

5.5

McDonald, G. (2004) *The continuum of the landscape: Promoting a livable network strategy* (Canada)

The Continuum of the Landscape: Promoting a Livable Network Strategy

Draft Copy – Do Not Reproduce without Author's Consent

Gregory McDonald
York University
Masters in Environmental Studies Planning Candidate
grgmc@sympatico.ca

Introduction

The Greater Toronto Area¹ (GTA) is experiencing unprecedented growth, both in human population and land area. According to the Neptis *Business As Usual Study*, the Toronto Related Region² (TRR) will experience a population growth of 3.1 million people along with the loss of significant agricultural and rural lands, as projected to the year 2031 (2002). Similarly, the provincial government's Smart Growth Panel (2003) has stated that specific actions are required immediately in order to stave off disastrous outcomes throughout the entire Region.

The Toronto Related Region has competing interests that exist throughout the entire landscape; innovative policies and strategies must be implemented and adopted throughout the Region in a timely manner. The varied topography includes lands to the south that are highly urbanized and lands to the north, which contain an abundance of both Class I and II agricultural lands. The Region also hosts two significant landforms, the Niagara Escarpment and the Oak Ridges Moraine, both demanding stringent and integrated land use planning controls. This has, however, proven to be problematic due to the current and destructive urban growth patterns, which have created an acrimonious situation throughout the entire regional landscape.

The function of the natural regional landscape is currently absent from most planning processes. A recent newspaper article stated that in the region, there are 350,000 homes already planned for and approved (Royson, 2000). The article goes on to state that with each municipality essentially working in isolation, absent of a collective vision or direction, one million more people will be 'dumped' into the region with little or no consideration to the larger social and land use issues. This presents a challenging situation for example, agricultural lands function better when the landscape is not fragmented, where activities can occur within large and contiguous areas. Between 1976 and 1996 150,000 acres were taken from production within the Region, and another 150,000 acres were selected for development (Walton, 2001). A major challenge to the preservation of natural lands is the realization that it cannot be accomplished through physical land use planning alone; the recognition that ecological operations are a viable and key economic component of our social systems must be brought to the forefront.

Through insufficient action, public policy has promoted fragmented and unplanned growth. Coordinated and collaborated efforts between the various jurisdictions and levels of government have been disjointed. This has resulted in a regionally inconsistent planning direction, and although attempts have been made to rectify this through numerous policy studies, the deficiency remains in the public understanding and implementation of such initiatives. The function, flexibility and adaptability of space is crucial, in particular, the multiple and integrated uses of both the built and natural

¹ Refers to City of Toronto; Regional Municipalities of Durham, Halton, Peel and York.

² Term used by the Neptis Foundation Study and includes: Toronto; Regional Municipalities of Durham, Halton, Peel and York; Hamilton; Regional Municipalities of Niagara and Waterloo; Counties of Wellington, Dufferin, Simcoe, Peterborough, and Northumberland.

environments, if a holistic landscape vision is to be created. A redefinition of space through a reconnection of the built and natural landscape can create a network of flowing and responsive spaces that can assist in creating an understanding of the current sprawl type patterns and enhance the overall quality of life.

As urban centres continue to expand, the loss and degradation of natural areas becomes an ever increasing phenomenon. There is a critical need for a comprehensive and integrated network of livable spaces to encompass both the natural and human systems. Within this context, this paper will concern itself with 'edge'³ city developments within a regional landscape, and put forth the following three assertions: the integration of pedestrianization and greenways can establish a critical livable network; the built and natural environments must be integrated; and, the above principles can present opportunities for experiential planning for the inhabitants of a region. Through an assessment of both the urban and rural landscape, and the built and natural environment, connections between ecological and social spaces within the framework of a livable network strategy will be discussed.

Toronto Centered Region – *What is occurring?*

The Toronto Regional Conservation Authority (TRCA) initiated the *Living City* model, which is 'A vision which initiates the partnership framework, lays the foundation, and establishes success indicators for the environment, social and economic sustainability of city regions' (TRCA, 2002). An aspect of this is the *Terrestrial Natural Heritage Program* (TNHP) which is a comprehensive approach to a regional landuse inventory throughout the entire GTA. According to the Progress Report dated June 2002, 19,000 habitat patches, covering an area of 60,000 ha, had been enumerated and scored, and a detailed field analysis had been completed on ten percent of those lands.

