

**INDICATOR DEVELOPMENT AND
COMMUNICATIVE ACTION:
APPLICATIONS FOR DOWNTOWN WINNIPEG**

BY

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**A Thesis
Submitted to the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
for the Degree of**

MASTER OF CITY PLANNING

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To my three daughters: Julia, Leah, and Keziah
for blessing our lives each in unique ways;
and to my wife, Charlene for enduring.

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1.0 Introduction

How did this study begin?

This study arises out of my personal interest in downtown areas in general, and with downtown Winnipeg in particular – a place in which I have spent many hours of my life. Downtown areas form an important part of their surrounding city areas and respective provinces, having been often colloquially referred to as the ‘engines’ of the city, while recognition of any particular city may often involve conjuring a mental image of the downtown area.

Winnipeg’s downtown area has a population of 14,000, downtown employment accounts for one-quarter of the city’s total employment, the downtown contributes about 23% of the city’s net business tax and 7.5% of the city’s total realty assessment, while construction in the downtown averages \$60 million annually.¹ Despite this notion of significance, there has been a generally accepted idea that downtown Winnipeg, like so many other central areas throughout Canada and the United States, has experienced marked deterioration over the past three or four decades. Both the demographic characteristics and the economic characteristics appear to have declined over time. Average education levels and household income have dropped, while downtown office and vacancy rates remain high.² There appears to be a perception that many downtown

¹ This information is taken from the reference by CentrePlan (no date). Although there is no date acknowledged on the document it is known by the author to have been produced in or around 1996.

² Canada Census 1996 data clearly show this trend for Winnipeg. Anecdotal evidence appears to confirm this notion.

areas are considered a less favorable place to live and work than the competing suburban areas.³ As a result of this trend, downtown advocates everywhere have engaged in processes of revitalization, hoping to improve upon the current state of affairs. But how are these individuals and groups to gauge what the 'state of affairs' is or has been? If there is an interest in improving downtown areas, how do we identify what the issues and visions for downtown are, where we have been with respect to those issues and where we are heading?

The concept of measuring progress is not uncommon, but despite the emphasis on revitalizing downtown areas, through this and other research I have come to recognize that there is currently no agreed-upon means of measuring and assessing the relative performance of downtown areas, on either an individual or a comparative basis. Though the occurrence of city-wide indicator systems based in either sustainable development issues or quality of life studies is becoming more commonplace, that is not the case for downtown areas in particular. Despite newer movements to produce measures of progress for neighbourhoods at a small scale,⁴ downtowns have thus far been largely excluded from that analysis.⁵ This is true not only of Winnipeg, but also of cities across Canada and the U.S. While specific statistics may be gathered for particular uses by individuals

³ See Myron Orfield's book *Metropolitics* for an excellent demonstration of the disunity and inequality of central cities versus their surrounding suburbs in the U.S. Joel Garreau's book *Edge City* traces the decrease in central city populations and a corresponding increase in newly established centres in the areas surrounding former central cities in the U.S.

⁴ Sawicki (1995) suggests that neighborhood measurements have become more common due in part to the advent of Geographic Information Systems (GIS) and the devolution of responsibilities to lower governments.

⁵ Most neighborhood scale progress measurement systems have evolved out of community organizations in low-income neighborhoods as a means of revitalization. The apparent exclusion of downtown areas may be due to the lack of local, residential community activity in a business district setting.

and groups, *there appears to be no current means of assessing downtown areas in a comprehensive fashion* in order to use that information for management and revitalization. This is surprising given the importance that downtowns play in the formations of general impressions about a city as a whole and even more surprising if one accepts the notion that a healthy city requires a healthy core.

This idea of measuring progress for downtown areas, and the accompanying questions about the apparent lack of comprehensive measurement systems led me to the first stage in this research – to learn more about indicators and indicator systems as a means of measuring downtown performance.

What is an Indicator?

An indicator is something that tells a story about something else. In order to understand the health of a nation's economy for example, many governments look at a simple number such as the Gross Domestic Product (GDP) or the Employment rate as an *indicator* of how the nation is getting along. Another example is that of a physician trying to gauge the health of a patient. A general understanding of health is arrived at by taking a few simple measurements or observations (heart rate, blood pressure) and asking a few simple questions (e.g. 'how do you feel?', 'how is your diet?'). Though more complicated tests could be performed, these simple ones provide a quick, reliable indication of overall health.

Sustainable Seattle similarly defines an indicator as "bits of information that highlight what is happening in a larger system. They are small windows that together provide a

glimpse of the ‘big picture’” (1998:3). Sustainable Calgary has adopted a definition that contains a notion of indicators providing a context and assisting in goal setting. “An indicator” they say “is something that helps you understand where you are, which way you are going and how far you are from where you want to be. A good indicator alerts you to a problem before it gets too bad and helps you recognize what needs to be done to fix it” (1998:3).

Indicators are currently being used at all scales ranging from international (such as the World Health Organization’s health indicators) to National (the Canadian ‘employment rate’) to Municipal (many quality of life studies) and even at the local community scale (West Broadway, Winnipeg among others). More and more individuals and groups are developing and/or using indicators to accomplish various purposes ranging from public education, to comparison research, to policy analysis to name a few. In Chapter Two I present a more extensive background on issues related to indicators – their history, typical uses and users, and complications of indicator use – reflective of current practice in indicator work. This discussion anticipates the nature of criticisms to be developed later, however its main focus is to familiarize readers with this substantive area.

What is important about information use?

While the collection of information has been heralded as important for some time, it has more recently been recognized for its ability to play a role in urban development. In the

context of urban policy development the Global Urban Observatory (GUO)⁶ has noted both the importance and the difficulties associated with collecting useful information:

Almost everyone is aware of the necessity for data in policy making, to provide objective measures of conditions and trends, to avoid or to correct mistakes, and to rethink ineffective policy. The problem is that, while enormous amounts of data are being generated at very high costs throughout the world, they are understood very poorly and are often inappropriate, inaccurate, incomplete or not generated for specific policy purposes. There is a global need to build national and local capacity to collect useful information on urban conditions and trends, to convert that information to knowledge through appropriate analytic techniques and to apply that knowledge in formulating and modifying urban policies and programmes (GUO 1997:8).

Despite the wide recognition of data requirements in the information age, a multiplicity of understandings exist concerning the parameters designed to harness that data. One may ask ‘What constitutes *useful information*?’ What *are* the *appropriate analytic techniques*?’ And in what fashion *should* knowledge be *applied*?’ These questions have different answers dependent upon which framework one applies in answering the questions. The eventual end product of the questions is defined through the formulation and explicit or unconscious use of a framework. In studying and discussing this point with others, I came to realize that indicators (as a form of information) are subject to many factors that sway how they are perceived and used. Users of information consciously and sub-consciously select among topics and pieces of information. The

⁶ “The United Nations Commission on Human Settlements, at its fifteenth session, requested the Executive Director of UNCHS (Habitat), in **Resolution 15/6**, to establish a global urban observatory to permit comparative international evaluation of progress in meeting the aims of the Habitat Agenda and to draw attention to and provide information on human settlements trends and conditions world-wide” (GUO 1997:7).

choice of any particular framework for understanding bits of information, in this case indicators, greatly influences choices that are made and outcomes of using that information. As a result of this observation I have researched two methodologies, or ways of looking at the conception and use of information, which help explain processes of indicator development. Thus in Chapter Three I introduce and discuss two methods of understanding and using information and knowledge.

One - the conventional scientific model – has traditionally been mistakenly accepted as the only method of inquiry. It is normally a straightforward and rigidly constrained experimental approach, where all biases and ‘subjective’ input are said to be removed from the process. As a result it is claimed that only a true and unbiased answer to a question can emerge from such a clear-cut process. The other method – using principles of communicative action – recognizes a number of limitations of the former and embodies a broader understanding of knowledge and knowledge use, as will be discussed in sections following. These two methods, as I have noted, significantly affect the development process and final ‘use’ of indicators. The research in Chapter Three concerning theoretical criticisms of information and its uses will be used to guide the discussion in the chapter following.

How does a new understanding of information influence a method for developing indicators?

In Chapter Four I discuss this important question by presenting a methodology for indicator development that is formed based on the principles communicative action. The resulting methodology is given context by two brief case studies of indicator

development – the cases of the City of Santa Monica, California and Sustainable Seattle based in Washington. The former provides an example of a government initiative that more closely follows a traditional, scientific approach than does the latter, which demonstrates characteristics more closely related to communicative action principles.

Is the methodology feasible?

In producing a methodology for indicator development based on the principles of communicative action, I recognized numerous questions that would inevitably arise. These questions would form a sort of test, through which I could draw the proposed methodology. As part of the empirical research two focus group sessions were held where local planners discussed indicators and the proposed methodology. Discussion focused around questions such as: ‘Are indicators useful for downtown areas?’ and ‘If so, what would they be used for?’ Other questions that tested the methodology asked ‘Is the proposed methodology ideally a useful one?’ and ‘Is this methodology feasible in the local context?’ Thus in Chapter Five I have reported on the empirical research conducted to discover how indicators and a proposed methodology for indicator development would be perceived in the local (Winnipeg) context.

How does the theoretical analysis relate to perceptions in current practice?

The final Chapter (six) presents an analysis of the results of both the theoretical and empirical research. I have identified common responses and response patterns of participants and integrated these with the theoretical reflections. Conclusions focus on

the ideal scenario of indicator development using communicative action principles, and the elements of current practice that pose limitations on the ideal.

One of the objectives of this research has been to expand a common understanding of how indicators might be used to revitalize and manage downtown Winnipeg. A second and perhaps higher objective of the paper is to expand a common understanding of information conceptualization and use. As a result of this research my own understanding of what constitutes knowledge and knowledge use has been somewhat redefined - I believe for the better. I hope that in some way the reader also discovers in this research, a similar advancement or change in their own understanding of the 'way things work'.

2.0 Indicators: Origins and Current Applications

The use of indicators as an instrument for measuring various aspects of society has a long and varied history. Indicators have been used in attempts to measure both the economic and social progress or regress of a given group since early this century (Baker 1978). More recently they have also been used for public education regarding various issues, for performance measurement and for city management. Various approaches to the use of indicators have emerged and for each approach an abundance of analysis and subsequent criticism. The following definition demonstrates some of the numerous ‘goals’ of indicators:

Indicators are not data, rather they are ‘models’ *simplifying a complex subject* to a few numbers which can be *easily grasped* and understood by policy makers and the general public. Indicators are statistics *directed specifically towards policy concerns* and which point towards successful outcomes and conclusions for policy. They are required to be *user driven* ...and have easily *recognizable purposes* (italics added; GUO 1997:2).

This definition emphasizes the importance of clarifying complex ideas and directly relating findings to matters of policy. It also describes the process of development as “user driven”, with a clearly “recognizable purpose”. Such recommendations have evolved over time since the initial production of indicators began. In the following section I will briefly examine these roots of indicator development. I will also present a thorough description of indicators and conclude with a discussion about how indicators can be understood within the framework of communicative action.

2.1 A Brief History of Indicators

In 1960 Raymond Bauer was commissioned by the National Aeronautics and Space Administration to examine the potential effects of the space program on American society. This somewhat oblique connection between space exploration and societal well-being formed the unofficial 'launch' of social indicator development.⁷ Bauer defined 'social indicators' as "...statistics, statistical series, and all other forms of evidence...that enable us to assess where we stand and are going with respect to our values and goals, and to evaluate specific programs and determine their impact" (1966:1). Until this time societal measurement had largely focused on economic measurements of progress. As editor of the resulting NASA study called *Social Indicators* (1966), Bauer recalls America as President Johnson's "Great Society" - one which was born out of an "advanced industrial society" and born into "the world's first example of post-industrialism" (p. xiii). Bauer laments that Johnson was "forced to rely upon concepts and data that ha[d] decreasing relevance to new national goals"(ibid.).⁸ Indicator projects of the first half of this century for Bauer represented a continuation of "economic Philistinism" where the major indicators attempted to measure not 'how good' but 'how much' (ibid.).

⁷ Some authors, including Bauer (1966) and Wish (1986) trace the use of social indicators even earlier to President Hoover's Committee on Social Trends. However, Bauer admits that these efforts at social indicator development tended to be primarily economic and quantitative in nature due to the debilitating economic effects of the First World War and the challenge of re-establishing economic security.

⁸ Innes (1990) notes that "Great Society programs were a disappointment because, many contended, social scientists got the theory all wrong...Many simply contended that the world was too complex for scientific knowledge to be of much help...moreover, voices began to challenge the conceptual foundation of the scientific model - the idea that analytic information could be value-free and unbiased, serving simply the rulers' or public's goals" (p.9).

The explicit intention of Bauer's work however, was not to replace economic indicators but to establish social indicators as a necessary supplement to social research and indicator development. His reference to "all other forms of evidence" seems a step towards the consideration of not only economic factors of society but social ones as well. It is not likely that he was already advocating the use of other forms of information gathering (such as a communicative approach) as a substitute for expert research. In fact, not only is the entire informative nature of the volume the 'opinion of experts', but also, the most important characterization Bauer gives of the volume is that it is a "continuation of the great information-gathering tradition of the Western civilization, particularly the United States" (p.ix). This would lead one to believe that Bauer's choice model was the conventional scientific one and that a new understanding of information use was not his explicit intention. Questions such as 'how data affects policy' and 'how the gathering of information determines results' or 'how the selection of issues affects solutions' are notably absent. These questions were reserved for more recent discussion concerning the use and construction of indicators.

The growing body of social indicator research in the late 1960s and 1970s was intended to quantitatively measure social conditions and trends, but as Cutter notes "the task...was so large that it was virtually doomed to failure from the start" partly due to the difficulty of quantifying abstract concepts and also as a result of an inability to summarize measurements in a useful way to define quality of life (1985:4). The movement was also fraught with numerous difficulties such as the questionable use of objective and subjective indicators, the arbitrary weighting of variables, and measurement techniques

among others, which seriously questioned the validity and stability of the indicators themselves.

The quest to measure societal trends was, however, apparently not entirely 'doomed to fail'. Studies concerning social indicators continue, many found in the journal *Social Indicators Research*, wholly dedicated to the topic. In the 1980s an increasing number of studies dealing with the same or similar concept of social indicators arose under a new, alternative name 'quality of life'.⁹ Questions concerning the details of indicator construction and definition have given way in more recent times to defining the larger process of *how* indicators are developed and what they are used for.

2.2 Uses of Indicators

Indicators have been applied for numerous uses. A housing based indicator study by the Global Urban Observatory (1997) provides an example of the wide range of uses that an indicator system may facilitate:

Citizens should be able to see on a regular basis what progress has been made by local authorities in terms of road maintenance, delivery of services, control of pollution, etc. Mayors and government officials should be able to identify emerging problems where immediate action is required. The private sector will want information on conditions that affect investment.

⁹ Social indicators and quality of life have been recognized as nearly synonymous concepts by numerous authors (see Rogerson et al., 1989; Wish, 1986; Baker, 1978b), Wish (1986) in particular believes that gathering consensus for a definition of quality of life poses no problem. Cutter (1985) has defined the concept from a subjective standpoint noting quality of life as "an individual's happiness or satisfaction with life and environment"(p.2), and equates the term with 'social indicators' (as does Lui 1976). Andrews (1974) shares the aspect of individual happiness in his definition of quality of life, essentially saying that the level of life quality refers to an individual's 'well-being'. Myers (1987) links quality of life as a concept emerging out of the social indicators movement, but objects to the a definition which directly compares 'quality of life' to 'social well-being'. He provides his own definition: "A community's quality of life is constructed of the shared characteristics residents experience in places...and the subjective evaluations residents make of those conditions" (p.108).

Builders may want to know what is the price of land throughout the city and the cost in time and money for obtaining building permission. NGOs should be able to determine the effectiveness of their participation in decision making, etc. (p.80)

A review of the literature suggests that indicators can be used for numerous purposes.

My own categorization of these uses includes the following: comparison studies, public management and decision-making, performance assessment, and consensus and public education.

2.2.1 Comparison Studies

One use of indicators has been to measure and compare spatial areas such as cities. One of the first popular studies comparing ratings of various places, is that done by Flax (1972). Flax used 14 social indicators to measure and compare the status of 18 metropolitan areas in the United States. The study received much subsequent criticism for various errors of measurement and assumptions regarding the selection and weighting of indicators. The objectives of the comparison research were also vague and indeterminate.¹⁰

Lui (1976) attempted to rectify some of these preliminary problems with indicators in his study that measured 243 American Metropolitan Areas. Lui's study served as a model for many of the 'non-technical' studies that followed, including Boyer and Savageau's *Rating Places Almanac*. *Rating Places* attempts to measure and compare annually 329

¹⁰ Flax (1972), for instance, states his objectives as: "to develop indicators on a wide variety of issues of social concern, to present and analyze the best available data while encouraging improved data collection, and to promote more public and governmental utilization of indicators" (p.v). However, he fails to discuss how they will be used.

Standard Metropolitan Statistical Areas (SMSA's) in nine general categories (Myers 1987). The annual volume has also received criticism from the literature, which has been directed mainly at the arbitrary selection of indicators and weightings of indicators that are arrived at without 'subjective' input (Sawicki and Flynn, 1996; Wish 1986; Cutter 1985).

Another significant problem with each of the noted comparison studies concerns their tendency to adopt a conventional scientific methodology. Flax, Lui and Boyer & Savageau have based their comparisons under the presumption of 'expert' knowledge both in the selection of variables in the indicator data and in the weighting of each variable. Landis and Sawicki (1988) in particular, have criticized *Rating Places* regarding its claims to be used as a planning instrument, due to its inability to help explain *why* some places may be superior to others (p.343). Myers (1987) has noted that at the city to city level, many city leaders have discounted the value of comparison research with respect to its ability to motivate improvements. He has also criticized comparison studies of quality of life on the basis that many have not been "designed to measure quality of life as residents see it...and that failure may lead to misjudgments" (Myers 1988:354).

Comparison studies that have been set within an existing body with a particular mandate would perhaps meet with greater success where the data serves a particular assigned purpose and there is credibility associated with the body utilizing the research. The Global Urban Observatory (GUO) has noted the importance of constructing indicators for use in comparing the effects of policy decisions from city to city or even between nations

(GUO 1997). This type of comparison research is widely utilized especially at the national level to help countries understand their relative position in any particular context, which can contribute to the development of goals and benchmarks.

2.2.2 Policy Direction and Decision Making

Social indicators have frequently been used to measure and monitor the rate of social progress and regress, primarily in an effort to direct policy and program implementation (Baker, 1978). For instance, in the earlier development of social indicators Baker noted the importance of an indicator in determining answers to the ‘Why?’ question: “It is hoped that governments would use indicators to determine their policies and programs to steer a different course. The ideal social indicator system would allow policy-makers to pinpoint the cause of a particular social setback...” (ibid.)

Using indicators as an assessment tool can help provide direction in policy and decision-making by summarizing information relevant to a particular issue. By looking at a sequence of measurements over time one can note the changes occurring relative to given events and new policies, and thus carefully infer general conclusions to inform future policy. Thus, indicators can serve as “measures which point to particular problem areas, giving a reasonable proxy in response to specific needs and questions asked by decision makers. They can assist in analyzing trends and in thinking more systematically about impacts of policies” (GUO 1997:8). For example, the GUO called for the development of a set of indicators that would assist in the development of a framework for monitoring the housing sector from different perspectives. The indicators were intended to be policy sensitive and easy to update. The explicit intention of the indicators was to “to provide a

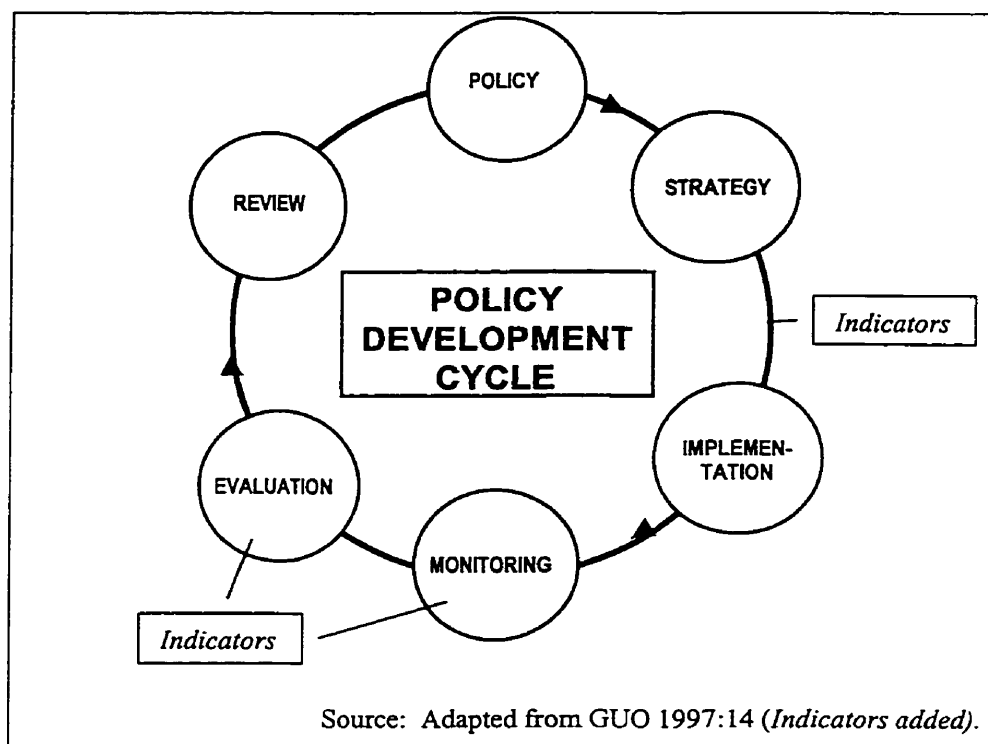
management tool for the key stakeholders -- housing consumers, housing producers, finance institutions, local governments and central governments -- to identify policy imperatives to address the pressing problems of housing” (ibid.).

Figure 1 demonstrates six steps in the continuing development and revision of policy, starting with strategizing and moving through to the eventual re-iteration or correction of the developed policy. The model, as developed by the Global Urban Observatory in the *Urban Indicators Programme* - an international effort to foster indicator development for urban regions - is intended to show at what points in this continual cycle policy development indicators can be used.

According to the model, indicators should be used after the strategizing stage where they can measure progress towards meeting original or existing policy objectives. Once the new or revised policy is implemented a monitoring system can be established through the use of indicators to help determine whether the strategy is successful. Finally, during evaluation stages of policy development, indicators can be implemented to review the success of the strategy (ibid.).

A related and perhaps more important usage of indicators is that they can directly or indirectly place issues on the policy agenda. Discussion and development of indicators by numerous participants legitimizes issues and brings clarity to what may have been a previously unclear notion. In the case of the *Urban Indicators Programme* one of the long term aims was to place urban and housing issues on the national policy agenda by engaging all the Member States in a long-term process of indicator development (GUO

Figure 1. Indicators used in the policy development cycle



1997). The inclusion of all Member States would necessitate agreements to focus on particular issues and to measure these issues in a particular way. The extensive discussion around these topics would appear to make inevitable increased awareness of the issues and a subsequent increase in attention granted to the issue within the policy arena.

2.2.3 Performance Assessment

Performance measurement is typically understood to apply to the measurement of a specific body working towards specific goals. Brugmann (1997) has called this effort “making sure that the efforts and investments of local residents and local institutions are having their intended effects and achieving agreed targets” (p.60). This understanding of measurement in the context of governmental performance provides for evaluation within

specific parameters and oriented towards measuring a specific goal or standard. The use of indicators in this fashion allows for measurement to be linked to particular actions and it is therefore purported to ensure usability.

However, performance assessment can also be understood to apply to a broader understanding of performance. The GUO has advocated a wider scope of understanding for the use of indicators in measuring progress with respect to the subject matter and in ways that appear to provide relevance and usefulness of the indicators to the stakeholders involved. In this case “the indicators are intended to be part of an enabling process, measuring sector-wide progress of all actors towards achieving social goals, rather than as a narrow measure of government activity. The indicators of government activity emphasize sustainability and efficiency goals rather than simple production goals that have been a feature of government performance indicators in the past” (GUO 1997:11). The move away from a “narrow measure” means a move towards tackling the practical difficulty in measuring performance that encompasses a wide range of goals and a broad spectrum of ‘actors’. This helps account for the current, common understanding of performance assessment as a simpler, direct measurement of progress with respect to specific projects and goals.

Performance assessment using indicators also has the potential to increase the capacity of groups to collect information. Innes has noted this sometimes inadvertent benefit of requirements to collect data (Innes 1990). The *Urban Indicators Programme* was similarly intended to indirectly enhance and “develop in-country capacity both in policy analysis and in improved data acquisition” (GUO 1997:14).

