? - how has the band dealt with garbage and sewage disposal in the past without affecting the city's water supply? - was the city caught unprepared? - is the city willing to use its railway as a waste disposal system and who will pay for the additional service? - if it is a user-pay system, would cottage waste be disposed in the same manner? - why not opt for a cash settlement to the band in exchange for no development -- a guarantee if necessary? - what will an EIA study show that is not already apparent? - are there grounds to suspect the current purity of the city's water supply given the proximity of the sewage lagoon to the water intake area?
22:24	03:23	<p>VTR CUT #4 (VTR item shows water-testing procedures in an environmental lab including footage of tests conducted at the water intake area to determine current purity)</p> <p>IN: "This is an accurate measure of...</p> <p>OUT CUE: ... impossible without a proper environmental impact study."</p>
22:29	00:05	<p>STING (freeze-frame of a person drinking a glass of water, music & title-super)</p>
	03:31	<p>VTR CUT #5 (VTR item shows federal official talking about the right</p>

RUNNING TIME	ITEM TIME	PAGE ____ OF ____
26:00	<p>of the Indian band to develop their own lands and that their present sewage lagoon is but an interim solution; item then seques to band leader arguing for a road link to the main highway and his view of the city's refusal to grant such a road allowance over their particular property; item finally seques to legal perspective of both parties)</p>	
	<p>IN: "Why will the federal government not support the city's request for an EIA study of...</p> <p>... both have very strong legal arguments depending on whether there is or isn't a genuine health threat."</p>	
27:10	<p>01:10 VTR CUT #6 -- ANNC V/O & BG SOUND ON TAPE (VTR item shows a series of long-shots with slow dissolves -- highway lake traffic, cottages on lake shores, people swimming and water-skiing, Indian reserve showing various living conditions, sewage lagoon, aqueduct and water intake area, well-travelled gravel road leading into forest)</p> <p>NOTE: ANNC V/O BEGINS AT 0:25 OF ITEM</p> <p>ANNC V/O: WE ALL HAVE A STAKE IN THIS DISPUTE. NO ONE WOULD ARGUE THE RIGHT TO PROPER AND ADEQUATE SANITATION NOR THE RIGHT TO SAFE DRINKING WATER NOR, INDEED, THE RIGHT TO A BETTER LIFE. WHAT IS ARGUABLE ARE THE METHODS BY WHICH THOSE RIGHTS ARE SECURED BECAUSE WE ARE ALL SERVED BY THEM IN THE END. TIME IS RUNNING OUT AND A LONG-TERM SOLUTION IS NECESSARY. UNFORTUNATELY, THE ROAD TO HAPPINESS IS -- WELL, YOU KNOW THE REST. I'M _____ . GOODNIGHT.</p>	

RUNNING TIME	ITEM TIME	PAGE ___ OF ___
27:55	00:45	VTR CUT #7 (closing billboard, music theme, closing credits)
		BLACK

This script attempts to address the major issues of the Shoal Lake controversy. These range from the Indian band's right to improve their standard of living, including their sanitation facilities, to the City of Winnipeg's right to a safe and pure water supply. The script does not play the advocate by emphasising one view over another. Instead, it assumes an educational role by presenting each component as impartially as possible. As stated earlier, its purpose is to mitigate any confusion surrounding the issue by reflecting, in its content and logic, all sides of the conflict. It makes no point save an uncontested one that time is of the essence in solving the problem.

The Shoal Lake script is broken down into four parts. It is first necessary to introduce the main actors and their respective positions. A common device is to assemble a short string of VTR items that, taken together, offer a brief synopsis of the controversy. These items are usually interspersed with an announcer voice-over whose job it is to thread them into one manageable segment. Accordingly, the Shoal Lake script, with appropriate announcer voice-over, presents the Mayor of Winnipeg stating his position, the Indian band Chief explaining his

stand and, finally, a federal government spokesman offering his viewpoint. Following this, the announcer appears on camera in the role of storyteller. From either a studio or a remote location, he provides additional introductory information. He effectively sets the scene and tone for the rest of the programme. In the case of the Shoal Lake script, this whole first part has taken about two minutes to complete. If the programme were airing on revenue television, as opposed to in-house or community cable television, then a commercial would probably be inserted at this point.

Secondly, it is necessary to transport the viewer to the source of the problem which, in the case of Shoal Lake, concerns the aqueduct's water intake and various examples of poverty found on the reserve, including its poor sanitation facilities. By means of a VTR item shot on-location, the viewer is shown the mouth of the aqueduct, its dependency upon fresh, clean water, its proximity to the sewage lagoon and the reason for the lagoon's existence. The Indian band Chief is interviewed so that his arguments can be heard in support of cottage development, highway access and in-coming tourist revenue. This second part has taken about eight minutes to complete. Here, as in the first part, a commercial would probably be inserted should the programme air on revenue television.

Having heard the Chief's view of the problem and his proposed solution, it is necessary to give the opposition a chance to air its side of the story. Accordingly, this third part contains an interview with the Mayor of Winnipeg who is asked to describe the city's position and

respond to various statements made by the Chief. Since his major concern is with maintaining the safety of Winnipeg's water supply, this third part also contains a separate VTR item on that specific aspect. It includes footage of water-testing procedures, the degree of accuracy involved in subsequent analysis and what those tests show with respect to the Shoal Lake controversy. A commercial may be inserted at this point.

The fourth and final part concerns the resolution of the problem as discussed by the main actors. The script attempts to draw no conclusions of its own save that time is of the essence in solving this dilemma. Since the Indian band is under federal jurisdiction, the federal government is necessarily involved. A spokesman talks of the right of the band to improve their standard of living and of the government's recognition that the sewage problem must eventually be solved. To emphasise the problem of time, the positions of the Indian band and the City of Winnipeg are re-stated. Here, as before, the Chief argues for highway access while the Mayor argues for the safety of the city's water supply. This is followed by a legal perspective since the conflict will probably be settled in the courts. The programme concludes amidst a series of visual images that, taken together, offer a brief synopsis of the problem. With a musical theme in the background, the announcer fulfils his final role as story-teller by bringing events to a close with a brief summation. The programme, as illustrated by the script, is at an end. It is

intended that it initiate audience feedback by way of subsequent discussion.

This script and others like it are important to planners because they can be translated into programmes that have major advantages over traditional forms of planner communication, such as notices, brochures and slides. They can convey a message to a select or indiscriminate group of people by means of a mass medium. They are able to hold this group's collective attention and have the ability to transport them anywhere the camera chooses. In this respect, planners have at their disposal a powerful tool of communication but there are certain problems.

As previously discussed in Chapter II of this thesis, the scriptwriter enjoys a position superior to his audience because he knows they are at a loss to reply. Information in this context is conveyed one-way, from sender to receiver. Should the scriptwriter have some point to prove, then he must emphasise that he is advocating a certain position, as also discussed in Chapter IV. He should not put forth an argument under the guise of impartiality. Similarly, the scriptwriter should know his audience. There is a tendency, on both sides, to stereotype each other with the result that the message may be lost or misconstrued. There is also the "gatekeeper" factor. While the Shoal Lake script attempts to present all sides of the controversy, there is only so much that can be conveyed in a short period of time. Certain decisions made by the scriptwriter might not have been made by someone else. Similarly,

the camera limits the audience's scope by shooting one image and not another. In this respect, the "gatekeeper" role is very significant but it is recognised that the audience suspends their normal disbelief in the assumption that the story-teller is recounting events to the best of his ability. The scriptwriter should not take this bond of trust lightly.

In short, a well-prepared and well-intentioned script provides the basis for a meaningful exchange of ideas and information. It fits ideally into Jantsch's process of rational creative action as presented in Chapter I of this thesis. It fits into the planning level because its central advantage is to illustrate the options involved. It renders clarity and takes the confusion out of decision-making. It is concerned with the future and can be produced by members of a planning department, a citizen's group or planning students who have access to the necessary facilities. The resulting programme could be viewed in-house or via community cable television, either locally or nationally through Etzioni's Minerva concept. Even though the Shoal Lake script is a fictitious exercise about a real event,²⁴ it is written in proper form and is but another example of the video process from head to tail.

* * * *

CONCLUSION

It was proposed in this chapter that the profession of urban planning can benefit from an infusion of video technology. Portable equipment is available in the marketplace which, if used skillfully and responsibly, can provide for new avenues of planning information and insight. Master-plans, development proposals, zoning guidelines, by-law information and so forth can be given dynamic expression and widespread coverage through visual presentation. By combining videotape with written supplements, these planning schemes can command unprecedented attention from peers and public alike. Similarly, video is a powerful tool in the hands of community planners and citizen groups. Presenting them in-house or via cable television, video testimonies have the potential to counter the insensitivities of a faceless bureaucracy or the ignorance of an unformed city council. Video also has tremendous scope in the form of municipal cable channels, public media resource centres and electronic "town hall" meetings. Moreover, its educational or persuasive power is greatly enhanced when supplemented with a script. Not only does it organise the material in a manner suitable to the planner/producer's objectives but it alerts him to any oversights in coverage or wrongful and unwarranted emphasis in content. A well-prepared script is an invaluable planning tool when used properly and effectively. It underscores the importance of thoroughly understanding

the video medium and recognising its potential in planning practice. The extent to which planners incorporate video technology and skills into their philosophy and praxis will determine the degree of influence and guidance that the planning profession will have in the near future. It is now necessary to examine its prospects; to formulate its role at the leading edge of a society characterised by the instantaneous exchange of ideas and information.

* * * *

FOOTNOTES -- CHAPTER V

- 1) Hartmut Gerdes and Peter Bosselmann, "You Ought to be in Pictures" in Planning (December, 1980) p. 12.
- 2) Ibid.
- 3) Ibid, p. 13.
- 4) Paul Frame and Clive Scollay, "Videotape Gives More Power to the People" in Ekistics 268 (March/April, 1978) p.131.
- 5) Ibid.
- 6) Ibid, p.132.
- 7) Supra, Note 1, p.12.
- 8) Ibid.
- 9) Ibid, pp.13-14.
- 10) Ibid, p.14.
- 11) William Rushton, "Turn on the Tube: Plug Your Community into Cable TV" in Planning (August, 1979) p.18.
- 12) Hartford Gunn, "New Technology for Public Communications" in Technology Review (July/August, 1971) p.27.
- 13) Supra, Note 11, p.21.
- 14) Supra, Note 12, p.26.
- 15) National Municipal League, "New Media Tools Assist League Program" in National Civic Review, Vol.66 #2 (February, 1977) p.167.
- 16) Ibid.
- 17) Ibid, p.113.
- 18) Supra, Note 12, p.26.

- 19) Robert Smith, "A Funny Thing Happened to the Library on its Way to the Future" in The Futurist (April, 1978) pp.85-86.
- 20) Amitai Etzioni, "Minerva: An Electric Town Hall" in Policy Sciences 3 (Amsterdam: Elsevier Science Publishing Company, 1972) p.460.
- 21) Ibid, p.462.
- 22) See Appendix -- Pat McKinley article.
- 23) See Appendix -- a glossary of script terminology
- 24) See Appendix -- Ritchie Gage article

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CHAPTER VI

PLANNING IN "PRACTOPIA"

"Practopia" -- neither the best nor the worst of all possible worlds but one that is both practical and preferable to the one we (have); ... (it) lies within the range of the realistically attainable...

-- Alvin Toffler (The Third Wave)

INTRODUCTION

The purpose of this concluding chapter is threefold. Firstly, it will stress the importance of being prepared for an inundation of change wrought by new communication advances for society is beginning to undergo a metamorphosis that planners can ill-afford to ignore. As the city evolves, as information explodes and threatens to overwhelm, planners must adapt alongside. They must seek the heart of this change and draw strength from its power. Secondly, it will emphasize that a communications revolution is not only imminent but that certain aspects of it are already occurring through the power of the marketplace. Finally, this chapter will stress six fundamental connections between City Planning and Communication. From this, it will be seen that planning is a human, communicative medium of forethought and action. As a consequence, dialogue is therefore central to successful and meaningful planning.