The central issue identified in the Progress Report was the recognition of the decline of biodiversity and ecosystem health stemming from the loss of habitat and the degradation and loss of critical ecological processes. The Report offers several actions that are necessary in order to stop this trend, such efforts would include: biological inventories and monitoring; devising a comprehensive and expansive regional strategy; and, inclusive communication and consultation with the broader community. An indication of this initiative was recognized in the Draft Toronto Official Plan (2002) which stated:

The City of Toronto and the TRCA have developed an inventory which identifies and contains data on the various components off the natural heritage system. The information in the inventory will be used to assess impacts of development on the natural heritage system and to identify priority locations where the system should be protected, restored or enhanced. (TNHP, p 15, 2002)

³ The difficulty is recognized in defining this term as the lines between urban and rural and town and country blur.

Since the early 1970's, many large scale studies have been completed within the GTA, Toronto in particular, that advocate for an expanded and connected greenways program, while recognizing and protecting the Region's natural inventory. For example:

Many of the greenspaces in the Greater Toronto Bioregion, particularly...the lake Ontario waterfront have been harmed and fragmented and are further threatened by patterns of development that ignore natural features and processes.
(*Regeneration*: Royal Commission on the Future of the Toronto Waterfront, 1992)

The current fragmented and disconnected approach to land use planning cannot sustain the remaining tracts of natural spaces and species. With all of the work that has been completed across the TRR landscape, an alignment of the various agency mandates needs to occur, in particular the government agencies themselves. This would reduce the siloization of data and resources and would enhance a positive public image. This uniformity and stability also needs to occur within the definition of landscape boundaries. Firstly, whether or not they will be defined in part on an ecological basis and not solely based upon a political platform, and secondly, whether or not the regions being studied will be defined as the Greater Toronto Area, the Toronto Related Region or the Golden Horseshoe. Consistency must begin through the provincial government itself, and then cascade throughout the various municipalities and planning agencies.

Interestingly, what is currently occurring across the GTA is the provincial government's attempt at developing and designating a Greenbelt Protection Act, to contain sensitive lands within the Area. Many issues arise at this stage of the initial investigation, namely, the current defined areas for study and possible inclusion within a greenbelt are perhaps too limiting at this phase of the investigation. For example, agricultural lands and natural spaces in Simcoe County are in threat of becoming a large continuous swath of single family dwellings. A recently released study from the Neptis Foundation examines Simcoe County in more detail, recognizing that the region is in immediate threat of becoming the next target for large scale developments. There are currently 3 large proposed developments in the region, that when completed will house an additional 172,000 people (Harries, 2004). These lands are currently outside of the proposed Greenbelt Protection area, but are under serious risk based on the decisions made within the landscape to the south.

One reason in part for this leap northwards is the availability of cheaper land; the Greater Toronto Home Builders Association has claimed that land within the current GTA boundaries is becoming scarce and will be exhausted by 2017 (Valela, 2003). This is debated by the Neptis Foundation, who state that lands currently defined as urban will provide sufficient lands for development until 2021 (Harries, 2004). This market approach to the re-direction of growth is why the province must begin to take a more inclusive and integrated approach to land use decisions.

The study area of the proposed Act should include all lands contained by the definition of the TRR that are currently under threat of sprawl type developments. Lands within the current study area are indeed under immediate threat of irreversible loss and therefore, the sought after vision must broadly include the whole province in order to

ensure that key natural spaces and the associated networks are linked, kept intact and properly planned for. For example, both the Central Ontario Smart Growth Panel and the Neptis Foundation Study include the broader Toronto Related Region. In particular, the Neptis Study states that ‘the area selected includes the towns and cities now considered part of the GTA commutershed, and areas where the rural population, though still predominant, is beginning to come under the urban shadow’ (2003). Broadening the study area is a fundamental first step in the recognition of the interrelated and functioning broader landscape.

In terms of public policy, there are several reasons to be concerned about the large scale developments occurring throughout the Region, for example, many are being proposed on lands not designated as urban in Official Plans and subsequently the current government's temporary moratorium on urban land conversions does not therefore include the threatened lands north of the Moraine.