2.2.4 Public Education and Consensus Building

A particular public issue may gain legitimacy and focused attention if it is based on a wide foundation of personally and commonly held views. The development of indicators, where it uses an inclusive and representative approach, can assist in broadening public awareness of particular issues and in clarifying or defining issues that may be either vague or contentious. The *Urban Indicators Programme* has noted that the process of using indicators to establish goals and targets first involves building consensus around the issues (GUO 1997). Indicator development that utilizes consensus techniques asks the question “What would a well-functioning sector look like, from the point of view of each of the key stakeholders or players in the arena?” (p.82). In the process of developing of indicators, agreement on the issues not only serves as practical step of producing the indicators themselves, but also engages a subtle learning process.

An indicator development process that includes consensus among a wide representation of parties inherently expands the legitimacy of issues to a broader base of official or unofficial ‘advocates’ of various views. Participants who may hold one view at the beginning of an indicator development process have the opportunity to expand or adjust that view to more correctly represent common experience, as compromises are reached in the consensus building process. In the case of the *Urban Indicators Programme*, the goals attempted to go beyond measurement of government initiatives to the development of an “enabling process, building up a knowledge of and interest in urban conditions by all stakeholders: national, local and private” (GUO 1997:14).

Where participants have a public voice or representation their efforts towards consensus have the opportunity to spread to a greater audience. This process indirectly affects policy development by enhancing the status of issues for placement on the policy agenda. The public is further 'educated' through the development and presentation of facts or trends concerning the respective issues. Indicator systems can be an effective means of summarizing or simplifying complicated issues, and directing attention to specific issues.

2.2.5 Community Level Management

With the advent of GIS computer systems and the devolution of power to lower levels of government, the concept of developing indicator systems for smaller scale areas has become more realistic (Sawicki et al., 1996). Community groups may have numerous motivations for developing indicator systems, some of which fall into the broader categories of uses listed above and others that may include measuring community change or enhancing lobbying efforts. Sawicki and Flynn (1996) have explored the concept of 'neighbourhood indicators' and compiled a list of possible uses that groups may have for such indicator systems. These include:

- Making neighbourhood concerns more visible at the national level;
- Generating statistics that measure meaningful change in neighbourhoods;
- Building capacity to systematically collect and disseminate indicators that inform and support local initiative taking;
- Developing dynamic models of neighborhood change;
- Evaluating the likely impact of existing and/or proposed policies on neighbourhoods and/or their residents;
- Measuring inequality over space and time both within and between regions;
- Setting goals for neighborhood and resident improvement;
- Developing surrogate census-like measures for intercensal years;

- Understanding the role that the geographic mobility of residents plays in their own welfare and the welfare of their (new and old) neighbourhoods (p.170).

Neighborhood scale indicators may be most useful in a context of residential neighborhoods that are in need of significant improvement and have some level of organization in place. Though there are notably few examples of such systems, the most prominent compilation of existing efforts is the National Neighborhood Indicators Project (NNIP). This project represents a group of seven cities¹¹ which have developed “fairly advanced systems to collect, analyze and disseminate local indicators” using address-level data aggregated to the “self-defined neighborhood level (ibid.).

Central business districts or downtown areas represent another potential application for indicator systems at the smaller scale, yet these too are notably absent from the literature. One working example can be found in the International Downtown Association’s (IDA) attempt to establish a singular downtown index for use in comparing issues affecting American downtowns.¹² The issues were selected by the IDA, and a *Survey of Leading Downtown Indicators* (1995) was circulated to 268 IDA organization and agency members across the United States. Response rates were only 10% and there has been no

¹¹ The cities and their associated projects are: Atlanta (The Atlanta Project – TAP), Boston (Boston Children and Families Database), Chicago (various projects), Cleveland (Cleveland Area Network for Data and Organizing – CAN DO), Denver (The Piton Foundation Information Campaign), Oakland (various projects), and Providence (The Providence Plan) (Sawicki and Flynn 1996:171).

¹² The issues and corresponding variables in parentheses are: Economy (number of employees), Office Market (Occupied Office/Sq.Ft), Retail Market (Occupied Retail Sq.Ft), Visitors (Number of Hotel Nights and Convention Attendance), Arts (Attendance at Performance Arts and Attendance at Museums), Residential Market (Number of Residents), Crime (Number of Crimes), Education (Number of Students) and Government (Number of Workers). Personal communication with the IDA indicates that current staff members were unaware of the methodology behind the selection of issues or the development of the survey instrument, but thought it likely they were developed on an internal basis (no participation).

report regarding whether the instrument has been applied in any manner. The usefulness of the effort is questionable due to the low participation rate, the weakness of variables chosen to represent issues, and the likeliness that issue selection was done on a non-participatory basis.

2.3 Users of Indicators

Closely following the categorization as given by the GUO through the *Urban Indicators Programme*, this analysis of typical uses of indicators will focus on the needs and utilization patterns of various groups in order to demonstrate the many diverse applications indicators have. Though the analysis of uses by the GUO is limited as noted in the sections below, the categorization of users remains helpful.

2.3.1 Residents

The GUO suggests that residents are typically exposed to examples of indicators through the media and may use indicators as a general measurement of the health of society and subsequently of government policy. Use of the indicators by residents appears to be primarily as a decision-making tool relevant to daily life issues (for voting, directing support, investing etc.). Residents may also see indicators as helping to ensure transparency in government (GUO 1997).

Other non-government related uses by residents are also apparent. A public involvement and education component of an indicator project can enhance the 'common knowledge' of residents and other individuals concerning the issues that indicators are measuring. Some indicator projects have originated through the voices of residents and citizens

concerned with social, environmental or economic issues affecting their quality of life. One such example is the Sustainable Seattle initiative - a grassroots effort involving “citizens choosing their own ways of measuring long-term community well-being” (Sustainable Seattle 1998:69). The idea of improving residents’ quality of life was also taken up by a group of concerned citizens and public officials from the Jacksonville Chamber of Commerce in Florida “in an effort to monitor Jacksonville’s progress towards community improvement” (Sawicki and Flynn 1996:168). In these cases, residents ‘used’ indicators by involving themselves in indicator development and by monitoring the indicators over time to make personal assessments of their own quality of life, which may in turn lead to further community involvement or enhanced personal decision-making processes.

2.3.2 National governments and parliamentarians

The GUO suggests that national governments and parliamentarians typically use indicators as a means of assisting in strategic development and in performance measurement. They note that many governments recognize the importance of measuring progress, and indicators are one tool that can help determine whether progress towards national objectives is being achieved. For example, indicators help strategic development processes through the regular collection of data that helps show which urban sector problems are being addressed and how policy may be effecting such problems (GUO 1997). They further note that comparison research may also help determine relative progress in addressing problems over time. “Indicators can be used as a diagnostic tool by new governments, by consultants or agencies who wish to identify problems and

possible courses of action. The analogy with doctors who use indicators such as temperature, blood pressure, or a description of symptoms as the major guide to diagnosis and treatment is apt; indicators may show from the example of other cities and other solutions, exactly what the problem is and how it might be solved” (GUO 1997:21).

Though the suggestion that governments use indicators to assess difficulties and point to measures that can be taken, the claims that indicators can determine “exactly what the problem is and how it might be solved” may be somewhat presumptuous. As will be noted in the following chapter, there are difficulties associated with presenting indicators as a means of solving problems in a direct and determinable fashion¹³, most notably that clear solutions are rarely available to social problems. Another interesting suggestion by the GUO concerns the use of indicators by parliamentarians. Here the GUO suggests that parliamentarians who are responsible for setting national goals use indicators to help direct policy and, due to parliamentarian’s relative sensitivity to public scrutiny, the requirement to know public opinion in order to justify and defend policy decisions is important. Thus they note “indicators are in demand as objective intelligence for crafting new legislation and modifying existing legislative programmes” (GUO 1997:22).

Though undoubtedly this group *does* require and to some degree ‘use’ insight into public opinion, indicators are not polling instruments and cannot typically convey what the public interest is, especially since the concept of a singular public interest has been generally accepted as a ‘non-reality’. Furthermore, the assertion of “objective

intelligence” conveys an idea that indicators can stand apart from any form of ‘subjectivity’ – a clear impossibility as will be demonstrated in the following chapter.

2.3.3 Mayors and city managers

Mayors and city managers may use indicators as a tool for providing policy direction, problem identification and prioritizing, and for performance evaluation of various programs. The GUO recommends that:

“indicators should become a regular part of assessment of the urban condition on behalf of all stakeholders, identifying problem areas for action and successful areas of investment for further development...major investment decisions can be monitored through indicators to ensure that desirable outcomes are being achieved, that target groups are being reached, and that there are not undesirable or unanticipated side-effects of development” (ibid.).

Mayors and other civic leaders can also use indicator projects as a means of encouraging community involvement, by organizing indicator development in a participatory fashion. The benefits of this type of process (as explained in the following chapter) are less measurable and specific, and more long-term and general by nature. Innes (1988), as noted earlier, has discussed the importance that the collection of data plays in expanding the capacities of institutions that collect it. In this respect, mayors and civic employees and the bodies they represent may benefit through the development of indicators and associated data requirements, by gaining an expanded capacity to collect technical data, by enhancing currently-held views related to indicator topics by the establishment of a

¹³ Though indicators by their very name suggest that they can be used to ‘indicate’ areas of progress or of difficulty, certain issues (especially social) may be too complex for indicators to suggest a clear link between indicators and solutions to problems.

new terms of discourse that focuses work on topics that the data represent (Innes 1990). These benefits will be further discussed in the following chapter.

2.3.4 Private sector

The private sector are likely to use indicators primarily to assist decision-making. “The private sector needs timely urban demographic information for production and marketing purposes and information on environmental conditions, on government performance, on supply/demand imbalances and on the overall economic and social health of cities for investment and locational decisions” (GUO 1997:23). In general, the private sector would use indicators to help determine or support investment and marketing decisions.

2.3.5 Non-government and community organizations

The GUO suggests that non-government organizations use indicators for two main purposes. First, by using accurate indicator information they can fulfill their role in monitoring the performance of governments. Second, in applications for funding they can use indicators to demonstrate their analytical capacity and their “organizational success, responsiveness and accountability”(ibid.).

Other uses of indicators by these groups include internal organization and performance evaluation in reaching self-defined goals or objectives. Community groups in particular may be interested in organizing or re-organizing their community, and the development of indicators can help form a framework around which to build other programs and activities, as well as help assess what goals or benchmarks to ‘shoot for’. Indicator

results can become a valuable tool for raising community awareness and for providing incentive via progress reports.

2.3.6 International and external support agencies

International agencies can use indicators to assist in reporting independent or comparative studies from country to country. For external support agencies indicators can be used for performance assessment of programmes and for decision-making in determining the most needy areas for assistance (GUO 1997).

2.4 Technical Issues with Indicators

There are a number of inherent difficulties associated with indicators that need to be recognized during the development process.

2.4.1 Data Availability

One of the greatest problems in developing an on-going indicator system is that of data availability. Acquiring data that is consistent, reliable and relevant to the issue being measured is seldom an easy task. Although there has been a massive increase in the interest and collection of data over the past several decades, the data may not be available for regular intervals or in comparable units and formats. The data may also be unavailable at various levels of aggregation, especially for the smaller community-scale such as particular neighbourhoods or downtown areas. The lack of appropriate data may seriously hinder the effectiveness and usefulness of an indicator system especially where indicator systems use data simply because it was the only data available. Power (in Wish

1986) has noted that such indicator systems have not always been guided by logic and theory but often merely on the basis of availability of data.

Comparison research, especially at the international level, may be hampered by the difficulties in *using* data. The *Urban Indicators Programme* experienced such problems with respect to the measurement of housing related issues. Details that measure “city product, investment or trade...population, infrastructure and the environment may be available in some places but not others and are seldom collected in a consistent international framework” (GUO 1997:7). Where data is available for these topics, each group may collect it for different time periods, at different levels of aggregation or they may have varying definitions and measurement techniques for the topics.

Sawicki and Craig (1996) have noted that another difficult challenge to the acquisition of data lies in the notion of proprietary information rights held both publicly and privately. “Some governmental agencies, for example, apprehensive of the axiom that information is power may severely limit citizen access to their data collection. Most private information companies charge dearly for their products, prohibiting widespread use” (p.519). In these cases costs may be prohibitive in the collection and use of data.

2.4.2 Scale

The difficulties associated with the selection of scale for an indicator system are twofold. First, it may or may not be possible to collect data for the selected scale. As mentioned earlier, this is particularly the case at smaller scales such as neighbourhoods and

downtowns.¹⁴ Data availability at this smaller scale is increasing with, among other factors: “the devolution of control over social service and other programs to the local level; the increasing reliance on operational government data, as the 1990 [U.S.] Census data ages and government responds to demands for access to more current data; [and] the increasing awareness of the successful use of information technology by other community groups” (Sawicki et al 1996:520).

A second difficulty involves aggregation of data or presentation of data at too large a scale. Data provided for an entire city, for example, will inevitably mask the inherent inequalities within the city boundaries. An indicator system that shows average household income at the citywide level may be useful for comparison with other cities, but it would be woefully inadequate in describing the relative status of neighbourhoods within the city. Presentation of data at one scale, therefore, may not be helpful for decisions and analysis at another scale.

2.4.3 Weighting

An indicators system may attempt to measure numerous issues and then combine those issues into some level of aggregation for the purpose of creating an overall index. This is especially true of indicators that are used for comparison. In aggregating the data to form a simplification of the data and reduction of the numbers, researchers may decide to apply weightings to the indicators in order to gain a more accurate picture of what the

¹⁴ Sawicki and Craig (1996) discuss the importance for data to be made available at the local scale of community so that community organizations can have a greater hand in planning their own affairs and affecting government at the policy level, by revealing a variety of specific neighbourhood conditions.

indicators are attempting to describe. One of the difficulties that may arise in this process lies in the decision of what weightings to place upon each individual issue.¹⁵ This process has led to criticisms of arbitrary weighting or researcher's bias, where indicator systems have been perceived to have been developed at the discretion of the researcher, or through insufficient or technically flawed research.

Some methods of indicator development attempt to address this difficulty by incorporating a more extensive study dedicated to issue development and ranking. When this process utilizes the viewpoints of an inclusive and extensive stakeholder group, the application of weightings may more accurately portray the importance of issues in an indicator system.

The concept of weighting itself has fallen under some criticism. Etzioni (in Sawicki 1996) warned of the dangers of aggregating indicators into some form of weighted *index*, noting especially that the details of the indicators and the importance of individual issues may be lost in the process of aggregation towards a singular index. Myers (1987) has also warned that attempting to establish a common set of weights for use in comparison studies may result in the failure to recognize the inherent distinct preferences of populations living in different places.

2.4.4 Variable Selection

The selection of issues, and variables to measure them, combine to form an indicator

¹⁵ Another difficulty that can arise concerns the loss of data through aggregation, whereby later interpretation of the data is impeded and detail is lost.

system. The selection of variables will affect *whether* the system is perceived as useful and *by whom*. Selection of issues should be critiqued in the same manner as critiques of weighting as the solutions to problems can be greatly influenced by the perception of the problem itself. Selection of issues therefore, by any one particular group or individual, runs the danger of helping to create an indicator system that is either irrelevant or ineffective due to the fact that issues that are considered ‘relevant’ may vary among groups and individuals.

Since it is necessary for an indicator system to focus and define issues being measured, one strategy that can help widespread endorsement is the inclusion of as many representative views as is feasible.

2.4.5 Subjective vs. Objective Indicators

An abundance of indicator research is dedicated to the discussion of objective and subjective (or perceptual) indicators. The former relates to “hard measures” according to Pacione (1982), “describing the environments within which people live and work” (p.498). The latter refers to people’s own description of the way they perceive the living conditions around them. Some authors have alerted readers to the apparent misnomer in the terms, where subjective implies something less than factual and thus less legitimate, while objective implies an equally misleading sense of freedom from bias (Andrews 1974, Pacione 1982).

Early indicator development focused primarily on the use of objective indicators. Later research noted that so-called objective indicators were insufficient, not only in diagnosing

problem areas but also in their ability to point toward solutions. Out of this criticism subjective indicators began to emerge, investigating people's personal experience rather than the "hard facts" of their surroundings which at times bore no relation to personal experience at all. Behavioral analysts adopted subjective research in an attempt to examine a given population's self-image, arguing that "personal happiness, stress, and life-satisfaction" were important dimensions in assessing the quality of life in different places (Rogerson et al, 1989:1665).

Subjective indicator research has also not been without its detractors. Some of the major arguments against the use of subjective indicators focused on their validity, interpretation, completeness and utility (Andrews, 1974). The major point of these arguments was that there were various setbacks to assessing the 'soft data' of people's experience, especially that they would be unable to put to words – let alone numbers -their true feelings and conceptions. Countering arguments noted that the perception surrounding unreliability of subjective indicators in research was perhaps unreliable itself. Andrews (1974) noted that subjective indicators "provide at least as objective measures of what they intend to assess as do the 'objective' indicators of what *they* try to assess, and, furthermore, that some of the 'objective' indicators are rather heavily weighted with subjective elements" (p.282). Later research indicated the importance of utilizing both objective and subjective measures in the development of any indicator system (Milbrath 1979; Cutter 1985; Wish 1986; Myers 1987).

2.4.6 People vs. Place

Indicators can be designed either to follow a particular population *group*, or to follow the characteristics of particular *place*. Though an indicator study may be place-based (i.e. not measuring a population as it moves from place to place), the characteristics that describe the particular place may have both internal components (people's perception of their own situation) and external components (people's perception of a particular place). With respect to quality of life studies, Pacione (1982) recognizes two fundamental elements that must be a part of any definition of life quality. Definitions must contain "an internal psychological-physiological mechanism which produces the sense of gratification, and external phenomena which engage that mechanism" (p.498). This is to say that a measurement of life quality may refer to the quality of a person's own life, partly based upon the quality of a given place.¹⁶

Myers (1987) made this important distinction by noting two different streams of indicator research that emerged out of the social indicators movement - one that focused on individual well-being, and another that focused on urban quality of life. Myers (1988) showed the importance of recognizing which factor was being measured when conducting quality of life studies. He cites two studies which reached drastically different conclusions based on their questioning:

[A] survey in Austin, Texas asked questions about "your quality of life" (AustinTrends 1985) and reached conclusions sharply different from another Austin survey, which inquired about "Austin's quality of life" (Myers 1985). The AustinTrends study highlighted personal factors, while the Myers study cited

¹⁶ Lui (1976) provides a similar definition.

community factors. In addition, the personal study found individuals' life satisfaction was increasing over time, while the community study found a widespread perception that Austin's quality of life was declining. The AustinTrends study concluded that everyone's quality of life is different...[while] the Myers study found at least 85 percent consensus about the importance of six community factors (p.356).

Myers' observations serve to emphasize the need to distinguish between people's opinion about their personal lives and people's opinion about the places in which they live. Each stream of observation will likely point towards a different solution. According to Myers "one stresses community factors that are beyond individual control, while the other stresses private, personal matters that are largely beyond governmental control" (ibid.).¹⁷

2.5 Characteristics of a Good Indicator Product

There is little disagreement concerning *what* makes a good indicator with respect to the final product – the agreement amongst those who have experience in indicator development is evident. The disagreement concerning indicators is more likely to be focused upon *how* a good indicator is produced. In the following section I discuss accepted characteristics of good indicators, that is, *what* makes a good indicator. Chapter Four will continue the discussion regarding *how* to create an indicator system, using a framework based on the principles of communicative action.

2.5.1 Validity

According to Innes (1990), the most important criterion for an indicator is its validity. Validity is an ambiguous concept that means "the extent to which the measure reflects the phenomenon or concept it is intended to" (p.215). Measurement of validity is resigned to

approximation and can be attempted in at least three ways according to Innes (1990). First, by looking at the way the measure is designed, one can intuitively assess whether the measure sounds reasonable based on one's own experience and perception of the subject. A second, closely related method, is to look at the way the measure is working and again based on experience and intuition, "see if the measure behaves the way you would expect the phenomenon to" (p.215). Finally, by examining different methods of measuring the same subject one can see whether the differences are significant enough to indicate a suspicious measurement. If results are similar, and by intuition and experience the measurement is designed reasonably and behaving 'as expected', then one may reasonably accept the measure as 'valid' (Innes 1990).

2.5.2 Clarity of Objectives

The first important recommendation for indicator development is that the objectives of the indicators be clearly recognized and unambiguous. The underlying concepts forming the foundations of the system must be clear and agreed upon by participants in the process (Innes 1990:110). For instance, where a focus is placed on immediate action and results, indicator development will likely focus on performance evaluation. Brugmann (1997) has noted that "the most results-oriented indicators projects are those that use indicators to hold institutions accountable to their plans and to evaluate whether actions are having the desired effects" (p.71). Similarly, if an indicator project is intended to create awareness around particular issues the objectives will be more closely seated in public education.

¹⁷ For a further discussion on the "people vs place conundrum" see Sawicki and Flynn (1996).

Some arguments state that indicators must adopt a primary objective (Brugmann 1997), while others recognize the ability of indicators to achieve multiple, simultaneous objectives (Pinfield 1997, GUO 1997). In either case clarity in objectives implies that clarity will also be found in the outlining of activities, processes and methodologies in developing the indicator system (GUO 1997, Brugmann 1997). As this development takes place, deciding upon a clear definition of what indicators themselves *are* will help clarify what the objectives are. Ultimately, when indicators are performing according to their own stated objective(s), they will assist in redefining other related policies or decision platforms by measuring and assessing the relative success in attaining them (GUO 1997).

2.5.3 Link to Policy

Perhaps the most widely cited ‘ingredient’ for a good indicator is that it must in some way be directly relevant to current policy.¹⁸ Where policy is not integrated with indicators or indicator systems they run the risk of becoming redundant or at best, under-utilized due to a lack of proven results. Even when results may only to be realized on a long-term basis, indicators that are directly linked to policy will be validated and recognized if the relationship between the indicator and the policy has been made clear and accepted by the users.

Though there must be a clear relationship between the measure and the concept (Innes 1990), that relationship will vary in intensity. Some groups may be more concerned with

¹⁸ Milbrath (1979) was one of the first to urge those developing indicators to link it to policy.

immediate, direct impact of policies and plans, and measurement that is explicit and obvious, especially where policy direction is the stated primary objective. For instance, the GUO *Urban Indicators Programme* emphasizes that “Indicators should be directly relevant to existing policy...and should directly measure outcomes” (GUO 1997:17). The selection of indicators in this case was based above all, on policy requirements. Indicators that are based upon existing policy accept the suppositions of that policy and therefore are less likely to have the ability to objectively critique the policy.

Other groups may require a less stringent tie between indicators and policy and may be satisfied to simply understand the *implications* for policy rather than conduct an exercise in exact measurement. This is especially the case where a key objective is public education or consensus building. In the case of an indicator system developed by Sustainable Seattle (Atkisson, et al, 1995), indicators of sustainable development were chosen that were not a direct reflection of existing policy, but rather were considered a ‘proxy’ measure of a concept *underlying* a policy or set of policies. One of the strengths of this type of an approach is that the indicators maintain an ‘arm’s length’ relationship with policy, and thus have an increased potential ability to critique existing policy rather than simply accept them as authoritative.

2.5.4 Available Data

The availability of consistent, quality data is a major benefit to the development of good indicators. Although an indicator may be well-developed and appropriate for a particular measurement, it may be unduly hampered by the lack of appropriate data. Therefore it is considered prudent to develop indicators where appropriate data can be somewhat easily

obtained. It may also be helpful to determine which indicators are of higher priority and ensure that data is immediately available for these, while those indicators that are secondary of lower policy relevance might eventually access less readily available data (GUO 1997:17).

Some indicator project groups have chosen to develop an indicator as a requirement to be fulfilled, even though no data for measurement currently exists (e.g. *Sustainable Seattle*). This action would seem to convey the message that the concept is important and perhaps hasn't been given the attention it deserves. In this case the indicator will of course, be unmeasured and 'unused' for the time being, though its presence may serve an educational or awareness raising purpose.

2.5.5 Conciseness and Comprehensibility

Indicators need to be communicated in a manner that is clear and understandable to a larger audience than the immediate users. If an indicator is communicated in too technical a manner or is bogged down in an abundance of detail, it will likely lose its attraction and validity not only for the immediate users but also to those who are less directly affected. The GUO notes also that "simple indicators that can be understood by those without specialist knowledge are likely to have a far wider currency and interest and to be used more accurately and readily. Complex indicators are likely to be misquoted and accused of unreliability" (1997:17). In the same vein, it should be made clear what the indicators can and cannot communicate (i.e. limitations) (Innes 1990:110), so that the indicator is not misquoted and so that false conceptions are not developed based upon false expectations of the indicator.