* * * *

A) PREPARING FOR THE ELECTRONIC AGE

The modern city is a vast communications network whose culture is inextricably bound up in the speed with which data is acquired, processed

and exchanged. As such, the city is bursting with information; information whose scope and magnitude is unprecedented. As advanced electronic circuitry continues to inundate the urban environment, so the system is constantly forced to expand and redesign its complex growth matrices. It is a difficult task; one wrought with significant consequences as the resultant information explosion threatens to overload a network not programmed to cope in such a short period of time.

Jerome Aumente in his essay entitled, "Planning for the Impact of the Communications Revolution," feels that planners and civic leaders are unprepared for this information-imposed urban metamorphosis. They neither comprehend nor recognize its implications for law and policy.

City councils, more accustomed to granting gas station variances, puzzle over the concepts of free and public access to cable television franchises, yet offhandedly turn over to private developers the ability of a community to communicate effectively, without safeguarding the rights of the public.¹

William Knox concurs. In his essay entitled, "The Pathology of Information," he states that this reflects a traditional belief in the scarcity of information and communication systems coupled with an assumption that the interests of the community are best served by a maximum flow of information.² The problem with such a belief

is that it no longer serves the present situation. Change is rapidly occurring in the urban environment as new electronic advances enter the marketplace yet planners and civic leaders are not cognizant of the rate of change nor its profundity. Information is no longer scarce; in fact, it is potentially overwhelming. Similarly, electronic communication systems are becoming accessible to virtually everyone.

Mark Hinshaw in his essay entitled, "Wiring Megalopolis: Two Scenarios," also agrees with Aumente and Knox. He states that few attempts have been made in the field of urban planning to "analyze the impact of communications on urban change."³ Many planners, in his opinion, are under the misapprehension that communications technology will have little effect on the city as they know it. For Hinshaw, this is naive. He strongly advises that the urban planning process expand its horizons to include those major communication technologies and structures that are intimately involved in housing, transportation, social services and the political economy.⁴

Communications systems must be considered a major component of the urban infrastructure, both as a public resource and as an integral part of the urban movement systems involving people, goods, energy and information.⁵

Nicholas Johnson in his essay entitled, "Urban Man and the Communications Revolution," supports this view. He feels that planners

have no choice but to become urgently familiar with the vital relation between urbanism and communication. The significance of sophisticated electronic technology to the urban environment must be evaluated as it appears. It must be incorporated into present planner thinking. For example, he states that the communications revolution may have a fundamental impact upon transportation. Portable, inexpensive computer-access terminals, located in the average home, may make the central workplace obsolete; "commuting" may be eclipsed by "communicating." Johnson feels that this has obvious implications for urban planners who may have to contend with an entirely new transportation pattern and, moreover, a revised vision of city size, shape and function.⁶ He is not alone in his thinking.

Arnold Wise in his essay entitled, "The Impact of Electronic Communication on the Metropolitan Form," shares his concern. He believes that the availability of information not requiring any physical movement will result in a dispersal of some companies from the "Central Business District" (CBD) to the urban fringe. Such factors as improved road transport, lower land prices, more space, proximity to airports and so forth have already encouraged a manufacturing, retail and software exodus to the suburbs but advanced information technology will facilitate this to an even greater extent. It is no longer necessary to maintain close physical contact between office headquarters and production plants due to complex computer links and telephone connections. The constraint of distance has

has been substantially reduced. Information has become the primary exchange and software technology the major vehicle. The market is a CRT terminal access. For Wise, the result of this may be an explosion of urban growth.

Improved information systems over large distances allow the metropolis to explode even further. As the volume of communications increases and the costs of improved systems decrease, the necessity for proximity for exchanges and interactions will decrease making the spread even greater.⁷

To ignore that such a metropolitan spread is facilitated primarily by advanced communication technology would constitute a serious error in judgment. Planners will have no choice but to include complex communication variables in their planning processes. It is no longer acceptable to plan for an urban environment not premised on change wrought by electronic communication advances.

Mark Hinshaw offers two possible scenarios for the future. Like Johnson, who predicts that "communications will be to the last third of the twentieth century what the automobile has been to the middle third,"⁸ Hinshaw emphasizes the need to plan for a future in which communications technology will be a major determining influence.

In the first scenario, he assumes that present social, economic and political trends will continue to unfold as man moves toward the twenty-

first century. He foresees that crime, pollution, urban decay, fiscal squeeze and other terrible problems will continue to rack the urban scene; each problem contributing to a degree of stress that, taken together, threatens to exceed the critical point. Amidst a degrading environment, an expanding bureaucracy, a falling GNP and citizen cries for law and order, Hinshaw states that impending social disaster can only be averted by establishing a national security and stability service, "NATCOM," employing advanced communications technology, such as two-way cable television. Through this multifold entity, citizens would regain some control over their immediate lives but at a cost. For example, in exchange for lower crime rates, they might have to give up the right to individual privacy. Electronic surveillance would be used by NATCOM to gather information and monitor the activities of dissidents. However, it would also work as a burglar alarm system for homes and offices. In exchange for a more evenly-distributed but higher standard of living, they might have to give up the right to traditional urban government. "Superagencies" would be created by NATCOM to apply specialised, technical skills to problems in housing, transportation, education, internal security and so forth. However, public involvement in local affairs would be stimulated through the establishment of intracommunity cable television systems. In exchange for cleaner air and lower fuel costs, they might have to give up the family car. New forms of transportation, such as rapid transit and aerobuses, would be encouraged by NATCOM. However, the status previously attached to a

personal vehicle would be transferred to that afforded by a personal communications system. In short, Hinshaw foresees a communications technology being applied to serious societal ills as a last but admittedly powerful resort. That it would be highly effective in solving urban problems and providing people with a relative degree of peace and prosperity is not so much the issue as the price paid for leaving it so late. Certain chances for maintaining personal freedoms and creating genuine affluence have been inextricably lost if this scenario comes true.⁹

In the second scenario, Hinshaw offers a more favourable view of the future. He foresees a genuine concern for a humane living environment occasioned by an acute awareness that traditional urban problems must be remedied before they completely overwhelm daily life. Unlike the first scenario, it is an awareness that does not result in diminished personal freedom. Granted, society can no longer tolerate the high level of anxiety associated with crime, overcrowding, slums, traffic congestion, pollution and so forth that has been the frustrating condition of cities for years but the impetus to solve these problems comes from the citizens themselves; a government-imposed "NATCOM" is not necessary. Hinshaw states that people will take positive advantage of existing cable television networks and the newer two-way modes in a realisation that this constitutes the means for a broader and more responsible participation in the urban decision-making process; participation not necessarily dependent upon

... habitation within an area arbitrarily defined by population, density, or political boundaries but ... instead determined by the access to communicative and information nets.¹⁰

Cable television affords the opportunity to exchange ideas and information. It fosters "community awareness and self-development"¹¹ by serving as an entirely new form of communication. People are no longer isolated from one another. They are able to share their experiences, their culture, their dreams and their fears with others. It has a dramatic effect. Hinshaw predicts that the concept of "work" will change into one of "role" embodying not primary or secondary economic activities but tertiary ones of human care and community development. In turn, this will occasion an economy not based upon competition for scarce resources but one where basic goods and services are the undisputed rights of life. As such, the traditionally dense megalopolis will disperse, becoming in the process more specialised. New towns will emerge, linked to the reformed urban centres by electronic highways. Similarly, the conventional "urban/rural" dichotomy will ease as the boundary between city and country blurs under the influence of an expanding communications network. In short, Hinshaw foresees a communications technology being applied to serious societal ills, not as a last resort, but in conjunction with a fundamental change in attitude and perception. No longer will citizens be at the mercy of perennial urban problems; no longer will they be blind to the consequences of leaving their solutions too late. They

have the means to tackle these problems and, by doing so, can create a better, more meaningful existence for themselves and succeeding generations. Two-way cable technology can specifically convey information between planner and community; it can be seen as a medium for "presenting simulated alternative environments (and for) ... eliciting reactions to them;" ¹² it can permit the "development of more individualized, interpersonal, intracommunity, and transcommunity communicative services," ¹³ such as artistic expression, ideation, education, conflict resolution, political decentralisation and so forth. For Hinshaw,

... the proliferation of communication technologies resulted in more direct human interaction instead of less interaction; there was a great increase in the demand for places facilitating human interchange. ¹⁴

Moreover, Hinshaw states that it helped bring about

... the simultaneous phenomena of societal dispersion and integration -- dispersion into a multiplicity of diverse communities and the integration into a national (and increasingly global) urban culture. ¹⁵

Unlike the first scenario, this second one offers hope by preserving personal freedom and occasioning an era of abundance for all. It is a hope only possible through the voluntary application of advanced communications technology to urban problems coupled with a profound

realisation that this application is not a panacea solution. "Deus ex machina" is not the essence of this scenario. ¹⁶

Bertram Gross, in writing the introduction to a collection of essays entitled, "The New Field of Urban Communications," ¹⁷ states that the message to planners is clear: the impact of urban communications technology must be recognised, assessed and incorporated into the planning process.

The urban planners, the policy makers of our cities, and concerned citizens must become aware of the problems and possibilities of urban communications. This is particularly the responsibility of academic institutions. While none exists today, in the next few years, universities will offer courses and doctorates in urban communications. ¹⁸

This would be of obvious benefit to planners. Communications technology, "Particularly in the form of the wired city," ¹⁹ will transform the urban environment and occasion new possibilities of interaction never before envisaged. For example, groups who would otherwise never have an opportunity to communicate with each other could now exchange ideas and information through the medium of two-way cable television. It is an exciting prospect providing it is not co-opted into a political vehicle for intimidation and repression. As planners must include communication variables in their thinking, so the radio and television media must also face this new electronic era. Gross writes that they too

... have not yet dealt with the imperative issues of quality urban communications, particularly in terms of the opportunities implicit in the new technology.²⁰

In short, the city is a communications switchboard bursting with information. Melvin Webber in his essay entitled, "Urbanization and Communications," states that never has a society had the opportunity to learn so much or so quickly and never have so many citizens been able to participate in this extraordinary experience.²¹ The result is a transformation of society facilitated by the communications revolution; one that is

... fostering increasing cultural pluralism, and it is triggering an unprecedented national integration that in turn will continue to erode the localism that has characterized human societies throughout history.²²

No responsible planner can afford to ignore the implications of such a plurality. For Webber, they must prepare themselves for

... a highly diverse array of urban settlement patterns, for a diversity of demands for public services, and for a heterogeneous variety of social communities that these would serve.²³

To be unprepared is, according to Jerome Aumente, to put planning" on a dead end course unless it (pays) attention to the urban communications component." ²⁴ It is time to make sense of the communications revolution and respond to its challenges. As the city evolves so must its planners.

B) MARKET FORCES

The wired city will be brought about primarily through the force of the marketplace. In the same way people do not so much buy televisions as programmes, they will not so much purchase systems as services; services provided by the leading edge of electronic technology. At present, there are market strategies being developed that will result in an inevitable urban transformation.