Regional Landscape – *An integration of ideas*

McHarg, through his seminal publication *Design With Nature* (1969) proposed that ecology was the central component to land use planning. This is a key understanding in addressing issues of physical planning within a regional landscape. His work emphasized the importance of the relationship between form and function, stating that form should respect the natural environments in which it is placed. The recognition that ecological and social processes both influence the built and natural environments is a fundamental first step in understanding holistic regional planning.

In *Cities and Natural Process* (1995) Hough's general thesis concerns itself with ‘the contradiction of values’ within the underlying value systems that have shaped city regions. He asserts that current planning principles have very little to do with the ecological processes and values of the natural landscape. Of specific interest is what Hough terms ‘visible processes that sustain life’ (p30). In referring back to an early Hough publication, he concludes that visual identity using natural elements through plant materials, imaginative street design, a high level of civic design, and a coordinated approach between both public and private interests is required in order for a societal value shift to occur (1971). These approaches are as pertinent today as they were when recorded over thirty years ago. This interactive identity between the landscape and the inhabitants of a region is a vital realization that planning must begin to encompass both physical design and the opportunity for social engagement.

The absence of function and a land base continuum within both the landscape and urban planning itself is a large aspect of the loss of identity between spaces. The current fragmented landscape is a product of ‘explosive’ growth according to Hough where urban developments engulf traditional rural lands and functions (1990). In response to this dilemma, an understanding of the natural and human development processes shaping the local region must occur in combination with urban areas reconnecting with their local

natural environments. Many elements are required if this destructive trend is to be stopped, and if a reconnection between landscape and the inhabitants is to occur.

Hough suggests that the preservation of natural heritage, the continuity of form, and an increase in pedestrian landscapes must exist within a system of connectivity and integration (1990). This approach as Hough states, will 'unify[ing] the total system of spaces as pedestrian routes that [will] allow for movement from one place to another, from the transportation centre to the office complex, from commercial areas to the civic centre' (1971, p 116). The fundamental realization that it is not necessarily a question of not having enough space, but rather how space is currently being used, and for what purpose, must be actualized.

As an aspect of this required shift, a redefinition and appreciation of the sense of place is required. To rethink the connections between the built and natural environments is now a fundamental initial step. Critical to this new definition is an understanding of the built living patterns within the bioregional context of a regional landscape. Understanding the interrelationships between what now constitutes the urban and the rural will only strengthen the context of regional planning. This will occur through what Beatley terms a holistic strategy for sustainable urban form (1997). That would include effective growth containment, protecting open space and natural lands, and increasing building densities. Landscape ecology must both understand and integrate with the topography, ecological conditions, processes and infrastructure, within all community functions.

Patsy Healey makes an interesting contribution to this discussion. Healey suggests that planning should encourage 'living together differently, through struggling to make sense together' (1992, p 148). She supports this statement through numerous ideas and examples for integrative planning such as collective argumentation, the elimination of blue print plans, and the sharing of rules and codes for practice. These ideas stem from the fundamental principle that everyone has something to say and contribute to the process, and that each process will differ and require dialog amongst all those involved, whether directly or indirectly. This mirrors the understanding that the natural environment will differ and thus demand landscape specific planning.

Environmental concerns according to Healey, cannot be predefined within a specific and rigid planning context, they must be understood through a 'systems of meaning' (p 237), which must include both physical and social elements, and as this paper stresses the natural and built environments. Interpretations are viewed and understood differently, depending upon the frame of reference, which according to Healey is a fluid and ever changing perception of meaning. When planners examine a particular issue, it must be understood in the context of balance, drawing from various elements of both time and place. This is a powerful statement that lends itself well to the understanding of the necessary connectivity and integration of both the natural and the built landscape.

Leonie Sandercock contributes similar ideas and emphasizes the need to expand the 'voice' and to respect and listen to difference and diversity. 'Planning for multiple publics' is required for sustainability and constructing knowledge based systems based upon non-traditional avenues of facilitation and investigation must be encouraged (1995, p 86). A multiple approach to planning can offer a means of expanding upon current human barriers, and as Sandercock states, bring in more voices from 'non-planners and the borderlands' (p 86). These voices in part must be derived from the interchange between the inhabitants of a particular region and the landscape itself, thereby providing for a cohesive planning element; an element that would recognize and support diversity in contribution, form, and function.