2.5.6 Measurement Reliability, Bias, Precision and Sensitivity

Indicator measurements are subject to the same guidelines as any other measurement exercise. Innes (1990) and the GUO (1997) refer to a number of these important guidelines. First, it is important that indicator measurements are reliable (GUO 1997). This means that the measure must be consistent in “reflecting a characteristic without wide variability due to peculiarities in the measurement instrument” (Innes 1990:196). If an instrument (e.g. a survey, questionnaire, the sample selection process etc.) is unable to respond consistently, or if the instrument alters what is being measured, then it will be unreliable. An example given for this phenomenon is a survey that takes too small a sample and is thus subject to a wide variance and inconsistent results.

A second important characteristic is accuracy. Accuracy connotes a lack of bias where *bias* is “the quality in a measure of consistently misrepresenting the underlying phenomenon” (ibid.). Bias will cause a steady error in results (as opposed to a wide variance) and may therefore be difficult to detect. Innes notes that instruments subject to some level of bias will likely omit some segments of their population. For example, a telephone survey would miss non-subscribers and people who are out often, “both of which categories are likely to be very different from the remainder of the population” (ibid.).

A third characteristic is precision, or an appropriate level of precision. Precision does not refer to a lack of bias (accuracy) but rather the level of detail that is provided – therefore a measure may be very precise but completely inaccurate. Innes indicates that too much

precision (detail) may in fact be harmful “in encouraging the user to ascribe more power to the measure than it has” (ibid.). For example, a census of a country would be unable to actually count the population down to the last individual, and therefore would be less misleading if it would alternatively provide a number that was approximately correct.

Finally, indicator measurement must express sensitivity. It is important that a measure be sensitive enough that it reflect a realistic degree of change yet not be so sensitive that it is changing all the time. “A measure which stays constant for many years is likely to have little value. On the other hand, indicators that are too volatile will be hard to interpret or collect”(GUO 1997:17). For example, Innes (1990) has cited the mortality rate as a not very helpful indicator of a nation’s health, due to numerous factors, one of which is that a country could be rampant with non-fatal disease and by the measure of mortality appear quite healthy. The indicator may be accurate and unbiased, but would be insensitive to the real problem.

2.6 Conclusion

Indicator history reaches back to the beginning of this century, over which time indicators have evolved from being largely focused on economic measurements to being used for a wider variety of uses including the measurement of social characteristics of places. The characteristics that describe a ‘good’ indicator are commonly accepted, though the uses of indicators vary from group to group. The following chapter will examine the use of indicators in the larger sense of information use in order to suggest a methodology for indicator development.

3.0 Two Models of Information Use: Foundations for Indicator Development

The previous chapter represented a review of indicators – how they have evolved over time, what they are used for and by whom, characteristics of a good indicator product, and some associated difficulties with indicators. However, the question of *how* indicators are developed has not yet been addressed. Also, traditional ideas about the *use* of information, and by implication – indicators, remain untouched as well. This chapter addresses these two points. It is here suggested that indicators may be developed within different frameworks for information use, and by applying different methods as a reflection of these frameworks. It is further suggested that traditional conceptions of both the development and *use* of information in general may be inadequate and therefore an alternative conception is offered.

3.1 The Conventional Scientific Model of Information Use

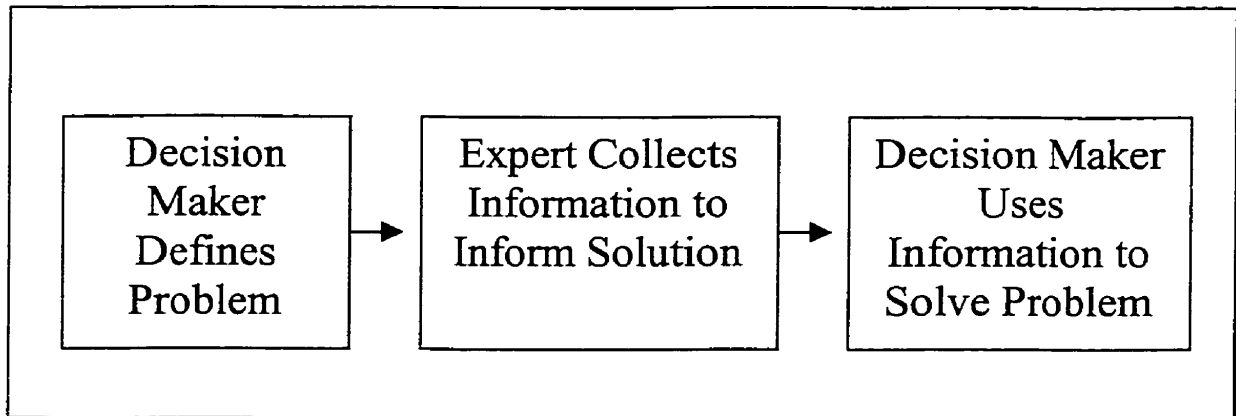
This section summarizes the scientific rational model – a model of information conception and use that has characterized ‘scientific’ inquiry and has dominated popularly held conceptions about science and knowledge. The implications of the model on planning activity are noted in order to help demonstrate the need for an alternative method of inquiry.

3.1.1 Nature of the Information

The basic method associated with the scientific model in a decision-making scenario proposes the following: a problem is defined by a decision-maker usually using

preconceived notions of selected issues; the decision-maker then asks an ‘expert’ to gather data surrounding the identified issues; and finally the decision-maker uses the resulting data in some manner to solve the problem (Figure 2). The use of the term ‘scientific’ here, may implicitly conjure a sense of ‘objectivity’ or unbiased inquiry. The ‘scientist’ in this scenario is an expert seeking a solution to some previously defined problem by way of testing ‘independent’ pieces of information.

Figure 2. The conventional scientific method applied to a decision-making process



The nature of the information within this process includes data that results from ‘experimentation’ and study, usually statistics and statistical formulae. The information and conclusions resulting from the method described above, carry the presumption of having been born out of ‘objectivity’ or ‘existing without bias’. The information claims its objectivity based on the presumption that the scientist has eliminated his or her subjective opinions. By eliminating such subjectivity, the process or ‘experiment’ is presumed to yield an ‘unbiased’, factual and ‘true’ result. The result is then directly applied towards the previously defined problem in finding a solution. This method of

inquiry and solution finding essentially represents the presumptions of the scientific model, or positivism, especially with respect to its presumption of independence and the value of scientific, 'objective' knowledge.

The scientific model finds its base in the logic of positivism, which is based on principles established in the early nineteenth century by the so called father of sociology, Auguste Comte (1798-1857) (Neuman 1991). The positivist stance holds that "there is only one logic of science, to which any intellectual activity aspiring to the title of 'science' must conform" (Keat & Urry 1975:25 cited in Neuman 1991). That one approach to science essentially represents the conventional scientific method, where usually quantitative and 'objective' research is used to precisely measure objects and phenomena, test hypotheses and analyze the results towards a conclusion. The straightforward, step-wise, singularity of positivism is closely matched with the straightforward step-wise procedure of the scientific method. Neuman (1991) has noted that positivism has been so closely related to the conventional scientific method, that "most people never hear of alternative approaches and assume that the positivist approach *is* science" (p.45).

The conventional scientific model (positivism) communicates essentially three major viewpoints: that the primary and often sole source of knowledge is delivered by an expert; that the inquiry is straightforward in reaching an unbiased conclusion and that results will clearly indicate directions and implications. The implied methodology is one that is straight forward and easy to conceptualize, allows for a determinate course of action, and seeks a determinate outcome. In this manner it is attractive in its simplicity, in its direct relationship between problem and answer, and in its efficiency. Despite the

benefits of the model, however, a further consideration of the presumptions of the model reveals some critical flaws.

3.1.2 Criticisms of the Scientific Model

One of the criticisms of the conventional scientific model when applied in many planning scenarios is that it fails to recognize inherent perspectives of the 'scientist' in defining the problem at hand, in selecting variables associated with the problem, and in choosing a method of measurement and examination. The idea that an 'inquirer' has the ability to shed all personal bias and preconception is one that needs to be challenged.

Karl Popper (1949) was among the first to suggest that scientific inquiry began not with observations or data collection, but with one's choice of a certain kind of data and focus on a particular kind of problem. He noted that,

...science...cannot start with observations, or with the 'collection of data', as some students of the method believe. Before we can collect data, our interest in data of a certain kind must be aroused: the problem always comes first. The problem in its turn may be suggested by practical needs, or by scientific or prescientific beliefs which, for some reason or other, appear to be in need of revision (p.121 cited in Hessler 1992:4).

Later, Schön (1980) demonstrated that in 'framing' the problems of cities, the solutions sought are contingent upon the perspective that is adopted in defining the problem. Schön pursued the question of 'problem framing' in the context of urban housing in the United States. In this context he demonstrated how problems related to unsatisfactory housing were constructed by 'looking' through the varied lenses of differing ideologies. One set of lenses identified the problem as that of a *diseased* or *blighted* neighborhood, and the

corresponding solution to be one of *slum clearing*. A second set of lenses found itself concerned with preserving the *natural community*, and correspondingly recommending preservation of that community by clearing only those homes that are blighted and ‘saving’ what remains. A third emphasized the importance of home ownership and the *upward mobility* of neighborhood residents, and thus proposed the use of self-help strategies towards home ownership.

Both Schön’s and Popper’s enduring message is that various subjects and methods (which require various types of information) are commonly chosen not in an ‘independent’ scientific manner, but in a fashion which is intimately tied to one’s perception of the problem. Schön noted that each of the housing solutions above “appeals to a different kind of professional”, each “conveys a very different view of reality and represents a special way of seeing”, and perhaps most importantly, each “constructs its view of social reality” by selecting particular aspects of the scenario on which to focus (Schön, 1980:41). Critics of the model contend that the notion of independence is not possible, that the preconceptions of problems inevitably influence the information sought and therefore the path towards mediation and solution (Harper and Stein 1993, Forester 1980).

A second criticism of the conventional scientific model is that it is limited to only one kind of knowledge. The positivist stance towards knowledge that the scientific method is built upon suggests that: “of the many ways to seek truth, science is held up as special – as the ‘best’ way” (Neuman 1991:47). Other ways of knowing such as personal experience or tradition are held as inferior. Common sense, when compared to conventional

techniques of science, is thought to be “sloppy, logically inconsistent, unsystematic, and full of bias” (ibid.). Thus, within the scientific model, ‘useful’ information is usually restricted to the measurable aspects of a problem. Anything that is not quantifiable within the terms of the inquiry is considered ‘subjectively’ tainted and therefore inadmissible within the constraints of the inquiry. There is no mechanism built into the model that can receive other kinds of valuable information, including information that is derived from other than ‘expert’ sources, because that kind of information is not considered useful. The positivist stance takes this distinction between useful and less appropriate information a step further in making this assertion:

That knowledge from the senses about observable reality is more important than other knowledge (e.g. insights and feelings) and *that it separates true from false ideas about social life*. (italics added, Neuman 1991:49).

Though severe, the assertion that only those concepts that can be seen or measured are meaningful, while other concepts are meaningless and “false” represents the crux of the positivist argument (Hessler 1992).

A third criticism of the conventional scientific model is that it suggests that research is best conducted in a straightforward, step-wise procedure where experts provide the solutions to pre-defined problems. Neuman (1991) describes the positivist approach where: “The researcher logically links abstract ideas in laws to precise measurements of the social world. The researcher remains detached, neutral, and objective as he measures aspects of social life, examines evidence, and replicates the research of others” (p.49).

The straightforward nature of truth, and purported simplicity of a scientific ‘conclusion’ are perhaps too lofty a set of claims for the conventional scientific approach, given the confusion of perspective, history and life-position that every scientist, theorist and participant carries.

A final criticism of the conventional scientific model raised here is that it is limited to a ‘use’ of knowledge whose intentions are seated in the need to find direct solutions to problems. This idea is based in the positivist stance of universal validity – where laws and solutions found in one setting should be applicable in all settings (Neuman 1997). This simplification of reality reflects the notion that there are distinct, singular and explicit answers to any problem that can be addressed through experimentation. The notion that solutions to problems can regularly be found by applying the conclusions to experiments is one that has been challenged by many (Habermas 1984, Innes 1990, Hoch 1982).

Many practitioners and academics having previously embraced these notions of positivism have come to realize the inherent flaws of applying the scientific model to all but the most ‘value free’ circumstances.¹⁹ Bolan (1983) has suggested that in planning, a ‘normative’ theory is required to help address the issue of ‘what *should* be done?’ before we address the question ‘what will be done?’. Rittel and Webber (1973) noted earlier that “the scientific bases for confronting problems of social policy is bound to fail” based on the assertion that some problems are “wicked problems” having no clear solution

¹⁹ See Heshusius and Ballard (1996) for twelve social researcher’s accounts of their ‘transformation’ from positivism to interpretivism.

whereas “science has developed to deal with ‘tame’ problems” (p.155). It is evident among these noted viewpoints that the scientific model based in positivism seriously undermines its adequacy as the sole tool to inform planning practice and social research given the value-laden material that constitutes these domains.

3.1.3 The Scientific Model and Planning

The scientific model has manifested itself in numerous modes of planning practice.

Gunton (1984) described the various ideologies of planners according to the roles that they define themselves in. Use of the scientific model in planning is most evident in the earliest conception of the profession where the planner is seen as a *technocrat*. In this mode “planners first viewed themselves as professional experts above politics and ideology employing objective, scientific knowledge to solve society’s problems” (p.400).

The approach in reaching a solution to the ‘problem’ was “to survey the problem, analyze the data and formulate a plan of action” (ibid.).²⁰

In this conceptualization of the planner, there is no discussion concerning conflicting interests or internal biases. Friedmann (1978) noted that technocratic approach taught that “those whose mastery of the techniques for acquiring objective knowledge is superior, or who have superior access to such knowledge, are also justified in making decisions and committing resources for those whose knowledge is restricted and inferior” (p.56). Though later views of planning described by Gunton, such as the planner as a

²⁰ Schön (1980:33) conveys a similar notion in planning practice of the “problem solving perspective [that] directs our attention to the search for solutions. It is assumed that we know or can easily voice the problems of cities, the problems of the economy, the problems of population control, but that we cannot yet solve them. Problems are given; the task is to find solutions”.

public servant or the planner as a *referee* recognize the concept of inherent bias and the fallacy of eliminating achieving objectivity, portions of the scientific approach such as the importance of quantitative data remain iconic. The role of information for the planner using the conventional scientific model is to provide a result to a preconceived problem, in order that a subsequent (or perhaps preconceived) solution could be used or defended. In this manner, the scientific approach creates a somewhat marginal role for the planner, where he or she neither informs a new way of thinking nor plays any part in enlightening the other participants in a process nor the problem itself.

The inadequacies of the scientific model suggest that its application should be limited to use in only strictly bounded scenarios. Innes (1990) outlines these required conditions with respect to policy making as follows:

...Basic political and social agreement on the nature of the issues, on the definition of a specific problem, and on the values that should be applied in resolving it; a known and generally accepted technology for resolving the problem or answering questions pertinent to it; a unitary policy maker who has the power to make a decision, the inclination and time to use information, and the willingness to respond to unexpected recommendations; information which can be gathered and analyzed in time for a decision; and methods and types of expert knowledge which mesh with the way the policy maker thinks about the issue (p.35).

The rarity of these scenarios, especially within the planning context, lends strong support to the call for an alternative approach to the scientific method of inquiry.

3.2 The Communicative Model of Information Use

An alternative approach to the scientific model challenges the presumptions as noted above: that inquiry can be value free and independent; that only quantifiable, expert

information is valid; that knowledge is used primarily for instrumental purposes; and that knowledge is used in a straightforward, incremented procedure to arrive at solutions. These presumptions will be explored primarily through the work of Judith Innes. Innes has addressed these ideas extensively being a key contributor to forwarding the application of communicative action principles in planning. The discussion begins with the roots and main principles associated with communicative action, then focuses on how these principles have been noted in planning practice over time. The section following deals with how information is perceived and ‘used’ using communicative action principles. The final section deals with some of the difficulties associated with applying communicative action principles.

3.2.2 Habermasian Roots

Communicative planning is rooted in Habermasian Theory.²¹ The German social scientist Jurgen Habermas centered his discussion on the *uses* of knowledge, believing knowledge and action run so close together as to be indistinguishable (Innes 1990). That is to say that when one is *performing* a function of sorts they are also *informing* both themselves and an audience either present or absent; and when one is *conveying* information, they are simultaneously acting and *influencing* themselves, their audience and the former information in a cyclical fashion.²² Innes describes a communicative process as one in which:

²¹ See Habermas (1984).

²² According to Innes (1998a), Forester (1989) introduced the idea to planning that “when a planner communicates he[or she] is warning, calling attention, prioritizing, and thus acting on his [or her] audience”(p.61).

...participants negotiate definitions, values, and mutual understandings as they join in discourse around a task. They bring to this not only formal kinds of knowledge, but also experience and interests. Communication and action are thus different sides of a common enterprise. Well-designed communicative processes can transform understandings while reshaping actions (Innes 1990:34).

Habermas further suggested that knowledge can be used in three ways. First, knowledge is used for “instrumental or technical purposes, to predict and to choose strategies likely to produce particular outcomes” (1998a:59). Second, knowledge is used for practical and interpretive purposes, which serve to inform us the reasons *why* a particular solution was decided upon. For example, “If theory tells us a program with certain features will work, we ask, what do we know from experience about how to actually make it work?” (ibid.) Finally, the third use of knowledge according to Habermas serves an “emancipatory” purpose. This use of knowledge is intended to free us from “assumptions, rules and expectations” that keep us from learning. Without this critical learning, it is proposed that we are unable to conceive of a deeper reality and thus unable to think and develop in innovative ways (ibid.). In using knowledge for emancipatory purposes theory and practice are most closely intertwined – that is, “theory only makes sense through practice and vice versa” (Innes, 1995:186). The three uses of knowledge appear hierarchical, with emancipatory interests at the top, having the ability to affect change in the greatest and most permanent fashion. However, all three uses of knowledge are considered equally valid, each having a particular importance given a specific setting and ‘demand’ for information.

Accepting this categorization, the conventional scientific model clearly rests in the first of Habermas's three realms, where information serves the technical purpose of informing a particular problem towards a rational solution. This understanding of knowledge has historically been both implicit and common with respect to planning. Innes (1998a) comments that this use of knowledge limits the role of a planner in the conventional scientific model to one of simply providing information for a decision-maker to 'use'. In a somewhat mysterious manner, the information is to make the leap from mere information provided by the planner all the way to useable knowledge for the decision-maker to base their decision upon. The communicative view sees planning and policy-making rather as a "messier, more interactive process" that uses information in a less linear or technical fashion (Innes, 1990:4). Beneath most solution-finding efforts there are underlying aspects of politics and power that change and manipulate information and knowledge. Innes (1998b) notes "while there may be reality or truth out there, it is hidden under the socially constructed understandings, theories, and assumptions shared in a society. These, in turn, embody an existing set of power relationships" (p.6). The principles associated with communicative action seek to recognize and address some of these inevitable difficulties.

3.2.3 Communicative Action in Planning

The concept of communicative action proposes an alternative view that suggests a use of knowledge more akin to Habermas's emancipatory notion of knowledge. In this concept information makes the important transition to knowledge through a process that serves to 'inform' all participants in a process. The 'higher calling' of information and knowledge

here is that it should embed itself in the consciousness of individuals and groups, such that it becomes an integral part of that party's personal understanding. When information is given the opportunity to do this, it is purported to be in its most effective state. In this state, information is serving the purpose of making one aware of a particular problem in a manner that a conventional scientific approach cannot provide. Rather than raw data mysteriously pointing in a direction towards solution, information has been embedded in a participant's notions of a problem. This new 'constant' awareness of a problem or scenario allows for participants to continually learn more about the scenario and exchange information (experiential or otherwise) on an on-going basis. The participant has thus become an informed 'advocate' of a scenario for an indefinite period of time, rather than having been underutilized in a role of 'information finder'.

In the communicative approach the planner, policy-maker, clients and citizens engage one another in active debate and learning that in itself has the ability to 'grow' new knowledge. A typical communicative scenario would see each of these groups contributing new information on a continuing basis and beyond the restricted setting of any particular meeting. Rather than proceeding step by step in a straightforward manner, various parts of the process may be revisited as new information is brought to the table and developed 'away from the table'. Thus the members of the collective group have a greater opportunity to learn from each other as the project proceeds. The problems and directions for the project as initially agreed upon may change at any time during the process as new information comes available. The process thus forms a cyclical, 'coiled' pattern that at times sees the group moving backwards in order to redefine and re-assess

the variables of the project. The planner in this case is unable (and not required) to be neutral in the process of evaluation, but becomes a part of the knowledge process as both knowledge provider and user.

Innes (1988) describes this process as distinct from the scientific (or 'positivist') approach:

The communication of knowledge becomes a process integral with its creation – a two-way transaction rather than a one-way communication from expert to layman. The informing of policy can be seen as a continuous process rather than, as in the positivist model, an intervention which occurs at discrete and specified points (p.89).

The integral role of all project participants in communicating and receiving knowledge affords the opportunity for participants to retain a sense of ownership of problems and solutions and creates a lasting awareness of relevant issues. Innes (1998a:54) refers to the internalizing nature of the communicative approach as “informatizing” a participant. In this manner, information becomes less explicit and more implicit, revealing itself in the choices and foci of participants rather than simply in the raw data they may bring to the table.

...Communicative action ‘informatizes’ planning, and in the process transforms the participants. Information influences planning and public action by becoming embedded in the thought, practices, and institutions of a community, and thereby influencing actions. When information is most influential, it is invisible. That is, it influences most when it is a part of policy participants’ assumptions and their problem definitions, which they rarely examine (p.54)

This process is said to cause knowledge to be more effective because the wide inclusion of participants and their respective knowledge allows participants to maintain a stake in the knowledge that is produced. The model of information use described here, rests comfortably in Habermas's third realm of enlightenment, providing an opportunity for all participants to intimately come to know the reasons behind problems and solutions, while preconceived notions are challenged and a knowledge that explicitly embraces formal and experiential sources is infused. The problems and solutions are said to be 'socially constructed' by the communities that are affected by them. Innes (1988) says this is important because participants "can trust and see the relevance of research or analysis which is grounded in their own understandings" (p.89).²³

3.2.4 Social Learning

This cyclical, interactive approach bears some relation to a process that John Friedmann referred to as 'social learning'. In this approach Friedmann (1976) attempted to understand why the results of policy research seemed to have very little effect on the policies in question. He supposed that this was due to the inadequacy of the model of information communication being used, where the researcher and policy maker lived in different worlds with different 'core images', one unaffected by the other. As a solution to this problem he suggested that "if policy research should wish to influence social practice, the task is to forge a new theory of reality that, although combining the core images of researcher and policy maker, transcend them both in a new synthesis" (1976:937).

²³ Hillier (1998) also notes that research by Lind and Tyler (1988), Leventhal (1980), and Leventhal, Karuza and Fry (1980) finds that "decisions are more likely to be accepted by those affected when the procedure used to generate the decision allows their perceived fair participation" (p.17).

Friedmann suggested an “experimental setting” in which this new model could be tested, where the requirements of that setting imply a new concept of information and the exchange of information. The setting would have the following characteristics:

- (a) small enough to facilitate face-to-face encounters between researchers, innovators, and affected population;
- (b) inclusive enough to make the affected population an active participant in the experiment;
- (c) simple enough to permit each participant to acquire a sense of personal efficacy;
- (d) autonomous enough to carry out appropriate actions;
- (e) bounded enough to bring these actions into focus and to permit a clear evaluation of results (ibid.)

The setting requirements given by Friedmann provide a template for a kind of information exchange that values the process of more than just scientific knowledge. The definition of knowledge (and information) is broadened to include not only the information ‘used’ within a debate or dialogue but also the knowledge derived from the way a process of information exchange is taking place. Value is placed on ‘face-to-face’ encounters between all affected parties – a fuller exchange than that of an ‘expert’ simply handing over data. Value is placed on the input of all effected parties –a broader scope and supply of knowledge than simple scientific experimentation. Value is placed on the importance of internalizing knowledge – a more effective use of knowledge than the simple application of data towards a solution. And value is placed on a balance between rigorous constraints in study and the importance of maintaining a focus. This allows for a greater potential knowledge base than does a constrained, directed ‘experiment’, yet it does not sacrifice a necessary focus towards clear evaluation.

The communicative approach to information use has adopted many of the precepts Friedmann discussed in social learning. Expanded definitions of information types and of information use are primary among these. Information gathering in the communicative approach takes on a new meaning, in the manner that Friedmann has indicated with social learning. The data itself becomes secondary to the process and dynamics of data gathering and communication.