Paul Storfer in the appendix of his essay entitled, "Videotex: Immediate Prospects: U.S.," proposes a number of approaches to consumer acceptance. Firstly, he states that it is necessary to foster familiarity with things electronic; to educate and transform their thinking; in short, to translate current commodities and services into their "micro-chip" counterparts. For example, books, magazines, newspapers, records and so forth can be offered as digitally-encoded, machine-readable discs, tapes and other storage/retrieval systems. This is reinforced by the infusion and inundation of video cassette recorders in which in-coming information "can be custom-organized." ²⁵ No longer will the networks

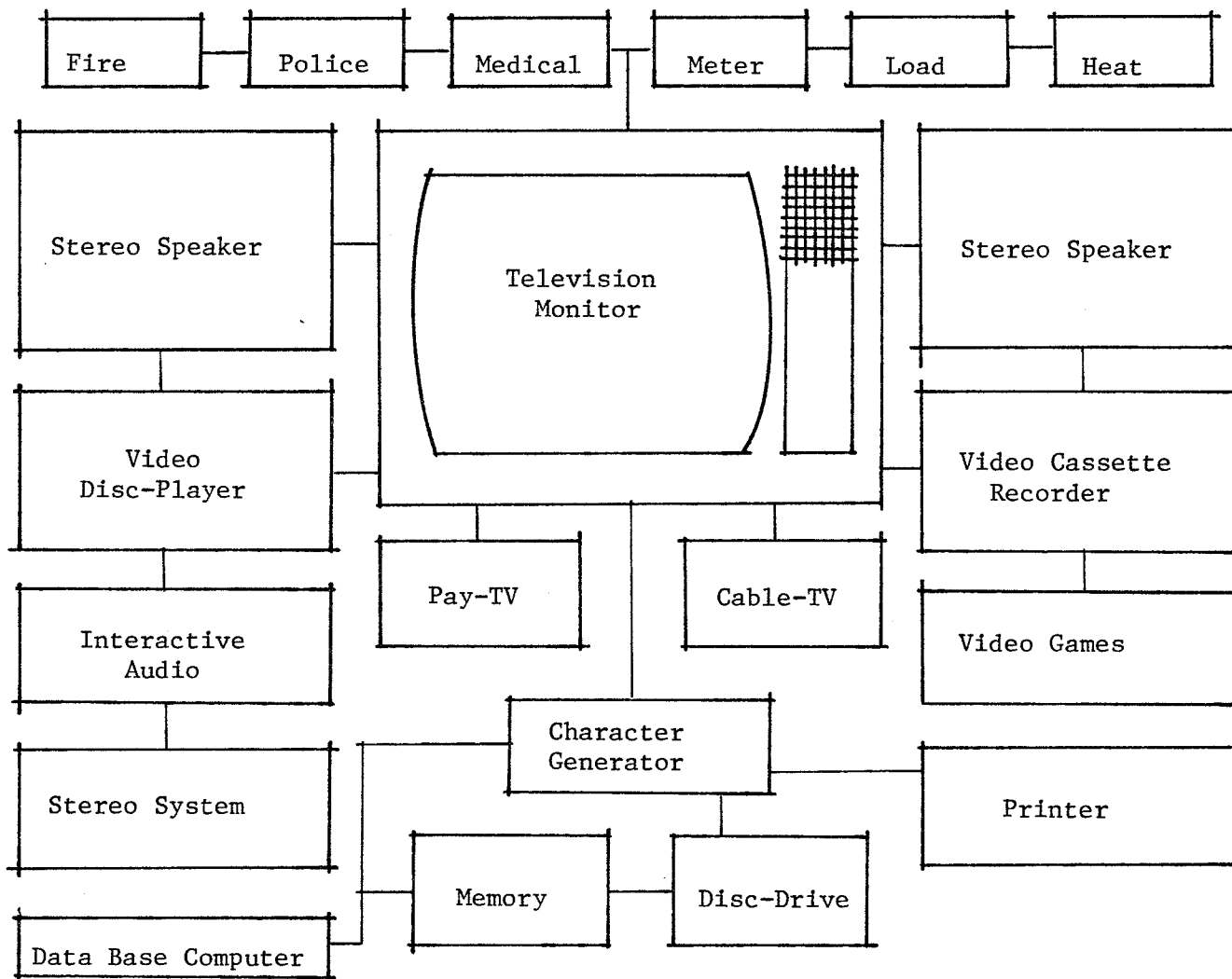
dictate viewer leisure hours. No longer will the viewer be subject to mass appeal broadcasting; no longer will he be restricted to banal programming fare. There is also community cable television which extends the viewing range and offers the capability of two-way interaction. Similarly, it provides for a public-access channel and sets the scene for an attitudinal change that both welcomes and supports pay-TV.

Storfer's second major approach is related to his third. Not only would he target special-interest consumers whose specific needs make them very receptive to electronic information technology, he would encourage the "broadening from one information aspect to another."²⁶ For example, a new generation of electronic video games, such as those manufactured by Atari and Intellivision, have the potential to become home computer terminals through the addition of keypads and character generators. This means that someone initially interested in a new form of recreation through the purchase of a video game may eventually be transformed into a personal computer consumer through the further purchase of supplementary game components. Figure 6. illustrates what a home communications centre may eventually look like if all systems are purchased.

In short, Storfer offers a set of market strategies whose shrewdness is only exceeded by its undeniable capacity for success. People will learn to want this plethora of electronic "wizardry" and, moreover, will accept the communications revolution with the same ease and enthusiasm with which they once accepted commercial radio in the 1920's. Given

Figure 6.
HOME COMMUNICATION CENTRE

-- Gerald Haslam ("Videotex:
What Is It and Where Does It Fit?")



radio's subsequent impact upon the city, planners can be sure that this new wave of electronic equipment, which has the uncanny ability to facilitate the instantaneous and massive exchange of ideas and information, will also have a tremendous impact upon the urban environment. Planners must understand and be prepared for this transformation while they are actually experiencing it.

C) CONNECTIONS -- THE HUMAN ELEMENT

The purpose of this thesis, as first stated in its general introduction, was to make connections between City Planning and Communication where none consciously existed before, to discuss the importance of communication to urban culture and development and to explore the impact of the electronic media upon planning and urbanism. It attempted to premise its entire length upon one major principle: that the quality of communication critically determined the effectiveness of urban planning. As such, the central message of this thesis was to encourage planners to become better communicators by understanding the communication structure in planning, the nature of human communication, the relation of communication to urbanism and, finally, the importance of good communications techniques in planning practice.

This thesis has fulfilled that original intent by making six important connections between City Planning and Communication in the course of a lengthy exploration. Firstly, that the planning model of rational creative action only works in harmony with an unfettered communications network.

Secondly, that planning, in a daily professional context, suffers from noise constraints that can only be reduced to tolerable levels with great difficulty. Thirdly, that planning is both a general and vocational activity based upon the processes governing human communication. Fourthly, that planning is dependent upon an accurate and continuous perception of urban change. Fifthly, that planning is influenced by television which is the most powerful form of mass communication known to man. Finally, that planning can incorporate, into its general practice, techniques of video production that further a positive relation between planner and citizen.

In the case of the first connection, as seen in Chapter I, a consensus of planning was sought by examining the writings of a number of distinguished planners and practitioners. From this, planning was deemed to be a social and purposive activity designed to provide choices for the future. It was also agreed that planning had the responsibility to communicate these choices as effectively as possible to all concerned. This collective view, premised upon forethought and action, was subsequently embodied by Erich Jantch's process of rational creative action. This process constituted a model for all forms of planning, general and vocational, because it described a complete cycle of human action. It incorporated forecasting, planning, decision-making and action into one entity relying on human free will to foster and encourage innovation at every level. These components operated in harmony but only because they were connected by a communications network characterised by low channel noise. Messages could flow in either direction, advocating action or revision. The model could also be set into

an elite or arena format, but it suffered in the case of the former. An elite format emphasised one-way communication with messages flowing from the top downwards, in pyramidal fashion. It did not so much stress innovation in action and thought as it did conformity. Contrariwise, communication in the arena format was much more open and two-way. Innovation was present throughout. In short, Jantsch's model of rational creative action presupposed an unfettered interaction of information. It meant that good planning was based on good communication. From the formulation of normative options to the implementation of strategies designed to attain these goals, the model embraced a distinctly human attribute; to be concerned specifically and optimistically for the future.

In the case of the second connection, also seen in Chapter I, planners were constantly sending and receiving information of all descriptions in the course of a day. This ranged from informal memos and formal reports to telephone calls and face-to-face contacts. If various planning objectives were to be realised, then these were necessary communication activities. Unfortunately, each message, verbal or written was subject to noise. Each carried with it not only the capacity for full comprehension but the inherent risk of failure through channel distortion or misinterpreted intent. Noise was also seen to be a function of department structure. Often, personality frictions, budgetary problems, unrecognised ability, low confidence, poor feedback, lack of political clout and overwork impeded basic communication and resulted in ineffective planning. Bureaucratic

elitism towards the public constituted another example. Planners generally understood that things were going wrong but they could only solve them by recognising that these problems were not to be seen in isolation. Instead, they were to be approached collectively as part of a general communications system. This was difficult because, in the case of most planning departments, such change could only be initiated at the higher levels of authority. Often, noise constraints were more readily encountered at the lower levels and were thus to be endured. When television was examined in Chapter IV, it was discovered that newsrooms were also burdened with similar types of noise. That they did not suffer from the same inhibitory effects was due to the difference in organisational structure. As previously stated, planning departments were usually moulded on an elite format of communication. Television newsrooms, in contrast, followed the arena design. With communication more participatory in this latter case, problems of noise were more easily remedied because they could be discussed and acted upon collectively.

In the case of the third connection, as discussed in Chapter II, human communication was seen to underlie all group activity, such as planning, and to encourage the fruitful exchange of ideas and customs. It was deemed the essence of all social process. Without communication, there could be no awareness of a better state of affairs. Communication facilitated insight through reason and creative leaps. Man, because of his intellect, was described as a communicative social being that,

conceiving of a future, could plan for its eventual fulfilment. Planning, in this context, was given to be a universal and general activity practiced by anyone concerned with charting a course of normative options. This was part of the consensus of planning as discussed in Chapter I. From Jantsch's model of rational creative action, "what is" could be re-phrased as "what ought to be". It was a characteristic unique to man and wholly with his fellow man through the act of communication. Planning was thus a social and purposive activity based upon the intellectual use of language and thought. In turn, urban planning was seen to be an extension of this in a vocational and particular sense. Urban planners were professionally trained to dwell upon the future physical, social and economic development of man's communal and spatial environment. In both cases, the activity of planning depended upon the dynamic exchange of ideas and information through a communication process distinctly human in tone.

In the case of the fourth connection, as seen in Chapter III, planning was presented as existing in a continuum of change. Nothing was too certain yet planning had the difficult task of not only providing society with one set of future choices but many. If decision-making, as described in Jantsch's model, was to reflect a responsible course of action, then the normative options formulated in the planning stage must be an accurate description of current events and trends. A plan based on miscalculations ran the risk of being ineffectual or worse, of resulting in an unanticipated and undesired future state completely out-of-sync with that first envisaged.

It was necessary to minimise this risk of failure. It was seen from Chapters I and II that planning was dependent upon good communication. It was also stated that communication and urban development were cast in a symbiotic partnership. This meant that planners could perceive the various nuances in urban change by monitoring the effects of communication advances on society in general. Accordingly, Chapter III attempted to present these in an historical perspective, from the calendar to videotex, to demonstrate the existence of a link between these advances and subsequent urban change. Since the link appeared to be reasonable, it was stressed that planners could work for a better future only if they kept abreast of this technology. Moreover, it was emphasised that urban change was bound to accelerate as society entered the first phase of a communications revolution, some systems of which are described in the appendix of this thesis. With information compounding on a scale unprecedented, it was suggested that planners incorporate new communication skills into their daily practices if their plans were to reflect viable options for the future.

