Winter Cities

VOLUME 23 · NUMBER 1 · FEBRUARY 2004

Marquette Waterfront

1984-2004

Winter Cities

ASSOCIATION

c/o CITY OF PRINCE GEORGE, 1100 PATRICIA BOULEVARD,
PRINCE GEORGE, BC CANADA V2L 3V9

MISSION

The Winter Cities Association is dedicated to realizing the potential of all northern communities. Through publishing, networking, organizing conferences, facilitating research and other means, the Association seeks to make available northern solutions to northern problems and to promote awareness of opportunities associated with the winter season.

HISTORY

The Winter Cities Association was founded in 1983 by the late Jack Royle, a retired journalist and pioneer in the winter cities movement. The Association was incorporated in 1984. Professor Norman Pressman served as its first President.

The purpose of the Association is to bring together professional, private, commercial and municipal interests and researchers who are committed to enhancing the liveability and quality of life in communities where winter conditions present unique challenges and opportunities. The Association seeks to support, and may enter into affiliations with, other associations that support its goal.

The Association publishes a quarterly magazine, periodically sponsors other publications dealing with winter issues, and promotes a biennial "Winter Cities Forum and Trade Show" in partnership with a host city/corporation.

The head office of the Association is currently located in Prince George, British Columbia.

MEMBERSHIPS & SUBSCRIPTIONS

Annual membership fees in the Association are by category:

INDIVIDUAL - $60.00 Cdn. STUDENT/SENIOR (OVER 65) - $30.00 Cdn.
CORPORATE/INSTITUTION - $125.00 Cdn. CITIES AND MUNICIPALITIES – based on population

All members receive the *Winter Cities Magazine* and municipalities receive 10 copies of each issue. Members are eligible for discounted registration fees at Winter City Forums, and may purchase books and other materials published or distributed by the Association.

Subscriptions for the magazine only are $40.00 Cdn. for one year, $75.00 Cdn. for two years and $100.00 Cdn. for three years. Visa and MasterCard are accepted. Cheques are payable to the Winter Cities Association, c/o City of Prince George, 1100 Patricia Blvd., Prince George, BC, Canada V2L 3V9

"A winter city is one in which the average maximum daytime temperature is equal to or less than 0 degrees Celsius for a period of at least two months or longer".