Information can become internalized for participants involved in a process where “the policy result [becomes] a forgone conclusion in the process of formulating and agreeing on the information” (Innes 1998a:58).

3.2.5 Nature of the Information

The central idea behind data use in the communicative planning model suggests that data can be effective on more than one level. Traditionally data has been conceived as a tool that has the ability to explicitly affect action. For instance, where a collection of data suggests an inadequate number of downtown parking stalls, planners may take measures to increase the number of stalls. Or, where vacancy data suggests an increasing retail vacancy rate, policy analysts may adapt policy to enhance retail development. Innes has described this typical perception of information and its effects by noting the method researchers and practitioners have considered ‘normal’.

What both researchers and practitioners have been accustomed to label “information” has usually been quantitative, framed in terms of costs or other easily countable units. The assumption has been that the professional’s job is to produce such analyses, or to select and interpret those done by others, and to present them to decision makers in understandable form, adding nothing beyond a professional opinion about their value and

implications. Elected and appointed officials are then to 'use' this information to decide on plans, policies, and regulations (Innes, 1998a:53).

The planner's use of information in this case does not go beyond simple analysis within the bounds of a preconceived problem. It does nothing explicit to inform the debate or to challenge preconceived notions nor to push the status quo. Such a conceptualization of the use of information suits Habermas's first level of knowledge use – that is, it is technically motivated. The emancipatory interest of Habermas' third type of knowledge and the internalizing notion of the communicative approach are not apparent within this method - the information in this model is both conceived and produced external to the decision-maker(s).

Despite this inadequacy, data requirements may ultimately serve some useful purpose. Innes (1988) argues this case with respect to requirements placed on public agencies to collect and submit data to public scrutiny. She notes that data requirements can be effective in three ways. First, where data gathering is required through legislation, it increases the technical capacity of an organization. For example, Innes reports that Environmental Impact Reviews (EIR) required for major mixed-use developments in California have helped to grow a new industry in environmental consulting. New communities that established a staff dedicated to EIR reporting introduced a new type of expertise. The requirement of data collection (environmental data, population updates, traffic and economic data etc.) ensured communities access to consistent, reliable data. This in turn allowed planners, citizens and elected officials to become technically more sophisticated as the data were communicated amongst these groups (ibid.).

Second, data gathering can empower the values of participants whose views support the objectives of the legislation that mandated the initial data requirements. Innes cites the example of The Department of Housing and Urban Development (HUD), which requires local agencies applying for a Community Development Block Grant (CDBG) to produce data on population and housing. This data was used in several ways to enhance the positions and viewpoints of the policy behind it. Innes notes that “because of self-selection and training, planners, environmental professionals, labor analysts, and human rights specialists are likely to believe in the values the legislation represents” (1988:276). The ability of these specialists to create and interpret data also helped them to appear both “legitimate and authoritative” to the citizens and policy-makers, while at the same time they serve to “increase the capability of participants to engage in discussion about them” (ibid.). The latter mentioned role of data requirements also helps citizens challenge existing viewpoints of officials. In the CDBG case, a law-suit filed on the part of the citizen group allowed them to argue that a policy that disregards existing data should be seen as illegitimate (ibid.).

Finally, data gathering can help to establish new terms of discourse by focusing the work onto topics that the data represent. On this point, Innes (1988) argues that the requirement of data collection can become so commonly accepted that the assumptions that policies represent also become “internalized”. She notes,

Participants in a planning process are likely to take for granted that housing need or rising unemployment are problems to be solved, or that high levels of pollution make a project undesirable. No explicit debate may ever occur on those points. The data affect policy not so much

because of facts they reveal, but because the concepts implicit in them become implicit in the discussion (p. 277).

The benefits of data requirements, though beneficial as outlined, do not *necessarily ensure* long-lasting “internalized” understandings and impressions, unless “there is plenty of talk about the meaning of the information, its accuracy, and its implications” (Innes, 1998a:56).

It is during such discussions that participants have an opportunity to contribute their own knowledge and experience to existing data. These contributions form an integral part of the web of information that is quintessential in developing a successful process of knowledge use. The communicative process provides an opportunity to revisit itself numerous times by integrating the ‘new’ knowledge gained along the way. This, in turn, ultimately serves to enhance the continuing purpose of information gathering – to convert the information to knowledge and ensure the successful application of that knowledge. The contributions of participants however, do not all necessarily fit the mould of what is traditionally understood as legitimate ‘data’.

3.2.6 Information Types

Information from participants may assume several identities. In the examples cited by Innes above, participants contributed knowledge to the process in numerous ways. First, participants contributed technical or scientifically validated knowledge that was either newly introduced or formed a part of existing data requirements. This information formed only a small part of the total information used.

A second type of information used is that of individuals' own experience. In these cases, various groups or individuals with 'expertise' in a given area were able to bring to the table valuable issues and understandings that were a direct result of their work or personal experience. This information was found useful in determining the nature of the problem, arguing, persuading and helping to decide what strategies to take (Innes, 1998a).

A third type of information used was found in the stories that people told. Despite traditional difficulties that characterize this type of information as too "anecdotal" and "unscientific", participants' stories "turned out to reveal changes that science had not yet caught" (Innes 1998a:59). As an example, Innes cites a representative of a taxpayers group who related a story about a failed water facilities investment venture, as a way of "warning the group away from its proposed course of action" (ibid.). In this case the warning was seriously considered and ended up altering the course of action the group decided upon. Another related type of information used included images and representations used in discussions. Some participants contributed photographs and drawings, for instance, that were informative to the discussion. Others discussed mental images and concepts that were crucial to reaching accepted and agreed upon terms within the discussion (ibid.)

A fourth type of information used was based in participants' intuition – their "personal sense of the situation and of the other participants" (Innes, 1998a:59). Innes describes the role of intuition with respect to consensus building efforts of planning, some of which were a part of the examples sighted above:

...Participants sized each other up and decided whether others were trustworthy or knowledgeable according to their own instincts. They decided what to do based on their 'sense of the meeting'. They talked about their 'comfort level' with proposals, or whether the proposal passed the 'sniff test'. The typical participants in these processes were experienced, and accustomed to assessing other people and situations. Sometimes they could not articulate why they knew something, but they felt confident of it (ibid.)

Friedmann (1981) also hailed the value of this type of knowledge in social learning approaches. Calling this knowledge "personal knowledge", he has noted that though we continuously use it, it is "subliminal" or "tacit" and as such we are "scarcely aware of it and are generally unable to articulate it in any other form than anecdotal. Personal knowledge is nevertheless vital to human undertakings" (p.3).

Sandercock (1998) has more recently presented a slightly expanded catalogue of knowledge types referencing many earlier works as cited above (Forester 1989, Healey 1997, Innes 1998a). She notes six types of knowledge and learning: *knowing through dialogue, knowing from experience, learning from local knowledge, symbolic and non-verbal evidence, learning through contemplative or appreciative knowledge and learning by doing, or action planning.*

The use of numerous types of knowledge indicates a need for various types of inquiry. Adopting a wider scope of inquiry styles can also help alleviate the threat of using one type of inquiry "in the service of a powerful elite" (Hoch, 1992:208), attempting rather to spread control of the inquiry process over a wider base.

Each of these types of knowledge can play, according to the theory of communicative action, play an important role in motivating and mobilizing decision-makers and public support respectively – a role that scientific data alone cannot. Innes (1998a) notes that the results of a communicative process of information use “have a vividness and can engage emotions, beliefs, and values in a way that objectified data do not” (p.58). The information used in the process thus becomes intermingled - ‘subjective’ experiences and understandings together with technical, ‘objective’ data – in a web that is unable (and unwilling) to separate and ascribe rank to various types of input.

Communicative planning proposes that the use of data and information has a greater purpose beyond the explicit benefits that simple data gathering requirements may present. It proposes the use of many types of knowledge as noted above. It also proposes a different approach to gathering and using that knowledge than has been traditionally accepted.

3.3 Difficulties with Communicative Action in Planning

While the conventional scientific model provides a straight-forward, step-wise methodology for problem solving, the approach that communicative action embraces is not so tidy. Participants using communicative action principles in a planning scenario work together to contribute many types of knowledge. This is done in an iterative fashion so that learning is constantly taking place, and such learning may directly or indirectly influence the perception and framework of the initial problem or scenario. It is this iterative notion which makes the communicative approach a more extensive, less

‘clear-cut’ endeavor. This notion coupled with a possible general reluctance of practitioners to embrace change lie at the heart of most of the noted disadvantages of the communicative approach.

3.3.1 Inefficient and Ambiguous

Because the iterative nature of communicative planning, the model is inherently inefficient when compared with a more scientific approach. The model calls for input of many kinds and from many sources *throughout* the duration of the project. It is this method which purports to enhance the sense of community ownership of the concept and the subsequent ‘survival’ of any particular project. Discussions and potential debate are lengthy and advancement to any subsequent stage holds no guarantee that forward motion will continue. Forward motion in this case is no longer the only direction associated with progress. Rather, backward motion – a revisitation of a particular topic – spurred perhaps by the introduction of new evidence, is also defined as progress. The revisitation to a previously discussed topic is merited based on a potential higher quality outcome, arising out of input from any number of participants and is therefore valued as progress. According to Chambers (1995) the trade-off lies between efficiency and common ownership. “The more our conversations are directed at mutual understanding, the less efficient they are in producing a determinate outcome that can be acted upon” (Chambers 1995:241 as cited in Hillier 1998:22).

The indeterminate outcome noted by Chambers exacerbates the inefficiency problem. With the communicative approach it is usually difficult to predict what the outcome of a particular process may be. Because the method requires decisions to be made along the

way and allows for those decisions to be changed according to future input, the results of the process are less predictable than the more highly structured scientific approach. An inability to predict the outcome (or promised deliverable) invites potential skepticism both about “what is being paid for” and about the validity of the process itself. An indeterminate outcome is again directly linked to efficiency arguments, all of which are linked to higher costs and use of resources.

The problem can be partially addressed by justifying the value of the outcome. Despite potentially higher costs resulting from an extended process, communicative planning can be justified by noting the long-lasting quality product that the process incubates. The current lack of recognition of the results of communicative planning, coupled with the importance of financial ‘efficiency’ make overcoming this obstacle difficult.

3.3.2 Reinforcing Existing Power Structures²⁴

Power inequalities are an inevitable part of planning, but the communicative approach attempts to equalize or reduce power differentials. This is generally attempted by the inclusion of diverse interests, by the validation of different types of knowledge and by the elected method of using information. Though these efforts do not change the respective power status of ‘participants’ outside the group, they do work towards affecting power relationships at the table (Innes 1998b). According to Innes (1998b), a process that equalizes power utilizes participants’ combined knowledge and information sources and recognizes various interests. An ideal dialogue “is one where people who have different

²⁴ For an extensive discussion on power and planning in the communicative approach see Innes, Judith (1998b).

interests and understandings, different resources and perhaps even a history of conflict, can work cooperatively and creatively on a common problem or task and create joint meaning” (p.16).²⁵ However, this ideal scenario is not immune to the pervasive forces of power and status even with the best intentions.

Forester (1980) warns that even well intended planners can inadvertently exercise power by using language that is bureaucratic. Use of language laced with planning jargon can “immobilize or disable” participants, excluding all but those who are in the know (p.282). Similarly, less-organized groups and individuals who are unable to be present at meetings have fewer resources and may go unrepresented at the table (Hillier, 1998).

A perhaps more fundamental argument is made by Hillier (1998), who notes that existing power inequities may be exacerbated by “a more discursive” approach to decision-making such the communicative approach represents. If adequate representation is not in place then the process may fall prey to the “domination of the discussion by the already advantaged, the articulate and the pushy” (p.22). The planner must address this problem recognizing the inequities, drawing attention to them and calling upon unheard voices. The planner can also act as an equalizer of sorts. He or she must act in a manner that allows inclusion of various ideas and types of knowledge. If the voice of the planner is seen as partisan in any way then it also may be necessary to make use of an external facilitator or mediator (ibid.).

²⁵ This ideal is usually sought using the principles of consensus building and ‘inclusionary argumentation’. For work related to communicative planning and consensus building see Innes (1996). For more on ‘inclusionary argumentation’ see Healey (1996).

Less-heard alternatives in a given project may not have the opportunity to emerge if the process is allowed to proceed too quickly and if the process fails to receive new knowledge, while revisiting old knowledge. This may be countered by the deliberate effort of the planner to slow the process down. In the context of strategic spatial planning Healey (1996) notes the challenge lies with the planner's ability to promote a process that embodies a willingness to "experiment with and test out strategic ideas in initially tentative ways, to open out possibilities for both evaluation and invention of better alternatives, before allowing a preferred discourse to emerge, and crowd out alternatives" (p.229).

3.3.3 Requirement to drop the Rational Planning Model

Using a communicative approach in planning may require the abandonment of the absolute reliance on conventional scientific model that rational planning endorses. This is a difficult task given the persisting use of rational planning. Innes (1990) has noted the reluctance of society to let go of the idea of the "value-neutral expert" on the precept that "we need the 'soothing fantasy' of the division between politics and knowledge" (p.39). She notes that politicians and professionals in particular, need to convey the sense that they are acting in an unbiased fashion, and that the public wants to know "who is responsible for what" (p.40). Letting go of the conventional scientific model and thus the concept of rational planning, poses a difficult task for the planning field and the public at large, as it has been the accepted mode around which so much of society has already been constructed.

Communicative planning emphasizes the need to recognize rather than shy away from our inherent biases. Healey's "inclusionary argumentation" approach to consensus building embodies the necessity of recognizing the inherent biases in a project. She writes:

The defining quality of an inclusionary strategic discourse is that, within its storyline, there are parts for most people, and there is acknowledgment, where relevant, that some suffer more and some benefit more as the story proceeds. Any story has its regrets and little tragedies. In the rational planning mode, these were ignored. An inclusionary approach demands explicit attention to them (Healey 1995:228).

Despite the difficulties associated with dropping the scientific approach, Innes (1990) has noted progress thus far towards a more communicative approach has included: an increase in forums for interactive knowledge development; the expansion of professional inquiry into interpretive research; the use of workshops and negotiation; and an increase of group processes that work to challenge assumptions.

3.4 Conclusions

The communicative approach to planning proposes a process that is less 'tidy' than the traditionally accepted scientific approach. Various types of information are allowed, and numerous parties are engaged in the process. The method engaged allows for the revisitation of original assumptions and for the redefinition of the original problem. The value ascribed to knowledge is loftier than in the conventional scientific approach, as it searches for a greater meaning with an 'emancipatory' interest that seeks to free us from unfounded presumptions, rather than seeking a simple solution to a problem. The

literature concerning communicative planning advances five major points that detail a 'new' understanding of knowledge and its application. Innes (1990) has focused the discussion on these points as follows:

- Knowledge that is influential is socially constructed, at least in part, in the community it influences.
- Knowledge influences as it becomes internalized in the shared understanding of a community. It influences more often as part of taken-for-granted assumptions, which frame problems and put bounds on the solution options, than as a result of explicit information processing in relation to policy questions.
- Just as objective and subjective knowledge cannot be sharply differentiated, professional inquiry and ordinary knowledge are intermingled. All are informed by the others, and all are jointly required for knowledge to be both valid and influential.
- Knowledge that motivates collective action is often in the form of stories and myths²⁶ which are part of a shared, usually tacit, repertoire on which those in a community rely to make sense of events and to point in the direction of desirable actions.
- Knowledge...packages facts, theories, and values, and means and ends in ways that cannot be disentangled (p.35)

The insights provided by the communicative approach present an opportunity for the development and use of knowledge that is more effective and enduring than that presented by the conventional scientific approach. This new understanding of information and knowledge can help inform the development and use of indicators as a specific type of information. In the following chapter I will discuss two case studies in light of the principles of communicative action and develop a methodology based on observations from the case studies and the framework that communicative action provides.

²⁶ Innes (1998a) uses the term 'myths' not with the popular notion of "false or ill-founded belief" but rather as an important tool societies use in simplifying their worlds by way of analogy, providing a moral basis for referring to good and evil, for providing object lessons, and for conveying "deeply held values" from one generation to the next (p.23).

4.0 A Communicative Framework for Indicator Development: Case Studies and a Proposed Methodology

In Chapter Two I discussed the concept of indicators and in so doing recommended characteristics of a good indicator product. Though there seems to be a common consensus regarding what a ‘good’ indicator should look like, there is less consensus regarding *how* an indicator or indicator system should be constructed. The development *process* associated with indicators can assume various frameworks, two of which were discussed in Chapter Three – the scientific and communicative action approaches. Each offers what they respectively consider to be a ‘good process’ for the development of indicators, yet each may yield a product that appears similar, yet should be recognized as fundamentally different. This chapter presents what the principles of communicative action have to say about indicator development and then compares these recommendations with two actual indicator development projects. Using insight gained from this process I also present a new methodology for indicator development that embodies the principles of communicative action.

4.1 The Case Study Examples

The projects cited in this section are both from American cities and both arise out of concern for sustainability/environmental issues. They were chosen for two reasons. First, the projects appeared to represent somewhat different approaches to indicator development – one was initiated and developed primarily by a government body, the

other by a grassroots collection of individuals. Second, the literature available for additional commentary on the projects was greater than that for other indicator projects. Finally, the projects were of approximately the same scale (both city scale) and for the same goal (increasing sustainability) and would therefore present good comparison material. American examples were chosen over similar Canadian ones, simply based on the fact that literature on similar Canadian projects (Sustainable Calgary or Quality of Life in Winnipeg for example) was relatively scarce. Though ultimately some differences would arise in comparing American and Canadian projects, it is not felt that for the purposes of this research the difference would be significant.

4.1.1 Sustainable Seattle Indicator Development Project

Sustainable Seattle is a grassroots organization originated by a network of volunteers representing a diverse cross-section of interests including business, government, social activists and religious communities in the Seattle/Puget Sound area of Washington, U.S. This group was initiated following a Global Tomorrow Coalition conference in 1990, with the shared interest in “promoting the concept and practice of sustainability programs” (CEC 1995:10). In 1991, the Sustainable Seattle Network - a group of 30 volunteers – was officially formed to discuss the idea of “citizens choosing their own ways of measuring long-term community well-being” (Sustainable Seattle 1998:69). Since that time Sustainable Seattle has promoted the concept of sustainability through the development of an indicator system to measure sustainability in the Seattle and Puget Sound area. The development of indicators utilized a multi-year, major public

participatory approach, with the goal of providing the Seattle community with a view of itself with respect to environmental, economic and social progress in the area.

An *Indicators Task Team* made up of volunteers with diverse backgrounds was initially formed to brainstorm and research possible indicators, however, after six months of meeting to develop a first draft list of potential indicators, the team “recognized a need to involve more people who could provide a broader perspective on indices of a healthy community” (ibid.). This led to the formation of a much larger Civic Panel who were asked to participate in imagining what aspects of community were important to measure.

At the same time another group of volunteers (some from the *Indicators Team*) met as “stewards of the process” to work at defining the “network’s identity and create an organizational structure that encouraged consensual decision-making, shared leadership and diverse participation” (ibid.). This group spent the next six months developing a consensual definition of sustainability.

The Civic Panel then met in workshop sessions over a span of six months. The activities in the six-month period are detailed as follows:

1. In Workshop #1 participants received “Draft Indicators Version 1” (an initial set of possible indicators as initially developed by the *Indicator Task Team*) including the initial 29 indicators plus additional indicators, along with a six page feedback survey to be filled out on their own time. The remainder of time was spent in small groups, where participants discussed perceptions and visions of sustainable culture.
2. Over a three-month period the *Indicators Task Team* reviewed the results of the feedback survey and used the results to revise a set of key indicators, and to frame comments and discussion questions.
3. For Workshop #2 civic panelists were divided into small groups on the basis of their own interest. The small groups used the synthesized

feedback from the survey to develop and refine a list of ten potential indicators for their topic area. Each topic group reported on their results and on their planned next steps. Many groups felt more time was needed for this development stage. This phase concluded with Draft Version 2 being formed out of the results.

4. In Workshop #3 the *Civic Panel* spent time reflecting on the goals and visions for the indicator system as a way of re-aligning interest. The topic groups then assembled to refine their indicator options into three to five key indicators for their topic. Some groups felt the need to meet independently after the Workshop to complete the task. In the end 99 total indicators became Draft Version 3.
5. The final Workshop #4 was held for the purpose of winnowing down the 99 indicators into 15 indicators to provide a 'snapshot' of community sustainability. The results of each topic group were hung on a wall, and the entire *Civic Panel* was asked to individually select 15 of the most useful indicators. Small groups were then formed to begin examining 'chains of causation' between indicators. The remainder of the workshop was spent in small groups brainstorming "strategies for putting the indicators to work in business, education, the media, communities and policy-making" (Sustainable Seattle 1995:70)
6. The *Indicators Task Team* with an open invitation to the *Civic Panel* began over a three month period paring down the indicators using the results from Workshop #4 together with consideration of measurability, data availability and professional credibility. The final draft list of 40 indicators (through a total of seven draft iterations) was mailed to the *Civic Panel* for final comments.
7. The *Indicators Task Team* together with Civic Panelists began collecting data relevant to the indicators and assembled the results in an official report.

The Sustainable Seattle project has been generally heralded as a major success in public participation and sustainable development. It has not been without its detractors, as I will report in the sections following. Criticisms have mainly stemmed from an apparent lack of subsequent action in changing sustainability trends and from an inadequate means of identifying results of the effort.

4.1.2 Santa Monica Sustainable City Program

In 1991, the City Council of Santa Monica established the *Santa Monica Task Force on the Environment* made up of seven volunteer citizens nominated by city staff and Council based on their respective expertise in environmental issues. The *Task Force*, working with a number of City departments identified *sustainability* as a vision and framework to guide City environmental policies and programs. The seven members of the *Task Force* then developed a sustainability program “with the purpose of providing the city with a coordinated, proactive approach to implementing the city’s existing and planned environmental programs” (EPA 1995:1).

The program was founded upon guiding principles based on concepts of sustainability. In order to assess the program’s effectiveness, the program included the establishment of benchmarks and indicators with sixteen specific ‘sustainability indicators’ selected by the *Task Force*. For example, *water use* was stated for 1990 to be 14.3 gallons per day, in 1993 was 12 million gpd and the year 2000 target was 11.4 million gpd. An annual report provided to the City Council would “assess progress made during the past year, evaluate overall program effectiveness, and recommend any program modifications that might be necessary” (EPA 1995:2).

The Environmental Protection Agency (EPA) case study on the project describes the process of implementation after the ‘expert’ *Task Force* had developed the program:

Over the next year and a half, the Task Force sponsored an extensive period of public review, community outreach, and consensus-building. The draft of the proposed program was initially distributed to City

Council, city departments, Housing and Planning commissioners, Chamber of Commerce, Environment Committee members, and interested citizens. A formal survey process, designed to identify areas of consensus, was conducted through a mailed questionnaire. A larger community-based public participation process was conducted with the assistance of the Neighborhood Support Center.

A community-wide meeting held on June 2, 1994 generated participation from over 100 Santa Monica citizens. Task Force members also made presentations at annual and/or board meetings of most of the city's neighborhood associations. The revised program document was made available for public comment. Final revisions to the document incorporated and addressed the several hundred responses received. On September 20, 1994, the City Council officially adopted the Santa Monica Sustainable City Program (EPA 1995:1).

The progress report submitted by the Task Force in 1996 noted some successes with respect to a good number of the target goals for specific sustainability issues. One of the major shortfalls as identified by the *Task Force* was a lack of a wide acceptance and understanding of the project. The *Task Force* reports:

Despite the progress made towards meeting the various indicator targets, sustainable policies and programs are still being undertaken on a "piecemeal" basis within the City. Coordinated implementation of the Sustainable City Program within the City has not yet been achieved. Many City staff are currently not aware of the program, and most of those that are aware of it do not see it as a high priority. To date, little or no effort has been made to merge the goals and objectives of the Sustainable City Program with the goals and objectives presented in the elements of the City's General Plan, Consolidated Plan, and various strategic plans for Human Services within the city. This situation is due to the fact that the implementation plan developed for the Sustainable City Program has not been systematically carried out, staff responsibility for implementing the program has never been adequately defined, and staffing and funding necessary to properly implement the program have not been identified.

To date, little or no effort has been made to involve the Business Community, School District, Santa Monica College, Local Non-Profit Groups and residents in the program. As a result the program is not well known or understood in the community and thus, is not fully serving the

community. This situation is also due to poor implementation and the lack of adequate staffing and funding to effectively implement the program. (City of Santa Monica 1996:49)

Both the Santa Monica project and Sustainable Seattle's project present achievements and accompanying weaknesses. The following section presents an analysis of these with respect to the principles of communicative action.

