

Walkability on Vancouver Island: Implications for Small Towns and Rural Communities

By

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Abstract

Most studies of walkability focus on large urban centres. This paper works to fill the gap in the study of walkability principles and applies them to small towns, and rural communities. Drawing from smart growth and new urbanist ideas, walkability is affected by density, destinations, distance, and design (the 4Ds); each of which affects people's choice to walk. Rural communities and small towns generally lack one or more of the 4 Ds, creating an inability to fully achieve the status of walkable communities as would be found in more urban places. In addition, rural communities are often part of a collection of communities that make up a region of small places. Each has its unique character and influences that guide development in the node. A focus on creating walkability in these nodal areas makes sense for small communities, and will enable people to park once and use the pedestrian infrastructure to reach multiple destinations within each node. Through an extensive literature review and a series of site visits, the findings are that walkability is a relevant field of study for small communities despite the implied weaknesses in density and distance.

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Introduction

Walkability is an emerging field of study that is growing as a means to reduce our carbon footprint and our dependency of automobile use in our communities (Ewing, Bartholomew, Winkelman, Walters, & Chen, 2007). Much of the existing literature looks at urban development, transportation, the built environment and their systems based on large urban areas; very little attention has been paid to similar studies in small towns and rural communities, using walkability as the focus. This research explores walkability principles as they apply to small communities, with special interest in coastal communities. The focus will be to scale the concept of walkability from large centres to small communities and develop specific recommendations on how walkability should be applied to development in small towns and rural communities in British Columbia. I will use elements of Christaller's central place theory and the progressions of his work to bring an effective understanding of small towns and rural communities in a larger system of regions. Walkability is a relevant study for small communities that may not have the densities and amenities that are typical of walkable places in large cities. Beyond the positive health implications of walkability for individuals, there are larger issues at hand, including issues of "human scale" and aesthetics in streetscapes, and each community's impacts on climate change through their reduction in the use of private automobiles. That is, improvements in walkability will have positive implications at a range of scales and from many perspectives.

Research Question

Can walkability principles be applied in smaller communities where densities, resources and environment do not match the criteria used in large urban centres?

Sub Questions

What densities are required to make walkability a relevant development objective?

How do the characteristics of small communities alter the composition of principles for walkability?

How does the distribution of surrounding communities impact the transportation choices and access to daily tasks in any one community or the cluster of communities in their entirety?

Methodology

To answer my questions I will begin with an extensive literature review to examine three distinct areas of investigation. One is to establish walkability as a concept and how it applies to planners in a broad context. Second is a study of rural and small towns. To fully connect walkability with small towns and rural communities, there must be an understanding of rural and what makes them unique places. Lastly, I will look at regional planning as a means to explain the system of communities and how they work together.

Following the study of the core ideas, I will ground my findings into the local context of Vancouver Island communities. From these observations, I will provide a clear conclusion and with specific recommendations for walkability as it applies to small communities.

Justification

There is an extensive array of literature on walkability as a means to solving automobile dependency in cities. However, most of this work focuses on larger, global cities with far different characteristics than the small communities of Vancouver Island, or any small towns elsewhere in the world. As planners there is a need for quality research on smaller scales where planning goals and objectives remain relevant: this is a pressing need as there appears to be a lack of quality literature that applies to small communities. My research will look to fill a gap in planning with hopes of generating new knowledge to better inform planners of best practices for walkability in small communities.

CHAPTER 1: Background

Since the end of World War II, cities have been subject to the explosion of automobile use and the built environment that accompanies the dominant use. Planners were once among the culprits of this movement and have taken decades to come to terms with the wrongs that were done to our cities by those focused on accommodating the car into the design and function of urbanism. Although the problems have been identified since the work of Jane Jacobs began in the 1960s, it has been much more difficult to translate the problems into action to solve the challenges of auto-dependency (Speck, 2012).

The writings of Jane Jacobs are among the keystones to planning literature and figure prominently with subsequent studies on walkability as a response. The four conditions for generating diversity; the mix of uses, short blocks, a mix of older and newer buildings, and density; are the foundations for theories and practices that have sought to promote sustainable development and less reliance of private vehicles for transportation (Jacobs, 1961). The challenge with incorporating Jacobs' views is that they are explicitly focused on large urban centres like New York, Boston, Chicago and San Francisco. They are not directed towards issues that may exist in small towns and rural communities that may be different than those in large cities.

The legacy left by Jacobs still cannot be overlooked for influencing the design of New York and the diversity that generates one of the friendliest places for alternate transportation. The policies in New York translate the theoretical knowledge brought by Jacobs and makes practice in the application of design into the built environment. Former transportation commissioner Janette Sadik-Khan says, "Every city resident is a pedestrian at some point in the day. A city whose

streets invite people to walk, bike, and sit along them also inspires people to innovate, invest, and stay for the good” (Sadik-Khan & Solomonow, 2016). These objectives relate to every city, town and community that strives for its own sustainability. The question is how do the means meet the objectives in small towns and rural communities that do not have the resources of a New York City?

As the planning field has come to grips of the problems of auto-dependency, new thinking has emerged to redesign urban areas with goals of sustainability and re-introducing the human into the built environment. At the forefront have been the New Urbanists and the Smart Growth movements, who assess the lack of planning and design in many cities, suburbs, and sprawl that dominates new development. Andres Duany, Elizabeth Plater-Zyberk, and Jeff Speck paint a pretty grim picture of the status of developments that in some cases were technically in violation of the existing zoning codes at the time. It is their contention that good design can overcome the problems of past generations (Duany, Plater-Zyberk, & Speck, 2000). Their response was the start of the smart growth movement and the adoption of new urbanist principles of design. Smart growth and new urbanism are described as “the convenient remedy for the inconvenient truth” (Duany, Speck, & Lydon, 2010). It refers to the reality of the urban situation where we have built cities for cars and not for people. To frame smart growth, the group breaks down its principles into six key areas:

1. Neighbourhood Livability
2. Better Access, Less Traffic
3. Thriving Cities, Suburbs, and Towns
4. Shared Benefits
5. Lower Costs, Lower Taxes
6. Keeping Open Space Open (Duany et al., 2010)

The smart growth and new urbanist movements lose some influence if we take their principles and apply them to smaller communities outside of the metropolitan areas and their system of suburbs. The state of Wisconsin implemented state legislation that forced cities and towns to create plans based on the six smart growth principles listed. An evaluation of this program reveals the discrepancies that occur when big city principles are compared to small towns and rural communities. There are several rural smart growth policies that towns develop that would not serve larger places. They include goals and objectives that call for partnerships with local land trusts, agricultural considerations for development areas, incentives for the development of local small businesses, and the promotion of locally produced goods and services (Edwards & Haines, 2007). This work identifies the initial differences in values between small towns, rural communities, and large cities. This point will be discussed further later in this document.

Out of the smart growth and new urbanist movements comes the concept of walkability. It has become the focus for Jeff Speck, who now serves as a consultant for urban design and the development of walkable places. He sees walkability as both an end, a means and a measure for encouraging vitality in a community. While his work began as one of the lead voices for smart growth and new urbanism, his field narrowed to walkability as it became a common theme that influences and embodies most of the others (Speck, 2012). His fixes are to give the built environment back to the pedestrians and give them a chance to revive downtowns and neighbourhoods that have been the domain of the car.

CHAPTER 2: Walkability

Defining Walkability

The roots for walkability go back to Jane Jacobs, who set out the conditions for diversity in the streets of American cities. The goal of these conditions was to set out what is needed for vibrancy at the human scale where eyes on the street and the diversity of uses, buildings and people made for a more complete community (Jacobs, 1961). Further work by urbanists have brought these ideas forward into practical application in cities, towns and communities that look to respond to the global needs of climate change and redesigning of places away from dominant automobile use.

Walkability is seen as an encompassing concept that brings together many points of interest that contribute to changes in the built environment and the mobility of people. Walking is seen as the basis for sustainable communities and the most environmentally friendly mode of transportation (Alfonzo, 2005). As a theory, walkability means that a walk has to satisfy four main conditions; it must be useful, safe, comfortable, and interesting (Speck, 2012). The concept can be further defined as a simple, practical-minded solution to a host of complex problems that we face as a society, problems that undermine our economic competitiveness, public welfare, and environmental sustainability (Speck, 2012). To fully explain this concept, Speck offers 10 Steps of Walkability.

Useful Walk <ul style="list-style-type: none"> • Put the cars in their place • Mix the uses • Get the parking right • Let transit work 	Comfortable Walk <ul style="list-style-type: none"> • Shape the spaces • Plant trees
Safe Walk <ul style="list-style-type: none"> • Protect the pedestrian • Welcome bikes 	Interesting Walk <ul style="list-style-type: none"> • Make friendly and unique faces • Pick your winners

Figure 1 Jeff Speck's Ten Steps of Walkability

Speck describes walkability as an end, a means and a measure, which is where my study branches out to investigate how the concept is implemented by scholars and in practice by planners (Speck, 2012).

There has been a considerable amount of study that has gone into the decision-making process for why people walk or choose alternate forms of travel, other than a private automobile. They deal with aspects of density, destinations, distance to transit and amenities, diversity of destinations and the design of the built environment. All eventually come back to a choice made by people to serve daily needs for functional travel to and from work or school, and for recreation and leisure activities. This work will survey the needs for walking, the influences on choices and how design may impact these choices.

In work done at the University of California, a social-ecological framework has been developed for understanding factors that work together to affect human behaviour and particularly their choice to walk or not to walk.

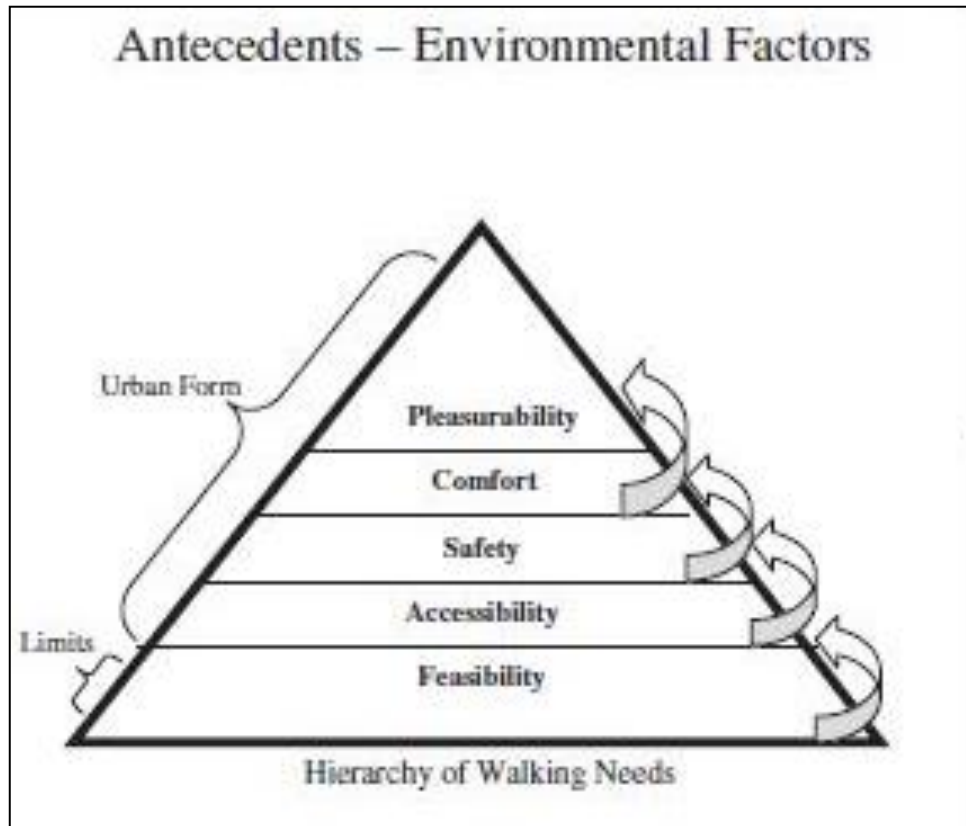


Figure 2 Hierarchy of Walking Needs (Alfonzo, 2005)

Borrowing from Maslow’s hierarchy of needs, Alfonzo has identified a hierarchy of walking needs that attempts to explain how individual, group, regional, and physical environmental factors affect walking and the decisions on mode of travel (Alfonzo, 2005). The study establishes five levels of walking needs within the larger social-ecological framework that are used to explain walking decisions. The 5 levels, as shown in Figure 2, are feasibility, accessibility, safety, comfort, and pleasurability.

1. Feasibility refers to the practical nature of a trip and whether it makes sense to walking or use another form of travel. This has implications for both utilitarian walking, choice of

mode, or for recreation and discretionary trips on whether to go anywhere (Alfonzo, 2005).

2. Accessibility deals with the encompassing pattern, quantity, quality, variety and proximity of other activities that may be available in a walking trip. It assumes that the feasibility of the trip is satisfied and incorporates more elements in a simple analysis of a residential to retail landscape (Handy, 1996).
3. Safety is referred to by Alfonzo as a relationship between the built environment the presence of crime. In this view, the level of safety may be affected by urban form, land uses, and the presence of certain groups or individuals. This seems to counter arguments by Jacobs and others that eyes on the street are needed to promote diversity and a public realm that is welcoming to people (Jacobs, 1961). It also takes a different approach that focuses on crime rather than fragments in sidewalks and infrastructure that affect walking. Physical features including block size, lane width, traffic flow, sidewalk design and other considerations contribute to safety as an element in pedestrian-oriented design (Speck, 2012).
4. Comfort refers to the ease, convenience and contentment of walkable areas. A person's satisfaction with a comfortable walk is affected by similar things that others link with safety. This may include the relationship between people and motorized traffic, conditions of sidewalks and paths, weather, and amenities such as street furniture. (Alfonzo, 2005)
5. Pleasurability is the highest order of need and assumes that each of the previous needs have been satisfied to some degree. In Alfonzo's explanation this suggests that diversity,

complexity, liveliness, scale, and aesthetics contribute to the quality of the walking experience. A case could be made that this contradicts the section on safety; however, it does bring the totality of the hierarchy of walking needs into line with others theories and models about walking and the choices to walk. (Alfonzo, 2005)

The main findings from Alfonzo suggest that the proximity of destinations, weather conditions, safety and well-designed pedestrian infrastructure significantly contribute to one's perceptions of walking. It would lead to a recommendation that planners should look to plans that consider all elements of the hierarchy of walking needs if they are to adopt goals that look for walkability as a means to re-designing their built environment and mobility systems.