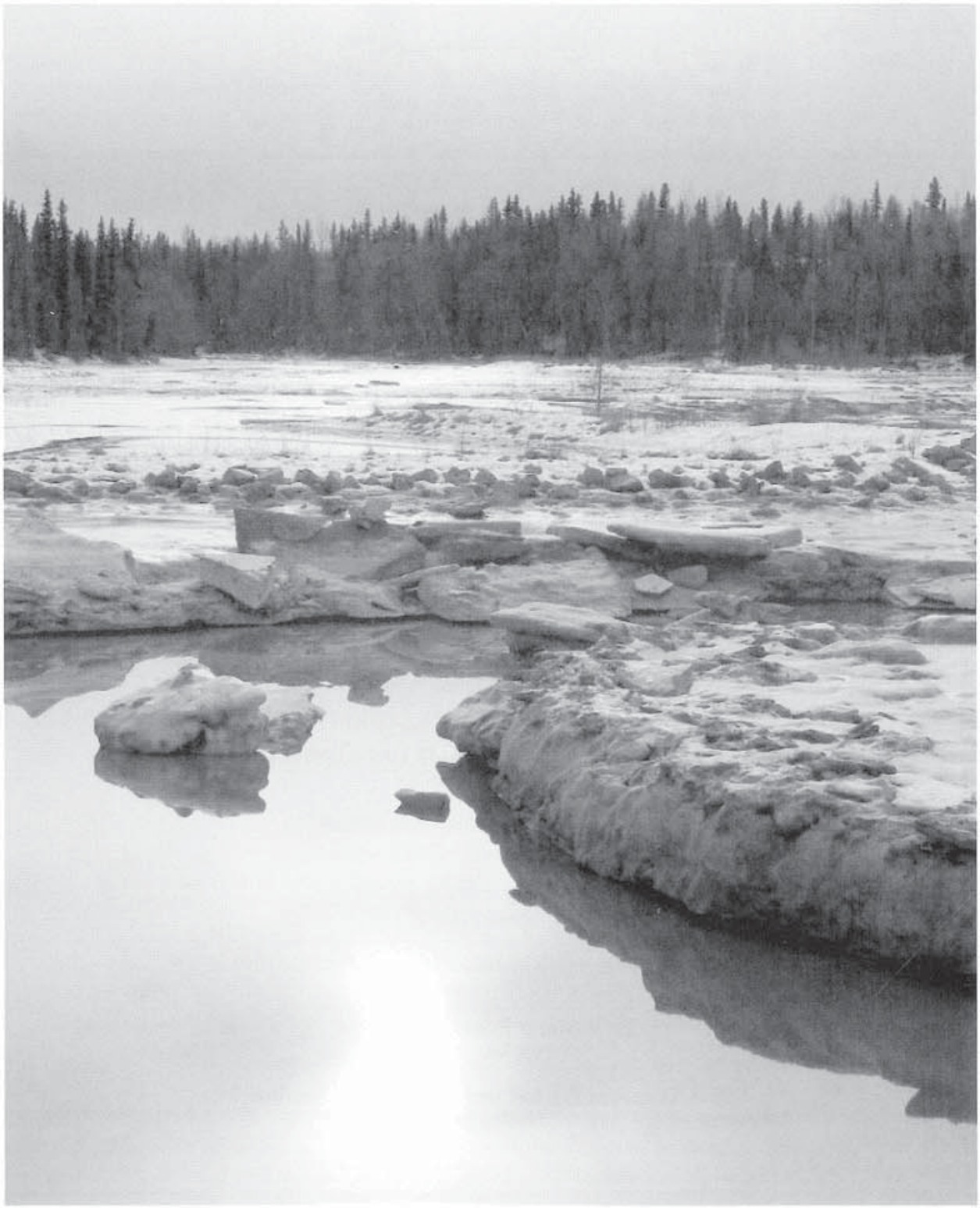
Pressman, Norman, 1988. "Images of the North: Cultural Interpretations of Winter", in Winter Communities Series, No. 5, Institute of Urban Studies, University of Winnipeg.

Winter Cities

Volume 23 • Number 1

On the Cover: 'Strolling the harbor on a winter day', Marquette Lower Harbor, Marquette, MI
courtesy of Jo Lorichon, thrutheeye photography

Featured Photograph



Tony Knowles Coastal Trail in Anchorage, Alaska

President's Message

The bumper sticker said "At my age, I've seen it all, heard it all, and done it all but I can't remember it all".

We all know that memory fades but when it comes to recalling the history of an organization we tend to rely on people's memories. When some of the early members move on, we turn to written records but even these can be inadequate. In many volunteer-run organizations, it is not unusual to find that the early members were so caught up with the excitement of creating something new they didn't think of keeping written records consistently, and even those they did keep were often undated.

Now that the Winter Cities Association has reached its twentieth year, we have been thinking about the early days. Fortunately, Bill Rogers and Jack Royle have given us their accounts of how the Association was started. The newsletters are also a good source of information, but we don't have a complete set, nothing before two WCA Updates, both identified as Issue Number 7 and published in 1993 I think, although the newsletters were undated!

Reading through some of the WCA Updates that preceded the later publication Winter Cities Newsletter, one is intrigued by references to interesting people and one wonders what they are doing now. Looking through the Board of Directors list for 1993/1994, it is reassuring to see that six of those named are still members of the Association.

The Directors who met in Sault Ste Marie last year agreed that for this February issue of the magazine it would be useful to think about our history and reprint some articles from previous issues. Norman Pressman and I made the selection and I am most grateful to Laura Ryser who helped with the re-typing of certain articles. We hope they are of interest to current readers and will jog the memories of long standing members. If you think there are glaring omissions, please let us know so we can include them in later issues.