Network of People Places

Landscapes are a culmination of both natural, to include biological and ecological systems, and cultural environments, to include social and historical relationships. This appreciation is absent from 'edge' city developments, where the separation of land use functions is ever widening. This loss of both social and spatial identity is evident throughout fringe areas, creating a void in both public space and quality of life. The various functions of the landscape must be viewed not from a single subject approach, but from a multiple and integrated visual identity. Through the creation of opportunities for pedestrians based upon a network of greenways, the increasing polarity between nature and culture may begin to reverse itself. The creation of green street linkages can present the built environment with opportunities for sharing infrastructure needs, recognizing natural processes and functions.

As Kevin Lynch stated 'macro level open space systems act as the necessary and essential counterform to the built environment, it can give form to cities and provide for a concentrated and continuous green system' (1981). A green system must be human in scale and thread through all elements of the built form and lead to central community facilities. Green elements must become proactive aspects of the regional form and not be dismissed as passive and intrusive. Landscapes must become 'everyday' landscapes, where people actually want to spend time. This dynamic exchange between the local population and the environment is instrumental in establishing the necessary relationships to understanding that the more permanent natural system, of which the observer is only a part, is of vital importance to a holistic landscape structure. This will help to focus upon the identity of the landscape and offer an ecological aesthetic, one that utilizes all of the cognitive processes and the senses of the inhabitants.

Nohl states that the current landscape is absent of rural structure, lacks a variety of aesthetic elements, naturalness, regional identity and vista quality (2001). The current increase of a homogenous landscape also provides for a monotonous sense of place, a decrease in elements, and the inability of the landscape to relate history and culture (Ibid). Areas that are close to spontaneous nature allow the beholder to participate in perceptual processes. A variety in landscape elements allows for greater visual quality

and experience of space, thus, natural systems should be a model to the design of places and social systems.

Integration of the Built and Natural Environments

Current patterns of the human built environment must begin to be more precisely interwoven with the existing natural networks of natural systems. This would allow for an approach based upon interconnected patterns of both natural and built structures. The existing natural landscape provides cues to both efficiency and effectiveness, whereby the provision of natural boundaries and patterns will assist in the creation and placement of built structures, creating a series of living environments based on the whole watershed pattern and the living corridors that exist within. These natural corridors are an optimum method to create contact between people and the surrounding natural systems. Until such an approach becomes standard, cities and towns that are surrounded by a flat and artificially inexpensive land base will continue to provide few limitations for developers to expand and exploit the landscape. The current situation has created a monoculture of both the built and natural environments, severely limiting the ability for any interaction and understanding.

Lynch discusses many facets of the physical build environment and how it relates to its inhabitants. For example, he suggests that people perceive urban areas as consisting of a series of five types of elements: paths; edges; districts; nodes; and landmarks (1960). These urban elements can now be expanded to also include the natural environment within a regional context, recognizing the cohesion of urban and traditional rural lands. They offer both the experience of place and connectivity between the built and natural environments that is required for cohesive community regions. There is a similarity of these elements to the principles of ecology such as corridors, edges, patches and so forth, which could also provide for a cohesive blend of natural and built environments, at the same time allowing for local residents to grasp a better understanding of the necessary relationships that exist.

Designing and planning communities that will enhance or even reverse the trends of natural degradation and improve ecological health, will also improve the reversal of lifeless communities. The diversity of the natural environment can be reflected upon built communities, which would produce a series of integrated layers of both ecology and culture. By providing choices on as little land as possible, quality public and pedestrian spaces can be created and form the mainstay of the community. This is, however, a timely process, one that will take public education and political will.

Framework for Experiential Opportunities

Experiential planning involves a physical and a social component, to include both the physical design of a community and the level of opportunity for public participation

through sensory experiences. These non spatial qualities of the landscape can provide for visual corridors and learning opportunities. This research asserts that the centre of experiential opportunities is both the possibilities for pedestrianization and greenspace infrastructure. These concepts are vital to the integration and connectedness of both natural and built environments and neighbourhoods and regions and must be thought of as fundamental infrastructure.