In the case of the fifth connection, as seen in Chapter IV, television was considered to be the most powerful form of mass communication known to man. It reached virtually everyone by saturating society with its two-dimensional imagery. Viewers, each devoting an average of 2000 hours per year, could not help but be influenced by its pervasive power to inform. In politics and entertainment, television distilled its participants into

apparitions, deriving their strength not from deeds but by mere presence before the cameras. For example, in the case of televising Parliament, it was suggested that many politicians became "grandstanders": being "seen" to do something was infinitely more valuable than the actual "doing". In sports, television provided the means for otherwise separate and distinct groups to bridge racial and social boundaries. In religion, television contributed to a general lessening of sabbatical adherence but to a greater exposure of certain non-denominational ecclesiastics. In journalism, television elevated its reporters and announcers to the status of heroes, embellishing them with "priest-like" qualities of guidance and benediction. In short, television not only coloured various events through its selective "gatekeeper" coverage, it contributed to a common experience by broadcasting to an audience of millions.²⁷ It was because of this common experience that planning was affected by television. The medium was a window to the world whether that meant another neighbourhood, another city or another country. By watching television, chiefly news and current affairs programming, planners were privy to urban information outside the realm of personal experience. This televised experience, secondhand by definition, was either helpful or misleading. For example, information derived from a programme dealing with a particular planning issue could be beneficial when compared to a similar planning project or detrimental depending upon its parameters and intent. A planner could see, via television, the effects of downtown

redevelopment in a distant city and be influenced accordingly. He could also believe, quite mistakenly, that what worked elsewhere could work anywhere. Moreover, planners might be influenced by the sheer weight of television coverage. Citizen groups who managed to co-opt the news cameras into televising their side of a planning issue were more likely to generate pressure for a solution favouring their efforts. Unfortunately television was never meant to be a substitute for reality. The problem was that anything seen on its screen was automatically given an ipso facto credibility by the viewer. Television was most certainly a shaper of opinion.

In the case of the sixth and final connection, as seen in Chapter V, it was shown that planners had access to portable video equipment and community cable television, both powerful tools of communication. Used correctly and creatively, it was suggested that these tools could help build a more positive relation between planner and citizen. On one hand, planners could augment their traditional skills in the areas of data collection, case histories, education, scale-modelling, simulation, reference, public relations and presentation, to name a few. It was envisaged that planners could take advantage of this video equipment to record and produce programmes relevant to planning. A case study was provided by way of illustration. On the other hand, citizens could participate in the planning process by borrowing this equipment to make their concerns known on videotape. It was stressed, in a number of examples, that planners had much to learn from the comments and ideas

of these people. Any programmes thus produced could either be viewed in-house as project supplements or distributed, via community cable television, to the general public. Viewer appeal, in the case of that public, was dependent upon personal interest but some significant interaction was forecast with the advent of two-way television, incorporating such viewdata systems as televoting and telepolling.

In short, these are the connections between City Planning and Communication as formulated in the course of this thesis. Taken together, they underscore the original consensus of planning which is to provide choices for the future and to communicate them as effectively as possible to all concerned. Planning is, most importantly, a future-oriented activity dependent upon open, clear and essentially "noise-free" communication. It involves dialogue. It is principally concerned with the free flow of ideas and information especially as society enters into a communications revolution where technological changes will determine not only the structure of urban evolution but its rate.

There is no doubt that society is already undergoing profound and, for some, rapid change. Urban problems are more complex and obtuse. Advanced technology explodes and overwhelms. The political process, with its long history of representative democracy, appears strangely antiquated and inept. Moreover, the average citizen, beleaguered and bewildered, is left with the distinct impression that society borders on nothing but crisis; that the great institutions designed to radiate calm and confidence are

falling perilously short of their objectives. It is no small surprise that citizens, in response to this apparent confusion, demand a more vocal and direct role in urban planning. They are tired of characteristically bureaucratic one-way lines of communication whose only major accomplishment is a serious failure to address issues of real concern. It is therefore up to planners to include citizens in the actual planning process. They both must be an integral part of the rational creative model as first discussed in Chapter I of this thesis. In this way can normative options be formulated that reflect their needs and are responsive to urban change.

Planners can certainly expect the advent of the wired city, with its onslaught of information and its heightened citizen awareness, but this is not to be met with fear or misgiving. Planning, under the influence of a communication revolution, need not assume radical proportions. Granted, the pace of electronic inundation is potentially overwhelming in its capacity for change, but examined in the context of historical continuation, it can be understood and accommodate. Planning is quite possible providing it is in accord with any resultant urban transformation, and, secondly, that planners themselves can adopt a tenet of rapid learning with which to facilitate this important harmony.

John Friedmann in his book entitled, Retracking America: A Theory of Transactive Planning, discusses this from the perspective of Taoist philosophy. Given that all systems obey their own laws of internal change, it follows that planners can only affect certain processes by "acting upon the sources that generate the lawful behavior of the system."²⁸ In

other words, planners must approach the communications revolution from a basis of optimism and open-mindedness if they are to comprehend its urban implications and plan for new choices under its widespread domain. Planners must establish a rapport through dialogue. They have the communication tools at their disposal, including video equipment, television and basic communication theory. These can be used to foster an atmosphere of mutual respect between planner and citizen. Here, the emphasis, to echo Robert Theobald,²⁹ is on planning with people, not for them. For Friedmann, the vital and human element of planning has and always will be "to lead but not to be master."³⁰ It is the basis of his transactive theory of planning and the basis of the consensus of planning initially discussed at the beginning of this thesis.

In an age of electronic "wizardry", having with it the capacity for fundamental alteration of a fragile urban fabric once thought to be indestructible, "transactive planning is a style that humanizes the acquisition and uses of scientific and technical knowledge."³¹ It is counter to a society whose many problems have been compounded by an inability to cope with demanding pressures of change. It is counter to a bureaucracy whose massive, central organisation makes it both ineffective and fearful at the very level where it was intended to do the most good: that of the social individual. It is counter to a society deaf to the cries of the helpless and blind to its own processes of feedback. Moreover, it seeks to remedy non-participatory democracy whose

citizens "have little understanding of their environment,"³² short of those glimpses and explanations offered by the media.

In short, Friedmann's human concept of planning is in firm accord with Jantsch's process of rational creative action by engendering a participatory, cellular network of communication where "original ideas can arise at any point ... and can be often acted upon without infringing upon the central interests of others."³³ By placing great and single emphasis upon dialogue, regardless of geographic location, it is thus an embodiment of the communication revolution. By fostering the creative exchange of ideas and information, by encouraging leadership and rapid, mutual learning between planner and citizen, it transcends the human activity of planning into the human realm of communication; ultimately, into a communications medium in its own right.

* * * *

CONCLUSION

This final chapter has suggested that planners seem unprepared for this information-imposed urban metamorphosis. They appear more concerned with the traditional aspects of their profession. To paraphrase Jerome Aumente,³⁴ they prefer the comfort of conventional predictions about such things as future land-use and population movements. They do not understand that communications technology will transform the city as they know it. Planners are not prepared to recognise the significance of any communication variables, especially ones which may not only change the communal and spatial environment but may add a plethora of new problems to old ones. For example, pollution, crime, urban decay, to name a few, may be joined by communications stress, loss of privacy, job redundancy, an explosion of metropolitan, new transportation patterns and so forth. Planners who should know better appear content to wait for the onslaught rather than to plan for it. They are content to react rather than to anticipate. They have not begun to plan for a future where communications technology will be the central fact around which cities will be characterised. It is already beginning. Cable television and portable video units are available at this moment. Videotex is on the immediate horizon. It remains for the planner to use this technology and to recognise the importance of this instant-access to information. The planner must be prepared.

This chapter has also proposed that the communications revolution, a term made popular by a current genre of future-oriented magazines, books and advertising agencies, is a real and distinct possibility, some of which is happening now. This information-based revolution will occur not through any evangelical crusade for societal change but through the familiar and powerful need to market a new range of consumer products. The strategies for implementation are already being formulated and tested. Given the strength of the marketplace, their capacity for success is both well-documented and overwhelming.

Finally, this chapter has made six important connections between City Planning and Communication to emphasize that the quality of communication critically determines the effectiveness of urban planning. Planners are urged to become better communicators by understanding the communication structure in planning, the nature of human communication, the relation of communication to urbanism and, finally, the necessity of good communications techniques in planning practice. This underscores the human element of planning whose message is simple but elegant: plan with people. Through a dialogue premised not only upon mutual trust and understanding but recognition of each other's position and interest, planning can foster a meaningful exchange of ideas and information. Its capacity for beneficial forethought and action is strengthened by a communicative envelope of participation punctuated by creative innovation and response.

* * * *

FOOTNOTES -- CHAPTER VI

- 1) Jerome Aumente, "Planning for the Impact of the Communications Revolution" in City, Vol.5 #5 (Washington, D.C.: National Urban Coalition, Fall, 1971) p.58.
- 2) William Knox, "The Pathology of Information" in Book Production Industry (June, 1971) pp. 43-46.
- 3) Mark Hinshaw, "Wiring Megalopolis: Two Scenarios" in Communications Technology and Social Policy (London: John Wiley & Sons, 1973) p.305.
- 4) Ibid, p.306.
- 5) Ibid.
- 6) Nicholas Johnson, "Urban Man and the Communications Revolution" in Nation's Cities, Vol.6 #7 (Washington, D.C.: National League of Cities, July, 1968) pp.9-14.
- 7) Arnold Wise, "The Impact of Electronic Communication on the Metropolitan Form" in Ekistics, Vol.32 #188 (July, 1971) p.25.
- 8) Supra, Note 6, p.11.
- 9) Supra, Note 3, pp.308-311.
- 10) Ibid, p.313.
- 11) Ibid, p.312.
- 12) Ibid, p.314.
- 13) Ibid.
- 14) Ibid, p.316.
- 15) Ibid.
- 16) Ibid, pp.312-316.
- 17) Note Mark Hinshaw's essay entitled, "Wiring Megalopolis: Two Scenarios," included in this collection.

- 18) Bertram Gross, "The New Field of Urban Communications" in Communications Technology and Social Policy (London: John Wiley & Sons, 1973) p.290.
- 19) Ibid, p.289
- 20) Ibid, p.292.
- 21) Melvin Webber, "Urbanization and Communications" in Communications Technology and Social Policy (London: John Wiley & Sons, 1973) p.293.
- 22) Ibid, p.294.
- 23) Ibid, p.295.
- 24) Supra, Note 1, p.59.
- 25) Paul Storfer, "Videotex: Immediate Prospects: U.S." in Inside Videotex: The Future...Now (Toronto: Informart, 1980) p.97.
- 26) Ibid.
- 27) George Comstock, Television in America, (Beverly Hills: Sage Publications, Inc.,1980) pp.125-133.
- 28) John Friedmann, Retracking America: A Theory of Transactive Planning (Garden City, NY: Anchor Press/Doubleday, 1973) p.186.
- 29) Robert Theobald, "Planning with People" in Environment and Change: The Next Fifty Years (Bloomington: Indiana University Press, 1968) pp.182-185.
- 30) Supra, Note 28, p.189.
- 31) Ibid, p.190.
- 32) Ibid, p.192.
- 33) Ibid, p.204.
- 34) Supra, Note 1,p.58.

* * * *

SUMMATION

SUMMATION

This thesis has employed, throughout its entire length, a methodology of exploration. From many different sources, it has folded into one cohesive document a series of ideas and relationships that, taken together, represent a sound connection between the practice of planning and the process of communication. Planning has been seen to be future-oriented and purposive; a social activity concerned squarely with forethought and action. Similarly, communication has been seen as the essence of all social processes and, therefore, the essence of planning; communication permeates all living things and establishes the means for interaction. As such, this thesis has shown how urban development throughout the ages has been vitally linked with communication and how current electronic innovations, under the umbrella of a "communications revolution", are but an historical continuation of this relationship. It has also examined the most powerful form of mass communication known to man under the premise that many planning issues are also television news stories; indeed, some are firstly news stories and subsequently planning issues. Since television is such a pervasive entity and not only has the incredible capacity to affect all members of society but the urban environment as a whole, this thesis has presented it in an exclusive chapter. By providing planners with an opportunity to study

its impact by studying the medium itself, planners can better understand its role in society and its influence on planning. Secondly, they are in a more advantageous position to use the medium in the service of planning. Given public access to cable television and the availability of portable video units, the profile of planning can be greatly enhanced as well as its planner-citizen interaction. The more planners incorporate into their thinking new avenues of communication, mixed with the right blend of rationality and pragmatism, the more the practice of planning acquires a distinctly human quality. Since society is undergoing an information-imposed metamorphosis where advanced electronic equipment is rapidly invading the marketplace, planners will have little choice but to prepare themselves for a communications revolution; one which will not only transform the urban environment but will surely transform fundamental planning praxis. In short, the quality of communication, in a new era based upon the instantaneous exchange of ideas and information, will determine critically the effectiveness, indeed, the *raison d'être* of urban planning. Planners must be prepared or be left behind. This is the future; this is the principal recommendation of this thesis.