If you have personal recollections of the WCA's activities, we should be interested in hearing them. I am particularly interested in the rise and fall of the various Affiliates and Chapters of the Association and reasons for the disappearance of the student design competitions. And, of course, if any of you have copies of the first issues of WCA Update, we would appreciate having them for our archives.

I hope many of you will join us for our annual meeting on February 28th.

Anne Martin
President

Editor's Note: "In addition to retyping previous articles, many photographs also were unavailable and had to be rescanned from the prior editions. We apologize where it has impacted the quality of the images."

Notice of Annual General Meeting

In accordance with Articles 9.1, 9.4 and 9.5 of the Bylaws of the Winter Cities Association, notice is hereby given that an Annual General Meeting will be held on Saturday, February 28, 2004 at 1:00pm PST in the 5th Floor meeting room, City Hall, City of Prince George, 1100 Patricia Boulevard, Prince George, B.C., Canada.

For attendance by teleconference, members may join by calling 1-877-602-4144 Code 7122#

Sault Ste. Marie Protocol

Winter Cities Forum 2003

Delegates at the Winter Cities Forum 2003 in Sault Ste. Marie developed the following Protocol to reflect their vision for winter cities:

- Winter Cities will demonstrate leadership by preparing for the impacts of climate change on our resources and infrastructure by setting achievable targets and implementing actions to reduce fossil fuel emissions by retrofitting existing infrastructure and exploring renewable energy, and resource protection.
- We must promote excellence and innovation as we plan, design, build and redevelop our Winter Cities with human needs, climate and the natural environment in mind.
- We will achieve healthier lifestyles in Winter Cities through policies and actions that promote community well-being and provide improved access to the best health care.
- We will promote attraction and retention of youth in Winter Cities by increasing educational, cultural and employment opportunities.
- We will pursue partnerships and encourage alliances between business, education and government to overcome common challenges and expand opportunities.
- We will learn from the culture and traditional approaches of our aboriginal peoples toward resource stewardship, and work in harmony with our natural environment to enrich the fabric of our Winter Cities.
- We will preserve our historic, cultural, and naturally gifted identities while pursuing better access to health care, economic stability and job growth.
- We will ensure sustainable communities through economic self-reliance and environmentally sound management.
- We will pursue education and invest in knowledge infrastructure, stimulating economic opportunity through research and development.
- We will take an innovative approach to integrating nature, technology, business and eco-tourism.
- We will apply the most innovative and effective techniques to infrastructure renewal and development, connecting Winter Cities through communication and transportation networks, offering safe, efficient and sustainable movement of people, goods and services thereby attracting organizations wishing to conduct operations in less congested centres.
- We will celebrate our rich natural environment and contribute to the social and economic health of our Winter Cities through festivals and other community events.
- We will celebrate and promote our Winter Cities as places to live, work, and raise families.
- We will encourage tourism sectors to band together, presenting a strong, unified voice to demonstrate the value of tourism to economic development of job creation in Winter Cities.
- We will generate economic development through policies that stimulate employment and investment, reward innovation and encourage the decentralization of government activities.
- We will encourage tourism sectors to band together, presenting a strong unified voice.

Questions about the Sault Ste. Marie Protocol may be directed to Mayor John Rowswell, President
Winter Cities Forum 2003
c/o Civic Centre, P.O. Box 580
Sault Sainte Marie, Ontario, Canada P6A 5N1
Telephone: 705•759•5344
Fax: 705•541•7171
E-Mail: mayorjohn@cityssm.on.ca

Be Prepared

by HAROLD HANEN and GREG LIBURD
Vol. 11, No. 2, October 1993

Be prepared. These words of wisdom often fall on deaf ears dulled to the advice of clichés. Why should we heed the motto of the Boy Scouts or in fact "do unto others" or eat our vegetables? These generalities seem to have little application to the intricacies and seriousness of our professional lives. Indeed, in dealing with winter cities it appears to be immaturely stating the obvious.