Continuing with the concepts of the visual experience, Lynch offers an interesting regional perspective on the sensory experience (1976). Intrinsic participation within a community enables individuals to completely immerse themselves in what Lynch describes as the sensory encounter. This level of participation leads well to an integrative framework, enabling residents to both understand their built and natural environments, and to then possibly react to development and planning pressures. The notion of providing for a sequence of visual events and designing for a moving experience through a succession of views that will provide for an assimilation of both form and function is key to integrating the pedestrian within the landscape. Lynch states that ‘a root difficulty as to why there is a lack of environmental design, is the divorce of the users of a place from control over its shape and management, which leads to inappropriate form and the imposition of alien purposes’ (1976. p.7). This statement summarizes the necessity to re-examine and explore the connection of physical design and social impact on the integration of communities and planning. Community mobilization must stem from members who are impassioned with understanding of the desired future direction of both the built and natural environments. Lynch’s understanding of managing a region and its senses, offer contemporary planners a viable tool in which to impact both the physical and social dimensions of community planning.

The importance of physical elements was reinforced by Whyte, who suggested that the use of elements can provide a source of examination and be instrumental in securing open spaces that are key aspects of a larger system’s connectivity (1968). This he states, is what truly makes the difference in a system of connected spaces. Whyte was a great advocate for community physical design elements to include large amounts of functional open space. This he proposes, does not always require a great amount of space, but does require a ‘tightening of scale’ or a recognition of a sense of place and community amongst the residents (1968, p 171). William Whyte also offers insight into interactive social spaces, and suggested that the only way open spaces can be secured against the pressures of growth is through recognizable and visual function, in short, being usable to people

The above sensory encounter and tightening of scale can be accomplished through a unifying plan that is focussed upon the pedestrian. Whyte offers this reasoning for pedestrian planning:

The highly useful kind of spaces that provide a maximum contact with people – the kind we get in cluster development – are much more appropriate to real needs. If we couple these many kinds of spaces needed to serve specific places, we will come up with a non-system of scattered spaces. This may not satisfy those who

want to design urban regions in the grand manner, but it has every likelihood of success and more profound and useful ways.

(The Last Landscape, 1968, p 180)

Pedestrianization can therefore begin to formulate the relationships between the landscape and its users through the physical design of a 'systems of meaning', as discussed by Healey.

Pedestrian planning is a key aspect in connecting physical design with a region's inhabitants. Peter Calthorpe's work on the 'Pedestrian Pocket' has woven the concept into various aspects of the integrative community (1989). Calthorpe's ideas stem from an acceptance of what needs to occur in the new developments surrounding existing metropolitan areas, essentially recognizing the need to integrate suburbia both with one another and with the surrounding landscape. He defines the pedestrian pocket as being a balanced and mixed use area within a quarter mile, or five minute walking distance of a transit station. This, when combined with the ideas of Whyte and Lynch regarding the open space regional perspective, can offer a network of connecting elements of both the built and natural environment where the pedestrian becomes paramount. The pedestrianization of spaces will allow for cooperative opportunities of landscape form and function, recognizing that a symbiotic relationship is essential. Pedestrianization and greenways are ideal concepts to assimilate environmental and experiential planning within a regional scale. It provides opportunities for visual and sensory engagement, allowing people to interrelate with the natural environment.

This idea of integration between people and nature is again realized in Van der Ryn's work on ecological design. According to Van der Ryn three critical strategies for natural preservation are required: conservation; regeneration; and stewardship (1996). He suggests 'the weaving together' of both the built and natural environments, which is instrumental in holistic community planning. These strategies can be applied to both environments in such a way as to 'bring forth new ecologies of design that are rich with cultural and epistemological diversity' (1996, p 525). Ecological design as defined by Van der Ryn is a method of integrating human purpose with nature's own patterns; this he comments, can only be accomplished through a culture of sustainability - similar to the ideas of both Whyte and Lynch. Van der Ryn also speaks of the elements of ecological design infiltrating with the texture of everyday life, thus creating a vision that transcends both the built and natural environments.