4.2 Communicative Action Principles and Indicator Development

The Sustainable Seattle and Santa Monica indicator project examples provide two diverse examples of how indicator projects may be carried out. The following analysis of the projects uses the framework of communicative action principles as outlined in Chapter Three, where the focus was on information in general. Discussion here will focus on how the principles can be understood in direct relation to indicator development. The case studies outlined above will provide a tool for applying the discussion to actual scenarios.

4.2.1 Integrated Approach

The Global Urban Observatory (GUO) has espoused the concept that in order to be truly effective indicators must be integrated with existing policies and projects. They write:

Integrating indicators in existing projects constitutes a first step in indicators use and application at the local level. Based on this project approach, the second step may consist in integrating indicators in urban development policies in general and building capacity for self-monitoring at the local and national level. The project is used as a first framework for addressing key issues and understanding the usefulness of indicators. If well-understood by project stakeholders, the process of defining and using indicators can be internalized in urban policy development in order to encompass all related issues for the purpose of monitoring and decision-making...If well defined and monitored, the process of integrating

indicators in projects can have a very positive impact for the success of the project itself, its sustainability, as well as for the sub-sector as a whole (p.103).

Integration in this case implies that in order to be truly effective – ‘to have teeth’ so to speak – indicator systems must in some way become a part of a process that currently exists. This process of integration of indicators may use either a traditional scientific approach to indicators, whereby indicators simply ‘piggy-back’ the policies and processes already developed by ‘experts’, or a more communicative approach whereby policy-makers and policy are integrated into a process of indicator development and issue assessment.

Integration using the conventional scientific method suggests a process that closely follows existing policies when deciding upon issues, since the goal is to ‘move from A to B’, versus a questioning and discussion about previously accepted concepts. It may also mean that the process would closely follow existing administrative processes, including the appointment of ‘experts’, decisions made by official ‘decision-makers’ and using the standard implementation channels.

As an alternative to this somewhat limited understanding of integration, the communicative approach suggests that indicator development should accommodate *numerous sources of ‘expertise’* combined to develop indicators *within* a context that already exists, not isolated in an attempt to preserve independence. Innes (1990:111) suggests: “We cannot develop indicators in isolation from actual processes of public action and decision. We need rather to find ways of integrating the technical

requirements of data collection and analysis with political realities and public perceptions”. Innes does not appear to be suggesting a whole-hearted, uncritical acceptance of the existing reality, but rather engaging that existing reality in the discussion and development process. It is in this context that the importance for policy relevant indicators takes shape. By integrating input from the people who will use indicators, especially those who are already part of the existing social and political structure, and by consistently referring to the policies that already exist, the indicator is more likely to become legitimate and relevant to those who can effectively ‘use’ it.

Of the two case studies cited, the Santa Monica case appears to more closely follow a traditionally held scientific understanding of integration. The primary motivation of the project was to “efficiently and effectively coordinate the City’s environmental programs” (CEC 1995:28). The fact that the project was initiated by the City itself, the same body that would have developed and would administer decisions about policy, was supposed to ensure that integration of current policies would occur – that the indicators would be linked and effective.

The subsequent findings as indicated above show that within a few years of implementation the project had achieved a substantial number of the goals that had been set. From this standpoint the project should receive high marks for its ability to induce action. A closer look at the success of the project with respect to integration shows some less positive results.

Since integration was implicitly defined as ‘following and enforcing the topics of existing policy’, an assumption appears to follow that the relationship between indicators and policy would almost inevitably lead to action based on the simple fact that the indicators were being birthed out of the institution that would ‘use’ them, and out of the idea that indicators covered the same issues as current policy. In this way it appears that the development of indicators by the institution that had also developed the related policies was intended as a means of insuring policy relevance.

One of the shortcomings associated with this presumption is that the project seemed to accept at face value, the policies that currently exist without an examination of whether those policies truly reflect the institutional or public values and importance of particular issues. Though the goals of the program were explicitly to examine and test existing policy, the actual relevance of existing policy was accepted, or defined by a limited group of environmental ‘experts’.

The self-analysis of the project after a number of years seems to support the failure of the program with respect to the integration of project ideals into a wider community. Though the indicators were effective in meeting some environmental impact reduction targets, they had failed to gain the acceptance or participation of many parties other than those who were involved in the development of the indicators. To reiterate the claim:

Many City staff are currently not aware of the program, and most of those that are aware of it do not see it as a high priority. To date, little or no effort has been made to merge the goals and objectives of the Sustainable City Program with the goals and objectives presented in the elements of the City’s General Plan, Consolidated Plan, and various strategic plans for Human Services within the city...To date, little or no effort has been made to involve the Business

Community, School District, Santa Monica College, Local Non-Profit Groups and residents in the program. As a result the program is not well known or understood in the community and thus, is not fully serving the community (City of Santa Monica 1996:49)

It is apparent from this assessment that the integration of the indicators and goals with other existing City programs and plans has not followed as naturally as may have been expected. Furthermore, integration of a wide range of perceptions and knowledge, both in the institutional and public realms has also not occurred. Therefore, the conclusion appears to be that integration does not simply result out of the use of existing policy to determine issues and acceptance of new systems.

In the Sustainable Seattle project, the definition of integration focused primarily upon the integration of publicly held values and perceptions with indicator development. Much of the process of indicator development was focused upon gathering public opinion, in an effort to ensure that the future indicator system would become embedded in the awareness and future actions of the broad spectrum of participants. In this manner, the project was attempting to achieve one of the self-defined goals of promoting the concept and practice of sustainability in the local region.

In this project, the concept of ensuring the integration of policy and public and institutional perspectives was sought primarily through the inclusion of policy and decision-making individuals within the development process. The practical consultation of public policy and administrative integration was relegated to a small, secondary event of brainstorming in the latter part of one of the workshops. Although there is little official analysis of the relative successes of the Sustainable Seattle concept, it would

appear that Sustainable Seattle may have failed to make the integration of policy concerns a significant part of their process. One critic of the project admits that the emphasis on public involvement for indicator development can have an impact on policy issues through simple exposure of the issues, but also maintains that without necessary connections to existing public process the project would not lead to specific action.

Brugmann (1997) writes:

Reports from the City of Seattle Office of Management and Planning verify that Sustainable Seattle, by raising public awareness increased the inevitability that the City would address sustainability issues in its strategic planning activities. But Sustainable Seattle itself, organized as it was without connection to major institutions, generally, and the City's strategic and statutory planning processes, specifically, neither provided a blueprint nor stimulated commitments, nor even a consensus for action. Its impact in driving change in local conditions was therefore, at best, catalytic (p.64).

It is possible that the integration of policy and decision-making participants into the Sustainable Seattle process will eventually result in the action that Brugmann calls for. By ensuring that sustainability issues spur further action (by placing issues on the policy agenda and through 'social learning') both Sustainable Seattle and communicative action advocates would consider achieving a description of "catalytic" as a great compliment of success as opposed to a marginal benefit. In this respect the project is a better representative of the principle that communicative action espouses – that action is a result of the shared and internalized knowledge resulting from a process of communication, and therefore unlikely to demonstrate immediate results. The effective integration of indicators into existing structures and into existing perceptions and values appears to

require some compromise, possibly found by addressing the respective weaknesses of each of these projects.

4.2.2 Stakeholder Input and Other Forms of Knowledge

The scientific approach to indicator development suggests that ‘knowledge’ is derived within the strict bounds of the ‘experimental’ setting receiving input from one or more ‘experts’. That setting disallows any input that may be subjectively tainted, or in some way express dependency upon another variable. This rule thus precludes the use of experiential and subjective input from participants. It also precludes the use of intuition and is generally not receptive of any knowledge that does not satisfy the requirements of scientific constraint. With respect to indicator development this philosophy may be seen in the use of selected ‘experts’ and their ‘expert knowledge’ to build an indicator system.

Communicative action principles highlight an alternate view that indicators *need to be* based on knowledge other than that provided by a particular administrative body or developed on an *internal* basis. Such projects run the danger of appearing irrelevant having not utilized public opinion and public knowledge in the development process. One study (Macnaghten et al, 1995) revealed that “people show an interest in indicators only if they relate to what they value and they can verify what the indicator shows *from their own experience*” (italics added, cited in Pinfield 1997:189). Pinfield similarly argues that performance indicators need to “reflect the values that people, not municipalities, see as important and which combine with scientific sustainability criteria” (ibid.).

In the case of Sustainable Seattle great pains were taken to utilize forms of knowledge other than institutional and expert knowledge. A very ambitious and lengthy process as detailed above (Sec. 4.1.1) demonstrates the emphasis placed on the importance of publicly held, common and expert knowledge. Numerous opportunities for discussion allowed participants to share experiences in a format that other participants could integrate into their own understandings – a process that communicative action principles suggest, allows for an important learning to take place.

The substance of small group discussions were brought forward to the entire group to expand this learning opportunity, and to keep experiential discussions from straying too far from the original agenda of indicator development. Institutional and ‘expert’ knowledge was not eliminated through this process but incorporated through representation by individuals. Unique forms of knowledge such as poetry readings, quotations and stories were also accommodated in the process. Overall, the pursuit of stakeholder involvement that the communicative principles suggest was exemplified in the Sustainable Seattle project. The results of this process are again difficult to gauge, as the notion of knowledge transfer and the true benefit of internalized learning are difficult to measure.

The Santa Monica indicators project also espoused the use of public involvement, though the opportunities for input were of a different nature than in the case of Sustainable Seattle. A written survey was distributed to community leaders, results of the survey together with the program as developed by the expert team, were discussed at a community workshop and the feedback was incorporated into a second draft of the

program. A second meeting with facilitated discussion groups allowed opportunity to provide feedback on the program with revisions. Though the opportunity for public involvement is clearly demonstrated in the Santa Monica case, there are a number of fundamental drawbacks to the approach.

Input by stakeholders was reserved for the review of an already developed program. The selection of a small group of environmental experts to design, develop and implement the indicators program limited other stakeholder input to review and feedback – basically non-fundamental input. The initial use of written survey instrument did not allow for discussion to take place among participants – a process that communicative action principles suggest is fundamental to a process of ‘higher learning’. This drawback was somewhat compensated for by the subsequent community feedback, however, it appears that these sessions were also limited to feedback rather than creating substantial involvement in the conceptualization of the project. As might be expected, the reported progress of the project once again demonstrated that a wide knowledge and acceptance of the project had not been achieved.

The Sustainable Seattle project has been further criticized by Brugmann (1990) for its inability to achieve one of its main objectives – the *measurement* of sustainability. Brugmann argues that, though the project was successful as an education and advocacy exercise for sustainable concepts, there was an unavoidable trade-off – that the rigors of scientific measurement could not simultaneously be satisfied by a process that relied so heavily on public values and perceptions. In contrast, the principles of communicative action are less concerned with immediate action and measurement than they are with a

long-term 'learning' process. Though a more direct scientific approach may produce a measurable and quantitative result, that result is based on a weak foundational knowledge base. Use of a wider base of knowledge, while potentially precluding specific measurement, prepares the *foundations* for future measurement using a broader sense of 'expertise'. The need for immediate specific measurement is made secondary to the infusion of diverse forms of information (e.g. people's life experience) upon which future measurements can be built.

Stakeholder participation may only partially alleviate the difficulty with indicator projects that are initiated from within a public institution. Pinfield (1997) intimates that indicator development projects that evolve out of a political institution are likely "viewed fairly skeptically by the public, who, world-wide seem to have lost faith in political institutions" (ibid.). His observation is validated by a key finding of a UK study that revealed "government statistics are viewed in the same light as governments themselves" (ibid.). According to Pinfield:

Performance indicators in the UK are probably the least believed by the public since they are widely believed to be 'massaged' so that the institutions appear in a better light...The idea of UK local government being able to devise its own performance measures (as Oregon has done) without reference to our national Audit Commission or Government Citizens Charter indicators has simply not been possible (ibid.)

This phenomenon may help to explain the lack of public acceptance in the Santa Monica project. One distinct disadvantage of an indicator development project *not* initiated by a public institution, is a potential inability to complete a project, and ensure some form of

resulting action. This drawback appears to embody much of the criticism aimed at Sustainable Seattle.

4.2.3 An Iterative Process

In the traditional concept of the scientific method the experimental process moves from point A to point B in a logical sequence from hypothesis to solution. Revisiting point A at any time during the process would indicate a flawed and subjectively tainted experimental process. External but related variables are typically eliminated in order to retain 'independence' in the process and to isolate factors that may show dependence and therefore confuse or bias the result.

When applied to indicator development, the traditional scientific model suggests that a clear answer to a particular urban problem could be provided by an indicator, since the indicator itself was developed without personal subjective bias, was untainted by a process that moved 'backward' upon itself, was unskewed by the various relationships that the problem may have with other problems, and was uncomplicated by numerous sources of inquiry and input – a clean process to produce a clean answer.

The principles of communicative action offer an alternative approach to indicator development, whereby the one of the primary goals of the process is to achieve an element of higher learning, or internalizing of indicator concepts for a long term payoff. Since this learning requires (based on communicative principles) the input of various sources of knowledge and allows those occasions of input to influence a final product, the process engaged lends itself to the concept of iteration. Iteration in the case of indicator

development means that there are numerous opportunities for participants to contribute their knowledge and experiences related to indicators and indicator issues, and for that knowledge to be added to existing knowledge within the development process.

The Global Urban Observatory (GUO) has noted that iteration, when built into an indicator development process, can help breed a consensus on action, is crucial before action takes place. According to the GUO, the process of discussion may take a very long time “but is crucial before any definition of further policy-objectives and indicators” (GUO 1997:84).

The Santa Monica project tended to move forward in a stepwise fashion from development of the program by 'experts', to public input, to implementation by experts. Despite this tendency towards the traditional scientific approach, the public consultation process attempted a small form of iteration. The first production of the indicator report was considered a draft version. Information subsequently gained by the community leader survey was incorporated and presented to the larger community for comment. This would represent a second iteration of the process. A final iteration of the process occurred with the presentation of the revised draft to the community in a facilitated discussion format. In this manner, the Santa Monica project engaged in an iterative process of adding information and knowledge over a period of time.

The iteration process was limited in some respects due to the fact that input, as has been noted, was based more on commentary and feedback than on development. One may thus question whether the true purpose of iteration according to the principles of

communicative action were achieved, where iteration seeks to create a sense of ownership and learning; an internalizing effect that provides a long-term benefit expressed through an awareness and concern for indicator issues.

The Sustainable Seattle project engaged in numerous iterations in determining indicator issues and in producing an indicator product. Opportunities for learning and conveying new and varied knowledge occurred at each of the four workshops and was also incorporated in the final development of the indicators. The consistent and repetitive small, topic group format presented a forum for the conveyance of personal knowledge and experience (from 'expert' and 'non-expert' alike). Discussions at the topic group level were consistently reported back to the entire Civic Panel in order for this knowledge to inform further discussion. Respondents to the initial issue identification survey were given a three month period for completion to allow for an extended learning process, rather than confining responses to what participants understood at any one time. The final indicator draft product was again submitted to the entire Civic Panel for review.

It is in this fashion that communicative action principles suggest that various types of knowledge from numerous sources can be incorporated into the indicator development process in order to incubate a learning process. Alternatively, an 'action oriented' approach tends to place an emphasis on results and expediency, though there is some indication that the success and results remain short-term. An iterative approach is decidedly slower opting, for a more thoroughly tested and deeply accepted product that may show greater benefit in the long-term.

4.2.4 The Nature of Information Use

The nature of information use according to principles of communicative action is that the primary purpose of information (here indicators) is to create an internalizing or embedding of information into the individual or group. This ‘learning’ is powerful in that participants from many diverse positions become advocates of the knowledge gained through an indicator development process. This knowledge is of more significance in bringing issues to a place of action, than the typical analysis of indicator data in order to solve a problem. In this way, learning does not take place primarily by applying an already formed indicator towards a solution, rather learning and indicator ‘use’ occur simultaneously as knowledge becomes internalized.

‘Use’ in this manner refers to more than simply the direct relationship between indicator and solution. Use here implies an internalizing process that an integrated development process affords. Individuals and groups learn the relative legitimacy and relevance of the issue that the indicator is measuring by having directly or indirectly contributed knowledge and received knowledge of the subject. The internalizing nature of the process thus presents a greater opportunity for an indicator to be both used and maintained over the long term, than does the scientifically developed indicator, which has been developed by perhaps one person in isolation from the current context.

In a discussion comparing Sustainable Seattle with Santa Monica, Brugmann (1997) has suggested that the primary purpose of Sustainable Seattle’s indicator project was for public education about sustainability, whereas Santa Monica was primarily oriented towards performance evaluation. Brugmann suggests that the advantage that the Santa

Monica model holds over the Seattle model is that upon its completion it “can be used for the same public education purposes as the Sustainable Seattle indicators” (Brugmann 1997:68). Though feasible, this kind of public education is likely to be less powerful than the Sustainable Seattle model where a great many participants from diverse backgrounds experienced a ‘public education’ process that was embedded as a part of their personal understanding. This follows the concept that the greatest remembering and learning abilities arise out of personal experience. When education takes place *after* the development of an indicator system, this suggests the use of a more scientific model as opposed to a communicative action oriented model.

The distinction between the traditional scientific model and communicative action with regards to the ‘use of indicators’ is clear. The former sees indicators as a set of data that can be applied to a set of issues towards a solution. The latter sees indicator development and use as a vehicle with which to communicate knowledge and learning, so that indicator issues eventually become an implicit part of individual and institutional focus and discussion. In this way it may be argued that Sustainable Seattle’s project involved a long-term payoff where ‘use’ has taken on the notion of Habermas’ third level of emancipatory knowledge. In this case the indicator process itself has helped indicator issues to become ‘internalized’. Participants have, it is argued, become “informatized” and may thus play the role of long-term advocate in spreading awareness about both the indicators and the issues that indicators represented.

4.3 Case Study Conclusions

The criticisms of the Sustainable Seattle project have merit, mainly that action-oriented results are lacking and that there has been little commitment to action as a result of the project. This may be the sacrifice made in pursuing a longer-term vision of the 'use of information', where the long-term payoff is valued more than short term action. The Santa Monica project also has merit, for its accomplishments in directly impacting sustainability issues. It too has drawbacks chiefly associated with its long-term acceptance within a larger community.

Both approaches suggest some recognition of communicative action principles, though it appears Sustainable Seattle demonstrated them to a greater extent than Santa Monica. Santa Monica's project made it clear that a lack of proper integration of a wider range of participant knowledge may contribute to a lack of significant acceptance of the ideals of the project. The key criticism of the Sustainable Seattle approach suggests that in following principles of communicative action in indicator development, a greater emphasis needs to be placed on policy relevance and action-mechanisms if a compromise between long and short term effect is to be made. In the following section I will propose a methodology for indicator development, that attempts to reflect the principles of communicative action, while learning lessons from the two indicator projects discussed above.

4.4 A Methodology for Indicator Development

The methodology proposed in this section incorporates the principles of communicative action applied to an indicator development project methodology as detailed in the previous section. It also attempts to address some of the weaknesses presented as part of two indicator projects discussed. The project is proposed for the downtown area in Winnipeg, Manitoba. The development process detailed is geared toward producing an indicator system that represents the creation of a decision-making framework that incorporates a shared public understanding and ‘expert’ knowledge of downtown issues. The system is established through an iterative and inclusive process, set within existing policy mechanisms, and tested periodically based on common and ‘expert’ knowledge. It is envisioned that the process would be housed and led by a body independent from the City departments yet more established and recognized than a grassroots effort. The most likely body in the Winnipeg context would be a currently proposed downtown development group. This group has the potential of representing downtown stakeholder interests much like a smaller scale version of Winnipeg’s current *CentrePlan*.²⁷ Whether this group comes to fruition remains to be seen, but given the possibility for the group to

²⁷ *CentrePlan* is a group of approximately 30 representatives of downtown stakeholder organizations and interest groups. The *CentrePlan* Committee, equivalent to a board of directors, directed the planning process and set the overall policy direction for the project and served as the final decision-making body. Five Strategy Teams were formed to examine issues and develop strategies and an Advisory Committee of public and private sector administrators assisted the *CentrePlan* Committee in its deliberations. The vision of the group involved the provision of direction and decisions for the future of downtown Winnipeg, and attempted to engage a strong participatory process through the use of directed and self-directed workshops, public forums and surveys (*CentrePlan* (no date)).

be recognized, representative and have some measure of authority and funding is attractive.²⁸

4.4.1 Group Formations

This methodology includes the following groups:

- A **Steering Group** (10-12 individuals) to facilitate the development process and to conduct detailed research. The group is intended to represent major downtown interests (Planning Department, BIZ Groups, Social Planning Council, Residents Association, Winnipeg citizens etc.). This group must also include individuals who are directly associated with decision-making and policy formation processes that impact downtown Winnipeg (Plan Winnipeg, CentrePlan, City Councillors etc.).
- A **Participant Group** of 50 – 60 people to represent interests as noted above and serve as a pool of knowledge. The Steering Group is included in the Participant Group.
- Sub-Groups of the Participant Group called **Topic Teams** headed by individuals from the Steering Group and 5-10 individuals from the Participant Group, to carry out tasks, discuss issues and report to the Participant Group.

4.4.2 Stages of Development

The stages of development are as follows:

1. PROJECT INITIATION

A **Steering Group** is struck and agrees upon goals and objectives of the downtown indicator system over a series of meetings.

2. WORKSHOP #1

The **Steering Group** facilitates the invitation of a wide range of representative participants in an initial Workshop session with the entire **Participant Group** to present the goals and objectives of the indicator system and to begin assessing downtown issues.

Topic Teams are formed based on individual interest with the intent of drawing out the knowledge, stories and opinions of all

²⁸ The exact form of the group also remains to be seen. The potential for the group to be another representation of current power structures (thus limiting representation) is an issue that may impede its effectiveness according to the development principles suggested here.

participants to identify downtown topics for discussion and associated visions or issues.

The topics noted by the **Topic Teams** are brought forward to the whole **Participant Group** in a summative but open fashion, followed by an open, facilitated discussion amongst the participant group. Questioning focuses here on:

- ‘Why are these topics significant?’
- ‘What do current practices/policy say about these topics?’

3. TOPIC GROUP MEETINGS

Topic Teams reconvene individually to examine the importance of each individual topic and their associated linkages.

4. WORKSHOP #2

The **Participant Group** reconvenes after a length of time (app. 3 weeks) for the purpose of re-assessing the topics and adding more to the discussion after several weeks consideration. The **Topic Teams** report to the entire participant group the discussions they’ve had concerning the importance of their topic and the current related policies and issues or visions. A larger facilitated discussion followed by a summary allows for other teams to provide feedback on the individual team findings. Questions focus here on:

- “Is revision needed?”
- “Should anyone else be added to the discussion?”
- “What have we found thus far?”
- “What are the linkages with other topics and with policy/decision-making?”

5. STEERING GROUP and TOPIC GROUP MEETINGS

An extended review by the **Steering Group** of existing policy relevant to the topics, and summary of issue linkages as reported by the Topic Teams. This may include several meetings over a length of time (app.8 weeks). **Topic Teams** to identify possible indicators for their topics.

6. WORKSHOP #3

The **Participant Group** reconvenes. The **Steering Group** reports on policy as it exists and presents the summaries and linkages that they have found. **Topic Teams** report possible indicators for each issue, and the floor is opened to the **Participant Group** for discussion and feedback on potential indicators.