However, if you live in a seasonal climate this scenario should be quite familiar to you; the first snowfall. The weather forecaster has been issuing warnings for a week, but when it hits - chaos. Scores of fender benders are reported as people turn their automobiles into bumper cars on slick summer tires. Commuters at transit stops shiver in disbelief as their light clothing is pierced by wind and sleet. Leaf covered lawns and unready gardens are smothered by snow, leaving a considerable mess come spring. In short, a significant sector of the population acts as if they never expected winter to come, especially not the day it does.

This denial of seasonal reality fits squarely in with a perception that winter is a dark period and if we act like it won't come, maybe it won't. Of course, this is based on a bias that the warm existence is the preferred one. In fact, the bulk of many peoples' preparation for winter is putting away enough money so that they can temporarily escape it once it comes.

"The art of anticipation is the art of living." This phrase could well be the motto of the winter city. In order to be truly prepared, you have to know what you are preparing for. This requires knowledge of our surroundings and how we interact with them. It also demands that we look at worst-case scenarios straight in the eye and develop contingencies to meet them. In short, in order to deal with the future we need to custom design our plans to effectively deal with the realities of our specific situation. The application of temperate climate blanket solutions is bad planning and inevitably proves to be inadequate.

By looking at cold climate living on an individual level we can get an idea of the types of measures it would take to increase the quality of life in winter cities. What would it take for your winter to be an enjoyable one? You would probably want your home to be comfortable, efficient and inviting. The commute to work would be one without any icy streets, slippery sidewalks or long exposure to harsh weather. The municipal surroundings would be safe, inviting and alive with seasonal activity. For the weekends there would be ample opportunities, special winter events and social gatherings.

Now what if you were handicapped or elderly or a child? What would make your winter better?

The questions and answers seem straightforward, yet across the board common sense planning for winter is the exception. The reason is that it is far easier to do what has already been done. Need to build a house, a pre-fabricated unit from California is readily available. Designing a sewer system, why not just base it on a southern model that has been used thousands of times before.

Providing for the intricacies of multi-seasonality makes all planning, from car upkeep to city maintenance, infinitely more challenging. However, this is a challenge we must strive to meet if we wish to live out northern lives to their fullest.

Success takes far more effort than mediocracy. Do something right and people expect you to be effective at more things, and then there is the matter of sustaining what you have done in the first place.

Successful planning will superficially mean more work, but take into account rectifying the mistakes of the past and in the long run it is the only route to follow.

Harold Hanen and Glen Liburd were editors of the Winter Cities Magazine in 1993.

Arctic-tecture

by HAROLD HANEN and GREG LIBURD
Vol. 11, No. 1, Summer 1993

ARCTIC-TECTURE. The play on words at first seems cute and maybe brings to mind igloos. However, scratch beneath the surface and it reveals a bias. The term architecture stems from the Latin 'arcus' meaning arrow which was used to describe the shape of the curved structural member which delineates the vast majority of buildings. Greco-Roman ancestry has created a lineage that still holds strong in all of Western society and, of course, in the traditions of the modern architect.

The principles of building practiced thousands of years ago would have to be updated and appropriately applied in this day and age. If this were not the case, we would all go to work at the downtown Acropolis and lunch beneath the pillars of the agora. This might seem far-fetched yet we continue shamelessly to apply temperate climate architecture in realms of multi-seasonality.

Architecture is integral to cities and their citizens. Buildings and houses do more than provide shelter, they help to determine how we exist. One can see how essential it is to create a built environment which is harmonious with the realities of surrounding.

Just as it is now intolerable for structures to be anachronistic in their function (i.e. handicap access, energy efficiency etc.) it should be equally unacceptable for them to be climatically inappropriate.

The goal of an architect should be to create structural expressions which enhance the daily life of their inhabitants. Since our existence is not severed from the earth, wind and sky it makes little sense to ignore these elements.

PROBLEMS

Essentially the situation of seasonal illiteracy has arisen out of priorities. Previous paradigms have focused on technology, the needs of form makers and international marketing. The results may look great on the covers of annual reports but are a slap in the face of those who have to live with them and in them.