* * * *

APPENDIX

APPENDIX

The appendix is divided into eight separate parts, running A through H. It is intended to provide the reader with information whose detail rather than intent places it immediately outside the main thesis body. Specifically, it provides a synopsis of certain elements of electronic video technology from a strictly Canadian perspective. For example, not only is Telidon examined with respect to its history, competition and performance, two experiments, Grassroots and IDA, are also described. Both make use of Telidon viewdata systems and both rely on the presence of an electronic highway to connect user to terminal. It is this highway that functions as a common carrier in the "wired city." Since it can be constructed from material based on laser-light technology, fibre optics, including its application in the field, is also discussed.

The appendix contains further information such as the daily news format of a private television station. Any discussion of newsroom constraints, in the opinion of the author, would not be complete without it. Also included is a glossary of script terminology for those readers not familiar with technical script language used in Chapter V of this thesis. Finally, where reference has been made to the print media in terms of source material or journalistic style, the actual article has been provided.

* * * *

A) TELIDON

"Telidon" was developed, according to John Madden in his essay entitled, "Videotex in Canada,"¹ by the Department of Communications Research Centre whose problem, in 1973, was to overcome serious transmission delays in sending computer graphics information over the narrow bandwidth afforded by telephone lines. Five years later, the CRC had developed the first Telidon system whose graphic display quality and transmission capacity were so unique that Canadian television and telephone companies withdrew their support of foreign videotex and backed the Canadian version.

The standard Telidon system consists of two distinct halves. The first is of a local nature relative to the user and includes a character generator or keyboard, a light-pen and magnetic graphics tablet, a memory storage unit with floppy disc capability, a colour TV receiver, a modem and a PDI digital decoder. A video camera and a hard-copy printer could also be added for greater flexibility but these are both costly items. The second half includes the remote computer and is attached to the first via a communications link such as a telephone or coaxial cable, microwave, optical fibre, satellite and so forth. The second half usually consists of modem, a gateway computer and several data base units. Taken together, the system can be used to retrieve, store and create information.

The secret of Telidon lies in its "picture description instructions" (PDI) which is essentially its graphic coding scheme.

Telidon technology is based on an improved concept of describing and encoding a videotex page, not point-by-point and square-by-square as in the previous alpha-mosaic videotex systems, but as a series of geometric buildings blocks being the point, the line, the rectangle, the arc and the polygon.²

These geometric shapes or "logigraphics", as they are sometimes called, are mathematically precise and can be defined with a minimum of information. For example, a point requires only one co-ordinate, a line two, an arc three and so forth. This provides a graphic system that is extremely flexible and allows the user to create any image so desired; from modifying existing graphics in the main data base to employing "telecriture", which involves free-hand drawings with a light-pen and a magnetic graphics tablet.

Telidon's PDI's offer other advantages as well. According to a Department of Communications publication entitled, "Telidon: Is There Any Other Choice?",³ they compact data to facilitate easy storage and transmission; they are compatible with existing computer technology; and they can be adapted and incorporated by any future videotex developments.⁴ This is significant because it enables Telidon not only to grow with the times but to lead them. Future

enhancements to the system include innovations ranging from a generalised photographic package to multi-node interpersonal communication. For example, Telidon currently has a limited capacity to reproduce a photographic "likeness" of the original by describing it, through a video camera, as a series of dots and using a variety of eight basic colours, green, blue, red, cyan, yellow, magenta, black and white as well as six shades of gray, to achieve this. Terminal-to-terminal (ie. person-to-person) communication is also possible through the provision of a common visual working space. By linking one user's command terminal and CRT with that of another user, multi-coloured graphic displays could be shared simultaneously between them with text dialogue also part of the process. One could thus envisage a client in his own home talking to an engineer in his office about a design of some sort; the plans of which are displayed on their respective CRTs. Similarly,

... students and teachers, although geographically separated, could carry on an educational dialogue using their TV screens as a common electronic blackboard.⁵

This also implies that multi-node interpersonal communication could simultaneously involve more than two participants.

Currently, Telidon is available as teletex, viewdata and audio/visual, or in a combination of all three modes. In the teletex version,

the user accesses the cycle of continuously-broadcast information via a small keypad for page selection. Information is of a general nature and is always updated, giving the latest in news, weather, sports, market notes and so forth. Telidon's viewdata system is more complicated than teletex and provides information ranging from reference to video games; all of which involve communication between the user and the remote central computer. The audio/visual system uses specially-designed terminals

... with extra computer memory which allows Telidon's high-resolution animated graphics and text to be used as an effective, low-cost tool for business meetings, sales presentations, training seminars and public displays. ⁶

Audio/visual information can be stored, re-called, modified or even transmitted to a remote user. It can also be projected on a large overhead screen or turned into hard-copy via an optional printer.

Telidon is a world leader in all aspects of videotex as evidenced by the number of organisations, both domestic and foreign, adopting the Canadian system either wholly or as a base from which to develop versions suited to specific local needs. It conforms to the American Standards Code for Information Interchange (ASCII) in the transmission of textual material; the International Standards Organisation (ISO) on the accommodation of various alphabets, including non-Latin characters; the International Telegraph and

Telephone Consultative Committee (CCITT) of the United Nations which sets global telecommunication standards; and the American Telegraph and Telephone Company (A.T.&T) which considers Telidon's alpha-geometric graphics to be the best to date.

Telidon has undergone field trials in January, 1980, by the Ontario Educational Communications Authority (OECA) through their educational television network, TV Ontario. The OECA was impressed with Telidon as a substantial educational tool because of its tremendous versatility. Telidon has also been tested by Bell Canada in Toronto and Quebec City, in the spring of 1981, through its "Vista" programme which was originally patterned on the British Prestel system. Similarly, Telecable-Videotron, a Montreal cable company and the Times-Mirror Company of Los Angeles tested Telidon viewdata in their respective markets in late-1981. Telidon teletex is envisaged for the general U.S. market by Time Inc. and will be distributed by satellite. It has also been introduced to Venezuela by that country's government and to New York and Washington D.C. through public and private support, including the PBS network. ⁷

One Manitoba field trial with Telidon bears elaboration. In the spring of 1981, Informart, a Toronto-based firm, opened "Project Grassroots" in southern Manitoba.

B) PROJECT GRASSROOTS

Designed to provide easy access to over 20,000 pages of pertinent agricultural information, "Project Grassroots" became the world's first commercial application of Telidon. Twenty-five terminals were strategically located in southern-Manitoba so that almost 30,000 farmers would be within twenty miles of the nearest one. They simply had to drive to the offices of their grain elevator, crop insurance agent or wherever a Telidon terminal was available to gain information that might otherwise take forever to compile.

The Manitoba Telephone System (MTS) acts as a videotex carrier while Informart manages the service and displays the information, including the updates. The cost, amounting to \$1.00/page/month, is absorbed by the information-providers contracted to Informart. From the farmer's perspective, this means that Project Grassroots amounts to a free and welcome service in a time where good and reliable agrarian information is crucial to the running of a farm but where money, in turn, is short.

By simply pushing a button, farmers have before them a wealth of data ranging from the world-view of competitive agriculture to the local factors affecting daily farm business. Information is structured in pyramid form, from the general index to the most specific and local content. Since Project Grassroots uses Telidon as a viewdata system,

farmers can select certain pages or, in turn, enter commands to input certain new or modified information.

According to an MTS pamphlet entitled, "Grassroots: Up to the Minute Agricultural Information and Meeting the Needs of Modern Farming,"⁸ the six information-providers include the Winnipeg Commodity Exchange which presents price and volume trading on all board grains every fifteen minutes; the World Weatherwatch, a computer-satellite service, which offers complete forecasts ranging from a North American synopsis to the weather conditions over a local farm district in southern-Manitoba, including maps showing growing-degree-days and soil-moisture content; the Manitoba Department of Agriculture which provides information packages from crop insurance and farm financial management counselling to market updates and soil and feed testing services; the Herald Grain Newsletter which analyses weekly grain industry activities; the Canadian Grain Commission which offers a weekly summary of grain stocks, supply and movement in Canada, including updates on new rules affecting this service; and, finally, livestock reports by cattle associations which give daily price and market trend information on all grades of cattle in all North American trading centres.⁹

Although Project Grassroots initially offered these six information-providers, other private interests, such as farm machinery manufacturers, chemical and fertiliser suppliers, grain companies and so forth, are now willing to enter this new market because no one in the

agriculture industry can afford to stand alone and isolated. Information must be fast, comprehensive and accurate and that is what Project Grassroots is designed to give. In other words, farming is a business whose success depends upon a plethora of factors, some of which lie outside the farmer's control. Grassroots is a serious attempt to offer the best, current agricultural information modern technology can provide and at a reasonable cost to all concerned. An indication of the project's success was delivered by Ottawa in May, 1982. MTS signed an agreement with the federal government which, amongst other things, calls for the expansion of Project Grassroots into other parts of Manitoba. It appears that the communication revolution, heralded by MTS's Project Grassroots, IDA and fibre optics experiments, is not confined to the "wired-city."

C) PROJECT IDA

"Project IDA" was conceived by the Manitoba Telephone System (MTS), a crown agency which is that province's "common carrier" and responsible for good telephone service, accessibility, privacy and reasonable rates. Project IDA, named after MTS's first female telephone operator in 1882, was an experimental programme lasting one year, from the spring of 1980 to the summer of 1981, and was designed to offer a sophisticated telecommunications package to a small community

using a coaxial cable as a single, integrated carrier. The objective was to test the technological capability of this new electronics system, including its market potential and customer acceptance. The outcome was to serve as an indicator for the logical and efficient expansion of the service to other areas of Manitoba.

Headingley was chosen as the site. It is a small town located six miles west of Winnipeg, the provincial capital, and lies very near the geographical centre of North America. It was chosen, according to a MTS press release dated 20 July, 1979, for three reasons:

- 1) the area is scheduled for telephone network upgrading;
- 2) the trial can be economically incorporated into the improvement plans; and
- 3) (it) is not currently being served by cable TV. ¹⁰

Headingley seemed the ideal choice including its close proximity to a city of some 600,000 people. The two centres were subsequently linked for the experiment by means of a single coaxial cable. This cable was as important to the trial as was the telecommunications package. Previous to Project IDA, coaxial cable was used primarily as a signal carrier for cable television but its large broadband capacity was well-known in the industry. In an attempt to alleviate the high costs of single, narrowband telephone lines, especially to remote communities, MTS capitalised on this knowledge by successfully designing an integrated system which was compatible with a single coaxial link. Because the coaxial cable could carry this complex information

with considerable ease and relative low cost, it was dubbed the "electronic highway".

Project IDA, according to Mike Aysan in his essay entitled, "Project IDA: Home of the Future," was envisaged to offer seven basic forms of service:

- 1) telephone
- 2) telemonitoring
- 3) telemetering
- 4) telecontrol
- 5) telesound
- 6) telegraphics
- 7) television ¹¹

With the exception of telephone and cable TV usage, all of the other services were offered free of charge to the participants.