The Argument for Walkability

One of the more significant issues that planners must face are those related to climate change and how planning can work to mitigate these issues. The question is how can changes in land use policies be used to change our footprint and allow communities to change their reliance on private vehicles (Ewing et al., 2007). Studies by Ewing et al have attempted to explain evidence that the built environment shapes behaviour and can be altered in response to changing priorities. While there is emphasis on changing the car culture, it is clear that there are many aspects to consider before reaching any kind of blanket solution.

There has been research in many areas that deal with different aspects of this problem. A growing body of work links the built environment with health issues in the general population. Others remain involved in linking land use and climate change. In all cases, it appears that some correlations have been made to link the various areas of study, yet there is a lack of definitive evidence that any one factor stands alone (Ewing et al., 2007; Frank et al., 2006; Robinson,

2015). It may be that there is no one solution, but a set of guidelines in a framework that can be adapted to each community to suit its own characteristics.

Walkability, seen as a field that touches most other areas, is most relevant for the study of the built form and the impacts that it can have on the other areas of research. It appears to be a common goal of many scholars that are searching for the link that will point to recommendations for re-designing communities to meet climate change responsibilities (Speck, 2012).

Walkability and the Built Environment

There are many studies that have been done to explain the link between human behaviour and how our built environment impacts our lives. Among the goals of this work is to establish the relationship to extent that we can understand how changes to our built environment may change behaviour in a significant way (Ewing et al., 2007; Speck, 2012).

The new urbanists and other reform-oriented designers argue for changing three dimensions of the built environment – density, diversity, and design – to be the keys to sustainable development. The research by Cervero and Kockelman, tests the ideas that compact, mixed land uses, and pedestrian-friendly designs reduce car dependency and promote walking, cycling and transit use (Cervero & Kockelman, 1997). Distance is the fourth D, that rounds out the key parameters (Ewing & Cervero, 2010). The test is to determine which elements are significant in the decision to walk. It is suggested that density, diversity, and design are conceded to increase the use of alternate transportation from the private vehicle; however, there appears to be discrepancies for describing utilitarian or commuting by walking and walking for recreation or leisure. Further study also reveals that the presence of destinations between transit and

residences increases the feasibility of walking as a commuting option (Alfonzo, 2005; Ewing & Cervero, 2001).

Compact communities are able to reduce vehicle trips and encourage alternatives by bringing destinations closer together. Distance and diversity of destinations allow more opportunities to leave the vehicle at home. The design of compact communities also contribute in the built forms that reduce parking, have better transit options, and constitute a more diverse mix of residents and land uses that lead to reduced car use. There is some discussion in Cervero's work that suggests that the concentration of uses in one centre may be less important than having diversity of any kind, provided that there is enough links between uses, residences and alternate forms of travel (Cervero & Kockelman, 1997). The research proves that compact communities have the most significant influence on travel choice for business trips or commuting, which supports the new urbanists and the like.

Density is an important factor that makes places inherently walkable or not. Without adequate density, it is difficult to have enough people within a reasonable distance of destinations. Low density areas do not provide a comfortable distance for those who rely on walking as well as other forms of alternate transport (Ariffin & Zahari, 2013).

One angle that is absent from planning literature is the capacity from which humans are able to change behaviour with changes to their environment. Most studies focus on the causes of change, while few have reviewed what goes into changing human habits. To answer this question, I turn to the field of psychology and the theory of planned behaviour. This is a useful conceptual framework for managing complex human social behaviours. Azjen et al, present their paper that states that in general the application of the theory of planned behaviour to any particular area provides a host of information that will be effective in changing behaviours. The

basis for this statement are rooted in findings that we can learn about unique factors that induce one person to engage in the behaviour of interest and to prompt another to follow a different course of action (Ajzen, Netemeyer, & Ryn, 1991). This applies to the question about the built environment and how changes may impact human actions for walking and other forms of travel. It suggests that effective design, with sufficient awareness and education can dictate change in behaviour and points to the opportunities for design to impact future use.

Measuring Walkability

In the literature on walkability, many authors link the four Ds into their explanations for their findings. These include Density, Destinations, Distance, and Design. In each case, they are attempting to measure walkability as a concept and a field that in its nature is difficult to measure with quantifiable data (Ewing & Handy, 2009). Many will contend that density is necessary for most programs to succeed, because they are focused on large cities where there are the numbers needed for such schemes. The challenge is how to incorporate the remaining Ds into a measurable scale to determine what key elements are required for analysis.

One of the difficulties in measuring walkability is that much of the data is derived from qualitative elements that are not measurable in quantitative analysis and other matrices. Work by Ewing and Handy, brings progress to assessing the built environment and the relationships with transportation decisions. It studies the effects of design of the built environment instead of the behaviour of the people who choose walking or other travel options. The goal was to give researchers some parameters to use to test built environment and street design for relationships with walkability (Ewing & Handy, 2009). The research seeks to measure five urban design qualities to test their significance for walkability. *Imageability* is the aesthetics of the built form, from architectural quality, colours, presence of trees, and landmarks. *Enclosure* is the compact

nature of the built environment. It can include aspects of setbacks, height of buildings, the activity between road and building, and the view corridors. *Human Scale* looks at the activity at street level, from first floor windows, street furniture, landscape architecture, and satisfaction of the five human senses. *Transparency* refers to the blending of aspects from windows and entrances, to views along corridors and of prominent features. *Complexity* brings the full picture and the many actors at play at street level. It makes sense of the organized chaos that could describe street scenes in highly walkable places (Ewing & Cervero, 2010; Ewing & Handy, 2009). The one takeaway from this study is that all of these elements are interrelated, with continuous overlap and relationships so that no one element stands alone.

There is some discrepancy amongst scholars around the distance to be used when studying walkability. A common perception is that a 400m radius is the standard buffer from any one point from which would be considered a feasible distance for walking. Recent studies have disagreed with this number, extending the benchmark to 600m or five minutes of walking time (Larsen & El-Geneidy, 2010; Lee & Talen, 2014). I will touch more on this later when methods and assessments are discussed further, especially in smaller communities.

There is considerable research done in separate fields that look at the decision-making that chooses to use a private vehicle or alternate travel options. Most focus on the built environment or public health for indicators to measure; however, there are some who contend that this does not account for a person's perception of these features that influence walking and other forms of activity. Many indicators deal with measurable numbers like Vehicle Miles Traveled to represent findings. These show change and results for vehicle use, but they do not give any indication of the effect of design in the change. To fill this gap, Cook et al developed a set of design quality indicators that assess walking infrastructure in the built environment. Their

findings indicate that design quality can vary within and across infrastructure that is rated as having high walkability, with a moderate degree of confidence (Cook, Bose, Marshall, & Main, 2013). It is suggested that more work is needed on design indicators to truly represent certain aspects. The inability to find strong and consistent evidence linking objective physical features of the built environment and walking behaviour points to a yet incomplete understanding of the relationship. To complete this understanding, design quality indicators must be used in conjunction with more study on the relationships between the built environment and what impacts active living (Cook et al., 2013). Design qualities like inwardly focused street geometry of centres may facilitate walking, but a more important factor is the concentration of business activity in the compact commercial core in the centre (Boarnet, Joh, Siembab, Fulton, & Nguyen, 2011). The takeaway is that walkability remains elusive as measurable in general context, making local and regional contexts important when assessing communities.

One of the key components of a walkable neighbourhood is the sidewalk or pedestrian network that provides connections to destinations. In many places, several aspects of sidewalks that would encourage more walking are not implemented. Many areas are either without proper sidewalks or they are in bad condition. Where there are better conditions, the lack of activities along the walkway contribute to some walking areas being underutilized and abandoned. This leads to the assumption that improving the active street designs would significantly promote walking as a preferred form of transport (Ariffin & Zahari, 2013).

For the general public, the most high-profile measure is WalkScore, a web-based application that rates whether or not a person living in a particular place is more or less likely to walk or require a car. While the general public gets a broad score that is simple to understand, scholars have dismissed this platform as it lacks robust data to generate accurate information that would satisfy

a more rigorous study (Duncan, Aldstadt, Whalen, Melly, & Gortmaker, 2011). Work out of Montreal has shown GIS-based applications that satisfy some of the gaps in WalkScore to create more comprehensive testing. The key adaptation allows the system to account for more than a single destination in a walking trip. It builds on the literature that suggests that the diversity of destinations has significant influence on the decision to walk (Cervero & Kockelman, 1997; Cook et al., 2013). There are many who have sought to create tools and frameworks that are defensible indicators of walkability that are transferable to most places. Modest success has been achieved in some cases, although there remains a lack of a consistent, replicable assessment.

CHAPTER 3: Defining Rural Character

The definition of a small town or rural community can vary greatly depending on the author or the place of study. For the purposes of my research, I will use the guidelines set out by Statistics Canada; which defines rural communities as less than 1,000 residents and not in a classified metropolitan area (Statistics Canada, 2006). A small town is therefore defined at 1,000-9,999 residents and also not within another metropolitan area (Statistics Canada, 2006; Stewart et al., 2016). The general assumption is that a small town has less population with a smaller geographic reach than large cities, though I would argue this can vary greatly. Towns are surrounded by undeveloped land that is source for resource extraction, recreation and tourism. While some small towns and rural communities may possess walkable neighbourhoods and the characteristics that scholars would agree lends to walking, there are some significant difference for what motivates small town residents to walk compared to their big city counterparts (Stewart et al., 2016).

“Rural” is a social construction reflecting local understandings, history, lifestyle, and institutions. For policymakers, rural is a reflection of distance and density: the distance between places and the density of people in particular location (Bollman & Reimer, 2010). Distance relates to the transaction costs for economic activities, and the movement of goods, services, and people (Bryant & Bruce, 2010). Density is related not only to market concentration but the concentration of knowledge and efficiency. In general, rural places have high distance and low densities when compared to urban centres (Bollman & Reimer, 2010).

I would argue that the actual distribution of towns and rural communities has less to do with economics and as much to do with lifestyle choices. We find relatively dense communities in

remote locations, with scattered developments near urban centres and mid-size towns in between. Each are unique entities with opportunities and challenges for policy makers. Policy should reflect the issue of identity and social representations when defining a rural area and its community. Community building is where people develop a shared understanding of themselves, with values and opportunities that reinforce social networks and their view of rural. This is done in a community-driven process that builds on the human values ahead of economic perspectives shown by Bollman and Reimer (Bollman & Reimer, 2010)

Two defining characteristics of rural are distance and density, which link well to the discussion of translating the 4 Ds – Distance, Density, Design, Destinations – into the rural context. Typically rural communities and small towns have greater distances to travel to access goods or services. This is due to lower densities needed to support higher levels of service.

Distance decay is defined as the extended distance that makes certain activities more feasible than are otherwise possible (Alfonzo, 2005; Bunting, Filion, Hoernig, Seasons, & Lederer, 2007). When coupled with lower densities that come in smaller communities, there is a natural reduction in the diversity of business goods and services available. To outline this point, Bunting sets four components to define a profile of small town; a low density profile, easy automobile access between activities, depleted core areas, and a sense of place that celebrates rural landscapes and conveniences (Bunting et al., 2007). This is a useful description as it replicates other works that assess walkability in such places and touch on many of these attributes in their findings.

Rural and Planning

Rural planning is the process of taking management of the built environment and applying these concepts outside the urban boundaries. While it may seem to be a simple translation, it is clear that the uniqueness of rural character is important for describing what is important in the rural perspective. To gain a full understanding of rural communities and small towns, I must look at how these places function as their own identities.

In Canada, the study of rural and small towns goes back to the beginnings of planning, the national survey, and the writings of Thomas Adams. In *Rural Planning and Development*, Adams takes on rural development in the era post WWI as an opening of a new era of social construction and national expansion. The question was not would Canada grow, but how would it grow? It was his view that in the future, science and clean government must work side by side with enterprise and energy in building up the national and individual prosperity. He viewed a system that would function best when taken as a bigger picture and how relationships are fostered in the greater Canadian society (Adams & Caldwell, 2011).

Through his work, Adams identifies some key areas of rural development that needed to be addressed; to create healthy communities, strong social structures, and sufficient government support for rural life. These pieces lay the groundwork for rural character and identify what will be important for rural communities going forward. While he worked on rural values, he spotted some of the very issues that continue to plague our societies nearly 100 years later. There were already troubling trends for land ownership that was going to speculators, resource extraction and production, and interests that were primarily economic. The human needs were being missed. Wolfe gives Adams credit for the beginnings of the conservation movement that incorporates human life, natural resources, and development in both a scientific and productive

manner. This is an early definition of sustainable development: the management of the relationship between people, the environment, and the economy (Adams & Caldwell, 2011).

The takeaway from this early work in the planning field is that towns and villages should be viewed as more than a collection of houses, stores, and factories; they are places that are valuable to the people who live there and who identify with the characteristics that are rural places. Later in the 20th century, these concepts raised by Thomas Adams got lost with the rise and dominance of the automobile culture that overran human health. It was not until the 1960s and in later works that the need for environmental and social planning were brought forward. It was in this period that the duty to provide a healthy environment that was capable of sustaining itself was solidified (Coleman, 1976).

Rural is often defined by measures of distance and density, particularly in official accounts through Statistics Canada (Statistics Canada & Bollman, 2007). Friction of distance refers to how far one is willing to travel to obtain a higher level of goods and services. This connects to density, as generally reduced density will reduce the level of goods and servicing. How these relate to each other from one community to another is a central view of this paper. I will address these issues in more detail when I get into Central Place Theory and the regional view in the next chapter.

Population

Rural populations in Canada are facing changes brought about by fundamental trends in society. To understand trends we first must define what is rural, what is a small town, and what are larger urban centres? Rural Canada consists of a diverse set of small areas, each with its own unique identity, character, and issues. The definition used by Statistics Canada classifies a settlement of

more than 1000 persons as ‘urban’ and the remaining as ‘rural’ (Bollman & Biggs, 1992; Bollman & Clemenson, 2008). The challenge with this basic division is that studies using these limits will now consider towns like Ladysmith in the same consideration as Vancouver and Toronto. For the purposes of this paper, I will define populations of more than 1000 as ‘small town’, with those under this threshold as ‘rural’. Those with greater than 10,000 residents will be considered a larger urban centre. It should be acknowledged that there may be some villages and hamlets that will hold higher densities yet remain part of the rural definition.

The rural to urban migration has been seen for many decades, and in fact large urban centres are growing faster than smaller cities, small towns and rural areas. This trend has continued in spite of the still rising rural population in Canada. Since the 1930s, the rural population, small towns, and even medium-size cities have increased their numbers at a steady rate (Bollman & Biggs, 1992; Bollman & Clemenson, 2008; Bollman & Reimer, 2009; Du Plessis, Beshiri, Bollman, & Clemenson, 2001; Walker, 2010). This is often lost in the study of human settlements, where most assume that the rural population must be declining, with the ever-increasing urban population. Immigration and other factors have pushed urban centres forward and therefore the percentage of the urban population has grown quicker than that of rural areas; yet the total number of rural residents has still been increasing.