The results of failing to relate to specific environments can be seen in any city where the snow falls. Just look at the staple of the metropolitan skyline, the high rise. Encapsulation and a total lack of finesse in dealing with the inside/outside transition creates a negative health situation, Sick Building Syndrome. On the outside these same buildings worsen wind, darken streets and create unsafe passageways.

Modern architecture's bankrupt connection to climate and geography has also lead to environmental difficulties. In cold climates natural systems go into hiatus. The resulting problems with river flow, air pollution and landfills should be handled with sensitivity yet they are all but disregarded.

EDUCATION

What does it take to get started in this reconstruction of ideas? Those involved have to genuinely care about the environment they are creating and this begins with students. Discussion has to be promoted to rekindle an enthusiasm for honest northern architecture. One quarter of the earth's surface is cold climate and building on it requires a multi-dimensional approach.

To provide ultimately successful and enduring buildings there has to be a shift towards the needs of the users and regional practicalities. This sentiment and those who promote it should be seen as visionary role models.

Fay Jones, holder of several American Institute of Architecture awards, believes that architecture is intended to make life better and to fit place, not to win awards. Buildings need to have style, not be a part of one. Jones' own stylistic parameters revolve around three elements: the nature of materials, the relationship of the part to the whole and the site.

Principles should be taught which will give future architects the ability to successfully encounter landscapes rather than trying to conquer them. Copying

is out. Architectural plagiarism is an expression of low confidence, laziness and not savoring the real world.

The north provides countless opportunities for creativity and innovation. There are so many problems that need to be effectively addressed that the ambitious should be chomping at the bit to tackle them. With this brave new frontier at every snow-covered doorstep, it makes no sense to blindly apply southern cookie cutter mentality.

Multi-seasonal design requires dealing with the worst case scenarios. Extremes of climate require respect. Designing for the most wealthy, able-bodied in tropical conditions is more than insensitive, it is negligent.

NEO-NORTHERNISM

Wholism. This is the underlying concept of circumpolar architecture. Multiobjectivism is needed in the north. Resources have to be coordinated to meet the needs of the citizens.

The fragmentation of the last forty years has limited scope and vision. We are now attempting to reverse urban decay through such trends as Neo-Traditionalism. Why not avoid being put into such situations by taking an integrated approach in the first place?

To create a nurturing atmosphere for northern architecture there has to be appropriate administrative support. Current cold climate building codes are universal and restrictive. They force builders to jam square pegs into round holes. Regional codes would address the need to diversify in order to meet the needs of specific areas.

The new northern architecture should be a positive one. Streets and buildings should welcome season changes. Colours should be used which enhance the natural environment instead of stifling it. Protective scale and intimacy should be created using nooks and hearths. Given the chance, people would celebrate winter rather than fruitlessly trying to avoid it.

POSSIBILITIES

Architecture for the north can only change if the ideological infrastructure is there to provide support. The incentive for creating and adhering to such ideas is compelling. Communities which function well within their environment create an atmosphere for social, economic and political strength. In addition, the innovation and creativity used to build climate-sensitive architecture is a valuable commodity.

The applications for such broad-based thinking are vast and span across the globe. With all these potential benefits it makes no sense to cling blindly to the past. Accordingly, it is now time to stop living in someone else's house and to start creating buildings that we can call home.

Harold Hanen was the Publisher/Editor of Winter Cities News and Greg Liburd was Associate Editor/Designer for a number of years.

Winter Websites

In their edition printed on Tuesday, January 13, 2004 (Vol. CCXLIII, No. 8, pg. D4), the Wall Street Journal highlighted five web sites that can link internet users to a variety of winter fun.