Many of the earlier writings do not include the inclusive functionality of both the built and natural environments, however, many of the concepts can be applied to each. At the centre of a livable network strategy are the possibilities for pedestrianization and greenspace infrastructure; these concepts are vital to the integration and connectedness of both neighbourhoods and regions. The sensory experience can be associated with Whyte's 'tightness of scale', Hough's comments on the importance of visual identity in landscape and design, Sandercock's 'voices from non planners' and Healey's notions of 'systems of meaning'. In utilizing sensory images and the 'visual experience', a new value system can be established through an incorporation of meaning and interaction. This sheds a new light on the potential for integrated landscapes. Aspects of physical

planning, sensory imaging through the visual experience and a regional planning approach can re-connect both the pedestrian and the natural landscape within a new meaning and framework of understanding.

What is Required?

Currently, there is not a strong connection made between related rural and urban issues, or natural and human concerns. What is required are policies based on the premise that central city decline and rural low density sprawl are opposite sides of the same issue. The present fragmentation of public policy between the various levels of government and governmental agencies hinders efforts to address local problems. It must be recognized through full cost valuation⁴ that the consumption of rural lands does in fact have a direct impact on the relationships of quality of life in the city centres and the region as a whole. The public mindset must be encouraged to demand that natural spaces become integral infrastructure; this will inevitably lead to an increase in the quality of life within the regional landscape.

Gibson et al comments that a new way of addressing urban issues is required, one that takes into account, through both ecology and community, the support of citizen inclusion (1997). Although this statement is widely accepted, the current predominant style of land use planning still displays only partial and somewhat fragmented attempts at inclusive ecosystem planning. The mindset that must begin to dominate North American culture is that ecological well-being must be considered the basis for both social and economic gains and community welfare (Ibid).

David Crombie and the Royal Commission on the Future of the Toronto Waterfront released the report *Regeneration* in 1992 that defined the Toronto waterfront to include all rivers, streams and creeks that enter Lake Ontario. This plan truly embraced the notions of both ecosystem and bioregional planning. The difficulty, however, is the varied and fragmented jurisdictions that exist within the defined area. The following quote was taken from the TRCA web site; it recognizes the urgency in establishing both good and sound land use planning throughout the GTA.

Forests, meadows and wetlands protect water, provide habitat for wildlife and support human health and recreation. As our Region's population grows, the quality of our natural areas is decreasing. Loss has been estimated at up to 60 acres a day! *The Living City* is committed to protecting our natural areas for the benefit of all living things. (http://www.trca.on.ca/land_protection/)

As a nation, Canada has a grave responsibility, being holders of twenty-two percent of the world's remaining wilderness, to protect and preserve our natural land base (Theberge and Theberge, 2002). Ecological thinking must expand well beyond both the

⁴ Takes into consideration both the positive and negative aspects of decisions within a balanced long term visionary framework.

confines of urban area boundaries and defined protective spaces, and take into account the surrounding natural systems and watersheds contained within all landscapes, and the various relationships that exist between them. Landscape ecology must be an integral aspect of the land use planning process. The ecology of large heterogeneous spaces and regions must begin to dominate both political and community structures. Ecological principles such as patch dynamics, corridors, linkages, and edge and fragmentation effects can be utilized to integrate both built and natural environments, and can apply to each jointly or in separate.

The following principles of a multifunctional landscape can be extracted from the above discussion and may serve as part of a framework for a livable network model:

- a systems view of the landscape must be an integral aspect of the planning process from the beginning;
- landscapes serve as a spatial matrix for all living things;
- the landscape has inherent value, even if an economic value cannot be affixed to the services it provides;
- a holistic systems paradigm must be established and recognize the interactions between ecological, biological, social and cultural functions; and
- an integrated system between pedestrian opportunities and greenways will present a possible central core for planning, which in turn will create a realization between the natural and built environments.

Dearden and Slocombe suggest that when managing natural spaces, the following aspects be considered: an understanding of natural dimensions well beyond the political boundaries; the need to develop and foster links with outside agencies and groups; and, an increased level of communication to expand upon public awareness of local and regional ecological issues (2002). In summary, both cooperation and coordination must be at the forefront of ecosystem planning and management. The recognition that agricultural and natural systems are a key component of the socio-economic trends throughout a region is a fundamental mindset. If linkages are established to create awareness and understanding of the issues on various regional spatial scales, the health of urban systems will indeed benefit in the long-term.