What this means is that there is a portion of the population who idealize rural living as a desirable way to live whether it is to retire or to raise a family (Walker, 2010). Much of this has to do with the rising costs of living in top metropolitan areas. It is especially prominent in BC where there are considerable affordability issues in Metro Vancouver, and in a few other pockets of the province.

In the early 1980s, rural area and small towns had seen growth by 25%, or nearly 1 million residents in the preceding 20 years (Hodge & Qadeer, 1983). In that time, the smaller centres were losing some of their commercial enterprises due to the increased commuting capability brought by cars. Despite the distances, many chose to continue to live, build homes, raise their children, retire, and identify with small town values (Bollman & Clemenson, 2008; Du Plessis et al., 2001; Hodge & Qadeer, 1983).

In 1983, there were almost 9,500 towns and villages in Canada, with nearly 4.5 million people living in them. The average size of these small towns is under 500 persons, although the majority of towns and villages have fewer than 200 residents. It is also shown that small-town living is not a fading trend, and that more people lived in small towns in 1976 than at any time previous (Hodge & Qadeer, 1983). It reveals that while the proportion of the Canadian population living outside the major cities is decreasing, the total number of people living in small towns, villages and rural communities is actually rising. The thrust of the evidence is that small towns and villages are viable. Small centres demonstrate that they are a significant and generally stable form of habitat in an otherwise highly urbanized nation.

It should be noted that nearly one third of the rural population lives within the rural-urban fringe of metropolitan areas. The population living outside the commuting zone of larger urban centres has maintained a stable population since the 1980s; however, the population of rural areas and small towns has remained larger than that of all smaller cities (10,000-99,999 persons) (Bollman & Clemenson, 2008). Nearly one quarter of rural and small town Canadians live outside of a long commute from a large urban centre. This means that a substantial portion of rural and small town residents are completely reliant on their own economy and labour markets with no influence of an urban centre of 10,000 or more (Bollman & Clemenson, 2008).

Character and Values

Most rural residents choose rural areas with a purpose. Rural residents are shown to be most content with their lifestyle when compared to urban residents. According to Bollman, more than 85% of Canadians living in remote rural areas want to remain in rural Canada (Bollman & Biggs, 1992). Further, most rural residents would like to retire and remain in rural areas (Hodge & Qadeer, 1983). As rural residents, there is an acceptance to go without certain goods and services that are taken for granted in large cities (municipal water, Ikea, professional sports). It is a choice, but one that is valued by those living in rural areas (McKie, 1992). The price of rural sacrifices the conveniences of urban, yet it still provides an attractive and enhanced community attachment for many Canadians (Statistics Canada & Bollman, 2007).

As technology changes, there has been a shift to allow for more cost-effective transfer of goods leading to new manufacturing and employment opportunities in rural areas that were not available under previous systems (J. Crowe, 2001; Statistics Canada & Bollman, 2007). While these innovations have also been present in urban areas, there is a leveling of the playing field for some of the more remote rural places that are seeing traditional economies decline.

As settlements have evolved, it is clear that the choice to live in rural or small towns are a result of a multitude of decisions by individuals, households, firms, agencies, and governments of all levels. These decisions reflect sets of values that are influenced by multiple factors. While the decisions at the household level are significant, the total set of decisions being made cannot be understood without first understanding the broader context in which they occur (Bryant, Coppack, & Mitchell, 2000). These factors must be considered in the planning of rural communities and small towns, because they will dictate the effectiveness of programs to

encourage decisions for transportation, and how these influence decisions on where to live in the context of walkability, transit and the use of a car.

The rural and small town labour force is concentrated in goods-producing industries when compared to town and city labour forces. Rural and small town labour has also seen a trend towards growth in service-performing industries that support the goods-producing industries. This is an indicator that a community is gaining resilience and strength as an economy with diversity of work. It also shows that as the aging population increases, so does the need for services and supports within each community (Bollman & Biggs, 1992). Typically, rural and small town residents receive more social transfers and pay less taxes than those in large urban centres. The lowest incomes are recorded in towns between 1,000-30,000 persons. While there is a considerable income gap between families in rural and urban areas, the numbers have held steady with a \$10,000 disparity remaining consistent over the preceding decades. The desire to live in rural and small towns mitigates the difference in incomes, largely due to the lower costs of living in rural communities (Bollman & Reimer, 2009).

There are a higher concentration of low income families in rural Canada and in the rural urban fringe. This may be the choice by families to live where they can afford to raise children, plus the perceived safety of the rural lifestyle. The lifestyles of rural and small town Canada tend to show lower levels of literacy and crimes, while seeing a high level of volunteerism within the community (Bollman & Biggs, 1992).

Ray Bollman and others through Statistics Canada, have done considerable work to define rural and small towns in Canada over many years (Bollman & Biggs, 1992; Bollman & Reimer, 2009, 2010; Du Plessis et al., 2001). The concept of rural is driven by the people and not the economics or goods and services that are available to the local population. Quoted in one of

Bollman's work, a Mrs. Skinner on the issue of the hospital closing in her small town said; "saving the hospital wouldn't save the town, saving the town would save the hospital" (Bollman & Reimer, 2009). In this case it had become clear that the town must work to strengthen the town to justify the infrastructure, goods, and services provided in things like a hospital.

Most small towns are not resource development enclaves, even if a resource is why company towns and the like exist. Most single industry towns are not isolated but are centres for employment, goods and services and part of the functioning region along with other towns. The secondary and tertiary sector jobs are often overlooked for their value and contribution to the community. Think about the jobs generated by the need for a collection of stores, garages, restaurants, and other private businesses, plus those in the school, post office, local government, and health facilities. There is a healthy range of employment and local income to sustain a small community (Hodge & Qadeer, 1983).

The community-based values on rural life were once based on personal relationships amongst community members and association with those intimately involved in the community (McKie, 1992). The daily activities of human interactions with the same people in the post office, the local co-op grocery, the boutique stores, and other places, provide the social fabric and the societal roles that define the identity of the place. Each person serves a roles in these communities and lends to a greater meaning of rural life (McKie, 1992).

One of the challenges faced is that of the evolving economy and building resilience into rural communities and small towns that were once based on single resource production (Bryant & Bruce, 2010). How do these places survive and change to support themselves through the matrix of service businesses and a local economy that is not dependant on global markets? The

fundamental values of social and community life in rural areas are changing as these communities are drawn into the distribution networks of the modern, globalized society.

It is clear that to understand rural character, there must be a measure of different forms of capital than the traditional economic paradigm. Rural character and the change in the economics of small places have been characterized by the growth and development of a variety of service sectors, the growing importance of knowledge capital, the openness of the economic system, advances in communications technology, and the growth of new needs in consumer trends (Bryant et al., 2000)

The renaissance of rural values is about the peace, friendliness, and simplicity of life in the countryside. In comparison with cities, towns and villages appear as havens of untroubled and friendly lifestyles; absent of congestion, noise, and blight (Hodge & Qadeer, 1983).

Bunce identifies three groups of people that make up a rural community – ruralites with deep roots in the area, newcomers transplanted from the city who still have links to the city, and home comers who are new to the area but are rural people with roots in another rural community (Bunce, 2010).

Human activities function within systems that involve the exchange of ideas, commodities, and information (Bollman & Biggs, 1992; Bollman & Reimer, 2010; Bryant et al., 2000; Harris, Alasia, & Bollman, 2008). The exchanges or interactions that link decision-making units within different areas of analysis include the flows of people, goods, information, money, capital, and ideas.

With the development of technologies into the internet age, rural and urban economies have been integrating, and moving rural economies away from the traditional agriculture economy. It is

changing the role of communities that have been built on resource production in the staples economy to one based on the communities themselves with services and goods production providing jobs needed to sustain their communities (Apedaile, 1992).

It is this shift that Bunce uses to suggest the farm, with its associated agrarian ideology, and the town, with its associated economic and social heritage, rank high as a desirable way of life for the urban resident (Bunce, 2010). While this may result in some relocating to the rural fringe and farther afield, others will be satisfied with the quest for the experience of rural as an escape from the city.

The growing number of visitors to picturesque and historic towns has provided a large part of the necessary market threshold for both the re-emergence of ubiquitous economic functions and the emergence of specialized, high-order amenity functions. There is also a link to an aging population with skills that can be turned into homemade woodcarving, pottery and other items found in these niche goods and service businesses.

Rural Capital

Social scientists have been working to understand the relationship between social capital and the natural environment as factors to draw workers and new local businesses to a community. To further understand the meaning of social capital, Reimer et al present a framework that highlights the normative structures through which it is manifested. This study introduces four types of normative structures which condition social capital; market, bureaucratic, associative, and communal. Through the discussion, arguments are made that social capital is organized in different ways by the normative structures through which it is embedded. There are important relationships between different aspects of social capital that are often overlooked. A useful

distinction can be made to separate social capital for what is used versus what is available. It is the access to social capital that can be used to analyze power relations that is useful for planning communities by recognizing who makes decisions. By understanding different aspects of social capital, the missing pieces can be identified (B. Reimer, Lyons, Ferguson, & Polanco, 2008).

The conclusion is that by identifying the uses of social perspective for informing public policy, there can be better decisions that are more conducive to the needs of communities. It is stated that rural communities have been disadvantaged for decades, since the dominant bases of influence have shifted to market and bureaucratic forms of social capital. Human capital has therefore been decreased in its influence on public policy decisions. Communities that reorganize to support social norms will be most likely to succeed and develop resilience in the global economic environment. Public policies should consider how to best utilize social resources already present in a given community (B. Reimer et al., 2008). This lends well towards a bottom-up, community-based planning processes that create a vision going forward for each community. It cannot be imposed by bureaucrats that come in with a plan that is to fit all.

Through studies in Washington State, Crowe shows that the community's social networks; co-ops, chamber of commerce, neighbourhood associations, sports clubs; positively affect the prospects of successful labour recruitment for industry and development of small business within the local community (J. A. Crowe, 2006).

Crowe reveals that in the Pacific Northwest, the natural environment and sustainable jobs tend to match with the values of small towns and rural communities. That said, the social fabric of a place cannot be ignored, where community-based organizations hold significant voices in the development and management of a resilient economy. Consistent with the literature on social infrastructure and economic development, communities with active community organizations,

discussion of local issues, businesses committed to supporting local projects, and participation in decision-making are more likely to have a strong local economy (J. A. Crowe, 2006). These findings work well with the depiction of the strength of small towns, which is based on kinship, religious or shared-interest groups (Bollman & Reimer, 2009; Hodge & Qadeer, 1983). When this dynamic exists, the community becomes stronger and the community works, plays, and has conversation within familiar environments and social ties (Hodge & Qadeer, 1983).

It is argued that rural perceptions are important and create increased tensions between economic development and the character of the communities. When development ideas do not match with the community values, the community will band together and have the ability to force policy changes. It exposes the need to allow adaptable at the regional level so to tailor rural development to the needs of each community. Each community has its own legitimacy and its own leaders that must be respected by those seeking to develop these areas (J. Crowe, 2001).

This gives credence that improving the social infrastructure of a place is important for developing the local economy. While it may be a long and difficult process, in the long run communities can achieve greater success that is sustainable economically, socially, and ecologically (J. A. Crowe, 2006).

Rural Community

There is an old saying in rural character that must be considered at all levels. “Once you’ve seen one rural community, you’ve seen one rural community” (Bollman & Reimer, 2009). This refers to the idea that no two communities are the same, each holds a unique identity. It leads to a need for greater engagement within each local community to fully understand the dynamics of each place. Rural policies should therefore have the flexibility to adapt to local contexts and achieve

the desired outcomes at the community level. There is no “average” rural community (Bollman & Reimer, 2009).

The strength of the rural perspective are in the individuals and organizations that oversee local affairs as advocates for attention from the different levels of government. Rural institutions such as the Lions Club, Royal Canadian Legion, farm organizations, chamber of commerce, and other associations hold significant influence in these places and contribute to the sense of rural (Caldwell, 2010). These are stakeholders that are needed in any development in rural areas and small towns in Canada (Apedaile, 1992). Rural residents tend to be involved directly or indirectly in the processes of local government, support the day-to day operations of the local school board, the regional district or the municipality itself. With a lack of resources available from higher levels of government, citizens are challenged to immerse themselves in local planning processes, assume leadership roles, and insist on accountability at the local level. For rural planners, this means they must be visionary, creative, relevant, and attentive to the evolving needs of their communities (Caldwell, 2010).

It has become clear that the best path towards planning success at the rural level is comprehensive engagement with the community and those who hold the true influence in the community. It means that the process of planning and developing the social infrastructure of a place may be a long and difficult exercise; however, in the long run communities can achieve development that is supported by all stakeholders (J. A. Crowe, 2006). The objective in understanding small places has many facets; one is that small towns and villages enjoy many of the same advantages as a city but are at the mercy of being at the end of the delivery chain.

Hodge and Qadeer focus on the people and their numbers, characteristics, trends and choices, rather than on the life of stores and businesses in small centres. The assumption is made that

town and village residents have made an accommodation to the trends of their small place. They make the trade-off of the simple rural lifestyle instead of the chaotic consequence of choices that are prevalent in a city (Hodge & Qadeer, 1983).

A small town or village usually has a grocery store, hardware store, gas stations, and goods and services related to the setting (farms, logging, mining, fishing, etc.). If there is a strong tourist presence there may be added goods and services that provide more choice for local residents in restaurants, hotels/motels, and more trendy clothing and department store type businesses. There are usually some of the typical national chains such as Hometown hardware, Loblaw's, Tim Hortons, but also a fair share of independent local businesses (Hodge & Qadeer, 1983).

Bryant and Bruce have done considerable work looking at economic frameworks to build resilience into rural communities incorporating local values in new opportunities. Community Economic Development is an approach that encourages the conservation and preservation of community values that define rural and small towns (Bryant & Bruce, 2010). In each case the framework can be adapted to fit the unique nature of each place and the people who live in each location.

Rural economies remain at the whim of transportation networks and how the flow of people, goods, and information moves throughout a region. This is where the regional view must be taken to reflect the realities on the ground and incorporate the system of communities in conjunction with the influence of the urban centres that exist in the area (Bryant & Bruce, 2010; Bryant et al., 2000). The challenge is managing the multiple actors and influences on new development and the redevelopment of rural areas. Things to consider include; multiple actors that influence the form and type of development, the multiple legitimate interests in the area, the desires of the individuals and organizations in the community, the identity of the place as it

exists and the desires of the future identity as it evolves (Bollman & Reimer, 2010; Bryant et al., 2000; J. A. Crowe, 2006). It means the strong interconnectedness of rural economies with other development orientations of a community.