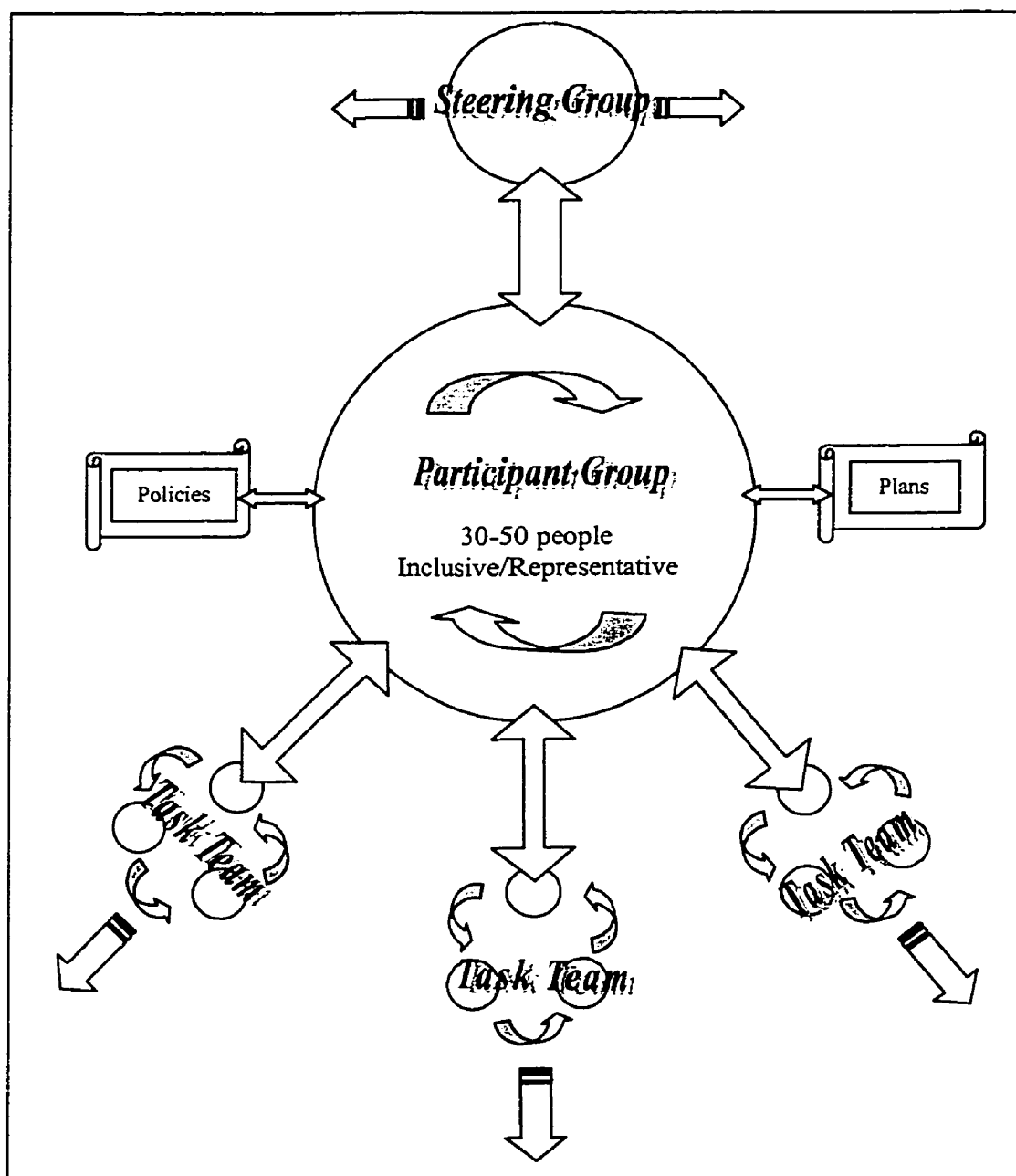
7. **TOPIC TEAMS PURSUE POTENTIAL DATA**
The **Topic Teams** pursue data sources over period of time, guided by the representative from the **Steering Group** assists where needed.
8. **WORKSHOP #4**
Topic Teams reconvene to report on data availability, and discuss revisions, changes or other commentary or experience with the **Participant Group**. Results are posted for final comments from the participant group.
9. **TOPIC TEAMS FINALIZE INDICATORS**
The **Topic Teams** reconvene to consider the input of the Participant Group and to finalize choices for indicators, including data availability.
10. **STEERING GROUP COMPILES DRAFT REPORT**
Steering Group collects data and applies the findings in report fashion.
11. **WORKSHOP #5**
The **Steering Group** presents the draft report. Members of the **Participant Group** suggest revisions.
12. **STEERING GROUP FINALIZES REPORT**
The **Steering Group** finalizes the report combining topics and data.
13. **PERIODIC UPDATE MEETINGS**
Periodic meetings of the **Steering Group** are held to assess the indicator performance and relevance. Periodic (annual) meetings of the **Participant Group** (expanded) to address new topics and consider relevance of established topics.

4.4.3 Rationale

The proposed method is intended to foster the principles of communicative action.

Figure 3 is a model of the process mechanism used in carrying out the process described above. The arrows in the model indicate an exchange of knowledge in both an explicit mode and an implicit mode, such as was described earlier in relationship to the principles

Figure 3. The communicative approach mechanism for indicator development.



of communicative action. The model is substantially different in this regard when compared to the scientific model (Fig. 2, p.47). The exchange of knowledge dominates

the communicative model, whereas the linear progress towards solution is the focus of the conventionally scientific model. In the latter case opportunities for learning and the exchange of 'information' are limited to the few expert participants in the process. In the former case, opportunities for learning occur at many points both within the 'mechanism' and beyond the mechanism as participants 'spread' their learning to other forums at other times.

The principle of integration is accounted for in two ways. First, individuals and representatives of groups that have some measure of responsibility or impact on local decision and policy-making are included in both the Steering Group and the Participant Group. Second, at several points throughout the process, local policy is consulted and helps frame discussions about downtown topics and indicator use. Policy is not necessarily accepted at face value but rather informs the discussion so that changes and recommendations can be made that incorporate the topics (with associated issues or visions) that indicator development has brought to light.

The inclusion of stakeholders is intended to ensure that 'learning' as a result of the indicator development process is not reserved exclusively to select 'experts'. A broad invitation of all stakeholders helps to ensure adequate representation of as many interests as possible, and allows the 'learning' and transfer of knowledge to be as wide as possible. Each attending stakeholder will take away with them an increased knowledge of the topics at hand, which may in turn lead to an overall, long-term exposure and focus on issues of importance.

The use of various types of knowledge, including experience and tacit understandings is made possible initially by the inclusion of many people (providing the source for a wide array of knowledge). But the process itself is set up in such a manner as to make that type of knowledge accessible. The Topic Teams are small enough to allow individuals to share the knowledge and experience they hold, and the numerous meetings of the Topic Teams provide ample opportunity to submit knowledge over a period of time and consideration of other participants' input. The experiences of individuals in the Topic Teams is not reserved for that small group alone, but is repeatedly brought back to the entire Participant Group so that all participants have an opportunity to 'learn' from the broad array of participant knowledge and experience. The conveyance of experience and knowledge is not limited within a survey format, but allows for input and influence arising out a discursive format.

There is a significant amount of iteration built into the process. This has been done to allow participants to absorb and incorporate new knowledge over a period of time. The underlying concept is one of winnowing, where concepts, ideas and experience are filtered through the shared experience of participants, and eventually emerge as solid, collectively understood set of concepts about indicators and the use of indicators. This process is fundamentally different from a speedier process that does not revisit earlier understandings.

Finally, the 'use' of information is determined to be less explicit and more implicit. The extensive, drawn-out nature of the process is combined with the utilization of participants' broad range of experience and input for with particular purpose in mind.

True, the indicator product that emerges from the process may have explicit purposes such as demonstrating trends and statistics to encourage downtown investment, but the 'higher' use indicators is more in line with Habermas' notion of emancipatory knowledge. The 'higher' use here is again that the wide array of participants will have indicator issues (positive or negative) more deeply embedded in their fundamental understandings about downtown in particular. A deeper understanding is tied to a greater awareness of these topics, which is more likely to lead participants to action in their day to day activities. Action comes through the new focus participants bring to ideas surrounding the project.

5.0 Perceptions of a Communicative Methodology for Indicator Development

5.1 Empirical Research Description

In the previous chapter, the principles of communicative action were used to propose a new methodology for indicator development. The empirical research presented in this chapter was used to reach a better understanding of how local planners would view this methodology. Though the principles of communicative action suggest that the resulting methodology represents an ideal ‘best practice’ scenario, it was considered important to test that theory from a practical point of view as well. Two key questions were put forward: Do local planners feel that the methodology would *ideally* produce a better indicator product? Do local planners feel that the methodology is practical and feasible in the local context?

5.1.1 Methodology

The empirical research utilized two focus groups for discovering local planner’s perceptions regarding the proposed methodology. The focus group participants were selected on the basis that they were planners, that they had some basic understanding of indicators or participatory processes, that they were familiar with downtown Winnipeg, and that they were available to commit to two focus group sessions. Of fifteen invitations, six planners committed to attending the two sessions. This number was considered to be within the ideal range of 6-8 for a focus group setting (Krueger 1988).

The qualitative approach that focus group research entails was selected because it tended to mirror the concept that principles of communicative action present. The research was intended (as noted) to understand participants' perceptions about a new indicator methodology, but also to allow the participants to benefit from the knowledge expressed 'at the table'. Furthermore, the format allowed for an adequate description and rationale for the methodology to be presented which, it was felt, would encourage a more informed discussion.

The first focus group meeting included a brief (15 minute) presentation of indicators, providing a background for participants to understand the basis from which indicators were being discussed. The discussion following the presentation was initiated by asking participants to share any experience they may have had with indicators. From this point the discussion was stimulated by questions from the facilitator, particularly focusing on indicators and their uses.

The second focus group session was held 5 days following the first. Rather than holding 'back to back' sessions, the brief gap between sessions was deliberately set to allow participants time to think about the concepts discussed in the first session, and to reduce a sense of being overwhelmed by new concepts (and voluntary time!). The second session began with a brief presentation of the theory and principles of communicative action, followed by a presentation of the proposed methodology for indicator development. The methodology was presented to participants by providing them with the outline of the process similar to the one outlined earlier (Sec. 4.4.2). The model as presented earlier (Fig. 3) was used as a reference in drawing the process step by step on an overhead

sheet.²⁹ Discussion that followed began with participants' perceptions of whether the idea was ideally a suitable instrument for the development of an indicator system, followed by discussion about whether the methodology was suitable for the downtown Winnipeg setting. Both focus group sessions were recorded by audio cassette recorder.

Following the second focus group meeting, participants were presented with a survey (via e-mail) consisting of ten questions representative of the topics covered (see Appendix A). The survey was intended to allow participants to summarize key thoughts about the topics discussed and to allow participants the opportunity to incorporate subsequent thoughts they may have had or failed to communicate during the focus group sessions.

The proceedings of the focus group sessions were analyzed searching for patterns, themes, descriptions by participants and other qualitative research analysis points as outlined by Krueger (1988).

5.1.2 Limitations

The empirical research was limited in a number of ways. The principal limitation was that of time. Participants were presented with a new, somewhat complicated methodology and some of them were not overly familiar with the concept of indicators. Given the limited time between the presentation of the concept and open discussion, participants were required to think about significant issues in just a short period. A more

²⁹ Though both the process outline and the model shown in this paper were not identical to those used in the focus group research, the content and structure of both were unchanged. Revisions made to the process and model in this paper were made in order to more precisely communicate the idea. Though the focus group research may have been assisted to some degree by a clearer explanation of the process and model as seen here, it is not felt that this clarification would have produced substantively different results.

substantial period of reflection would have been preferable. Compensation for this limitation was attempted by providing a gap between the first and second focus group sessions, and by providing a gap between the second group session and submission of the e-mail survey.

A second limitation is that participants had a limited existing knowledge of communicative action principles, and no previous knowledge of the proposed methodology. This may have had a limiting effect on the quality of the discussion.

A third limitation of the research is that the participants were familiar with each other through a work setting. This may or may not have artificially restricted what participants felt freedom to share. In this way the research may have been swayed either by participants' desire to agree with other participants or, as is less likely, a desire to stand out or be antagonistic over disputable issues. However, it did not appear that this potential limitation was overly significant in affecting the research.

A final limitation of the research is that the small number of participants necessitated by the focus group format may have provided a limited view of possible opinions that exist. Furthermore the participants represent almost exclusively the views of planners to the exclusion of other indicator stakeholders such as politicians, business people, residents etc. This may have been remedied by holding more focus groups to allow for greater input by a wider range of societal positions. This was not possible in this case due to the limits of time and resources.

5.1.3 Lines of Questioning

Two lines of inquiry were used. The first was used to determine whether participants felt the proposed methodology was ideally (outside of any context) a suitable instrument for producing an indicator system. This line of questioning thus sought opinions regarding both the ‘ideal-practicality’ of the proposed methodology, as well as the normative aspect of the methodology in general. The results of the questioning were intended to provide insight into current, local philosophies/ideologies about the process of indicator development.

The second line of inquiry - the contextual inquiry - was intended to gather participants’ understandings about whether local-scale indicators, within the local context, can and should be developed using communicative principles (i.e. whether it is possible and/or recommended given the local context, to use the proposed methodology). The results of this line of questioning were intended to indicate whether the proposed methodology is feasible and desired in the local context. When compared to the results of the first line of questioning, these responses were intended to help show the level and type of constraints or opportunities that the local context holds (i.e. a comparison of what could/should be to what is).

In addition to the two key lines of inquiry, participants were provided an opportunity to discuss their individual exposure to indicator projects or participatory processes, or to communicate other relevant experiences. This input was intended to allow for comparison between experience and opinion in the analysis portion of the study, and to potentially enhance the knowledge of the group as a whole.

As with any focus group research, the questions did not necessarily follow a set order, although the path from ideal to contextual inquiry was attempted. The specific questions used for the two lines of questioning are as follows:

Ideal Inquiry:

- Do participants feel that the proposed methodology for indicator development is an appropriate one? Why?
- If, given the resources necessary to choose any approach, would participants choose this one? Why?
- What specific benefits do participants feel the proposed methodology would bring?
- What specific barriers do participants feel would prevent the methodology from being used?
- What specific purposes do participants feel indicators can and should be used for?
- What specific topics do participants feel indicators would be most useful and least useful for?
- With regards to indicator development and use, what do participants feel are the most significant topics indicators should address?

Contextual Inquiry:

- Do participants feel that the proposed methodology would be possible to apply in the Downtown Winnipeg context? Why?
- Do participants feel that the proposed methodology would be effective in this context? Why?
- What specific benefits do participants feel the proposed methodology would bring in the Winnipeg context?
- What specific barriers do participants feel would prevent the methodology from being used in the Winnipeg context?
- What policy change or other concrete steps could be taken to adopt the proposed methodology in the downtown Winnipeg context?
- With regards to indicator use, what do participants feel indicators would be best used for in the downtown Winnipeg context?

The focus group facilitation process was informed by recommendations given by Krueger (1988). The individual survey (Appendix A) was constructed with guidelines by Hessler

(1992). The preliminary discussion was intended to help expose participants to alternative understandings and viewpoints, and thus provide a greater reference for reflection in the survey portion of the research (Neuman 1991). Though it would possibly have been more effective to have an extended discussion among participants over a protracted period of time, the constraints of time for this research did not allow for it. The questions themselves also contain some overlap. The purpose here was to allow numerous opportunities for the participants to convey their answers (especially written) to the fullest extent (Hessler 1992).

5.2 Analysis

The following analysis is based upon notes taken at the focus group meetings, and on the results of the summative survey completed by the participants. One participant did not return the survey. Two additional surveys were completed by individuals who did not attend the focus group session, but volunteered their perspective having read the proposed methodology, and having significant understanding of indicator development as well as a familiarity with downtown Winnipeg.

5.2.1 Usefulness of a Downtown Indicator System

The initial topic of discussion focused on the potential for downtown indicators without consideration of any local or political context. Participants were asked to reflect on whether they felt that a comprehensive set of downtown indicators could be used as a tool for enhancing efforts at managing downtown areas. All participants indicated that an indicator system *would* be useful in some manner for this purpose, although most participants added a qualifier to the statement. Two participants appeared positive about

the opportunities provided by downtown indicators but suggested that indicators would not “provide an automatic solution”, and though indicators would “definitely” be helpful in the manner suggested, time would be a factor in public acceptance and recognition of the indicator system. One of these participants noted:

- *“It will take some years to entrench an indicator set that the public comes to recognize, understand and agree on, but it seems clear from what has happened in other cities that valuable insights have been gained into the state of the city or sections thereof such as the Downtown”*

At least three other specific qualifiers were each mentioned several times.

The first qualifier mentioned most frequently (and prior to most others) was concerned with the *purpose* of an indicator system. Participants seemed to communicate that in order for an indicator system to be helpful it would require definitive objectives to be laid out in advance. These comments included:

- *“We have to determine what role the indicators will play...”*
- *“... the key issue is what are [indicators]? ...who would benefit and thus manage the system”*
- *[Indicators would be useful] depending on what the indicators are, how they are used and who is using them for what”*

Also evident in these comments is an emphasis placed on *who* would be involved and affected by the indicators. A significant portion of the initial discussion questioned who should be involved in the development of a downtown indicator system, especially in what manner stakeholders should be involved.

A second qualifier that appeared in participants’ comments began to reveal specific uses that they felt may or may not provide a suitable application for an indicator system. In

particular, one participant noted that if indicators were a mere collection of statistics then they would not be very helpful. Rather, this participant suggested that statistics must be clearly linked to topics. The participant provided the following scenario:

- *“For example, the issue of occupied square footage might indeed suggest that there is increased activity and prosperity. But the reverse might be in effect. Rates may have dropped 50%, so landlords are offering super deals and people came in for the one time special”*

Two participants noted a second use that would negate the effectiveness of an indicator system, and both provided a specific rationale for their comments. They noted that an indicator system used in a political environment may have limitations, especially due to the volatile and changing nature of civic politics in particular. They noted:

- *“...as a mechanism for driving policy formulation [indicators] could be limited, as an evolving environment often requires an evolving set of indicators”*
- *“I am suspect of placing too much emphasis on tools such as indicators when they are to be used in a highly political environment. Civic politics and decision making tends to take place in a somewhat undisciplined arena because, in part, of the absence of a party structure and, therefore, commitment to party policy. Each politician is independent and may or may not be part of a ruling power coalition, which might change from year to year”*

The comments and discussion associated with the topic of the usefulness of a downtown indicator system outside of the local context tended to be supportive but hesitant.

Qualifiers were used to suggest that producing and ‘using’ an indicator system was not a straight-forward exercise and that significant barriers may present difficulties along the way, particularly if indicators are set within the political context. The hesitancy that was expressed seemed to indicate a knowledge by some participants that previous attempts to

implement programs (of any kind) had met with some difficulty, especially as regards the determination of specific objectives and the difficulties associated with the political arena. These observations seem to coincide with findings of the literature, particularly with respect to the importance of determining initial objectives of the indicator system. The potential difficulty of integrating indicators within the political realm may help explain or emphasize the repeated call in the literature for policy relevant indicators.

5.2.2 Possible Uses for Indicators

Discussion regarding the general usefulness of a downtown indicator system led naturally towards identifying participants' views on the particular uses that a downtown indicator system could be applied to. Participants' perceptions were slow to emerge and required the use of additional questions to stimulate discussion. The follow-up survey was most useful for analysis, possibly due to the fact that participants had additional time to think further into the topic. Participants expressed a variety of specific potential uses for a downtown indicator system. Three distinct themes emerged out of participants' discussion and commentary.

First, participants most frequently identified the importance of a downtown indicator system in serving a communicative function. Several comments identified the importance of an indicator system in building public awareness, promoting improvements or changes to the public at large and fostering public co-operation. Some of the comments included:

- *"The indicators could help identify, define and build public awareness of key problems and priority issues concerning the Winnipeg Downtown"*

- *“[Indicators] could be effective at promoting improvements or changes as they transpire in the downtown area”*
- *“[Indicators] could perform...a communication function – to help communicate all these to a broad range of audience”*
- *“Indicators that show trends will foster and legitimize political will and the public cooperation necessary to capitalize on good trends or attempt to reverse negative ones”*

The last comment noted above also expresses a common, but here disputed notion regarding the potential of an indicator system within the political and policy arenas.

Some participants felt that a downtown indicator system (as noted above) could serve to “legitimize political will” by providing direct evidence of either hardship or success regarding various issues. Another participant was supportive of this idea suggesting a real-life example of a similar program. The participant also noted the conditions necessary for this process to be effective:

- *If set up (like Sustainable Seattle) where there was broad agreement and consensus on the issues, and a "Watchdog" team established - this group then becomes the advocacy body for influencing City council, and elected decision makers. Every year they announce their annual "results" just before budget time. They have to be set up to be able to rigorously collect data that will be meaningful, and be prepared to feature the issues or events that have led to the statistics.*

Two participants were more skeptical of the potential for an indicator system to affect policy and to operate in a meaningful way in a political arena. The support for their stances is noted in the final comments in the previous section, citing mainly the evolving and volatile nature of civic politics as fundamentally inhibiting the successful use of an indicator system.

A final potential use for a downtown indicator system identified by participants was that of *evaluation*. Four survey respondents noted either that an indicator system would help identify the success of existing policies, programs or plans for specific downtown issues, or that an indicator system could help identify trends and areas of need in the downtown.

Participants' comments included:

- “[An indicator system] could perform a set of functions, including: an analytic function – to help evaluate existing policies, plans, programs; a planning function – to help evaluate future plans...”
- “The indicators could help identify [and] define...key problems and priority issues concerning the Winnipeg Downtown. It [the system] can also be used for comparative analysis with other cities to determine policy formulation options or other aspects of downtown development”
- “...to capitalize on good trends or attempt to reverse negative ones. A 'set' of indicators that's well thought out and presented clearly will be comprehensive enough to imply solutions”
- “Tracking progress. Testing or evaluating programs intended to improve downtown. Identifying areas with greatest need for attention”

The specific uses as identified by participants, tend to imply an *explicit* sense of how a downtown indicator system would be ‘used’ (e.g. if the indicators are “well thought out and comprehensive enough [they will] imply solutions”). The theory of communicative action together with and Habermas’s ideas of ‘emancipatory knowledge’ imply a somewhat elevated and less explicit use of indicators. It is not expected that planning professionals would communicate this notion when asked about the ‘use’ of an indicator system, but it is interesting to note the possibility that some comments suggest ‘uses’ that are more *persuasive* than they are *deliberate or explicit*. It is difficult to determine however, whether participants’ comments, particularly concerning the increasing awareness and advocacy issues, are drawn out of this ‘emancipatory’ notion of

information that sees information as being internalized and embedded rather than analyzed and applied.

An underlying theme with regards to indicator use was a perception that most participants held that a downtown indicator system would have many uses. Even the participants that identified strong reservations with respect to using indicators in policy matters identified uses in other capacities. A deeper look at the commentary appears to provide hints at participants' perhaps unconscious understanding of the importance of indicators with respect to a 'higher learning' as advocated by principles of communicative action.

5.2.3 Participatory Processes for Indicator Development

Participants were asked to comment on the advantages and disadvantages of participatory processes as a principle advocated under communicative action. The resulting commentary was found to be largely consensual, although some comments served to highlight particular aspects of participatory processes.

The two key factors cited as disadvantageous to participatory processes were the amount of time required and the lack of a broad representation of viewpoints. Over half of the participants noted the "inordinate", "excessive", or "unbelievable" amount of time and energy required for participatory processes to be effective. As regards the concept of a broad representation, participants tended to agree that participatory processes often fail to reach this goal. Most felt that attempts to gather all perspectives 'at the table' were mostly skewed by an over- or under-represented segment of the population. Comments included:

- *"The most difficult problem to overcome is the lack of broad representation. Almost universally one can observe the same, small but vocal minority who come out to public meetings on any given type of issue"*
- *"...the one absolute negative is that this type of process seems to attract a specific segment of the population and you almost need to work at making it cross representative"*
- *"...although it is participatory, it may not truly reflect a broadly based range of opinion. It may simply reflect the views of a relatively small group most of whom participate because they have a vested interest. It is very easy to manipulate these processes if you want to with a small group of people"*
- *[A] disadvantage would be defining who would be participating; the downtown is the heart of the city, and so all residents are stakeholders in its development. This would also make it difficult to articulate a consensus on where the downtown should go, as those attending public participation sessions may not necessarily be truly representative of the general public, or have the complete set of information pieces available to them.*

Aside from these disadvantages participants expressed the *potential* advantages of a participatory processes as: allowing for the expression of local knowledge; creating a greater presence of topics in the public mind; and increasing the 'buy-in' of the concept. Participants noted:

- *"I think the main advantage of any participatory research is allowing people or the targeted population to express their opinions and ideas on issues of importance to them freely. This helps provide more in-depth understanding and knowledge on the issues..."*
- *"You need the large buy-in and broad perspective. Need commitment. Don't get this by having 6 people develop this idea and then try and sell it"*
- *"...there is a wide range of 'local knowledge' that comes out at these events and it is important to get it noted. Sometimes one even gets professional expertise in attendance by virtue of a persons residence in the community or some other connection to the issue(s)"*
- *"There is a normative advantage - means to induce social learning; a substantive advantage - substantive contribution to topic under*

discussion; an instrumental advantage - increase the effectiveness of implementation and acceptance of results"

A number of qualifiers on this point appeared as part of the commentary. One participant suggested that 'buy-in' would not be improved simply by involving a few hundred people out of the total population of Winnipeg. Rather, the participant suggested:

- *"If on the other hand, you recognize that the group with the biggest stake, and a clear vested interest is downtown merchants and landowners, and get a high level of participation from this group, then I think it is valid"*

This participant seemed to advocate the acceptance of current power relations with respect to a participatory process, but appeared to stand alone with the opinion.

Another participant suggested that even though the potential may exist for participants to express their opinions, which will help increase "in-depth understanding and knowledge on the issues", it may not be possible or likely that that input becomes incorporated into the decision-making process.