Suggestions for Going Forward

Returning to several concepts and principles discussed in brief throughout the text, several holistic visioning statements can be formulated into a possible framework for a livable network strategy. The three assertions put forward at the beginning of this paper are worthy of repeating: the integration of pedestrianization and greenways can establish a critical livable network; the built and natural environments must be integrated; and, the above principles can present opportunities for experiential planning for the inhabitants of a region.

The recognition that human activities are an aspect of the natural environment is a fundamental first step. In re-examining the above discussed ideas it can be stated that Lynch's work on the sensory region can be a means to achieve Sandercock's 'planning for multiple publics' and Healey's 'system of meaning'. Sensory participation can be discussed both through an intrinsic appreciation of the landscape, and can include the broader community in the process, thus, establishing relationships not only with the landscape, but also amongst community members. This connectivity is crucial, and begins with sensory perceptions relating to the built and natural environments across a regional landscape through effective opportunities for pedestrianization and greenways.

Robert Thayer sums up the need for a holistic approach to planning quite effectively by stating:

...a converging collection of activities that cuts across all of these more traditional planning domains...addresses a growing demand for comprehensive, ecosystemic, social and physical planning...sort of planning made impossible by the absence or impotence of existing city and regional plans, top down expert approach to ecological planning, and the narrow scope of single resource agencies. (2003, p 146)

He continues by commenting that the current dissociation with the landscape into various mechanized parts is in direct conflict with natural regionalism. The solution rests within the recognition that landscape patterns will vary greatly and will depend upon the distinct ecological and cultural factors of a particular region (Ibid). Returning to the ideas behind experiential planning, a bottom-up approach to local concerns, recognizing that each region will demand a unique set of design, planning and management ideals is fundamental to the recognition that the current divisive lines between the built and natural environments must be erased.

Concluding Remarks

Regeneration makes several poignant statements that have been repeated several times, only to go unnoticed and forgotten, however, hold great value for the new direction that must be expanded to and adopted by the Toronto Related Region (1992). For example: 'It has also become clear that institutional arrangements in the bioregion are often part of the problem; bureaucratic systems are often rigid and jurisdictions fragmented' (p 60); and 'In the past, decision-making has often been based primarily on economic and social objectives, often to a cost to the environment...The ecosystem approach is based on the reality that everything is connect to everything else...' (p 60). These statements must be revisited by those decision makers that are responsible for the Region's natural and built systems.

Understanding the natural and human development processes shaping the local region will help to reconnect urban areas with their local environments through an urban-rural community continuum. Planning within a pedestrian scale and envisioning space beyond traditional constructs can create an environment that both integrates the landscape

and interacts with the inhabitants. Connecting landscape form through interactive spaces and the provision of a continual pedestrian spaces system, linking the various built and natural forms within the existing regional structure, can indeed create a connected livable network. Breaking from the well defined boundaries of what constitutes urban and rural, and the built and natural form, will only help to fully integrate and connect spaces through innovative uses and create spaces of opportunity. As Lynch suggests, 'urban and rural areas will not be separated, they are part of the continuous spectrum of human habitats and are now becoming progressively more difficult to distinguish' (1976 p.10); this is also reflected in natural and built elements and patterns. Through the above re-examination of previous ideas, fresh relationships between the natural and built environments can offer contemporary planners the ability to explore an urbanism based on one set of applied elements and patterns.

The role of physical design needs to be one of integration, linking the concerns of the environment with building, development and design. This must also relate with the seemingly disconnected association of the social requirements of a region's inhabitants. This holistic approach is fundamental if in due course, planning ideas and concepts are to be expanded from the current confines of political boundaries to ultimately include the surrounding natural areas. This is necessary in order to firmly establish natural boundaries and plan within the carrying capacity of the region. Physical planning must begin to advocate for an understanding of the spatial relationships between a particular land base and the social components that interact within. This approach assumes that people cannot exist the same everywhere and social perspectives differ and exist within the spatial relationships in which they find themselves. The current template approach to physical design and planning is destructive and imposes unreasonable patterns of land consumption and use on the regional landscape.