Rural-Urban Fringe

The redistribution of urban residents into the countryside has shifted the needs and values of communities; though, not so much away from the tranquil, safe, rural lifestyle. Residential enclaves have sprung up on the peripheries of Canadian cities, like Nanaimo and others on Vancouver Island, as commuter refuge from the stress of the city. Many old industrial places are being transformed from old mills to gift shops, historical sites, and memories of past developments that seek to share nostalgia and experience of rural ambience (Bryant et al., 2000; Bryant & Marois, 2010; Bunce, 2010). These areas we know as the rural-urban fringe.

While some cringe at this change to the past rural life, others view this new commerce as new economic needs that are required to maintain resilience in otherwise declining resource towns. Ironically, the search for historical character and rural atmosphere by newcomers has guaranteed the continued existence and preservation of many towns in the countryside (Bryant et al., 2000). On Vancouver Island, these areas include Coombs, Chemainus, Ucluelet, Tofino, Telegraph Cove, and many others.

The governance of the rural-urban fringe is at the centre of this study, as the matter of jurisdiction and responsibility is passed from the provincial government to municipalities within city limits, and from the provincial government to regional districts for the rest. This decentralization brings a number of issues that come with delegation of responsibilities (Bryant & Marois, 2010; Daniels, 1999).

In the case of British Columbia, the municipal governments in the cities and towns will have their own sets of policies and regulations that cover the area up to the city limits. In some cases, this limit includes a containment boundary that is designed to focus new developments in concentrated areas within existing municipal infrastructure. The challenges comes outside of these boundaries where the responsibilities lie with the regional district, which may have significantly different policies and regulations (British Columbia, 2015). These differences are often misunderstood by the public, and used by developers to create new neighbourhoods on the edge of municipal boundaries that turn into sprawl.

The growth of the rural-urban fringe is a symptom of the car-dependency that we have seen in North America in through the 20th century. In the US, the top 39 metropolitan areas grew by less than 1 million people, while their surrounding fringe grew by more than 30 million. It is identified that growth management is needed across the country to protect the countryside that is still void of sprawl (Daniels, 1999).

It is all part of what Lewis Mumford referred to as “a collective effort to live a private life” (Daniels, 1999). The convenience of the automobile has gradually pushed development further afield from urban centres and the jobs contained in the inner cities. This convenience is continuously thwarted as commuting times and distances increase in search for privacy, cost savings, and the values of a rural lifestyle.

Statistics show that rural-urban commuters account for 16% of all workers residing in rural and small towns (Harris et al., 2008). These numbers are reflected in the number of urban residents who travel to rural areas for work, likely due to the location of high paying manufacturing jobs on the urban periphery. This follows the common pattern of inner cities becoming vacant as land values push businesses into the countryside (Bryant & Bruce, 2010; Bryant et al., 2000; Harris et

al., 2008). In most situations rural to rural commuting also accounts for a significant portion of the workers in other rural communities than which they live. Naturally, rural communities that are located farther from urban centres see more rural to rural commuting within a network of rural municipalities (Harris et al., 2008).

Harris et al highlight the need to look at the system and the relationship between rural and urban linkages, where the economies are pushing jobs and how transportation and mobility are affecting workers. The findings show that rural jobs are twice as reliant on in-commuting from other rural areas as from urban areas. This is likely due to lifestyle choices of those living in rural areas matching those values put forth by jobs also located in rural areas (Harris et al., 2008)

To explain this pattern of growth, Daniels brings several theories from the previous centuries. Johann Von Thunen's model uses the village centre and rings of land radiating outwards. This was seen as the ideal world of dispersal loosely based on the limits of perishable farm products. Ernest Burgess adapted this model to show an economic version of this pattern; however, these failed to recognize the developments of railways, streetcars, and eventually automobiles into these concepts. I will address these theories and a greater discussion about regional models in the next section.

Fringe landscapes are categorized into 6 categories as laid out by Daniels (Daniels, 1999) in Figure 3. It shows a progression of rural as one moves from a village centre into agriculture and resource areas. While this is an oversimplified view of a region, how these settlements function, look, and interact

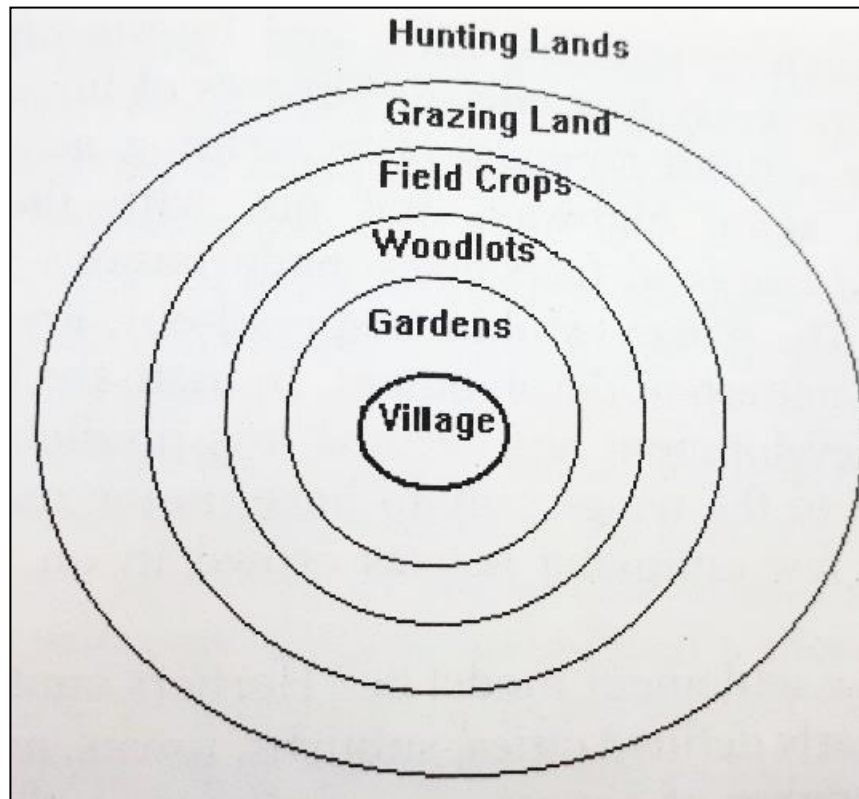


Figure 3 Johann Von Thunen's Village Model (Daniels, 1999)

with each other affect land use patterns, transportation, environmental quality, economic activity, and social relations. I will address the complexities of regional planning in the next section.

Rural policy is any public policy made by governments to do, or not to do, something that influences or impacts rural populations (Bollman & Reimer, 2010). It requires understanding of the interdependence of key entities; businesses, residents, households, social organizations, action groups and the environment (Bollman & Reimer, 2010; J. Crowe, 2001). Its primary role is to ensure social order so that the basic needs can be met and the future survival of society is enhanced.

The concern for rural policy in the face of declining resource dependence in the rural economy is to ensure equitable outcomes for all residents and how the communities are transformed.

The appearance of community reflects the feelings of pride and collective attitude toward land use. The rural-urban fringe has often been shaped by short-term wins on the side of the developers, who profit from those seeking their own homes but cannot afford the urban centres. This has resulted in all the single family residential neighbourhoods that dominate the perimeters of North American cities. They take on the forms of either a jumble of houses strewn along a highway or that was once its own small downtown, but has been swallowed by urban development and now has deteriorating nodes, disconnected from the community (Daniels, 1999).

Developers will say that they build what the market wants and what the government allows in its policies. If the design and location of new developments are to be vibrant, livable communities, then local policies and guidelines must change along with the preferences of those who buy the homes and operate the businesses.

CHAPTER 4: Regional Planning

A regional definition should be used for the analysis of regional issues. In a region, groups of communities would be expected to work together to promote mutual economic development and to improve shared values. At a broad regional level, the trends and patterns are similar to that of urban areas with increased use of technology and innovation driving communities economically, socially, and environmentally. Generally the number of the population is increasing; however, the percentage of the total population is declining (Bollman & Clemenson, 2008). To fully understand the functionality of a region, one must understand the relationship of one communities to another and how each fit within the system of a region.

The human experience of the landscape is as fundamental as any other factors (Lynch, 1976). These experiences are based on sensory qualities of humans based on their basic human senses. Sensory quality refers to the look, sound, smell, and feel of a place. This refers to what one can see, how it feels underfoot, the smell of the air, the sounds of activity, how patterns of these sensations make up the quality of places, and how that quality affects our immediate well-being, our actions, our feelings, and our understandings (Lynch, 1976). The social importance of these qualities are often overlooked or denied. Plans that ignore them make disheartening places.

There are growing concerns with rural land and the preservation of natural beauty rather than the creation of permanent human settlements. There are also interests to preserve fine historic man-made settings and the growing interest in maintaining the traditional rural scenery (Lynch, 1976). A regional government would be wise to develop sensory policies expressed as framework designs that specify the general location and sensory character of regional features. Frameworks are highly abstract, flexible, large-scale site plans that are appropriate to management at the

regional scale, while incorporating the nuances of local communities within the region. They call for extensive public participation and place limits on private development for the sake of preservation of the existing character. These provisions would be integrated with the more familiar land use and transportation plans. This is where progressive growth management is needed in rural areas, to guide development into areas that maximize

Our senses are local while our experiences are regional (Lynch, 1976). So a discussion over regional planning must include large scale items like air basins and freeway systems, and small items like sidewalks, street furniture, and signs. This calls for policies that deal with everything at scale from the large swaths of forest or farm lands, to individual trees and gardens. Each must fit within the larger framework at the regional level, but reflect the needs and desires of the local communities. Care for sensory quality should be the concern of the regional governments, in the case of BC these are the Regional Districts.

To understand regions and their role in rural communities, small towns, and the larger urban centres; I will bring forward ideas from European studies that are meant to explain the interdependence of each place within the system of places. These theories are brought forward into the modern context to allow for new technologies to be understood on how they impact the system. Combined they will be applied to Central Vancouver Island to show the relationship between communities and provide a basis for walkability as a vision for rural communities.

Central Place Theory

The primary work of German geographer Walter Christaller, observes the regularities of influence in the size and spacing of settlements in Europe. The theory is built on a hierarchy that places large first order cities at the theoretical centre of a region as seen in Figure 4 (Knox & McCarthy, 2005; Taylor, Hoyer, & Verbruggen, 2010). It would hold the highest forms of business, services, governance, and influence over the other settlements within its region.

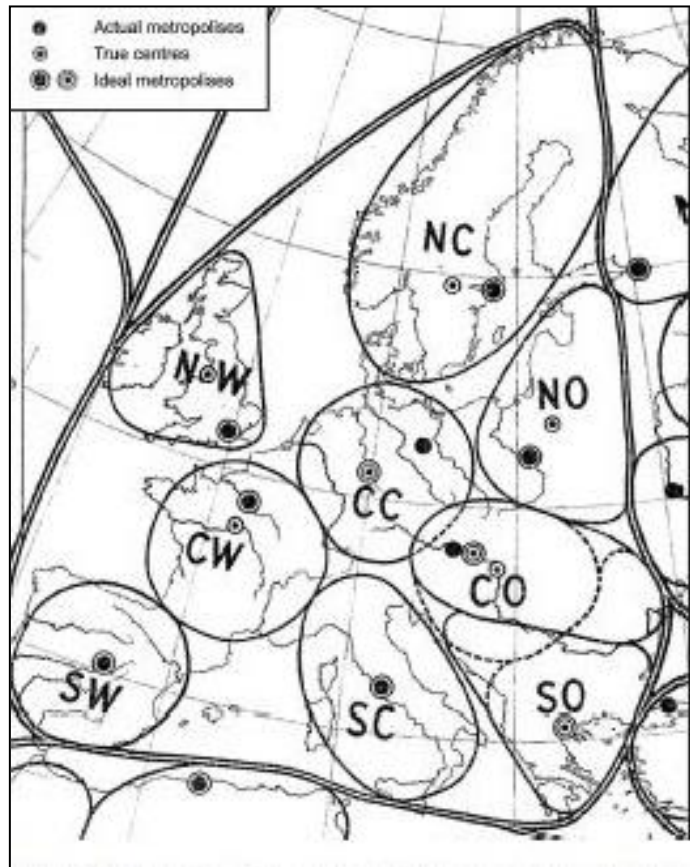


Figure 4 Christaller's Central Place Theory (Knox & McCarthy, 2005)

Subsequent orders are ranked based on the friction of distance, the distance one would travel for a particular good or service. Each step in the hierarchy would yield less diversity than the next order, with the distance to the next settlement an appropriate trip on the occasion that the people of the lower order need the next level of good or service. The lowest order of settlement would therefore be the small hamlet that provides the basic needs of daily life; a small collection of food stores, bookstore, and other small gathering places (Knox & McCarthy, 2005). For Vancouver Island, rankings would have Greater Vancouver at the top, followed by Victoria, Nanaimo, Parksville, Lantzville and Errington for their place with their relative order of goods and services.

Central Place Theory as a model of human settlement has come under fire as an incomplete description of human evolution over the past century of innovation. It is seen as an interlocking model that fails to reflect the true system of order with the onset of globalization and interdependencies from one city to another, and to the hinterland (Taylor et al., 2010). An update put forth by Taylor et al, comes from a rethinking that the hierarchical model between urban spaces only represent a partial understanding of intercity relationships. Jane Jacobs is one of the few urban theorists who did not assume the hierarchy of cities to view smaller, lower ordered settlements as important entities to themselves (Taylor et al., 2010). New ideas bring forward Central Place Theory in an update that establishes a new paradigm that depicts a network model that provides a fresh view of central places (Meijers, 2007).

This is not a dismissal of central place theory in the context of regional relationships, there remains a hierarchy that defines the places of settlements with nearby neighbours. For a globalized environment, there needs to be an update that better reflect new technologies and how they have brought places together theoretically that cannot be explained under Christaller's model. This is not to say that Christaller should be dismissed, it will be a key theory to explain the relationship of small towns and communities in the regional context on Vancouver Island. I will argue that this model is still relevant from a regional perspective and how cities and hinterland communities function in the larger system.