The first service concerned digital telephony and a message recording/retrieval system. Traditionally, telephone and communication has operated in "analog" form which, according to Frank Herbert in his book entitled, Without Me You're Nothing,

... (is) a continuous signal with a voltage corresponding to a measurement of something observed or monitored. Also a device which, by its performance, can represent the performance of some other device. A model airplane can be the analog of its full-size counterpart. ¹²

Similarly, an analog signal in a telephone line is an artificial but analogous representation of the curved sound waves made by a human voice through the air. Since this analog signal is virtually identical, regardless of having been carried along a copper pathway, the listener can receive the caller's message without the aid of a decoder. This is not possible with a digital system because it converts or encodes the analog sound wave into an electronic "on-off" pulse or "bit". This pulse of information is relayed down the communications channel, whether copper, coaxial or fibre optics cable, and translated, through a decoder, back into analog form.

There are two major advantages for using digital telephony. Messages can be continuously compressed by a computer which takes a sample of the analog sound wave at source and relays this minute part at the rate of 8000 samples/second to the decoder at the end. This allows many different messages, in digital sample states, to be intertwined, transported and finally delegated to their respective receivers. In other words, digital telephony reduces the high cost of traditional telephone communication because of the number of messages that can be carried distinctly and simultaneously on just one line.

The other major advantage concerns signal strength along the carrier. In an analog system, power boosters are needed at successive intervals on the route to ensure that the message will arrive in a

discernible state. Digital technology eliminates the need to rejuvenate the weakened signal by simply recreating a new but exact duplicate of the original and can do so anywhere on the carrier line through the aid of a scanning computer.

Digital telephony also offers a unique message recording/retrieval system that avoids the usual analog answering service which is subject, according to Mike Aysan, "to mechanical failure and (is) sequentially processed." ¹³ In a digital transmission medium, Aysan states that after a certain number of rings, a storage device is automatically accessed. This gives the caller the option of leaving a message for a nominal fee. If one is left, then it is encoded into digital form and a light on the receiver's telephone goes on to indicate that a message is available for decoding. The receiver simply dials a number, identifies himself to the Automatic Number Identification (ANI) computer and receives the message. The major advantage, Aysan states, is being able to leave a message even if the line is busy and avoiding the relative high costs of processing a message in the normal analog manner.

The second service was called "telemonitoring" and involved fire, intrusion, pressure and panic alarms. In the case of fire alarms, a homes wiring and its smoke detectors would be monitored by a central computer which would automatically relay an alarm by the smoke detector to the fire department. The major advantage, in Aysan's opinion, is the crucial time saved in sending the information

from the home to the fire department. Temperature and pressure alarms would work the same way. If, while on holidays, a home's heating or cooling system failed, then the central monitoring computer would send the alarm to the appropriate utility which could quickly respond. Similarly, panic alarms would result in a police cruiser or an ambulance being dispatched but, unlike the others, this specific alarm is not automatic. The reason is simple. The alarm could be sent by a person in the midst of a medical emergency, in response to an intruder and so forth. A different button would be used in each case.

"Telemetering" is a process where a central computer remotely and automatically reads the various meters situated in an average home. This information is sent to the hydro and gas companies who subsequently issue a monthly utility bill. Telemetering, states Aysan, is a cost-saving device and could be expanded to include the measurement of cable or pay TV usage, telephone usage and so forth.

The fourth service in Project IDA was called "telecontrol" but it was never put on trial in Headingley. Telecontrol is the inverse of telemetering and concerns the management of power consumption by the respective utility. The home owner or apartment dweller is encouraged to use various appliances in response to specific power rate periods. For example, one could take advantage of a low-cost period in the day, such as after 7PM, to

operate a dishwasher. Further, the utility company could use a central scanning computer to calculate power consumption and shift loads to avoid energy peaks that could result in a power "black-out". Aysan states that one might find one's air conditioner, hot water tank or furnace being automatically shut down for fifteen minutes while general loads are readdressed. Telecontrol is a cost-saving method which enables the utility company to provide a service in the most efficient manner and at the most reasonable rate to the consumer

"Telesound" was the fifth service in Project IDA's inventory. It was to include stereo and mono music channels and electronic voice mail. In actual fact, only one stereo music channel became available although it would have been possible to add more. Theoretically, telesound could accommodate a "music-request" system where a user would pay a nominal fee to hear a specific song or LP and a further charge should he request a digital copy. Unfortunately, the problem is one of technology because this service, operating in its fullest sense, would require more sophisticated storage and retrieval devices than are otherwise available. Electronic voice mail was not part of the experiment but Project IDA was designed to incorporate it. The sender simply calls up the system, leaves the message, enters the receiving telephone numbers and hangs up. Like the message recording/retrieval system in digital telephony, one responds to a glowing telephone light by dialing a certain number, identifying oneself and subsequently receiving the stored

communication. In the case of unwanted "junk" mail, one pushes a "dump-message" button on the telephone consol. Aysan predicts that within ten years, 70% of all mail will be exchanged in digital electronic fashion.

One of the most important aspects in the Project IDA experiment was "telegraphics" which used two videotex services, Telidon and Omnitex. Both are Canadian-built systems but Omnitex, developed by a Winnipeg company called Interdiscom Limited, is the less expensive because of its four colour, alpha-numeric design. Telidon uses eight colours and generates its pages in the more complex alpha-geometric style. In Project IDA, both were used in broadcast videotex or teletex modes with Telidon employing a small keypad and Omnitex adopting a full English keyboard to call up specific pages of information. This information was stored in three computers and contained, amongst other things, material generally associated with newspapers, such as news, leisure, classifieds, stocks and so forth. The Winnipeg Free Press and the Toronto Star were contributors. Informart, a Toronto-based company with branch offices in Winnipeg and Ottawa, also provided information, such as news, weather, sports, entertainment, travel, education and notices, but did so primarily with Telidon.

Although Project IDA did not offer viewdata services, it was designed to carry it. One form of viewdata is called "teleshopping: which could take many forms. Mike Aysan states that "Yellow Page" information,

normally found in telephone books, could be displayed on a television screen. A variation might include a picture of the item and a column of text describing it complete with price and retail outlet. Aysan further states that a company might engage a consumer advisor who would communicate answers to questions generated by interested parties through their respective newdata systems. Presumably, the advisor would recommend the employer's products over others but with good reason from the buyer's perspective.¹⁴ Similarly, it is possible to buy an item advertised on television by simply entering one's account number and the commercial identification code into one's keypad and sending this information, via the remote central computer, to the specific retailer. The product is subsequently delivered and a bill appears on the videotex screen or through the Post Office.¹⁵

Telegraphics could also accommodate opinion polling where one responds to a presentation by pushing a "yes/no" button; auctioning where one bids for a displayed item through the keypad; off-track betting where one enters the "daily-double" bet, watches the race and dials up how much has been won or lost; and lottery guessing where one programmes, for a certain cost, the last four of a seven number sequence for the chance of winning the jackpot. Aysan further suggests that telegraphics could offer a

... library service: what is available at what library, under what index. Restaurant listings

and menus and prices; general government information, where to get what service; consumer information -- Ralph Nader could have a brand new arena; medical information -- in prevention or education of the public for public health and the list goes on. ¹⁶

Project IDA was designed to test only a small spectrum of telegraphic services but Mike Aysan's description of the potential seems staggering in the least. Telegraphics, through videotex, is only limited in its fullest application by the demands of the marketplace and the speed with which services can be made available in response to those demands.

The final service offered by Project IDA was cable television. The residents in Headingley had previously been without it although two cable companies had, for a number of years, been operating in Winnipeg, which lies only six miles away. Unlike the Winnipeg system, Headingley's cable had the access potential of thirty-seven television channels. This included normal network programming by the CBC, CTV, Global, NBC, CBS, ABC and PBS as well as pay-TV programming, such as "Home Box-Office," and educational broadcasting by TV-Ontario. With this service, users dialed up specific programmes on their keypad which overrode the twelve-channel VHS tuner on their television set.

Project IDA was discontinued before much of its potential could be realised. The major reason for its untimely demise was one of cost: it fell in an era of major cut-backs but it did not fail. Project IDA

was designed to test the feasibility of a "Single Integrated Network: (SIN) and this "electronic highway" proved very successful. The vision of the "home of the future" was simply a happy by-product of this experiment and could not have occurred in the absence of the communications link provided by MTS in the first place. They proved that the coaxial cable, so vital in the cable TV industry, could also function as a common carrier in the "wired-city." The only medium that has greater potential and eventual lower costs is glass cable based on fibre optics technology.

D) FIBRE OPTICS

The communication revolution of the 1980's may only be possible in its widest scope because of spectacular advances in fibre optics technology. The inventions of the laser, the light-emitting-diode (LED) and the ability to reduce fibre optic transmission loss from 1600 dB/mile to just thirty-two by 1970 has made fibre optics a viable carrier alternative to coaxial cable, satellites and microwave.

In its simplest sense, fibre optics technology employs as its basic component, an extremely high-quality, transparent, hair-thin plastic or glass fibre. This fibre core is covered with a transparent cladding which is also made of glass or plastic. The reason for this special combination of materials concerns the refraction index of light.

It is this specific index or bending property of light that allows the transmitted light to be guided within and along the fibre. Since the cladding has a lower refractive index than the core, "light rays launched into the fibre," according to D. van Vleit in his essay entitled, "BBN for the Layman," "are restricted by total internal reflection and are thus confined to (this) core." ¹⁷ It is the usual practice by MTS and Sask-Tel to bind twelve of these clad/core fibres into one strong and highly-insulated transmission cable to facilitate handling by cable-laying machines and to withstand the elements.

Each fibre can carry voice, video and data information, emitted in digital pulses at the source, by a laser for long distances or an LED for short spans. While a normal telephone conversation in analog form requires two relatively-substantial copper lines, complete with cumbersome power boosters, a single fibre optics cable can carry 672 simultaneous telephone conversations or 44.7 megabits/second of data or one complete video channel. The immediate advantage over copper carrier lines, besides an increased telecommunications capacity, is size. As the demand for information constantly and geometrically increases, underground electronic highways, especially those located in large cities, are becoming intolerably crowded. These conditions could be greatly eased by using twelve bundles of twelve-strand optical fibre which are capable of relaying over 50,000 simultaneous telephone calls and measure only one-half an inch in diameter!

There are other significant advantages as well. Unlike copper lines, fibre optics cable does not leak, thus eliminating "cross-talk." It is also immune from atmospheric disturbances, such as lightning. From a security and privacy perspective, it is free from wire-tapping and jamming. Because fibre optics is a digital carrier, distortion build-up, normal in analog systems, is removed by carefully-placed repeater sites that completely re-create the transmitted signal and send it, de nova, on to the next one. These sites can be located further apart than traditional power boosters as a light-emitted signal can travel a greater distance than an electrically-generated analog loop.

Currently, two fibre optics projects are underway in Western Canada. In Saskatchewan, Sak-Tel has set up the first stage of a province-wide broadband distribution network (BBN) that will incorporate some 2000 miles of optical cable by 1985. This network, known as the "Helicopter Bird,"¹⁹ because of its rotor-like shape, will serve fifty-one communities, including Regina and Saskatoon, and will rank as the world's longest fibre optics highway when finally completed. The system is designed to meet Sask-Tel's projected digital telephony, data and video needs for the next twenty years.

The other fibre optics project is a joint-venture of the Manitoba Telephone System (MTS), the Department of Communications (DOC), the Canadian Telecommunications Carriers Association (CTCA) and two private companies. Unlike its Saskatchewan counterpart, which is massive in

comparison, the Manitoba field-trial is located in the small, rural community of Elie-St. Eustache, which lies approximately thirty miles west of Winnipeg. This site was chosen, according to an MTS information pamphlet, because Elie is a local market centre for the surrounding area and because the cost of wiring single-party lines and cable TV service to its 600 inhabitants is economically unfeasible using non-digital technology.¹⁹ The objective of the two-year programme is to test the technical capacity of a small fibre optics network by bringing to approximately 150 participants, digital telephony, cable TV, FM radio and a complete videotex channel via a single integrated optical cable trunk line or electronic highway. Like its provincial complement, Project IDA, which used a coaxial cable in place of a fibre optics one, the service could offer a variety of things including telemonitoring, telemetering, telegraphics and so on. If the Elie-St. Eustache project is successful, then MTS will consider an eventual province-wide fibre optics distribution network similar to the one envisaged for Saskatchewan by Sask-tel.