The discussion and commentary about participatory processes seemed to indicate that participants were very hesitant and somewhat skeptical about both the practicality and the feasibility of conducting an effective participatory process. Participants felt that the amount of time required was an inevitable flaw with such processes. Perhaps more significantly participants noted the inability of most participatory processes to produce a reasonable representation of the population. This observation should be considered *key*

as it dominated the commentary and was often stated using strong language (e.g. “*absolute disadvantage*”, “*most difficult problem*”).

In the ideal situation, participatory processes were recognized by some participants as having the ability to evoke social learning and increase local knowledge, much in line with the theoretical conclusions in this paper – where the highest purpose of information use is for knowledge to become an embedded part of participants’ understandings and actions. It should be noted that discussion in this regard was minimal when compared with commentary about the apparent disadvantages of participatory processes.

Overall, the commentary appeared to suggest a large gap in participants’ perceptions between what is ideal and what is realistic with respect to participatory processes.

Participants expressed in the ideal, that participation by many would allow for a broad representation, and would utilize and increase local knowledge and “social learning”, yet experience seemed to show that this ideal was extremely difficult to meet due chiefly to the constraints of time and skewed representation.

5.2.4 Experience and Perceptions in Indicator Development

This portion of the discussion and questioning followed nicely on the heels of commentary about participatory processes. Participants were asked to reflect on how people’s individual experiences and perceptions would play a role in the development of downtown indicators. The purpose of this section of the discussion was to move from the actual structure and feasibility of participatory processes and into the substantive content

of the processes, with an eye towards understanding knowledge in light of principles of communicative action.

Participants' comments were brief but revealing. Some participants noted the importance of personal input in brainstorming and generation of issues concerning the downtown.

- *"In a broad setting, at the beginning of the process, they become the basis for brainstorming and discussion"*
- *"[People's experiences] will help generate a set of issues of importance to them from which useful indicators can be derived. They may also help with the necessary data needed for the indicator system"*

One participant touched on the idea that 'local knowledge' played an important role in directing 'expert' knowledge, not by any explicit application of their experience but rather by a tacit sense of understanding the issues at hand.

- *"Residents in a city may not be planners and experts but they know when they see something good or bad going on and they can raise the red flags for outside experts to key in on. Residents may not be able to come up with a solution that would be practical but they can often endorse those that are offered if they hear the rationale."*

The most common response however, was that experiences and perceptions fundamentally affected the process of indicator development, due to the inability of individuals to separate themselves from their experience.

- *"Experiences and perceptions will shape or influence what is considered to be important for measurement. This can be both good and not so good."*
- *"Most indicators are most of the time contextual, and they bear the stamp of circumstances, including the circumstances of the individual (personal history, profession, cultural biases etc.)"*

- *“[Personal experiences would effect indicator development] in all ways. There are very few people who can truly step outside of their own experiences and perceptions to develop policy.”*

The observation of participants in this matter appears to coincide with findings of the literature with regard to role of experience in shaping action. Most participants recognized the notion that an indicator development process would be thoroughly affected by the experience of those initiating, involved in and implementing a project. Both the theoretical and empirical portions of this paper appear to suggest that the type of process selected, the selection of topics, the selection of participants and the implementation of a project are likely to be affected by the “stamp of circumstances” individuals carry.

It may be of some interest to note that there appears among these comments to be very little sense of a negative perception of this phenomenon. It seems that participants accept this notion as fundamental and unavoidable and perhaps even advantageous from the perspective of utilizing the uniqueness of individual experience. This observation is congruent with principles of communicative action, which suggest that, not only is the “stamp of circumstances” inevitable, it is crucial to understanding and communicating (and therefore ‘acting upon’) topics associated with downtown indicators. Taken in light of participants’ reluctance concerning participatory processes, this may present some difficulty if a true representation of the relevant constituencies’ experiences is the objective.

5.2.5 Scientific and Communicative Approaches to Indicator Development

This portion of the discussion served as a bridge in moving from the ideal to the contextual – that is, to topics more directly associated with the proposed method of indicator development. Having been presented with the basics of the scientific and communicative action approaches to indicator development, participants were asked to reflect on whether they felt an iterative approach (one that is more repetitive than usual and involves greater amounts of discussion) was important. Subsequent discussion and questioning lead to the question of whether participants felt that a straight-forward, stepwise approach (like the scientific method) for developing downtown indicators would be a better idea than the proposed method.

Participants were for the most part in agreement with respect to the importance of the iterative notion for indicator development. Some participants noted plainly that iteration was an important part of indicator development, chiefly as a means of validating and adding credibility to the results over the long-term. These comments included the following:

- *“[The iterative process] can serve to validate indicators. If repeated, they are important.”*
- *“Yes, [iteration] helps the public and politicians buy into the final results.”*
- *“Probably - part of me wishes for a quick process to problem solving - but [an iterative process] is more like setting up a weather channel in which you are constantly reporting, reminding, and ensuring feedback and action. This lends credibility to what people intuitively believe is wrong or right.”*

Only one participant was in clear opposition to the concept of iteration, citing the tendency for this method to increase discussion and impede action, and noted a preference for a more goal-oriented approach.

- *“...greater amounts of discussion often leads to fewer decisions being made. I would rather be moving forward in time and making a few wrong decisions (and hopefully learning from them) than getting mired down in greater amounts of discussion...I tend to be goal oriented and therefore can relate to straight-forward approaches. I think they are more focused and can achieve concrete results rather than hypothetical ones.”*

Two participants qualified their responses by noting that iterative processes were an important part of indicator development especially as a tool for consensus building and issue identification in particular.

The qualification associated with each comment suggested that an iterative process would be both insufficient and impractical if it characterized the entire development process. This point led to discussion about the scientific method and about blending iterative processes with a more traditional step-wise approach. After significant discussion on this topic most participants suggested that a blend of the two methods was important, where an iterative process had particular uses together with a more traditionally scientific process. Comments included:

- “I still think it has to be a blended approach. Participation within a modified scientific approach - one that accommodates the best of both worlds.”
- “It would not be wise to go with any one narrowly focused approach...”
- “I believe there must be a blend of the two - that is, the iterative process and the scientific method. Either one of the methods or

processes by itself cannot lead to any good indicator development system.”

- “I don't think [the two methods] are mutually exclusive. One may use an iterative process that combines citizen-based focus groups with review by a scientific panel.”
- “A consensus building approach should probably place greater emphasis in establishing the strategic framework to which the indicators are linked; indicators are just markers, whereas a strategic framework identifies what is important to people and to what priorities resources should be directed.”
- “No, [the scientific method is not exclusively preferred], I think the broad group needs to decide what is important - I think the data part is where you have to ensure straightforward data collection and management systems.”

This portion of the discussion and commentary was interesting with respect to the strong consensus around the concept of blending the two methods – conventional scientific and communicative. Participants clearly valued the iterative process as is made evident by the consensus around the usefulness of the idea. It was commonly suggested however, that the iterative notion should be applied to a particular portion of indicator development - primarily, it seems, to issue identification.

Furthermore, the stepwise, analytical approach appeared to form an important element in the indicator development process in the minds of most participants. It was also clear in some of these comments that the ‘scientific’ portion of indicator development would be ideally associated with the knowledge of ‘experts’ versus ‘common knowledge’. These comments seem to reflect some participants’ earlier notions, that participatory processes have severe limitations, and that perhaps a more regulated, expedient process would be required to compensate for and supplement these limitations. Participants seemed to suggest that in their opinion iteration would be valuable in the same or similar manner

associated with participatory processes, but in order for analysis and action to become a reality, the formal structure associated with the scientific method would be required.

5.2.6 The Proposed Method: Acceptance and Feasibility

The final section of the discussion focused on one of the ultimate purposes for the empirical research – to gather some indication of whether the proposed methodology for indicator development would be effective in the local context. Would participants find the method attractive? If so, would they find the method effective in producing an indicator system that would impact policy and be effectively used over the long term? Finally, would participants find the methodology actually feasible and would it find political and administrative support in the local context?

Material from the participant discussion together with commentary provided through the survey instrument revealed a number of recurring themes and opinions that overlapped from question to question. For the purposes of this analysis, I have organized the material to highlight these recurring themes while attempting to maintain the integrity of the original content.

Participants were asked initially to reflect on whether they felt an indicator system developed using the proposed methodology would influence the long-term utilization and effectiveness of indicators for downtown Winnipeg. Most participants responded in a positive manner to this question, although most also added some form of qualifier to their response. In other portions of the discussion and in the survey comments, participants expressed additional support for the proposed methodology in an *ideal* context without

giving consideration to typical constraints. Responses to whether the proposed methodology would improve the effectiveness of indicators in the long-term included:

- *“Yes - better than anything we currently have – the process would start the ‘watchdog’ process”.*
- *“If the process can be implemented as described it would be very defensible as opposed to one that is driven by a smaller core of experts.”*
- *“Probably”*
- *“...I think the method proposed is quite broad in scope. With three levels of groups it looks very feasible and thorough.”*
- *“The method as you described it, that is, a participatory one with three layers of information gathering and policy development, is a good theoretical model...I think it is probably seen to ultimately be a superior method...”*

The final comment above supported the method as a theoretical model in an ideal setting, however qualifiers were added to suggest that there were significant limitations to the model. The supportive comments were thus somewhat tempered by a number of qualifiers each of which suggested that in the minds of participants, the long-term success of an indicator system was more dependent on externalities, especially the institutional setting. One comment was based on an example from experience. The final comment below shows that one participant felt that the methodology would likely not be helpful in improving the long-term results of an indicator project, but added a qualifier similar to the two previous comments:

- *“The methods are general and not prescriptive. A lot depends on the policy context within which they are used, the level of institutionalization. If they induce institutional change, this would mean they had a profound impact. If they are external to the policy process, they probably achieved little.”*
- *“It may or may not. Ultimately it depends to some degree on how the City decides it wants decision making for the downtown to take place.”*

The recent experience of TransPlan, with an extensive participatory process is worth noting. It has largely been ignored because it didn't fit with the expectations of either the special interest groups or the political agendas of those who control the process."

- *"Not really, although you would have to define long-term first. The longevity of policies, programs and strategies is limited, and subject to many pressures which result in their constant evolution."*

Picking up on this notion of policy, participants were also asked to reflect on whether the methodology would help or impede a downtown indicator system from becoming policy relevant. The discussion and comments provided a variety of responses. One theme emerged suggesting an admonition to ensure indicator development was seated in or linked to a policy process. The clear suggestion by these participants was that in order to be policy relevant, an indicator development process must in some manner be incorporated into the local political and institutional processes. Participants did not however provide insight into *how* this might be done. These participants suggested the following:

- *"Every opportunity should be used to link the process of indicator definition and interpretation to the policy process, both during the process itself and thereafter."*
- *"An indicator system will only be relevant to policy if it includes a political process in its decision-making."*
- *[repeated] "A lot depends on the policy context within which they are used, the level of institutionalization. If they induce institutional change, this would mean they had a profound impact. If they are external to the policy process, they probably achieved little."*

Besides these recommendations and the limitations noted above, the overwhelming general perception of the feasibility for the proposed methodology is that it was too "cumbersome". The iterative nature of the approach called for numerous meetings in

both small topic teams and larger participant group formats. Aside from the attractiveness of the model in an ideal fashion, participants found this concept too drawn out and consuming of time and energy. Participants noted:

- *"...the process may be so cumbersome that it is rendered totally ineffective."*
- *"The criticism that it is 'cumbersome' and prone to attrition is certainly a valid one..."*
- *"The proposed method is too cumbersome and time consuming. It will be difficult to get people who will be committed to such a process. Even if you have enough participants to start the process, the discontinuation rate of participants during the process may hinder its ability for any policy relevance"*
- *"[the method may be effective]...if streamlined to about half of the iterative process"*
- *"...lots of people will not buy-in, purely on the basis of the level of commitment required."*

This was not a surprising finding, since the methodology was purposely built as a more drawn-out process in order to increase the opportunity for knowledge to evolve and to increase the social learning component that indicator development could engage. It is also not surprising given the current constraints on expenditures and human resources, although the mass volunteer effort for such a process would appear to partially alleviate the demand on current resources. It also appeared that participants were perhaps more dissuaded by the perceived mass of 'subjective' input associated with the process, and the feasibility of managing a process that was drawn-out over a protracted period of time.

The theoretical research (especially by Innes) would likely contend that this reluctance has something to do with a parallel reluctance to surrender the traditionally held use of the scientific model in planning. However, it is difficult to determine whether such is the

case in this research. Participants' earlier reflections suggested that there were attractive elements to the methodology, and comments below also suggest a measure of support for the concept especially in an ideal context. This evidence would appear to suggest that participants were not making an unconscious dismissal of a 'new' methodology in favor of the 'old' one, but rather had specific and defensible rationale for their reluctance.

Despite the strong reluctance concerning the methodology, especially with respect to the cumbersome nature of the proposed methodology, participants were split when asked in the survey if they felt the proposed methodology was feasible in the Winnipeg context. Participants who suggested that the method *was* feasible, again added qualifiers to their responses – that the process would not be easy, that the product would not be perfect and that the product may not be any better or worse than one developed in any other fashion. Two participants noted current examples of similar processes that, in their minds, clearly showed that methods similar to the one proposed can be utilized.

- *"What is being suggested is like CentrePlan 2. Sure it's feasible - the old group is probably burnt out and it would be time for a new fresh group to take a look. Everything has a hope in Winnipeg - though it will never be easy."*
- *"In technical terms it is probably feasible, keeping in mind that it will not produce a perfect indicator list. One should think about measurement as an ongoing process in which both issues to be indicated and policy preferences, and therefore indicators themselves, are likely to change."*
- *"Yes, because similar models have been used and are seen as valid. There is clearly a perception that broadly based policy development is superior to back-room decision making. I'm not convinced that the end result is any different."*

Participants who felt the methodology was not feasible suggested that it was again, too time consuming and ambitious in scope, and not sufficiently focused on expediency that they felt was currently demanded. They noted:

- *“No, [the process is] too expensive and time-consuming. Also, it offers little of direct relevance to the public.”*
- *“No [the process is not feasible]. People are too pessimistic and are too good at finding a reason why something won't work. My answer is a good example of this. It seems most people are more concerned with doing something quickly and less concerned about process issues.”*
- *“[The process] is ambitious in scope and thoroughness and therefore potentially not feasible.”*

The negative commentary above highlights the gap between what is ideally upheld and what appeared to be feasible to participants when they explicitly considered the concrete circumstances of their professional practices. The trade-offs appeared evident in the minds of participants – more money, more time and less thoroughness would likely lead to more action and would make an indicator development process more feasible.

The final line of questioning asked participants to comment on whether the current administrative and political environment in Winnipeg would be supportive of the proposed methodology for developing downtown indicators. Participants were again mixed in their responses, but tended to conclude that despite some surface acceptance and interest in the concept, the methodology would fail to find long-term support. This was chiefly attributed to the drawn-out nature and perceived commitment required for the methodology, which one participant noted as contrary to the expedient character of the bureaucracy. The attraction of an action-oriented, more ‘scientific approach’ also appeared to serve as an incentive for participants to disregard a more extensive approach.

Two participants suggested that Winnipeg in particular provided an environment supportive of participatory processes in general, but they felt that past and current examples of similar participatory processes, though feasible, had not resulted in any particular action or substantial outcome. Participants made the following comments:

- *“The political environment would, on balance, not support the method. The scientific method would be more tolerable and understandable. Administratively, I think it would not fly either. Bureaucracy is not interested in innovative, participatory approaches.”*
- *“The current political and administrative environment may be more supportive of an extended method since it involves broader consultation and defensibility, but longer time frames likely make it less attractive and result in the familiar criticism that there is too much study and not enough action on the issues.”*
- *“[The mayor] is a big supporter of the “benchmarking” process. I think some administrative personnel have an interest in this methodology. Timing becomes an issue. Winnipeg is too diverse to not go with the extended process. But lots of people will not buy-in, purely on the basis of the level of commitment required. It’s tough in Winnipeg to do anything but the inclusive model. But our results to date are? TransPlan - two years numerous public consultation processes- results - shelved! Capital Region - we’ll see. CentrePlan - 50-80 groups (300-500 people) - now down to a crew of 16-25 of the same hardened veterans (exclusive of political representation and buy-in).”*
- *“Is it supportive? Yes, on the surface. Would a scientific method be more acceptable? Not necessarily in principle, but probably in terms of the practical nature of wanting to get something done.”*

Most notable in participants’ comments about the political and administrative environment, is once again the gap between what is ideal and what participants accepted as practical. Though there is some indication from participants that the administration and ‘even’ the mayor, among others, would be supportive of a methodology along the lines of the one proposed, numerous restrictions appear to have made the idea, in the minds of participants, too great a leap to achieve. Consideration should also be given to

the idea that many individuals and groups (administrations, etc.) *do not* prefer or recognize the value in an approach that engages the principles of communicative action. The importance placed on new and different knowledge, on iteration as enhancing learning potential and especially on the inherent value of knowledge that becomes embedded in individuals and institutions, according to participant input, appeared inevitably insufficient to supplant the value placed on money, action, expediency and 'results'.

5.3 Conclusions from the Empirical Research

The objective of the empirical research was to more fully understand the local perception of indicators and the acceptance potential of a new indicator development methodology.

Key findings of this portion of the research included the following:

1. Participants tended to communicate that an indicator system would be a useful tool in assisting downtown revitalization efforts. This claim was generally qualified by questions regarding *how* the system would be created, for *what* purpose and involving *which people*. One participant was somewhat skeptical about its usefulness.
2. Participants noted a variety of possible 'uses' for a downtown indicator system. Chief among these was the notion of building public awareness and consensus concerning downtown issues. Opinions were split regarding the ability of an indicator system to effect policy, but were somewhat supportive of the idea that indicators could direct decision-making efforts. A few participants recognized the inherent value of developing indicators for 'social learning' purposes.

3. Participants expressed support for the ideals behind participatory processes and the related idea of using people's experience and opinions in the creation of a downtown indicator system. However, all participants noted some difficulty with participatory processes, mainly the time and energy requirement and the lack of ability to gain a truly broad cross-section of the population.
4. Most participants identified with the idea that individual experience and perceptions inherently effect how an indicator system would be built, what it would focus on, and who would use it. The individual "stamp of experience" was perceived as unavoidable.
5. Most participants felt that using the proposed methodology (based on principles of communicative action) would ideally have a positive effect on the long-term effectiveness of a downtown indicator system. This perception was qualified by all participants as being dependent on numerous variables, most importantly the "cumbersome" nature of the methodology. The lack of substantial administrative and political support was also noted as a limiting factor.
6. Nearly all participants expressed the importance of using more than one method for indicator development (i.e. conventional scientific and communicative principles). Participants suggested a blend of the scientific and communicative methods would address the time constraints of the latter and the narrow focus of the former. Neither process was seen to have the ability to produce a worthwhile and workable indicator system on its own.

Most participants expressed in some fashion, support and appreciation of the benefits of using a methodology like the one proposed. Perceived benefits included a longer-term acceptance of the indicator system and an increased awareness of downtown topics. Though all participants agreed with the latter benefit, there was some hesitancy as to the ultimate effect of the methodology to increase buy-in in the long run. Lack of substantial administrative and political support for the idea was one of the more common factors suggested in limiting long-term viability of the method. Participants also suggested that the overall feasibility of the methodology was limited, especially due to the cumbersome and time-consuming nature.

The apparent gap between the ideal and realistic feasibility and usefulness of the indicator development methodology was perhaps the most interesting finding. As noted earlier, it does not appear that the lack of acceptance for the methodology was due to an unwillingness to 'drop' the traditional scientific approach (as the literature may suggest). Rather, it appears that participants carefully weighed the feasibility of the idea under current constraints beyond the power of any one of the participants, and made conclusions based on this analysis. The trade-offs associated with selecting a particular method were thus evident in the empirical, theoretical and case study research.

Finally, it is interesting to note that the opinions of a number of participants appeared to change slightly from the first focus group meeting to the final survey results. Initially many comments were more aggressively skeptical about the concept, especially in terms of the practical feasibility of it. After significant discussion, comments became more

revealing and participants began to recognize ideal benefits rather than immediate obstacles. This may shed some light on the need for prolonged discussion in producing acceptance of new ideas.

6.0 *Summary and Analysis*

The findings of this study should be considered important and relevant from several standpoints. First, downtown areas have been argued as fundamentally important to the 'health' of cities as a whole. Second, indicators provide an excellent opportunity to promote downtown vitality and to gauge progress and achievement with respect to particular downtown topics. Finally, since indicators can be approached from various angles and their relative strengths and weaknesses have been demonstrated, it is crucial that indicator development follow a solid development structure in order to help ensure a successful outcome. This study thus addresses the technical issues associated with indicators, but more importantly addresses the theoretical underpinnings of successful indicator development. The empirical portion of the research has further addressed the perceived potential feasibility and effectiveness of a proposed method in the downtown Winnipeg context.

An indicator system has numerous practical applications including public education, performance assessment, comparison research, policy formulation, decision-making, and community level management. Recent work in neighborhood indicators shows that an indicator system at a small scale such as a downtown area has merit, though little of this type of work has yet been done. Processes of indicator development should pay attention to clearly defining objectives, linking indicators to policy, ensuring indicators are concise and easily understood, and ensuring measures are reliable, precise and sensitive to change.

In deciding upon a theoretical framework for developing indicators numerous choices exist. Two of these choices are the scientific method as it has been traditionally understood, and a method which is built upon principles of communicative action. Choosing the former method tends to be more expedient, simpler and more efficient, but involves presumptions and sacrifices that may make it less desirable. Among the difficulties with the method are: the presumption of 'objectivity', a limited conception of knowledge, an over-emphasis on the importance of 'expert' knowledge, and a simplistic understanding of the application of information. These limitations may create an indicator system that is not widely accepted, understood or considered relevant, and thus may fail to be utilized in the long-term.

Choosing a method based on the principles of communicative action means acknowledging a wider understanding of knowledge and knowledge use. In this case, information and knowledge use are understood as having a higher purpose of *embedding* knowledge into individuals and institutions in a process of social learning. This knowledge is said to effect long-term action as the relevant issues gain attention and affect decision-making over time, and may eventually become firmly established and accepted notions. An indicator development process that engages these principles will tend to be more drawn-out, iterative and time consuming, but communicative action advocates view these costs as worthwhile (and fundamental to learning) in the long-term.

The empirical research suggested that an indicator system would prove helpful for downtown Winnipeg and that development of an indicator system would ideally benefit

from the application of communicative action principles. However, the research also revealed the local perception that the proposed method had major shortcomings mainly with respect to its perceived feasibility and the lack of significant support in the local administrative and political context. Furthermore, the empirical research and case study findings suggested that a blend of these two methods may be necessary in order to overcome the shortcomings of each.

In either case, the importance of connecting an indicator development process with a policy or decision-making framework was considered of paramount importance through the literature, case study reviews and the empirical research, in ensuring that the resulting system will affect explicit change.

Given the input from the empirical research, the case study findings and the literature a slight revision of the methodology, were it to be implemented, would be recommended. The significantly cited notion of the process being cumbersome (and of communicative processes in general being somewhat inefficient³⁰) would suggest that the methodology as outlined needs to be streamlined. This could be accomplished through a reduction of 'iterations' (i.e. fewer workshops and sessions). While the potential exists for this revision to compromise the quality of the knowledge input, it may prove a necessary 'evil' to make the project more feasible, where extended participation on the part of both individuals and organizations is difficult to secure.

³⁰ Chambers (1995) notes "The more our conversations are directed at mutual understanding, the less efficient they are in producing a determinate outcome that can be acted upon" (p. 241).

In comparing the empirical research with findings in the literature, a few final points need to be made. First, the local view of information use (as represented by participant comments and discussion) showed limited congruency with suggestions from the literature. Habermas (1984) and Innes (1988, 1998a) both suggested that knowledge and information can serve purposes at different levels – the ‘lowest’ being the application of information for technical purposes and the ‘highest’ being the application of information for ‘emancipatory’ uses (or as Innes has put it to ‘informatize’ participants that are a part of information development). There was some suggestion that participants in the empirical research understood this notion. A significant portion of the commentary by participants focused on the use of indicators for less technical purposes than the simple application of data towards a solution. Among the alternative suggestions were the ideas that indicators could be used for communication purposes, to demonstrate change and to legitimize political will. One participant cited the use of indicators for purposes of “social learning”. By and large however, the prevalent notion was that indicator information would be *used* in some manner directly towards a solution. This was mainly evidenced by suggestions that an indicator system could be used to “evaluate existing policies”, “identify key problems and capitalize on good trends”, “create buy-in” and “imply solutions”. This would suggest that conceptions of information use in the local context were limited when compared with the conceptions of information use as portrayed in the literature.