Bryant, Coppack and Mitchell, continue the look at regionalism in their discussion of the settlement organization of the city's countryside (Bryant et al., 2000). While they do not reference Christaller directly, the concept of extended influence by nodal cities (Dickinson, 1947) brings many of the linkages and dependencies that are shown in central place theory. It describes urban forms that extend from a dominant urban node, leading to the idea of a nodal

region. Shown in Figure 5, the pattern of development is seen at the urban view through to a national view. Most relevant in my assessment of Central Vancouver Island are the perspectives from both the Regional City Scale, viewing the influence of various nodes in their adjacent regions, and the Urban Field Scale, that explains the relationship of each node with each other. This modern view shows a hierarchy of nodal regions,

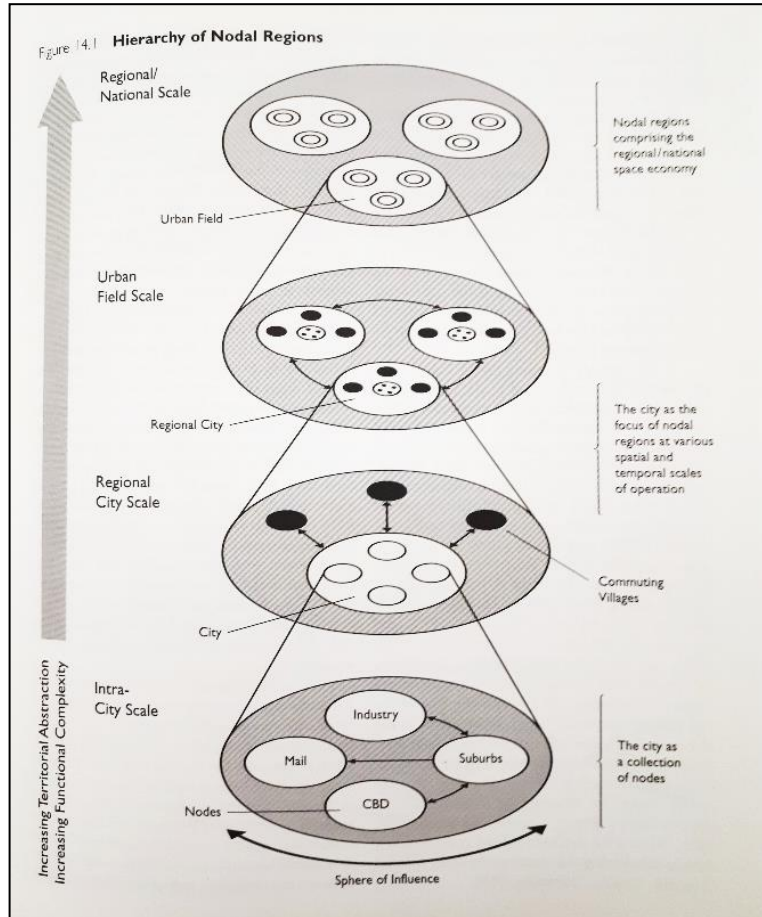


Figure 5 Hierarchy of Nodal Regions (Bryant et al., 2000)

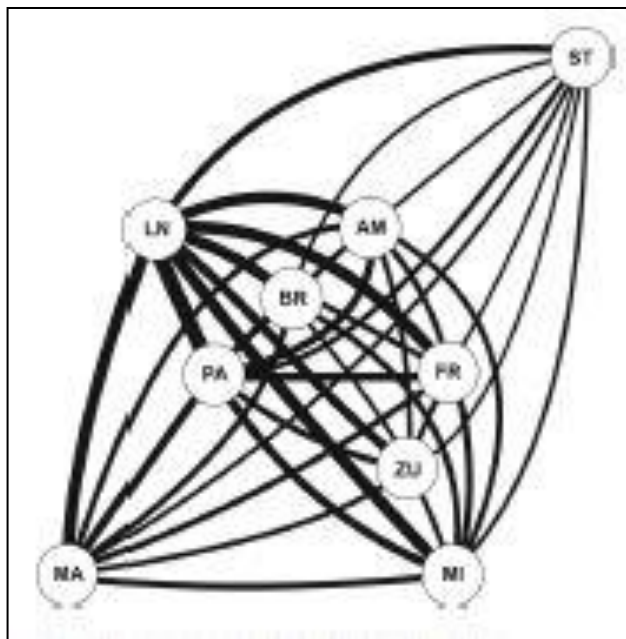


Figure 6 Central Flow Theory (Taylor et al., 2010)

similar to Christaller, that actually form within the inner-city and its connected nodes, and flows through the suburban areas to the countryside (Bryant et al., 2000).

Taylor et al provide a necessary update for Central Place Theory to Central Flow Theory, shown in figure 6, which represents the fluid mobility of society today. It makes the case for cities, towns, and communities to be

interconnected in a network with interdependencies in place of competition for hierarchical values (Taylor et al., 2010). This provides a new platform to value cities as special places, while maintaining the unique settlements and character of places in towns and small communities. It explains the complexities in the flow of people, goods, and information in the rural-urban, urban-rural, and rural-rural patterns that have been discussed in previous sections.

The use of central places brings forward a framework for viewing the regional context of development on Vancouver Island, allowing the analysis of the larger system. These theories lead to the streetcar systems of design put forward by Patrick Condon from the University of British Columbia. It is about the regional perspective that views each community as a piece of a system that compliments and supports development of built environments that reduce automobile use. The concept is the development of nodes as centres of communities, be it downtowns of the cities or a collection of buildings in rural communities (Condon, 2010). Condon's work ties together nicely with that of Bryant et al on the concepts of nodal cities, developing from nodes within the urban centre and extending to small towns and rural communities that are influenced by the dominant node (Bryant et al., 2000).

Walkability in Small Places

Small towns and rural nodes are not the typical area of study for scholars, who primarily focus on large cities in their research; however, compact development that is in line with smart growth and other principles focused on reducing automobile dependencies are becoming more common in low density suburbs and rural areas. A study out of California looked at these types of communities to test the viable walkability in places that are typically dependant on automobiles (Boarnet et al., 2011). The results revealed that compact developments around retail and service nodes showed an increase in walking, when compared to corridors or other forms of increased

density. The key was the concentration of local shops and services, which itself represented traditional elements of a walkable place. It shows that even in places where the density of residential neighbourhoods struggle to meet typical levels to support walkability, the built environment in the node made walking a viable option. What brings this study further is that the commercial businesses in the node oversupplied the local community with necessary options that would normally support this type of commercial activities. This suggests that highly walkable nodes become attractive for driving trips for residents in other areas to seek a node as a destination (Boarnet et al., 2011). This is a critical outcome in the context of Vancouver Island as it provides walkability as a means to the feasibility of rural nodes for residents, with enough support from people in other communities.

The Smart Growth and New Urbanist movements bring the idea of transect planning, which is to create immersive environments, created to preserve the integrity of each location along the rural-to-urban continuum. This is a matter of finding an appropriate spatial allocation of the elements that make up the human habitat. Rural elements must find their place in rural places.

Duany and Talen call for the promotion of a more sustainable urban form – defined simply as a urban pattern that is compact, pedestrian-oriented, less auto-dependent, and not disaggregated into single-use zones. Their perspective is based on ecological theory and how humans fit within the larger ecosystem. This leads to many of the new urbanist theories that Duany is famous for, including calls for walkable areas that reinvigorate the public realm and work to integrate regions socially, culturally, and economically. These roots are drawn from many of the famous names in planning including Ebenezer Howard, Patrick Geddes, Lewis Mumford and Jane Jacobs (Bunce, 2010; Duany & Talen, 2002).

A transect is a geographical cross-section of a region used to describe a sequence of environment change from urban centre to rural countryside. This is also known as the rural-to-urban continuum. The idea is to create an experience of immersion in any one type of environment by specifying the elements that comprise that environment in a way that is expected, given the nature of the place. This creates a local vernacular traditions of the human habitat that are unique to each community. The key is to find the key qualities of the immersive environments to gauge the sense of a place and its place within a region (Duany & Talen, 2002).

Duany and Talen push for human environments to be more walkable, pedestrian-oriented, diverse and promoting of public space as appropriate along each stage of a transect. It is in this sense that planners must connect to a larger (regional) view of the rural-urban relationship.

Quoting Geddes, the purpose is to find “the rhythm of the land masses of the earth, from the snow to sea, from highland to lowland” (Duany & Talen, 2002). Each valley section had a different level of natural intensity which would determine what occupation was likely to be found there. This further establishes theories that a transect methodology involves taking a linear cut across a landscape, along which a diversity of systems and habitats is sampled, measured, and analysed.

It is here that we can bring together transect theories with regional views. I argue that regions are not a simple organization of community attributes along a transect line, but an irregular transect that pulls influences by each community in the area. Central Place Theory should be used to evaluate the influence of each community and show the unique characteristics of each place in relation to each other. The challenge in planning is that planners must seek to rectify the problem of spatial misappropriation: density in rural landscapes without the composition of street life, marsh grasses on main streets, and deep setbacks in urban areas.

In Canada, towns and villages constitute a network of small centres that provide the necessary goods and services for the farm, fishing, mining, or logging firms, towns and villages that form the rural economy. People shop for food, clothing, or furniture, and obtain services such as mail delivery, medical care, or entertainment at centres within their vicinity. It is only when need exceeds these limitations that travel to a larger city is necessary (Hodge & Qadeer, 1983). Small centres provide the functions of the communities, they are the focus of organized activities by community organizations, the elementary school, church activities, the Royal Canadian Legion, and various forms of Chambers of Commerce, Lions Clubs or similar groups. Recreation is a centre of life with much social interaction happening around the local ballpark, curling rink, hockey arena, and swimming pool.

Small towns and villages are not autonomous entities, they are elements of a regional system of communities that must work together to support each other. Where one community may not have a certain good or service, the next town may have it and vice versa. This relates very much with Central Place Theory as explained by Christaller (Knox & McCarthy, 2005; Taylor et al., 2010). The nationwide similarities among towns and villages are evident, but there are wide ranging differences from one region to another. Even British Columbia will have obvious difference from Vancouver Island to the Kootenays, to the Peace River region. Hodge argues that each region not only has an internal hierarchical order but also is linked with other regions through the flow of people, good, services, and information (Hodge & Qadeer, 1983).

By viewing spatial interrelations of villages and cities as a system, contemporary theory has gone beyond the conventional notions of central-place hierarchy, which present a static picture of the relationship among settlements (Taylor et al., 2010). With the current rapid flow of people, goods, services, and information, the simplicity of central place theory should be modified to

include transportation and the flow of information to get an accurate picture of the postmodern small community. Innovation and technology will continue to challenge this vision and force planners to update their view of small communities and their roles in the regional context.

It is important to remember that towns and villages are generally manufacturing and service centres, servicing the wider region characterized by the location and resources available in the area (Bollman & Biggs, 1992; Du Plessis et al., 2001; Hodge & Qadeer, 1983). Small towns are at the centre of the sub-region, but subject to the forces and factors that govern the larger region's economy, social development, and growth prospects. It serves the role to organize the economic and social activities of its local region, and it participates within the larger regional context.

Transportation and the Network

To understand rural communities there must be an understanding of the linkages that occur in four ways: through the flows of resources, services, people, and information among them; the formal and informal institutions they share; the environments they share; and their common and complementary perceptions, values, identities and ideologies (W. Reimer, 2010).

The city's countryside is characterized as a collection of environments comprising the support base for a variety of activities and functions. It is a complex environment with multiple dimensions affecting everything from the economy, recreation, residential developments, and the transportation networks. These carry significant implications of the changing relationships of settlements, and how the public sector has responded to the challenges that these issues present (Bryant et al., 2000).

Communities have changed through the 20th century migration to urban centres, mainly due to the declining labour demands with the implementation of machines and technology into traditional rural economies. This disconnected rural communities from the globalizing economy, further isolating populations from the means of supporting rural life. The latent effects are seen in the secondary institutions; such as Canada Post, health care, and social services; being reorganized, leaving a diminished presence in the smaller towns. All of these factors led to the need for commuters from rural places to access services and daily needs (W. Reimer, 2010).

Traditionally, the majority of people have commuted from their residences outside the urban centre to their place of work within the city. These are the people who are least likely to use alternate transportation other than their private automobile (Heisz & LaRochelle-Cote, 2005).

This has changed with the costs of living and the attractive rural lifestyle pulling residents to the countryside and away from the core of urban centres.

Retail trade and small businesses are shifting away from the urban core in search of lower costs.

There is a growing need for concentrating places of employment in nodes, to strengthen the ability to obtain public transit services in rural areas. Non-traditional forms of transportation are eroding the market share for cars; however, lower densities of residents and jobs impede the efficiency of alternatives including walking, cycling, and public transit (Heisz & LaRochelle-Cote, 2005).

To pull individuals out of their cars requires a reasonable alternative to match the perceived cost, timeliness and convenience of car commuting. As commute patterns become more complex with the creation of new workplaces in rural areas, regions will face the challenging task of encouraging their residents to make more use of alternatives (Heisz & LaRochelle-Cote, 2005).

Hodge and Qadeer bring in the theory of Counterurbanism – representing a shift in regional distributions of population and jobs and the changing concentration of people in relation with the different town, village or city centres (Hodge & Qadeer, 1983). Further definition is that counterurbanism is the growth of rural economies stimulated by inward migration to rural communities (Bosworth, 2010). Bosworth shows trends in the UK where in-migrants are responsible for growth in rural microbusinesses and more employment than the former agriculture sector. The takeaway is that shifts are occurring in rural communities away from traditional rural economies and towards small businesses that mirror that of urban areas. That said, new businesses must fit and integrate with the unique rural identity of each rural community. What works in one community, may not in another (Bollman & Reimer, 2010; Bosworth, 2010).

Rural towns and villages are at the outer end of the national and provincial delivery systems for foundational services like postal, health and amenities. As such, small places suffer from a lack of variety in private and public goods and services; yet this remains part of the simple rural lifestyle that the residents of small places intentionally seek (Hodge & Qadeer, 1983).

The rural area is different than that of the city of influence. The different roles, uses, and nature are too pronounced for the same approach. There are different values from greater importance of the natural environments to the role of social organizations and clubs within the communities that hold significant political power. In rural areas, small communities support residential, recreation, commercial, tourism, and heritage functions, as well as finding a home for wildlife and other uses unique to each particular place. The city's countryside requires a more innovative and comprehensive approach than is practised by planners and developers in an urban context (Bunce, 2010).

The need for a holistic approach to the rural economy is relevant (Bosworth, 2010). It should be clear that comprehensive planning and development in the city's countryside can only take place within a policy framework that recognizes the multidimensional nature of that particular part of the regional system. The structure and stresses created in the old resource based economies, must be considered in any planning and development of rural areas (Bunce, 2010).

Certain features of urban-centred behaviour will be introduced to rural areas as more people move to the countryside, especially as the baby-boomers look to preserve their wealth through retirement. These processes must be integrated with the rural values that are attracting these people to move in the first place. It furthers the idea that it will be necessary to integrate internal and external networks of the communities and the region. New opportunities, new investment, counterurbanism, and new people make community-based planning processes a necessity in rural areas. This is how places build capacity and understanding of the change in their community, where they can plan for formation of new businesses and the development of child care, infrastructure, and support services can be targeted for maximum efficiency.