* * * *

E) LIST OF POSSIBLE USES -- Elie-St. Eustache Fibre Optics Trial²⁰

Digital Telephone Service

Voice Mail

Telephone Message Recording & Retrieval
Fire, Intrusion & Medical Alarms
Temperature Alarm for Deep-Freeze Malfunction
Hold-up in Progress Alarms
Remote Meter-reading for Power, Gas & Water
Mono Music, Stereo Music & Voice Distribution
Teleshopping
Two-way Interactive Video School
Electronic Mail
Facsimile
Electronic Newspapers
Yellow Pages
Library Services
Stocks & Securities Information
Polling & Auction Systems
Restaurant Listings
Guide to New & Used Cars
General Government Information
Income Tax Advice
Electronic Funds Transfer
Cable Television Distribution
Educational Television
Pay-TV
Televideo Phone
Real Estate Listings
Market Prices -- World & Local
Detailed Information Tailored to Specific Operations
General Agricultural Extension Information
Weather Information

* * * *

F) CKY-TV DAILY NEWS FORMAT FOR FRIDAY, 11 MARCH, 1983

6:00:00 OPENING BILLBOARD (VTR/spare cart audio)
 VTR/CAM-6 (2-shot/cart BG)
 HEADLINES
 CAM-5 (medium-shot of Paul)
 1st NEWS (as per script)
 STING (gen/camera 2-shot)

6:13 COMMERCIAL "A" 3:03 mins.)

6:16 WEATHER
 GEN/CAM-5 (medium-shot of Sylvia)
 CAM-6 (forecast board)
 CAM-5 (wide-shot/zoom in)
 STING (gen/cam-5/widen/rack out of focus)

6:30 COMMERCIAL "C" (3:30 mins.)

6:33 SPORTS (as per script)
 GEN/CAM-6 (medium-shot of Barry or Peter)
 BARRY OR PETER TO PAUL/INTRO COMMENT

6:48 COMMENT (Marshall on VTR or studio live)
 STING (VTR or slide)

6:50 COMMERCIAL "D" (3:03 mins.)

6:53 3rd NEWS (as per script)
 GEN/CAM-7 (medium-shot of Shelly)

6:59:00 CLOSING BILLBOARD (2-shot/widen/cart pre-roll 58:50)
 CREDIT ROLL (slow -- 59:07/medium -- 59:25)

6:59:55 GEN/BLACK (credit freeze/station I.D.)

* * * *

G) A GLOSSARY OF SCRIPT TERMINOLOGY

- ANNOUNCER VOICE/OVER -- any audio commentary or narration over video where announcer is not seen on camera
- BG -- "background" - refers to any music, talent, scenery or noise not in foreground but kept subdued in background for effect
- BILLBOARD -- the opening and closing portion of a programme usually containing establishing video, musical theme, titles, credits and copyright
- CREDITS -- any titles at the opening and/or closing of the programme listing the names of all associated talent, production personnel and organisations including show title and copyright
- CUT # -- identifies a certain VTR item for playback during programme production
- FREEZE-FRAME -- a special effect whereby a particular image is electronically "frozen" on the screen thus resembling a photograph
- IN CUE/OUT CUE -- an action or line by sight or sound signalling both the precise beginning and end of the VTR item
- RECORDING/PLAYBACK DATES -- dates on which a particular programme is produced and subsequently broadcast
- SEGUE -- one sequence followed by a new sequence without any intervening explanation or announcement
- SOUND-ON-TAPE -- the audio portion of a VTR item not requiring any announcer voice/over
- STING -- a musical and visual transition between two items or scenes usually in advance of a commercial (also referred to as a "BRIDGE")
- SUPER -- any graphical information electronically keyed over an image such as a name or title

TALKING HEAD -- a camera shot ranging from a medium close-up (MCU) to an extreme close-up (ECU) in which the predominant image is a person's head and/or shoulders

TBA -- "to be announced"

THEME -- music or sound effect usually associated with the opening and closing of a programme by which that programme can be readily identified

TIME -- any elapsed time associated with the programme indicating where a particular item should be in relation to total allotted show or running time

VTR -- "video tape recorder" - refers to an item stored on a particular VTR tape to be played back during programme production

* * * *

Whiteshell park proposals face increasing opposition

F.P. MON 28 FEB 1983

As the time nears for Natural Resources Minister Al Mackling to sign the master plan for Manitoba's Whiteshell Provincial Park, pressure is building to have certain proposals modified.

Last week, Mackling received a letter from the Manitoba Wildlife Federation which, understandably, is upset about the preservation aspects of the plan and the proposed wilderness area.

Don Glays, executive director of the 15,000-member federation, objects to the wilderness concept — in particular, the size of the area — and the parks branch stance that hunting disrupts recreational use.

He also is critical about which group in Mackling's department enjoyed the most sway with the minister.

"In our opinion," Glays wrote, "the master plan was conceived by very biased civil servants and adoption in its present form would only serve to further the aims and objectives of a small group of people.

"The biases of these civil servants is toward the concepts of preservationists and anti-hunters and is reflected in the proposed zones within the park."

The wilderness concept, called the Mantario wilderness zone, takes in 321 square kilometres (128 square miles) or 12 per cent of the Whiteshell, Manitoba's largest provincial park. That sector will be set aside for fishing, canoeing, hiking, cross-country skiing and primitive camping.

All other uses — especially hunting, motorized traffic of any sort and cottage developments — are prohibited.

"Relative to the number of users," says Glays, "12 per cent of the park is much too large to set aside for so few people.

"Hunting doesn't conflict with recreational use in the area," Glays maintains. "Hunting as a recreational use takes place after summer use of the area."

He urges the government to con-



Glays: anti-hunter biases



Barry Mullin

sider "the harvest of wildlife in whatever size area you decide upon."

Glays says the no-hunting aspect is an attempt by the parks branch to cloud the issue. "It (no hunting) is not based on studies or on scientific data. It is based on opinion and wrong assumptions."

In his letter, Glays maintains pleas from wildlife and fisheries branch staff were ignored.

"What we end up with is planners trying unsuccessfully to fulfil the roles of species managers."

Glays says there is no reason to close all hunting in the area. There could be moose hunting in one area, for example, and wildlife hunting in another.

The federation urges Mackling to "consult with the staff of the wildlife and fisheries branches on the

question of hunting in the park — and leave wildlife management to the managers."

It acknowledges Mackling is under pressure from opponents of hunting and motorized transportation.

"However, please recognize that much of the area is accessible only by motorized equipment if it is intended that the majority of Manitobans should have access to the area," the letters states in asking the minister to modify the intensive recreation-use zone and the wilderness zone.

John Christie, an unemployed biologist, joined the federation in its fight for modification of the no-hunting proposals and the wilderness concept and delivered a personal letter to Mackling Friday.

Christie, a hunter whose family has a cottage in the park, says there are on average 6,400 man-days of waterfowl hunting in the Whiteshell and most of that takes place in lakes that are proposed to be closed.

Christie, 30, urges more enforcement of hunting regulations, not abolishing them in the area.

"It's only a very few individuals who create the problems that so many cottage owners react to in a negative way," he says.

The lakes in the area which would be zoned wilderness are the staging area for bluebill ducks, the biologist explains. The hunting ban would mean Manitoba shooters would be the losers and United States hunters would harvest more bluebills.

Christie predicts if the area is zoned no hunting, the Whiteshell moose population, which is starting the upswing side of its cycle as a result of forest fires improving grazing conditions, will starve unless controlled.

Christie also notes the few outdoorsmen who hunt in the Whiteshell will have to shift their attentions to other areas and thus increase hunting pressures elsewhere.

It is up to Mackling to fire the next shot.

City's water safe despite problems on Shoal Lake reserve, Norrie says

By Pat McKinley

Winnipeg's water supply faces no imminent threat despite a federal report citing serious sanitation problems on a nearby Indian reserve, Mayor Bill Norrie said yesterday.

The report, made public yesterday, says a lack of adequate sewage and garbage facilities on the Shoal Lake reserve has become serious and must be solved as soon as possible.

A federal official, meanwhile, said that although a cleanup now under way is expected to stave off pollution of the lake this spring, the cleanup will only solve the sanitation problems for another year or so.

After that, a more permanent solution must be in place.

At a meeting of the city's executive policy committee yesterday, Coun. Alf Skowron (NDP—Elmwood) confronted Norrie with concerns that a quick thaw this spring could dump garbage into the lake and could also

lead to pollution of the city's drinking water from sewage seeping from the reserve.

Skowron also questioned Norrie about charges by representatives of the Shoal Lake Indian band, who have said that because of a dispute over the band's proposal to develop cottages in the area, the city is blocking construction of a road to truck sewage and garbage off the reserve.

The road, seen as a longer-term solution to the sanitation problems, would have to cross a city-owned canal that isolates the reserve from the mainland.

Norrie confirmed he has been blocking construction of the road because of the cottage dispute, but denied that the city's refusal is preventing a badly-needed cleanup of the reserve.

Norrie said the road is not needed to eliminate the immediate problem, as the federal Department of Indian Affairs



Norrie: no imminent threat

See CITY'S page 4 F.P. FRI 04 MAR 1983

City's water safe despite problems on Shoal Lake reserve, Norrie says

F.P. FRIDAY

continued from page 1 04 MAR 83

fairs can store garbage in a temporary site on the reserve.

In the longer term, city engineers "feel there are better alternatives" than construction of the road.

Norrie said the city would prefer to ship the waste out of the area itself, using the railway the city maintains to service the aqueduct site.

The city is concerned because the road would not only pass near the city's water intake but would also pass through the area where the band proposes to develop up to 350 cottages as a tourist attraction, Norrie said.

"Quite frankly, if the road is built, it gives some credence to the argument that garbage can be disposed of for the cottage development . . . as it could be for people living on the reserve."

Norrie said he fears the Indian

band's long-term objective would be to extend the road to the Trans-Canada Highway to allow highway access to the cottage development. The city does not want highway access to the area of the water intake, he said.

Norrie described reserve sanitation as essentially a federal problem, saying there is nothing new about poor sanitation and that it is "shocking that the Indian Affairs Department would allow a reserve to remain in that condition for 10 or 15 years."

Meanwhile, Norrie said the city still plans to wait for the band to file an environmental statement on the cottage development before entering further negotiations on the cottage issue.

The federal and provincial governments have agreed to negotiate the possibility of having the city and the two other levels of government pay compensation to the band to halt the

cottage development.

However the city has refused to take part until the band has filed the consultant's study.

In the legislature yesterday, Environment Minister Jay Cowan said he hopes a resolution of the long-standing problem of waste disposal for the band is near.

"Very significant progress is being made," he told Opposition environment critic Gary Filmon (Tuxedo).

The Manitoba government has offered two sites for a sewage lagoon on provincial Crown lands, but the city is concerned about the road that would have to be built over a strip of city-owned land.

Cowan says the province is anxious to see a proper sewage disposal site developed and if a road link is necessary it should be a short road, not connecting with a highway.

Indians, Manitoba back Shoal Lake sewage plan

By Ritchie Gage

The Manitoba government and Shoal Lake Indians have accepted a plan to build a \$1.5-million sewage system and a landfill site to solve the band's waste disposal problems and safeguard Winnipeg's water supply.

But the City of Winnipeg has not yet endorsed the project even though the federal Indian Affairs Department would foot the bill, Hamish Gavin, director of federal environmental protection services for Manitoba, said yesterday.