Second, the literature concerning participatory processes and communicative action suggested that stakeholder input is a crucial component to creating a greater acceptance

and understanding of the information at hand (Hillier 1998; Innes 1995). The empirical research also suggested that participation was a crucial ingredient in creating a successful indicator system. Participants noted quite readily that a key question in developing indicators was ‘*Who* is going to be involved?’. A number of participants also suggested that participation by stakeholders would increase the eventual ‘buy-in’ of the system and in some instances serve to ‘legitimize political will’. One of the important notions that was evident in the literature and was not as evident absent in the empirical research is that the selection of participants, the legitimization of political will, and creation of buy-in in particular communities are all affected by current power arrangements (Innes 1998b, Hoch 1992). Accepting this notion means that an indicator development process that seeks to address the ‘*Who* will be involved?’ question, must also recognize the idea that there is no such thing as a singular ‘public interest’ and, alternatively, attempting to embrace all communities is also not possible. Therefore the inevitable tendency to *select among* possible stakeholders and therefore embrace certain existing power structures must be made explicit.

Third, the local view of what constitutes knowledge was limited. The ideas put forth by Habermas (1984), Innes (1990,1998a), Sandercock (1998) and others in the literature suggest that useful knowledge can take many forms – experiential knowledge, knowledge through dialogue, and symbolic knowledge to name a few. The most readily recognized of these types of knowledge in the empirical research focused on the experiences of people. When explicitly asked about the role that individual experience could play in indicator development, the dominant perception was that experience would influence

decisions made, but that this action was inevitable. Rather than embracing the positive benefits of using experiential knowledge, most participants tended to recognize the potential disadvantages associated with using experiential knowledge (e.g. bias, mass of research material). The alternative conceptions of knowledge that the literature puts forth were either not in accordance with participants' understandings or were subdued as a part of their unconscious understandings.

Fourth, the literature has suggested a reluctance in planning practice to give up a total reliance on rational planning and the conventional scientific method (Innes 1990). The empirical research did not reveal this reluctance in an explicit or overt manner. As noted earlier, participants appeared to present (especially towards the end of the research) a willingness to acknowledge the ultimate benefits associated with applying the principles of communicative action. This willingness was chiefly demonstrated by comments that suggested that in an *ideal context* the proposed methodology for indicator development would prove advantageous. However, the immediate and overwhelming response to the proposed methodology by participants was that the approach was not feasible due to its cumbersome and time-consuming nature. The long-term, 'ideal' benefits associated with the method did not appear among participants to be significant enough to merit an effort at overcoming the immediate obstacles that were identified. This would suggest that the reluctance on the part of current planning practice to venture into new methodological arenas still persists.³¹

³¹ One participant offered a possible anecdotal explanation for this reluctance, noting: "When you're trying to earn enough to pay for a loaf of bread you forget that one alternative is to learn how to make bread".

This research would be amiss if it did not identify the possibility that the reluctance of planning practice to embrace new conceptions of knowledge and knowledge use is based on legitimate grounds – that the proposed methods based on communicative action principles, though recognized as ideal in the literature and in the empirical research here – may, as suggested, ultimately face too many barriers as to prevent their practical application. Though this possibility may exist, evidence as given in the literature and in the case studies in this research show that progress *towards* these principles has already been evidenced. This, coupled with the significant support for the theoretical prospects of communicative action principles, suggests that immersion of the principles into planning practice is a legitimate possibility. This notion of progress is further evidenced in my final point.

Participants' understanding and relative acceptance of the proposed methodology (and therefore, of communicative action principles) appeared to increase over time. The initial introduction of communicative principles in the second focus group session did not appear to be 'well-received' by participants, demonstrated by an initial skepticism that focused on the cumbersome nature of the methodology. However, as discussion continued a greater sense of receptivity appeared to emerge. Results from the final survey noted a significant change in as much as many participants conceded that there were definite potential advantages associated with the principles of communicative action. This seems to demonstrate that even the brief time allotted to an open discussion of ideas appeared to have had a noticeable effect on participants' understandings. This

observation alone adds merit to the central point of this paper and provides a good starting point for the development of an indicator system for downtown Winnipeg – that the communication of experiences and other information can play a fundamental role in shaping people’s understandings, and therefore, their actions.

Appendix A: Focus Group Summary Questionnaire

Focus Group Summary Questionnaire

Please reflect on your past experiences (including our focus group research) in answering the following. There are no right or wrong answers. **In each case please provide a brief explanation of your answer.** If you require more space to respond than is given, insert the text as needed.

The Idea

1. Do you think a comprehensive set of downtown indicators could be used as a tool for enhancing efforts at managing and revitalizing downtown areas?
2. If you answered *yes* to the previous question, in *what way* do you think a comprehensive indicator system would be used for managing downtown areas? If you answered *no* to the previous question, why do you feel a set of downtown indicators is unnecessary or not useful?

Participation

3. What do you see as the advantages and disadvantages of a participatory approach to developing downtown indicators?
4. In what ways do you see people's experiences and perceptions playing a role in developing downtown indicators?

Iteration

5. Do you see an iterative process to indicator development (i.e. one that is more repetitive than usual and involves greater amounts of discussion) as important?
6. Do you think that a straight-forward, stepwise approach for developing indicators for downtown would be a better idea than the method described in the focus group research?

Relevance

7. In what ways do you think the proposed method will either help or impede policy relevance?
8. Do you think the method described in the focus group research would help ensure that the system would influence the utilization and effectiveness of indicators for downtown Winnipeg?

Feasibility

9. Do you think that the proposed method of indicator development is feasible in the Winnipeg context? Why or Why not?
10. Do you think the current political and administrative environment is supportive of an extended method of developing indicators, or would the scientific method prevail? Please explain.

OTHER COMMENTS:

Appendix B – Focus Group Meeting Agendas

Agenda

Donovan Toews

Qualitative Research Focus Group Meeting One

February 8, 1999

1. Indicators report (Donovan)

- 1.1 What are indicators and indicator systems?
- 1.2 How are they used and by who?
- 1.3 Minor issues and policy relevance, usefulness.

2. Lunch

3. Group Discussion

- 3.1 What are participant's experiences/understandings concerning indicators?
- 3.2 Is there a need for downtown areas to have indicator systems?
- 3.3 What would a downtown indicator system be used for?
- 3.4 Who would use a downtown indicator system?
- 3.5 Is it feasible to create a downtown indicator system for Winnipeg?
- 3.5 Are there barriers to creating a local downtown indicator system in Winnipeg?

Agenda

Donovan Toews

Qualitative Research Focus Group Meeting Two

February 12, 1999

1.0 Presentation of Theory and Methodology

1.1 Theory of Communicative Action

1.2 Implications for the Process of Indicator Development

1.3 A Resulting Methodology.

2.0 Lunch

3.0 Topics for Discussion

3.1 Do participants feel that the proposed methodology for indicator development is a reasonable/appropriate one?

- Does it involve too many meetings?
- Is inclusion/public participation necessary?
- Would this method encourage policy relevance?
- Would this method ensure an enduring effect?

3.2 What specific benefits/barriers do participants feel the proposed methodology would bring in the Winnipeg context?

- Would increased awareness of issues translate into improvement downtown?
- Would this method enhance downtown co-operation and pooling of resources?
- Would a usable product emerge from this process?
- Does the current political and administrative environment supportive of an extended method of developing indicators, or would the scientific method prevail?

2.3 Do participants feel that the proposed methodology would be *possible* to apply in the Downtown Winnipeg context?

- Would our political structure support such a venture?
- Would the process be bogged down by diverse opinions?
- Are downtown groups willing to co-operate?

2.4 What policy change or other concrete steps could be taken to adopt the proposed methodology in the downtown Winnipeg context?

- Are Downtown groups in a position to be effective as a group?
- Does the current political and administrative environment supportive of an extended method of developing indicators, or would the scientific method prevail?

Appendix C: Survey Results by Question

The Idea

1. Do you think a comprehensive set of downtown indicators could be used as a tool for enhancing efforts at managing and/or revitalizing downtown areas?

- Yes.
- Definitely! It will take some years to entrench an indicator set that the public comes to recognize, understand and agree on, but it seems clear from what has happened in other cities that valuable insights have been gained into the state of the city or sections thereof such as the Downtown.
- Yes, of course. But the key issue is what are they? How is the information collected on a consistent basis? Who would benefit and thus manage the system? These are all practical comments that have absolutely no bearing on the theoretical model that indicators are needed. If, as is suggested in the "Survey of Leading Downtown Indicators", it is the collection of a number of key statistics then I believe this is no different than a series of "downtown facts". For example the issue of occupied square footage might indeed suggest that there is increased activity and prosperity. But the reverse might be in effect. Rates may have dropped 50%, so landlords are offering super deals and people came in for the "one time special". I like the idea of the [Sustainable] Seattle model in which "environmental" indicators were selected. The seven out of 99 that they selected seem to very clearly give a reflection of Seattle's "environmental" health. The same could be done for downtown economy, downtown health (which might be quite different than the health of the entire capital region).
- Yes, provided the indicators will address the key problems, issues and policies needed to revitalize Winnipeg's downtown. We have to determine what role the indicators will play in the decision-making cycle to decide if we need descriptive indicators, performance indicators aggregated indicators or the mixed of the three.
- A conditional 'yes', depending on what the indicators are, how they are used and who is using them for what. They would not provide an automatic solution, but they may be an essential tool if used effectively.
- They could be effective at promoting improvements or changes as they transpire in the downtown area, but as a mechanism for driving policy formulation they could be limited, as an evolving environment often requires an evolving set of indicators.
- Yes and no. Yes because I believe it could be helpful to use indicators as a tool in evaluating whether efforts are reasonably successful, that is, as a gauge. No because I'm not convinced that the development of indicators would actually improve or enhance efforts at downtown revitalization or management. I am suspect of placing too much emphasis on tools such as indicators when they are to be used in a highly political environment. Civic politics and decision making tends to take place in a somewhat undisciplined arena because, in part, of the absence of a party structure and, therefore, commitment to party policy. Each politician is independent and may

or may not be part of a ruling power coalition, which might change from year to year.

2. If you answered yes to the previous question, in what way do you think a comprehensive indicator system would be used for managing and/or revitalizing downtown areas? If you answered no to the previous question, why do you feel a set of downtown indicators is unnecessary or not useful for this purpose?

- [Yes] Tracking progress. Testing or evaluating programs intended to improve downtown. Identifying areas with greatest need for attention.
- [Yes] Indicators that show trends will foster and legitimize political will and the public cooperation necessary to capitalize on good trends or attempt to reverse negative ones. A 'set' of indicators that's well thought out and presented clearly will be comprehensive enough to imply solutions.
- [Yes] If set up (like Sustainable Seattle) where there was broad agreement and consensus on the issues, and a "Watchdog" team established - this group then becomes the advocacy body for influencing City council, and elected decision makers. Every year they announce their annual "results" just before budget time. They have to be set up to be able to rigorously collect data that will be meaningful, and be prepared to feature the issues or events that have led to the statistics.
- [Yes] The indicators could help identify, define and build public awareness of key problems and priority issues concerning the Winnipeg Downtown. It can also be used for comparative analysis with other cities to determine policy formulation options or other aspects of downtown development.
- [Yes qualified] They could perform a set of functions, including: an analytic function – to help evaluate existing policies, plans, program; a planning function – to help evaluate future plans; a communication function – to help communicate all these to a broad range of audience.
- [Yes qualified] They could be effective at promoting improvements or changes as they transpire in the downtown area, but as a mechanism for driving policy formulation they could be limited, as an evolving environment often requires an evolving set of indicators.
- [Indicated to refer to Question 1 - cited here] Yes and no. Yes because I believe it could be helpful to use indicators as a tool in evaluating whether efforts are reasonably successful, that is, as a gauge. No because I'm not convinced that the development of indicators would actually improve or enhance efforts at downtown revitalization or management. I am suspect of placing too much emphasis on tools such as indicators when they are to be used in a highly political environment. Civic politics and decision making tends to take place in a somewhat undisciplined arena because, in part, of the absence of a party structure and, therefore, commitment to party policy. Each politician is independent and may or may not be part of a ruling power coalition, which might change from year to year.

Participation

3. What do you see as the advantages and disadvantages of a participatory approach to developing downtown indicators?

- It may be excessively time consuming. Consistency in participation from time to time may be a problem. An advantage would be that the indicators become based on broader perspectives and values placed on the downtown.
- Public participation is rife with pros and cons and anyone who has been through it knows what they are. The most difficult problem to overcome is the lack of broad representation. Almost universally one can observe the same, small but vocal minority who come out to public meetings on any given type of issue. Nevertheless, there is a wide range of 'local knowledge' that comes out at these events and it is important to get it noted. Sometimes one even gets professional expertise in attendance by virtue of a person's residence in the community or some other connection to the issue(s). Fortunately the more 'typical' participants in attendance are happy to follow the leadership of these people.
- You need the large buy-in and broad perspective. Need commitment Don't get this by having 6 people develop this idea and then try and sell it. Participatory-takes an unbelievable amount of time. Communication through modern technology may relieve the need to meet – but energy is still derived from the gatherings - the one absolute negative is that this type of process seems to attract a specific segment of the population and you almost need to work at making it cross representative.
- I think the main advantage of any participatory research is allowing people or the targeted population to express their opinions and ideas on issues of importance to them freely. This helps provide more in-depth understanding and knowledge on the issues, but whether their inputs will be of any use and incorporated into the decision making process is another story. Much also depends on which of the participatory techniques will be adopted and whether it is the most appropriate to get information regarding the situation. The main disadvantage is getting a good representation of the targeted population to participate, in addition to time, cost and commitment.
- There is a normative advantage - means to induce social learning; a substantive advantage - substantive contribution to topic under discussion; an instrumental advantage - increase the effectiveness of implementation and acceptance of results. The disadvantage is that the process can bog down and take inordinate amounts of time without producing clear results.
- Advantage would be the promotion of downtown revitalization concepts and give it a greater presence in the public mind. Disadvantage would be defining who would be participating; the downtown is the heart of the city, and so all residents are stakeholders in its development. This would also make it difficult to articulate a consensus on where the downtown should go, as those attending public participation sessions may not necessarily be truly representative of the general public, or have the complete set of information pieces available to them.
- In theory, broader participation is seen as resulting in more "buy in" and "ownership" of the process. Again I'm skeptical because involving 100, 200 or even 300 people

out of a population of 625,000 does not create much buy in. If on the other hand, you recognize that the group with the biggest stake, and a clear vested interest is downtown merchants and landowners, and get a high level of participation from this group, then I think it is valid (I for one am not convinced that downtown must be the commercial center of the city. Perhaps the city of 1999 does not need a single commercial core). One of the major disadvantages of a participatory approach is the time and energy needed to achieve your objective. And although it is participatory, it may not truly reflect a broadly based range of opinion. It may simply reflect the views of a relatively small group most of whom participate because they have a vested interest. It is very easy to manipulate these processes if you want to with a small group of people.

4. In what ways do you see people's experiences and perceptions playing a role in developing downtown indicators?

- Experiences and perceptions will shape or influence what is considered to be important for measurement. This can be both good and not so good.
- I think it stems from the 'local knowledge' factor that I mention above. Residents in a city may not be planners and experts but they know when they see something good or bad going on and they can raise the red flags for outside experts to key in on. Residents may not be able to come up with a solution that would be practical but they can often endorse those that are offered if they hear the rationale.
- In a broad setting, at the beginning of the process, they become the basis for brainstorming and discussion - but as the process is tightened, direction needs to focus on the collection, monitoring and presentation of real data. - then of course, the ability to present the data in a meaningful effective way to move current thinking or effect policy change becomes important – thus, people's experiences once again become important.
- In addition to my response to question 3, much also depends on the background and interest of the participants. In anyway, they will help generate a set of issues of importance to them from which useful indicators can be derived. They may also help with the necessary data needed for the indicator system. *Response from question 3:* I think the main advantage of any participatory research is allowing people or the targeted population to express their opinions and ideas on issues of importance to them freely. This helps provide more in-depth understanding and knowledge on the issues, but whether their inputs will be of any use and incorporated into the decision making process is another story. Much also depends on which of the participatory techniques will be adopted and whether it is the most appropriate to get information regarding the situation. The main disadvantage is getting a good representation of the targeted population to participate, in addition to time, cost and commitment.
- Most indicators are most of the time contextual, and they bear the stamp of circumstances, including the circumstances of the individual (personal history, profession, cultural biases etc.).

- In all ways. There are very few people who can truly step outside of their own experiences and perceptions to develop policy.

Iteration

5. Do you see an iterative process to indicator development (i.e. one that is more repetitive than usual and involves greater amounts of discussion) as important?

- It can serve to validate indicators. If repeated, they are important.
- Yes, that helps the public and politician s buy into the final results.
- Probably - part of me wishes for a quick process to problem solving - but this is more like setting up a weather channel in which you are constantly reporting, reminding, and ensuring feedback and action. This lends credibility to what people intuitively believe is wrong or right.
- Yes, an iterative process is important and conditional towards any indicator development. However, using only the iterative approach is not a sufficient method to indicator development. I believe there must be a blend of the two - that is, the iterative process and the scientific method. Either one of the methods or processes by itself cannot lead to any good indicator development system.
- If the goal is to arrive at a consensus, then iterations are important. Otherwise, the fiscal environments and time constraints will limit what is achievable.
- Sorry, I don't have an opinion on this one other than to say that greater amounts of discussion often leads to fewer decisions being made. I would rather be moving forward in time and making a few wrong decisions (and hopefully learning from them) than getting mired down in greater amounts of discussion.

6. Do you think that a straight-forward, stepwise approach (like the scientific method) for developing indicators for downtown would be a better idea than the method described in the focus group research? Please explain.

- I still think it has to be a blended approach. Participation within a modified scientific approach - one that accommodates the best of both worlds.
- It would not be wise to go with any one narrowly focused approach, but I think the method proposed is quite broad in scope. With three levels of groups it looks very feasible and thorough.
- No, I think the broad group needs to decide what is important - I think the data part is where you have to ensure straightforward data collection and management systems.
- I believe there must be a blend of the two - that is, the iterative process and the scientific method. Either one of the methods or processes by itself cannot lead to any good indicator development system.
- I don't think [the two methods] are mutually exclusive. One may use an iterative process that combines citizen-based focus groups with review by a scientific panel.
- Probably. A consensus building approach should probably place greater emphasis in establishing the strategic framework to which the indicators are linked; indicators are

just markers, whereas a strategic framework identifies what is important to people and to what priorities resources should be directed.

- I tend to be goal oriented and therefore can relate to straight-forward approaches. I think they are more focused and can achieve concrete results rather than hypothetical ones.

Relevance

7. In what ways do you think the proposed method will either help or impede an indicator system being relevant to policy?

- If based on broad participation it should carry more "democratic" weight and reflect what the electorate feels to be important, which of course the politicians would take notice of. However, the process may be so cumbersome that it is rendered totally ineffective.
- The criticism that it is 'cumbersome' and prone to attrition is certainly a valid one, but perhaps the steering group can assume ultimate responsibility and keep it going when other resources wear thin.
- The Politicians are reluctant to give up their agendas. The "Indicator Group" may be viewed as being non-representational of their constituency.
- The proposed method is too cumbersome and time consuming. It will be difficult to get people who will be committed to such a process. Even if you have enough participants to start the process, the discontinuation rate of participants during the process may hinder its ability for any policy relevance. However, if the process is streamlined, it may be very useful in building an indicator system - otherwise it is just an "attractive" theory that has no practical bearing.
- Good question. However, it doesn't depend only on this method (i.e. what happens during indicator selection), but it [also depends on] what happens later once indicators are selected, reported etc. Every opportunity should be used to link the process of indicator definition and interpretation to the policy process, both during the process itself and thereafter.
- An indicator system will only be relevant to policy if it includes a political process in its decision-making.
- The method as you described, that is a participatory one with three layers of information gathering and policy development, is a good theoretical model, but one that is cumbersome and time consuming. I think it is probably seen to ultimately a superior method, but I'm not convinced that the end result is any more valid than a more focussed effort (one tier rather than 3).

8. Do you think the method described in the focus group research would influence the long-term utilization and effectiveness of indicators for downtown Winnipeg?

- Probably.
- If the process can be implemented as described it would be very defensible as opposed to one that is driven by a smaller core of experts.

- Yes - better than anything we currently have – the process would start the "watchdog" process.
- Yes, if streamlined to about half of the iterative process and at the same time attaining the set goals and objectives.
- The methods are general and not prescriptive. A lot depends on the policy context within which they are used, the level of institutionalization. If they induce institutional change, this would mean they had a profound impact. If they are external to the policy process, they probably achieved little.
- Not really, although you would have to define long-term first. The longevity of policies, programs and strategies is limited, and subject to many pressures which result in their constant evolution.
- It may or may not. Ultimately it depends to some degree on how the City decides it wants decision making for the downtown to take place. The recent experience of TransPlan, with an extensive participatory process is worth noting. It has larger been ignored because it didn't fit with the expectations of either the special interest groups or the political agendas of those who control the process.

Feasibility

9. Do you think that the proposed method of indicator development is feasible in the Winnipeg context? Why or why not?

- No. People are too pessimistic and are too good at finding a reason why something won't work. My answer is a good example of this. It seems most people are more concerned with doing something quickly and less concerned about process issues.
- It is ambitious in scope and thoroughness and therefore potentially not feasible.
- What is being suggested is like CentrePlan 2. Sure it's feasible - the old group is probably burnt out and it would be time for a new fresh group to take a look. Everything has a hope in Winnipeg - though it will never be easy. Make it the Mayor's idea.
- (no answer)
- In technical terms it is probably feasible, keeping in mind that it will not produce a perfect indicator list. One should think about measurement as an ongoing process in which both issues to be indicated and policy preferences, and therefore indicators themselves, are likely to change.
- No, too expensive and time-consuming. Also, it offers little of direct relevance to the public.
- Yes, because similar models have been used and are seen as valid. There is clearly a perception that broadly based policy development is superior to back-room decision making. I'm not convinced that the end result is any different.

10. Do you think the current political and administrative environment is supportive of an extended method (the proposed methodology) of developing indicators, or would the scientific method be more acceptable? Please explain.

- The political environment would, on balance, not support the method. Scientific method would be more tolerable and understandable. Administratively, I think it would not fly either. Bureaucracy is not interested in innovative, participatory approaches.
- The current political and administrative environment may be more supportive of an extended method since it involves broader consultation and defensibility, but longer time frames likely make it less attractive and result in the familiar criticism that there is too much study and not enough action on the issues.
- [The mayor] is a big supporter of the "benchmarking" process. I think some administrative personnel have an interest in this methodology. Timing becomes an issue. Winnipeg is too diverse to not go with the extended process. But lots of people will not buy-in, purely on the basis of the level of commitment required. It's tough in Winnipeg to do anything but the inclusive model. But our results to date are? TransPlan - two years numerous public consultation processes- results - shelved! Capital Region - we'll see. Centreplan - 50-80 groups (300-500 people) - now down to a crew of 16-25 of the same hardened veterans (exclusive of political representation and buy-in).
- (answer can be deduced from 5 and 7) [*Answer from 7:*] The proposed method is too cumbersome and time consuming. It will be difficult to get people who will be committed to such a process. Even if you have enough participants to start the process, the discontinuation rate of participants during the process may hinder its ability for any policy relevance. However, if the process is streamlined, it may be very useful in building an indicator system - otherwise it is just an "attractive" theory that has no practical bearing.
- As I said, the two are not mutually exclusive, although one possibly can't get an indicator set that is perfect from both perspectives. That's probably not the purpose. The process is important, but I would consider it successful if it produces (an admittedly imperfect) result that can be communicated and used a tool for learning.
- I think my answer to this lies in my above comments. Is it supportive? Yes, on the surface. Would a scientific method be more acceptable? Not necessarily in principal, but probably in terms of the practical nature of wanting to get something done.

Other Comments:

- Bottom line - when you get involved in the day to day operation you quickly lose sight of the theoretical. When your trying to earn enough to pay for a loaf of bread you forget that one alternative is to learn how to make bread.
- I'm somewhat skeptical after two Core Area Initiatives and now the WDA. I'm not convinced we understand what we are trying to achieve beyond the fact that downtown landowners, retailers and some city politicians and urban planners think the downtown must be revitalized. Perhaps the real answer is that a downtown as we know it is obsolete and what works better are nodes for commercial, recreational or cultural activities. Nodes may be less sustainable from a transportation perspective, but the truth is most people utilize private vehicles because they are far superior in meeting their needs than public transit in a low-density, prairie city. Are there any other reasons why we should have a concentrated downtown rather than nodes such as Polo Park, The Forks, Assiniboine Park, etc?

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