Growth Management

Managing how a region grows is vital, if complete and walkable communities are the goal. Growth management is a tool that has become popular for regions looking to slow the dispersal of sprawl into rural areas. In adopting a set of containment policies, local and regional governments need to set two key planning objectives. One, to remediate the failure of the past. Two, to be proactive to identify which new developments should go ahead and be serviced versus those that should not happen due to low densities and unsustainable designs (Daniels, 1999).

An effective growth boundary should contain sufficient land and servicing to support the expansion of the community for twenty years. Daniels suggests two techniques to achieve this goal. One is to establish firm village or town boundaries to concentrate residential and commercial development into the most efficient areas. Second is to bring in rural residential zones, which will allow for those looking for the remoteness of rural, but shut out the developers that are looking to carve up open space for unsustainable suburban-style developments (Daniels, 1999). The regional view will see these developments as enhancing nodes which can then be linked through public transportation and trails to neighbouring towns, villages, and the larger urban centres.

It is imperative that local actors, involved in the management and planning of communities in the region, embrace the values in the functions of their land that serve the broader regional population. This leads to a greater understanding of the multi-functionality of land and farmland that can be developed into secondary uses to maintain the vibrancy of the community and move away from single economy regions (Bryant & Marois, 2010).

Policies for flexible zoning that allows for a mix of uses would enable developers to build more compact, creative, and pedestrian-oriented projects (Daniels, 1999). Cluster zoning is an example that has been promoted as a way to allow non-farm developments in farming areas. The idea is to allow part of a farm to be developed while the remaining portion is maintained for farming and open space. This allows higher densities in small areas which could support village development complete with a village containment boundary (Daniels, 1999).

In BC, there are factors that currently exist that limit development in rural areas. The Agricultural Land Reserves protects farm land, but also serves to limit new built environment. Natural areas, mountain ranges, and coastal areas, also provide barriers to development, forcing

developers to concentrate on density in nodes. I see a need for regional governments to expand these policies to further protect open spaces and encourage developments into nodes.

Sense of Place

I have spent a great deal of time gathering an overview of what it means to be rural, which will inform how walkability transfers to small communities. Each community is a place that represents the way of life of the people who live, work and play in that place. The sense of place is of particular interest, as it brings out the uniqueness that are rural communities when compared to urban centres. It is important to state that sense of place can be construed based of the physical environment and the social attributes of the community (Stedman, 2003). There is no one worldview from which to identify the sense of place, but it is a multi-dimensional construct that represents the beliefs, emotions and behavioural views of a particular setting (Jorgensen & Stedman, 2006).

We all live in places. Sometimes we love and care for places, sometimes we hate our places. The nature of North American development is to seek out new places and step over the places where others have been. This desire for “new places” leads us to leave the confines of existing communities to seek out new locations to seek out new dwellings, which has lasting and significant impacts on our places. The question remains, how do we design places that nurture and maintain our desire to be in that place? The answer is that we must present places that are active to our human senses – colours, smells, openings, faces, enclosing, exposing, or protecting (Lynch, 1976; Schneekloth & Shibley, 1995). Our places offer themselves to us in a special relationship, and as a form of reciprocity our recognition is expected.

The liveliness or vibrancy of a place is influenced by the transparency of the setting; the way people can view their presence in a place; the manner in which things express their action and purpose; the pattern of ownership; and the mix and density of movement and activity (Lynch, 1976). A place is defined by its symbols of care and pride, but especially where one must live and talk at length to local people to uncover their deep associations. The liveliness and the expression of values in a place increase as the degree of local control increases. Any analysis of this quality therefore begins with an understanding of the given landscape, its settlement, its history, its inhabitants, their culture, and their political economy (Bollman & Reimer, 2010; J. Crowe, 2001; McKie, 1992).

Storytelling is a powerful means for joining community. It is part of the origin of the place, its ongoing commitment to a place and its meaning. Stories are the adhesive that hold groups together; your group of buddies is nothing without the wildly hilarious stories that recall experiences made together. A story provides the commitment to the future through a desire to live in vibrant and centred places that are attached to the people themselves. Reimagine the community into something new and vibrant and able to tell its own adhesive story.

If you live in a rural area or along the fringe of an urban centre, chances are you live not far from a stream valley, vast meadow, or forested areas. These areas are in the path of urban development that has been unmitigated in North America. That is because most towns and regions have adopted zoning policies whose principle purpose is to set out rules for orderly conversion of natural lands into developed properties. There is no “greener vision” that differs from that which produces sprawl (Arendt, 1996).

The special places of rural and small towns give these communities their distinctive character. Paradise need not be cleared, graded, and paved over to put up parking lots (Mitchell, 1970);

although that has been the fate of many natural areas, especially adjacent to human development. To change the North American mindset there must be a shift to view special places as members of the community. As entities, these places demand that we become active placemakers again, to participate in community and maintain what is built by us. This requires community building by the people, for the people. What we need to enable us to live well, to dwell, is to trust in the possibility of a beloved place and our own significant part in making such places.

Public Engagement in Placemaking

The uniqueness of a small town or rural community is often seen in the overlap of community members in various functions (Miller, Kim, & Schofield-Tomschin, 1998). Social life and business often overlap; the person in the general store could also be on the board of the neighbourhood association, the person in the bank is part of the Lions Club, the person in the community hall also serves on the school board.

The key to community-driven placemaking is the involvement of the stakeholders that take ownership of the process and the final outcomes. The scope is developed out of the stories told by the community in conjunction with town officials, planning professionals, neighbourhood organizations and those who work to preserve the character that has drawn the people to a place. In this process the community sets the definition of what the neighbourhood is, where the boundaries are and how we should distinguish the boundary as a placemaker. The result is full understanding of the issues and the solutions, and a full participation by those who play in the community. The people determine who can play (Schneekloth & Shibley, 1995).

History continues to repeat itself as most communities still operate under conventional zoning practices without a clear idea as to how the natural lands that make up special places could be

preserved. The answer is simple, to zone for open space and limit the amount of buildable land in a given region. As a solution, Arendt proposes a density-neutral approach that respects private property rights and the ability of developers to create new homes, but preserve the remaining natural areas that are the special places of rural character (Arendt, 1996). This approach provides a fair and equitable way to balance conservation and development objectives. It creates opportunity for middle ground and create more liveable communities.

The rules of design is that form follows function. It seeks to answer questions like: What is the function of the rural communities and the land that surrounds the human settlements? It should offer a good place to live, but what does that look like?

To answer these questions; planners, architects and landscape architects must recognize the complex interaction of design elements – buildings, transportation networks, and open space – that make up the overall quality of the community and regional environment. What is often missing is the human scale to these design elements that must go ahead of the automobiles and other 20th century planning failures (Daniels, 1999).

Rural communities and small towns share many characteristics referred to as the dynamics of smallness (Hodge & Qadeer, 1983). Each should be incorporated into design guidelines that are refined to suit each unique community.

The aesthetics of a community are subjective to the unique perspective of the people. It leads to the need to seeking the opinion of the public and to have them involved in the formation of design principles for their own community. This can be done through a Visual Preference survey or a design charrette.

Village design can enhance a sense of community and set the identity of the place. One approach features a series of transit villages connected by public transportation networks. This leads to a regional view where the true relationship of the collections of communities is acknowledged and understood (Condon, 2010; Knox & McCarthy, 2005). The key to success depends on how much development is allowed to scatter throughout the countryside, instead of being concentrated in villages as nodes within the larger system.

Biddulph looked at the development of Urban Village Centres in the UK, which were brought into popular views under the direction Prince Charles in the 1980s. Though he concluded that the concept was a utopian, nostalgic and deterministic version of what was reality; many of the characteristics described have value when looking at the development of nodes. The concept was widely regarded as a plausible means for merging ideas around Neighbourhood Planning, Urban Geography and Sociology, Community Involvement, Urban Design, and Sustainability. Villages were to be built on large sites characterized by compactness, mixed-uses and dwelling types, employment, leisure and community facilities, appropriate infrastructure and services, public space, and good access to public transport (Biddulph, Franklin, & Tait, 2003).

While there were significant means to building community identity and develop nodes where there was either new developments or to revitalize a declining site, some considerable challenges remained when implementing urban village centres. The plans were widely seen as utopian and ambitious for the sites selected. In most cases the costs for the developers made the concept unreachable from a cost point of view. The concept was ultimately adapted in each case to fit the local context. Greenfield developments were less successful than projects that built on existing sites that had declined for one reason or another. The historical identity of the place informed the form and character of the designs that would be included in the development of an

urban village centre. The case studies in the UK revealed plans that covered areas ranging from 1 to 300 hectares in area, with between 160-15,000 residents, with the majority towards the smaller end of the scale. It shows that while the concept was intended for large urban centres with significant densities, most were implemented and built in smaller communities. Some of these discrepancies can be explained by the loose policies that allowed much of the design to be left to the developers. They simply continued to build predominantly single-family housing as had been the norm, leaving much lower densities than had been intended under the concept (Biddulph et al., 2003).

In the cases studied, density was shown to have a significant impact on the sense of place of the village. It also showed a pattern of acceptance, where those living closer to major metropolitan areas were willing to allow higher densities than those in smaller or rural communities. Once completed, the village centres became convenient places for residents to shop for basic necessities and participate in community venues, while car dependency continued to other areas and choices for retail and leisure activities. It is interesting to note the reference to schools as a binding agent within the schemes, where people felt a greater sense of community through ties to the local school. While it can be said that a certain amount of success was achieved for placemaking, it is difficult to conclude that villages became self-sufficient, one of the fundamental goals of urban village centres (Biddulph et al., 2003).

The concept of community-driven design in rural and small towns builds on the findings of Crowe who describes the characteristics of such places (J. A. Crowe, 2006). Bringing local voices into the discussion about the form and character of the community has the best chance of building capacity for new projects. Further study into the self-development model explains that the ownership of issues in a community helps to define its own design principles.

Flora et al define a local self-development project that must include involvement of a local organization or government, investment of local resources supplemented by available funding from outside sources (grants, etc.), and local ownership and control of the enterprise (Flora, Green, Gale, Schmidt, & Flora, 1992). Their conclusion is that self-development should not be considered the primary economic development strategy, but complimentary to other activities in most rural communities. The benefits include an increased sense of community among residents and contributes to the community economic vitality by making the local economy less vulnerable to sudden shifts in the global market economy (Flora et al., 1992).

Policies should assist communities with self-development projects. Most rural communities have the ability to implement their own economic development schemes, but lack the technical assistance for information and financial assistance to support their initiatives. Policies that support new community-oriented institutions, should be encouraged by creating funding, tax incentives, and other means available to local entrepreneurs. Red tape is a significant challenge for small, community-level initiatives that are at the whim of regulations designed for large commercial enterprises. Local regulations should be adapted so they are not roadblocks to well-intentioned, sustainable, small businesses (Flora et al., 1992).

Conventional planning is based on concepts for city development, walkability is no different. Small town planning is much more about specific problems and issues that are relevant to the small scale, small growth, and diverse land-use situations (Hodge & Qadeer, 1983). The responsibility for encouraging superior subdivision design, based on sustainable principles in rural areas is shared by a number of stakeholders; landowners, developers, realtors, site designers, planning staff, elected officials, and conservation groups (Arendt, 1996). There is a need for a regional view that goes beyond the conventional scope of urban planners. This

includes area-wide mapping of natural features, network of communities and their transportation links, farmland and other natural assets, and historical features that are of value to the community.

In rural areas, the unique character of the communities will drive the need to limit development in their special places, whether it is working farmland or green space that is used for recreation and conservation of their rural values. Residents and local officials must take steps to create community open space networks through principles of conservation in subdivision design, based on New Urbanist principles (Arendt, 1996; Duany & Talen, 2002).

Placemaking for Walkability on Vancouver Island

To bring my guiding concepts of walkability, regional planning, and placemaking together I bring in the work Jill Collinson, who has done considerable research of rural life in the Regional District of Nanaimo (RDN). Collinson looks at how the concepts of complete communities and agricultural urbanism are applied to rural areas (Collinson, 2013). This fits nicely with the concept of walkability as many have linked complete communities with the walkable places.

Rural areas tend to be more spread out, have smaller population base, and feature highly localized issues. Integrating regional planning and community design within these communities can be an effective means for growth containment at the urban-rural interface. The characteristics of rural communities include organic lifestyles, community-driven initiatives, safety and calmness (Rye, 2006). Following along with Christaller's Central Places, rural communities are strongly influenced by their municipal neighbours in a stratified organization of communities (Knox & McCarthy, 2005). Bryant describes this relationship between city and rural as a neighbourhood of the city's countryside (Bryant et al., 2000). While there continues to

be a migration from rural to urban in Canada, rural is changing and is among the more interesting places in their complexities (Bosworth, 2010; Halseth, 2010).

The bridge from regional to community planning is placemaking and how we design places in rural contexts. The urban influence is mirrored broadly in rural development, bringing concepts of urban villages into non-urban areas (Biddulph et al., 2003). The RDN Rural Village Centre policies reflect this trend. With this in mind, it is important to note that each rural community has its unique characteristics that are not replicated in all situations. There are strong ties of community within those areas that are the reason people choose to live in rural areas (Bollman & Reimer, 2009).

The RDNs Rural Village Centre policy is essentially a growth containment strategy to direct and distribute growth in designated centres. While it may be a worthwhile strategy, its implementation and effectiveness is questioned as fragmented with diverse management approaches. (Meligrana, 2003)

The application of “urban village” to “rural village” can be expected to require alternate approaches and frameworks that use values of both the district and the local community in the design and placemaking. Community design principles that acknowledge and incorporate user needs feed into a complete community concept, based on new urbanist ideas. A community is best planned and designed to be never finished, but always complete (Quayle, 1997). With the urban-rural fringe influencing this design, there will become a hybrid of urban and rural concepts that inform what the design actually looks like, remembering that no community is the same. The design must play off of the influences of the relationship with the regional system to determine the extent of its node and the realistic goals of the walkability concept. This type of

planning takes time and the cooperation of the community for the investment to pay off as a benefit that actually happens.

Rural Village Centres are based on policies that aim to promote a diverse mix of land uses that allow people to live, work, play, and learn within a walkable environment. Placemaking is the key as a bonding agent allowing for similarities and differences. In this frame, the concept of walkability and the principles brought in from practice in urban centres is a useful goal in community design and placemaking. A regional view built out from the communities themselves will create a forum to mitigate the competition between centres and create a community of communities.