Planning within a pedestrian scale using greenways as fundamental infrastructure and envisioning space beyond traditional constructs can create an environment that both integrates the landscape and interacts with the inhabitants. Connecting physical form through both 'smart' spaces⁵ and the provision of a continual pedestrian spaces system, linking the various built and natural landscapes within the existing regional structure can create a connected and recognizable livable network. In summary, the isolated and current disconnected approach to integrating land uses across the regional landscape is both detrimental to both the natural and built form, and to the inhabitants of the region. There is a critical need for determined provincial intervention in regional plan and policy making, in fiscal innovations, and in the administration of planning visions and directions. Without a strong committed leadership in place and high level of public understanding, these ideas will remain, as they have for decades, simply words on a page.

⁵ Multiple, flexible and re-adaptive uses of space, linking the built and natural environment, while considering natural boundaries.

Works Cited

- Beatley, T. and Kristy Manning. 1997. *The Ecology of Place*. Washington: Island Press.
- Calthorpe, Peter. 1989. 'The Pedestrian Pocket'. In Richard T LeGates and Frederic Stout (Eds), *The City Reader*. (pgs 350-356). NY: Routledge
- Canada. Royal Commission on the Future of the Toronto Waterfront. *Regeneration: Toronto's waterfront and the sustainable city: final report*. 1992
- Central Ontario Smart Growth Panel. February – March 2003. *Shape the Future: Central Ontario Smart Growth Panel: Discussion Paper*. Queens Printer for Ontario.
- Dearden, P and D Scott Slocombe. (2002). 'Protected Areas and Ecosystem-Based Management'. Eds P. Dearden and R Rollins. *Parks and Protected Areas in Canada: Planning and Management*. 2nd Edition. Toronto: Oxford Press.
- Gibson, Robert, Dorothy Alexander and Ray Tomalty. (1997) 'Putting Cities in Their Place'. Edited by Mark Roseland. Canada: New Society Publishers.
- Harries, Kate. 2004, May 30. Developers press their case north. *Toronto Star*.
- Healey, Patsy. 1992. Planning through debate: The communicative turn in planning theory. *Town Planning Review*. 63(2): 143-162.
- Hough, Michael. 1971. *The urban landscape*. Toronto: Conservation Council of Ontario.
- Hough, Michael. 1990. *Out of Place*. MA: Yale University Press.
- Hough, M. 1995. *Cities and Natural Process*. London: Routledge.
- Lynch, Kevin. 1960. *The Image of the City*. Cambridge, MA: MIT Press.
- Lynch, Kevin. 1976. *Managing the Sense of the Region*. Cambridge, MA: MIT Press.
- Lynch, Kevin. 1981. *A Theory of Good City Form*. Cambridge, MA: MIT Press.
- McHarg, Ian. 1969. *Design With Nature*.
- Neptis Foundation. 2002. *Business As Usual: Modelling Growth in the Toronto related Region to 2031*. www.neptis.org/program.asp.
- Nohl, Werner 2001. Sustainable Landscape Use and Aesthetic Perception. *Landscape and Urban Planning*. 54: 223-237.

Royson, James. 2000, June 10. Gridlock threatens to choke province's booming economy. *Toronto Star*.

Sandercock, Leonie. 1995. Voices from the borderlands: A meditation on a metaphor. *Journal of Planning Education and Research*. 14: 77-88.

Thayer, Robert. 2003. *LifePlace*. California: University of California Press.

Theberge, Jeannette and John Theberge. (2002) 'Application of Ecological Concepts to the Management of Protected Areas'. Eds P. Dearden and R Rollins. *Parks and Protected Areas in Canada: Planning and Management*. 2nd Edition. Toronto: Oxford Press.

TRCA, *The Terrestrial Natural Heritage Program*, Progress Report, June 2002.

Valela, Joe. 2003, May 2. The Sprawl Paradox. *The Globe and Mail*.

Van der Ryn Sim. 1996. *Ecological Design*. Washington: Island Press.

Walton, Margaret. 2001. *Why Agricultural Land is Worth Preserving*. Delivered at the GTA Forum June 7.

Whyte, William. 1968. *The Last Landscape*. NY: Doubleday.