Gavin, who recommended the solution in a 100-page technical report made public yesterday, said the prov-

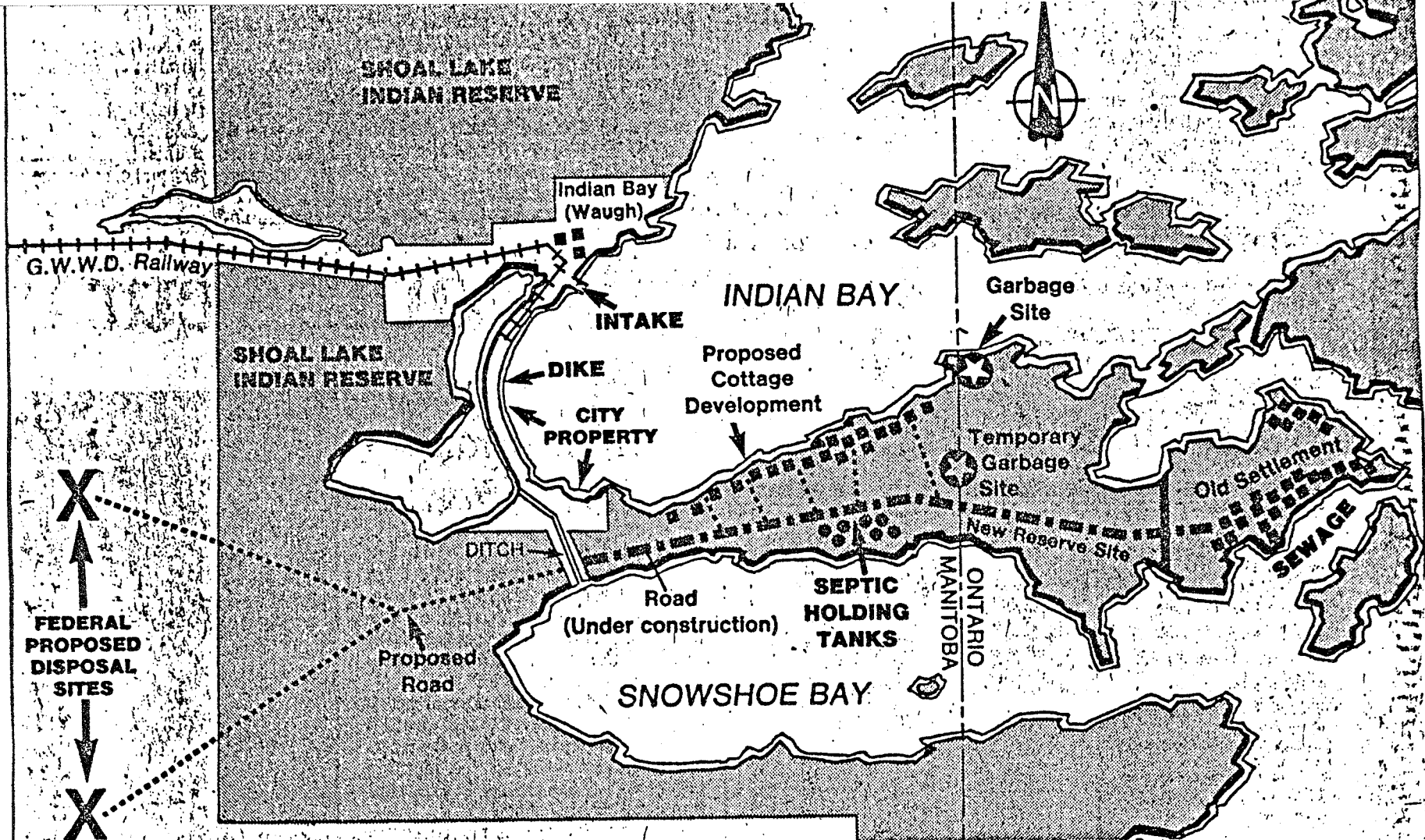
ince has also offered land near the reserve for the proposed sewage lagoon and landfill site.

He said sewage would be held in holding tanks for each home on the reserve, collected manually and taken to the lagoon site by truck.

In his report to the federal director general of Indian affairs, Gavin said his proposal is the most environmentally-sound way to ensure long-range protection of water quality.

Gavin's proposals, after a month-long investigation of Shoal Lake Indian Band's waste disposal problems, differ from those urged by the city's sewage and water branch and an independent

See NORRIE page 4 WFP, 05 MAY/83



Map of Shoal Lake area points out federal disposal sites and septic holding tanks proposed to solve band's waste problem.

Norrie opposed to Shoal Lake sewage plan

continued from page 1

engineering study funded by Environment Canada.

The city wants the sewage and the garbage shipped to Winnipeg by train at a cost of \$1.5 million. The independent engineer suggested the garbage be burned and a permanent sewage treatment plant be set up at an

Mayor Bill Norrie said in an interview yesterday he does not favor Gavin's road proposal and looks more favorably on the independent engineer's proposal for a treatment plant.

However, Norrie said city officials are to meet with Gavin tomorrow to discuss his plan. A committee of

Lake issue may meet Monday, he said.

The issue of the band's sewage arose in 1981 when the band applied to build a cottage development on its land. The city had concerns about its drinking water and the two parties have been at odds ever since.

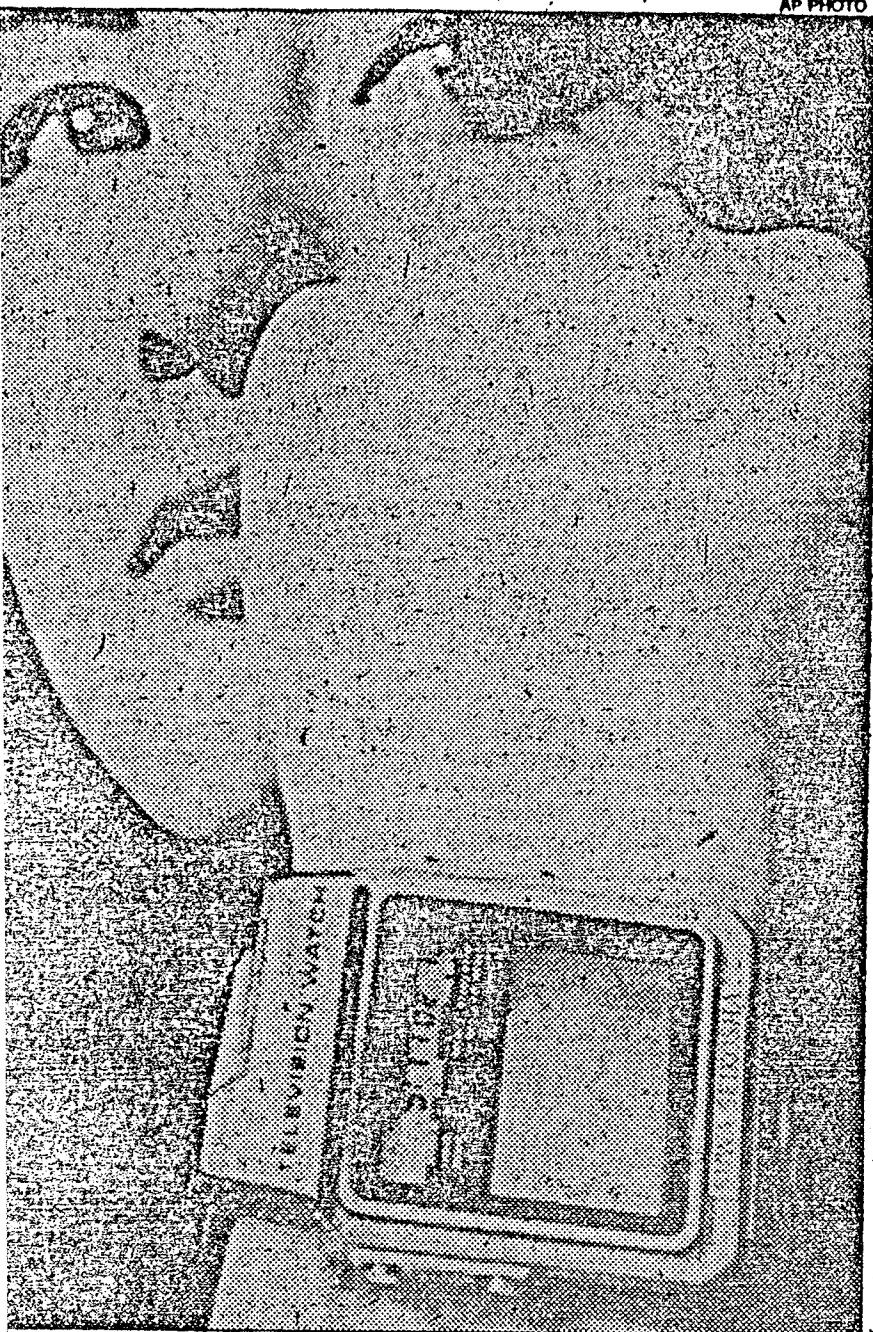
The city's plan is to have the band's garbage and sewage trucked over a

by train to Winnipeg for disposal. Gavin rejected this as unsafe because the route passes near the intake pipe for the city's water supply.

He also rejected the independent study, saying sewage treatment plants require special technical services, and if they break down, untreated sewage can escape into the

AP PHOTO

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Sony invents flat television

TOKYO (Reuter) — Japan's Sony Corp. announced yesterday it has developed a flat television receiver which can be carried in a pocket or in a handbag and be watched anywhere at any time.

The company will start marketing the new black and white TV receiver, named the FD-200, in Japan starting in late February for \$240.

It employs a cathode ray tube only $\frac{5}{8}$ inches (16.5 mm) thick, which allows the entire receiver to be only $1\frac{1}{4}$ inch (33 mm) thick.

The company said the principle behind the new tube may be applied to display units and TV receivers of various sizes.

GILGEE F. MAIL 28-VAN 182

Watch TV on TV watch

ko announced in Tokyo this week the world's first stwatch with a black-and-white television screen, featuring a 1.2 inch liquid crystal display. The watch is capable of receiving regular VHF, UHF and FM broadcasts and comes with a battery-powered wallet-size receiver and headphones. Though the wrist television is not yet on the market, it is expected some time next year for a selling price of around \$200.

FOOTNOTES -- APPENDIX

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- 2) Martin Lane, "Images: How Information Reaches the Screen" in Inside Videotex: The Future...Now (Toronto: Informart, 1980) p.52.
- 3) Government of Canada, Telidon: Is There Any Other Choice? (Ottawa: Department of Communications, May, 1981) pp.1-22.
- 4) Ibid, pp. 3-9.
- 5) Government of Canada, Telidon (Ottawa: Department of Communications) p.5.
- 6) Supra, Note 3, p.13.
- 7) Ibid, pp.3,15,17,19.
- 8) Manitoba Telephone System, Grassroots (Winnipeg, MTS, 1981) pp.1-18.
- 9) Ibid, pp.2-6
- 10) Manitoba Telephone System, Press Release, 20 July, 1979, p.2.
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- 13) Supra, Note 11, p.72.
- 14) Ibid, p.74.
- 15) Ibid, p. 68.
- 16) Ibid, p. 75.

- 17) Doug Van Vliet, "BBN for the Layman" (Sask-Tel, 31 October, 1980) p.4.
- 18) Doug Van Vliet, "BBN - History to Date" (Sask-Tel, 31 October, 1980) pp.9-10.
- 19) Manitoba Telephone System, "Canada's First Rural Fibre Optics Field Trial" (Winnipeg: MTS, 1980) p.2.
- 20) Manitoba Telephone System, "List of Possible Uses - Elie-St.Eustache Fibre Optics Field Trial" (Winnipeg: MTS).

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For all other creatures,
 communicatively,
 Whatever is, works.
 For man,
 communicatively,
 Whatever works, is.

-- Lee Thayer
 ("Communication Systems")