The question in this study is how to incorporate these unique characteristics into a set of goals and objectives built on walkability principles? My recommendation is to establish community-based goals for village concepts as nodes within a system of complete communities. These goals will fit into a broader regional plan that protects farmland and open spaces between each community, and concentrating new developments within the containment boundaries to build density in nodes.

CHAPTER 5: Site Visits

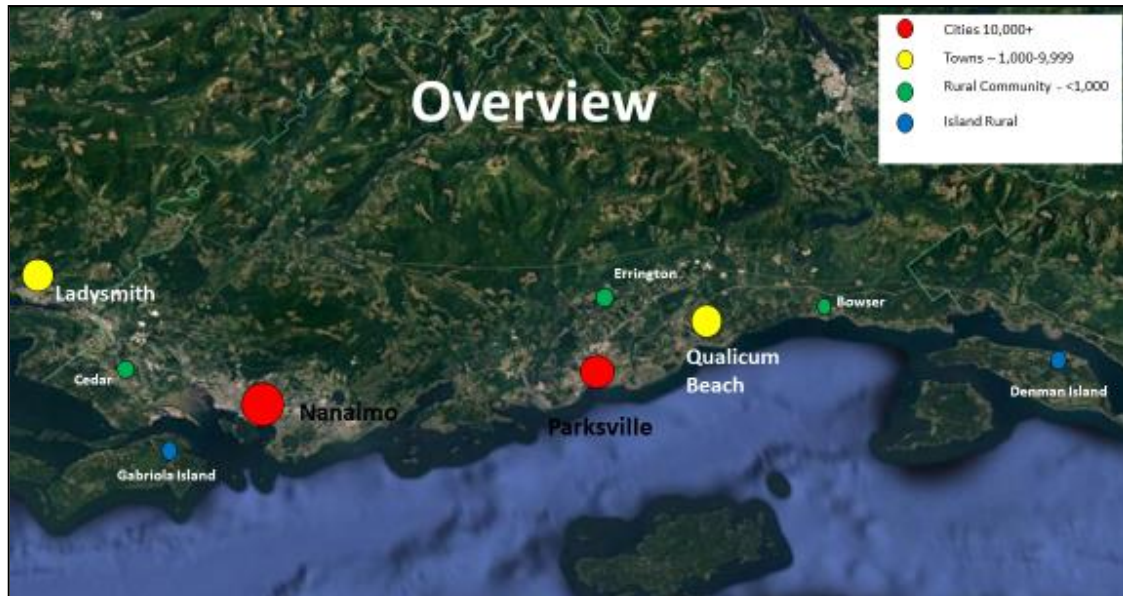


Figure 7 Distribution of Site Visits

To ground my research into the Vancouver Island context, I conducted a series of site visits to observe the activity within each node. In my selection of sites, I looked for a diversity of places to show how each community is different and how context changes based on the 4 Ds – Density, Destinations, Distance, Design – and how Speck’s 10 steps of walkability may be applied.

In each case study, I first go through a brief profile of the community, followed by my observations and recommendations for walkability in each place. In all cases, there are arguments to be made that walkability principles can be applied to varying degrees, based on the desires of the local community.



Bowser



The village of Bowser lies within the unceded territory of the Qualicum First Nation.

The village of Bowser is located within the Regional District of Nanaimo, approx. 21kms north of the Town of Qualicum Beach and 35kms



Figure 9 Bowser Village North

south of the City or Courtenay (Regional District of Nanaimo, 2010). It is situated in Electoral Area “H” of the RDN, which has a current population of nearly 4,000 residents (Regional District of Nanaimo, 2017). Transit lines that run through this community are currently inactive in the RDN system.



Figure 8 Bowser Village South

The area is described as a collection of distinct neighbourhoods that have diverse values, which shared many common characteristics (Regional District of Nanaimo, 2017). The village of Bowser is one of these neighbourhoods, strewn along Highway 19A, with fragmented collection of commercial businesses.

Observations

The primary area, shown on the right in Figure 8, holds great potential as a walkable place with some necessary improvements. A secondary node Shown in Figure 9, is approx. 800m south of primary node with no path or sidewalks available to pedestrians.

At first glance, the village at the north end works well together as its own unit. There are sidewalks and paths that connect between stores, businesses, and the green space directly behind the complex. While these are good things, there is a lack of connectivity from one cluster to the next, with an ambulance station between natural focal points of the coffee house and grocery store. Pedestrians must cross the busy Highway 19A to access the businesses across from the main part of the node. There are some attempts at pathways; however, they are quite uneven and do not invite people to use them as alternatives to getting back into their cars.

A secondary cluster is located south along the highway, containing a general store and post office. Both clusters are included in planning documents for the Bowser Rural Village, but they are missing any links between the two (Regional District of Nanaimo, 2010). One could use the highway to walk from one cluster to another; however, there would be significant comfort and safety concerns in doing so.

Bowser Village has tremendous potential to serve as a focal point for the surrounding, largely rural community. While there are limited selection of destinations, there are many of the fundamentals to serve day-to-day needs for most people. There are enough places of employment to maintain some level of economy within the node; however, there will need to be

accommodation for those who will commute to larger centres for work. Visitors will be drawn to Bowser for its smallness, with interesting shops and experiences.

Recommendations

There needs to be better connectivity to make the node more cohesive and encourage people to park their cars once and walk to each destination within the village. Well defined paths, with appropriate materials that fit community values, make the pedestrian experience safe and comfortable while enjoying Bowser's unique character.



Cedar



Cedar lies within the unceded territory of the Snuneymuxw First Nation.

Cedar is located in Electoral Area “A” of the Regional District of Nanaimo, a short distance from the City of Nanaimo to the north. The community strongly supports maintaining and enhancing its rural character and way of life (Regional District of Nanaimo, 2013). The Cedar Village Centre is the heart of commercial activity in the area, with the Village Plan meant to direct future growth into well-defined areas.



Figure 10 Cedar Village from the South

Cedar has traditionally been a farming community with some resource activity. With a 2006 population of 2,836 (Statistics Canada, 2016),



Figure 11 Cedar Sidewalks

it is typically agricultural/rural with a few pockets of concentrated development. BC Transit services Cedar in the RDN system, with regular daily service to the City of Nanaimo. With the

development of the Village Centre, there has been new developments that will increased density in the immediate area of the village.

Observations

Cedar village is the gathering place for the larger community that is quite dispersed over a large, mostly agricultural area. There has been a concentrated effort to develop the node around the 49th Parallel Grocery Store and the surrounding businesses that make up the village. It is accessed from Cedar Road as the main arterial route through the community. The immediate area is seeing some growth with the development of single family homes, to go with the existing neighbourhood, sports fields, and supporting businesses within reasonable walking distance of the village centre.

The village is well positioned to be self-contained on the side of the road, with a comfortable design for those already in the node. It is somewhat less appealing for someone accessing the site on foot or alternatives to a private vehicle. Sidewalks are very fragmented,



Figure 12 Cedar Unfinished Sidewalk

with crosswalks leading to little or no pedestrian infrastructure. As seen in Figure 12, there are sidewalks that are well constructed leading towards the village, but are then cut for parking spaces just before one reaches the destination.

Recommendations

Cedar village is well on its way to being a functional node that has many positive attributes that lead to good walkability. With some added density, more attention should be paid to the network

of pedestrian infrastructure. The node will always serve as the focal point of the wider community and so the goal needs to be to develop walking within the node to encourage people to park once. Some carefully defined walking paths will set the identity of the village that match the values of the community. The RDN must work with its transit partners to enhance bus service, not only to Nanaimo, but within the Cedar community for alternate means for accessing the village.



Errington



Errington lies within the unceded territory of the Snaw-Na-Was First Nation

The rural community of Errington is located inland in central Vancouver Island, west of the City of Parksville and Highway 19. A traditional

agricultural area, it is known for low density, with strong rural character valued by its residents. It lies within Electoral Area “F” of the Regional District of Nanaimo.

The Errington Village Centre has been the location for commercial, cultural and social

activities of the area since the early 1900s. Currently, the Centre contains a general store, several retail/service stores, a community centre, a sawmill, and the Errington Elementary School (Regional District of Nanaimo, 1999). The closest point to reach public transportation is an approx. 86 minute walk from the General Store.



Figure 13 Errington General Store



Figure 14 Errington Intersection

Observations

Errington is the most remote, rural node that I visited for this study. The greatest barrier to walkability in this community is distance, as evidenced by the army of school buses surrounding the school at the end of their day. Centred at the intersection of Errington Road and Grafton Avenue, the village centre is the heart of the community. It is almost exclusively accessed by car, with no evidence of alternative transportation available. However, it is located amongst farmland and level topography, leading to the idea that a network for cycling could be a viable option for most abilities.

The general store, shown in Figure 13, is the crossroads for the people in the community. It serves as grocery store, liquor store, gas station and gathering place for many people. During my visit, it was clear by the conversation between customers and clerks that this was where everyone's secrets were told. The people in the store represent the social hub in remote rural communities where local groups and organizations wield substantial influence on any decision or changes happening in the area.

A 400m walking diameter surrounding the general store has very little in the way of walking infrastructure. The adjacent collection of businesses (Figure 14) are all serviced by their parking lots with nothing to encourage people to walk from one side of the intersection to another. That said, there are the beginnings of a healthy node that has a number of daily destinations that would lead to a walkable place.

Recommendations

Errington has tremendous potential as a node, beyond the general store. Its greatest challenges are distance and density, with the current population needing a vehicle to access the node. While adding density may be contentious for the local people, I believe that there is a community-based solution to developing this node. It must be intentionally incremental that requires ongoing community engagement to clearly define the values of the community and to build the capacity for change. Walking paths should be encouraged to define the edges of the node, with new residential developments providing places for residents of Errington as they age and are no longer able to care for their farmland.



Denman Island



Denman Island lies within the unceded territory of the K'omoks First Nation.

Denman Island is located north of Bowser, a short ferry from Vancouver Island. It is under jurisdiction of the Islands Trust for planning matters; however, is part of the Comox Valley

Regional District for most community services.

Denman Island today is a quiet, peaceful place with a largely rural character and significant natural areas. Two goals expressed by many islanders are to retain a closely knit community and to remain within the environmental carrying capacity of the island, both of which depend largely

on land use and would seem like choices within our control (Islands Trust, 2008).

The population is currently at 1,165 residents according to the 2016 census (Statistics Canada, 2016); however, this number fluctuates greatly with seasonal residents visiting the island in the



Figure 16 "Downtown" Denman Island



Figure 15 Denman General Store

summer months. The island sees significant traffic with people transiting through Denman to Hornby Island.

Observations

The “downtown” on Denman Island is a fairly compact area centred on the general store. It serves as the heart of the island with few other gathering points. The collection of businesses includes a café, bookstore, real estate office and a few other small outlets. These are concentrated around a distinct core of community services including the community school, activity centre and extensive sports fields and festival space.

Denman has the beginnings of a network of trails that connect different places within the node, which

fit well with the island character that is evident in the community. The edges are defined by the Earth Club Factory guesthouse and restaurant to the east, the community health centre to the north, and the ferry terminal connecting Denman Island with Vancouver Island to the west. I have concerns over accessibility, with many buildings having stairs to access businesses. With an older community, many people were observed having difficulty accessing these places.



Figure 17 Denman Path



Figure 18 Denman "Sidewalks"

Recommendations

Denman is a unique place, defined by island values that are distinct from that of small communities elsewhere. There is no desire to grow and add people to their community, so much that they do not even want the people traveling to Hornby to stop and visit. With this in mind, any new developments must have meaningful public engagement to ensure the values of the community are protected.

I would recommend an ongoing series of consultation with community leaders to develop shovel-ready projects that can be completed when funding becomes available. Projects would include adding to the existing trail network, creating a more accessible downtown for those with mobility challenges.



Gabriola Island



Gabriola Island lies within the unceded territory of the Snuneymuxw First Nation.

Gabriola Island is located a short ferry from Nanaimo BC, off the east coast of Vancouver Island. Like with Denman Island, its land use planning is handled through the Islands Trust; however, in this case most community services come from the Regional District of Nanaimo. The Gabriola community is made up of people of diverse ages, incomes, educational background and national origin. Many creative people have made their home here, and arts and artists are an important part of life on Gabriola. The natural resources of the area support a rural lifestyle and livelihood (Islands Trust, 1999).

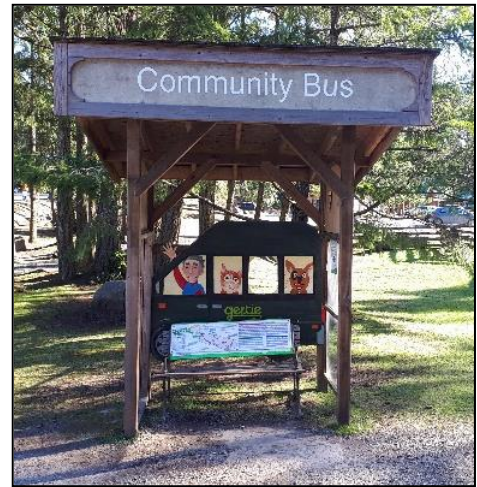


Figure 20 "Gertie" Stop



Figure 19 Folklife Village

The current population current sits at 4,033 following the 2016 census (Statistics Canada, 2016), with seasonal residents fluctuating throughout the year.

Gabriola has its distinct character that is rural in natural, with the unique island values amongst its residents. It is home to a number of artists, retirees, and those looking for peaceful island life. It also serves as a significant commuter community with many residents traveling via ferry to Nanaimo for work. Gabriola has its own, community-operated bus service known as the Gertie (Figure 20). The Village Centre is the core of the community both economically and socially, with a few outlying commercial areas around the island (Islands Trust, 1999).

Observations

In the Village, there are a number of well-designed business complexes that in themselves contain some good walkability features. The complex containing the grocery store (Figure 19), there are covered walkways that surround the



Figure 21 Gabriola Street Shoulder

parking lots, giving opportunity for people to visit multiple destinations with one stop. There are other similar places; however, they are all self-contained and offer no connectivity to each other.

On the walk from the ferry, there is a very narrow shoulder that must fit any walkers and cyclists in a small space (Figure 21). It is clear that vehicle traffic is the top priority, with deteriorating conditions and simple lack of any walking infrastructure.

Recommendations

Each piece of the node has character and addresses most components of walkability; but they need to be connected to truly make walking useful, comfortable, safe, and interesting. As it stands, people get back in their cars to go to each place. Gabriola needs to enhance walking and cycling options to encourage people to park once and walk to the rest of their destinations.



Qualicum Beach



Qualicum Beach lies within the unceded territory of the Qualicum First Nation.

The Town of Qualicum Beach is located in central Vancouver Island, approx. 45 minutes driving time from Nanaimo. It has the distinction of the oldest demographic communities in Canada with a median age of 65.9 out of its 8,943 residents (Statistics Canada, 2016). It is an incorporated municipality within the Regional District of Nanaimo.



Figure 22 Qualicum Village



Figure 23 Qualicum Street Furniture

Known for its vast sandy beach, the town has worked to develop its village that has become a model for the rest of Vancouver Island. The “Village Neighbourhood” is the heart of Qualicum Beach, home to commerce, social activity, goods and services, and higher density housing. Improving the quality of life for residents in and around the downtown attracts more residents that want to live a high quality of life within walking distance of downtown amenities (Town of Qualicum Beach, 2011).

Observations

Qualicum has one of the best developed villages in the region, with plenty of features that lead to good walkability. The design includes the parkway approach to the core that slows traffic and allows for good sidewalks, trees, and space to give pedestrians a comfortable public realm.

Within the village itself, there are many areas with wide sidewalks, street furniture, and effective barriers that offer protection for walkers.

The best feature of the village are the collection of stores and businesses that are accessible from the street. There is some on-street parking with the majority of spaces located behind buildings and out of the public eye. Many businesses are able to provide outdoor seating and active edges (Figure 24), adding to the environment that encourages people to walk throughout the village and leave their cars in one spot.



Figure 24 Qualicum Active Edges

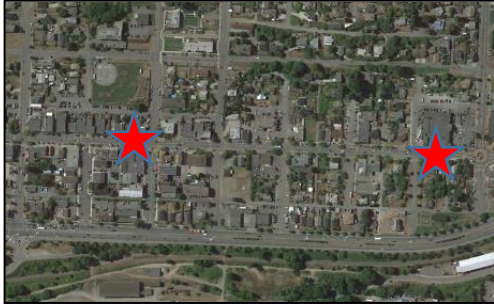
Recommendations

Qualicum needs to continue doing what they are doing to build community in their village.

There are conversations ongoing about alternate transportation, whether it is expanding the existing RDN service or building a rail trail along the old rail line that runs through the town.

The community needs to continue to look for ways to develop other means for reaching the core.

Conversations should go into building infrastructure for scooters, golf carts, cycling, and other forms of transportation.



Ladysmith



Ladysmith lies within the unceded territory of the Stz'uminus First Nation.

The Town of Ladysmith has long been recognized as a special place, with an attractive downtown and nestled on the side of a hill



Figure 25 Ladysmith First Avenue

overlooking the Ladysmith Harbour, Stuart Channel and Gulf Islands.

Ladysmith's unique character and setting, and associated quality of life, have made it an attractive place for professionals to establish emerging businesses and for young families and retirees to enjoy. For the purposes of this study Ladysmith classifies as a small town with its population of 8,537 (Statistics Canada, 2016).

In 2017, Ladysmith's First Avenue (Figure 25) was awarded to be Canada's great Street of the Year by the Canadian Institute of Planners.

"First Avenue exhibits all of the qualities one would expect from a great street: visually-interesting building facades, generous sidewalks, attractive landscaping and artistic details, places to rest, and places to gather. This street, with its diverse mixture of local businesses, housing and services, has been a focal point of daily life for community members for more than a century. Streetscape enhancements, heritage preservation, the adaptive reuse of historic buildings, and the many unique and publicly accessible festivals

and events held throughout the year, are key ingredients to First Avenue's success as a Great Street."(Canadian Institute of Planners, 2017)

Observations

First Avenue is one of the models for street design. This main street of Ladysmith is constrained by topography, with steep slopes above and below the town centre. Most of the activity happens between two focal points; one around the Old Town Bakery and adjacent businesses at the top of the hill (Figure 27) and one around the 49th Parallel Grocer (Figure 26) at the north end of the strip. In both locations there are many features from extended curbs, street furniture, trees and crosswalks that lead to high levels of walkability.

The criticism is the connection between the two points, where there is little walking. This could be due to a void of destinations for walkers.

Transit is also a concern in what is a well-developed node. Ladysmith is part of the Cowichan

Regional District, which supplies transit service from Ladysmith to Duncan. There is no link to Nanaimo, which is arguably the highest influence in the region.



Figure 27 Ladysmith Old Town Bakery



Figure 26 Ladysmith 49th Parallel Grocer



Figure 28 Ladysmith Street Furniture

Recommendations

For Ladysmith, it is really about the mix of destinations that needs improvement. There are a number of closed buildings, leading to dead spaces that line First Avenue. There also needs to be transit available to give Ladysmith better connections to the other communities within its region.

CHAPTER 6: Conclusion and Recommendations

This study looks to bring walkability principles, as they are known in urban centres, and contribute to literature by applying them to rural communities. Walkability is seen a goal and a means for reducing our dependence on automobiles and encouraging other forms of transportation. It encapsulates many points of discussion that planners must consider as we design our communities on a human scale and not heavily weighted to that of cars.

As planners, we have the task of righting the wrongs of past generations and creating better places for our children and their children. This work brings forward the means to address the dependence on cars and retrofit communities for walking, cycling, and other transportation options on a human scale. The sites selected for observations were to provide a cross-section of rural communities; two rural villages, two small towns, two island communities, and one distinctly rural farming community. The hope is to provide a broad perspective to encourage more work in the area of walkability to be applied to small places.

The goal of this study was to determine whether walkability principles could be applied to small communities and what differences must be considered when compared to large urban centres.

My conclusion is that walkability is a relevant study for small communities that may not have the densities and amenities that are typical of walkable places in large cities. Rural communities present key differences in approaches for changing this assumption, with implications for policies, to plan for the future, and mitigate their impacts on climate change through their reduction in the use of automobiles.

In the review of rural smart growth policies, rural communities develop frameworks that would not serve larger places. They that call for partnerships with local land trusts, agricultural groups, offering incentives for the development of local small businesses, and the promotion of local projects.

Speck brings us 10 steps to walkability, broken down into 4 themes. Each is important for looking at walkability in either environment, whether it applies to urban centres or rural communities. When planners go into small communities they must use Speck's guide to evaluate a place for its strengths and weaknesses for walkability. From the literature review, the lesson for applying these principles is that there is no one-size-fits-all formula that can be brought in by the consultant from afar. There needs to be an adaptable toolbox that can be given to a community and shaped into their vision that comes out of extensive public engagement.

Speck's Ten Steps are a guide with basic components:

Useful Walk – Put the cars in their place; Mix the Uses; Get the Parking Right; Let Transit Work

Safe Walk – Protect the Pedestrians; Welcome Bikes

Comfortable Walk – Shape the Spaces; Plant Trees

Interesting Walk – Make Friendly and Unique Faces; Pick Your Winners

While these steps may be likely in the evaluation, there must be room to add local values to the formula to best fit the community.

There has been a considerable amount of study that has gone into the decision-making process for why people walk or choose alternates forms of travel, other than a private automobile. They

deal with aspects of density, destinations, distance to transit and amenities, diversity of destinations and the design of the built environment.

It is clear that effective design, with sufficient awareness and education can dictate change in behaviour and points to the opportunities for design to impact future use. It builds on the literature that suggests that the diversity of destinations has significant influence on the decision to walk. This means that there is no single element that is critical to the success of walkability, but all elements are interrelated.

“Once you’ve seen one rural community, you’ve seen one rural community” (Bollman & Reimer, 2009). This is the uniqueness of rural character. They are all their own animal, with lifestyle choices made by the residents who shape each place. Most rural residents choose rural areas with a purpose. In fact, rural residents are shown to be most content with their lifestyle when compared to their urban counterparts.

Going back to Thomas Adams, towns and villages should be viewed as more than a collection of houses, stores, and factories; they are places that are valuable to the people who live there and who identify with the characteristics that are rural places. The concept of rural and small town is driven by the people and not the economics around goods and services that are available to the local population. I would argue that the actual distribution of towns and rural communities has less to do with economics and as much to do with lifestyle choices.

The community-based values on rural life were once based on personalism and association with those intimately involved in the community. The daily activities of human interactions with the same people in the post office, the local co-op grocery, the boutique stores, and other places,

provide the social fabric and the societal roles that define the identity of the place. Each person serves a role in these communities and lends to a greater meaning of rural life.

The renaissance of rural values is about the peace, friendliness, and simplicity of life in the countryside. In comparison with cities, towns and villages appear as havens of untroubled and friendly lifestyles; absent of congestion, noise, and blight (Hodge & Qadeer, 1983).

It is argued that rural perceptions are important and create increased tensions between economic development and the character of the communities. When development ideas do not match with the community values, the community will band together and have the ability to force policy changes. It exposes the need to allow perspectives at the regional level so to tailor rural development to the needs of each community. Each community has its own legitimacy and its own leaders that must be respected by those seeking to develop these areas (J. Crowe, 2001).

In many rural places, the community's social networks; co-ops, chamber of commerce, neighbourhood associations, sports clubs; positively affect the prospects of successful labour recruitment for industry and development of small business within the local community (J. A. Crowe, 2006). Institutions such as the Lions Club, Royal Canadian Legion, farm organizations, chamber of commerce, and other associations hold significant influence in these places and contribute to the sense of rural (Caldwell, 2010). These are stakeholders that are needed in any development in rural areas and small towns in Canada (Apedaile, 1992). Rural residents tend to be involved directly or indirectly in the processes of local government, support the day-to-day operations of the local school board, the regional district or the municipality itself.

It has become clear that the best path towards planning success at the rural level is comprehensive engagement with the community and those who hold the true influence in the community.

Rural policy is any public policy made by governments to do, or not to do, something that influences or impacts rural populations (Bollman & Reimer, 2010). It requires understanding of the interdependence of key entities; businesses, residents, households, social organizations, action groups and the environment (Bollman & Reimer, 2010; J. Crowe, 2001). Its primary role is to ensure social order so that the basic needs can be met and the future survival of society is enhanced.

To better understand rural communities, it is important to look at the nodes as part of a regional system. It is here that we can bring together transect theories with regional views. I argue that regions are not a simple organization of community attributes along a transect line, but an irregular transect that pulls influences by each community in the area. Central Place Theory should be used to evaluate the influence of each community and show the unique characteristics of each place in relation to each other.

Compact developments around retail and service nodes showed an increase in walking, when compared to corridors or other forms of increased density. The key was the concentration of local shopping and services, which itself represented traditional elements of a walkable place.

This suggests that highly walkable nodes become attractive for driving trips for residents in other areas to seek a node as a destination (Boarnet et al., 2011). This is a critical outcome in the context of Vancouver Island as it provides walkability as a means to the feasibility of rural nodes for residents, with enough support from people in other communities.

My findings from the literature review centre on the uniqueness of each rural community, so that when applied walkability we must consider each as its own place where a finite set of criteria can be used. It would be incorrect to set benchmarks like density numbers that are required to make walkability viable. These benchmarks must come out of extensive community engagement, empowering the community leaders into champions of walkability and how it fits in their place.

In place of set criteria, I have developed a Walkability Matrix that brings together Speck's Ten Steps and the 4 Ds into a single checklist from which to assess a given community. It brings in the principles in a framework that community champions can develop with their own input and interpretation. Shown in Figure 29, the first section breaks down the Ten Steps as seen in my site visits. The marks indicate where a community has adequately addressed the particular piece of walkability, or have are working towards satisfying this need. Those without a mark lack the existing designs that are needed to move towards a more walkable community. The second section looks at the 4 Ds – Density, Destinations, Distance, and Design – for each of the communities in my study. Once again, there must be room for local values to be brought into the matrix that reflect the outcomes of public engagement.

The study of Ten Steps show that only the small towns of Qualicum Beach and Ladysmith adequately address walkability infrastructure that keep walking Safe, Comfortable, and Interesting. The main challenge for these areas are managing the volume of cars that are prevalent in the centres of these nodes. All rural areas need more attention paid to the design of walkable places that place priority on the pedestrians. The most significant piece in many places is picking your winners. This alludes to the argument for robust public engagement to assess what the community wants. Errington and Denman Island show the least progress in

Walkability Matrix		Site Visits						
Ten Steps of Walkability		Bowser	Cedar	Errington	Denman Island	Gabriola Island	Qualicum Beach	Ladysmith
Useful Walk	Put Cars in Their Place	●	●			●		●
	Mix the Uses	●	●	●		●	●	●
	Get the Parking Right	●				●		●
	Let Transit Work					●		
Safe Walk	Protect the Pedestrian				●		●	●
	Welcome Bikes						●	●
Comfortable Walk	Shape the Spaces		●	●		●	●	●
	Plant Trees				●		●	●
Interesting Walk	Make Friendly and Unique Faces	●				●	●	●
	Pick Your Winners						●	●
Community Values	Value 1							
	Value 2							
The 4 Ds		Scale: Excellent - Good - Fair - Poor - Challenged						
Density		Fair	Fair	Challenged	Poor	Fair	Good	Good
Destinations		Good	Good	Fair	Fair	Good	Excellent	Excellent
Distance		Poor	Fair	Poor	Fair	Fair	Good	Good
Design		Poor	Fair	Fair	Fair	Fair	Excellent	Excellent

Figure 29 Walkability Matrix

walkability; however, in both cases their communities are largely opposed to growth and development.

The analysis of the 4 Ds is assessed differently, where I felt a more diverse rating system was appropriate. On a scale from challenged to excellent, the communities visited showed their greatest strength in their Destinations. This links well with how each shows in Mix of Uses in the first section. Overall the 4 Ds reveal that small communities will have their challenges when building walkable places.

It is my opinion that walkability is a useful goal for community development in small towns and rural communities. Rural communities and small towns lack the density of people that are seen as necessary for walking, cycling, and public transit to be viable alternatives. Therefore, it must be acknowledged that there are certain limitations and use of private vehicles will be a way of life in rural places.

The goal should be to encourage people to park once. This means developing nodes that are the lifeblood of communities and encouraging people to walk to multiple destinations once they arrive. We have seen in various studies that success within the node strengthens the resilience of the community. Small scale developments that increase density are possible in places where growth is often opposed. The key is comprehensive public engagement, which gives decision-making to the community members themselves, who can fully understand a project and take ownership with the future of their special place.

With the goal to narrow the scope of research in this study, there was not an attempt to link walkability with small towns or rural communities with a full feasibility study of the economics that go into building infrastructure of this nature. This study was specific in targeting the principles of walkability and how they might differ when implemented into rural communities. How incremental development of nodes and the financial implications of such changes would be a next step for future study. Additional research should look at rural policies that limit sprawl development around cities and concentrates growth in nodes. This would encourage new density into rural nodes, leading to greater resources and a better chance at building complete communities outside of urban centres.

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