Winter Festivals:
- Sapporo, Japan: http://www.snowfes.com/english/index_e.html
- Harbin, China (Has photos and links to other ice festivals around the world.)
http://www.travelchinaguide.com/attraction/heilongjiang/harbin/ice_snow.htm

Ice Climbing:
- One man's collection of reports: http://www.terragalleria.com/mountain/info/

Ice Hotel (use a search engine to find several listed hotels.)
- Icehotel.com

Igloo Builder's Guide
- http://home.no.net/gedra/igloo_bg.htm

Winter City Movement:
Its North American Heritage

by WILLIAM C. ROGERS
Volume 10, 1994

Yes, I did have a winter city epiphany that day in 1977 on top of the City Hall parking ramp. The idea came suddenly but had been developing for several years.

An architect friend and I had just emerged from a long "Committee on Urban Environment" (CUE) meeting dealing with such subjects as how to plant window boxes and grow vines over ugly buildings. We looked out over the cold, grey buildings of downtown Minneapolis. Spring was still a month off. I blurted out "Why don't we do something to make the city more beautiful in winter? It's by far our longest season!" My friend replied "We sure don't do much for our city in winter." And I was off on my crusade.

Why me? After all I was born in Kansas where summer days get as hot as 120 deg. F. At the University of Chicago I first encountered real winter and also got a Ph.D. in political science and international relations. I also took a lot of geography courses and learned about climate. I was fortunate to find a job at the Public Administration Clearing House in Chicago where I was put in charge of "foreign relations". It didn't take me long to learn that cities could learn a lot from each other and that other countries, especially in Europe, were doing better with their cities than America. This knowledge made it possible for me to search out the best winter city ideas around the world thirty years later.

In the fall of 1977 we were able to put together a set of CUE "Livable Winter City Guidelines" which had a quasi-official stamp to them. Here we laid out the basic things a city should do to maximize the pleasures of winter life. These guidelines hit the media like a two-ton bobsled. A local columnist, Barbara Flanagan, reported the story and it was picked up by UPI and circulated through the U.S. and Canada. Later the AP also did a story. CBS, ABC and CBC all gave me taped interviews as did radio stations in New York, Detroit and Montreal.

Our "International Conference on the Livable Winter City" was held on March 19-21, 1978 at the Spring Hill Center in Minneapolis. Invitees were a distinguished group of civic leaders, opinion makers, professors and government decision-makers and speakers included urban authorities from around the world. Our participants were impressed and the idea of the livable winter city was now a solid concept in Minnesota at least.

The full impact of the conference and the winter city concept again hit the national media with a vengeance. Once again we were in the New York Times, television and even Advertising Age. Among the millions who heard about the conference was a Canadian named Jack Royle who asked if he could come to the next conference on the subject which was of great interest to him.

Meanwhile, I was asked to teach a College of Liberal Arts Honours Course on the subject. I didn't know enough for a full quarter but I taught them everything I knew and sent them all off on research projects. One of their main goals was to work on finding the best colors for winter buildings, "garden" and clothing. One of the best ideas we discovered was the importance and

value of using local materials for building. The winter city movement owes a lot to this class for the research they did. Less than a year after our first conference Spring Hill hosted us again for "Livable Winter City: How Do We Make It Happen?" None other than John C. Royle, retired Canadian journalist and now know to everyone interested in winter cities was our keynote speaker. The emphasis of this conference was not theory, as in the first one, but the nitty-gritty of getting the job done. Jack Royle went on to found the Winter City Association, which now spans the globe, and I co-authored the Winter City Book with Jeannie Hanson.

The subject matter of Winter City meetings had long progressed away from the narrow question of "How will it look in winter?" - the aesthetic orientation. City planning, urban development, parks and recreation, energy conservation and transportation were now major conference topics.

In spite of our winter city problems, I began to sense a superiority of the North over the South. Living up North was the civilized thing to do. For starters, the United Nations declared Canada the best country in the world in which to live. Except for Australia the top ten were northern countries and all the "worst" countries were tropical or sub-tropical. The best and most numerous universities, symphonies, art galleries and libraries were overwhelmingly in the North.

If I ever had the energy for another winter city conference, it would be called "Keeping Cool: The Built, Natural and Human Environment in the Tropics". This idea came to me in India where we visited an abandoned "model city" built by an ancient ruler who provided for everything except adequate water supplies. As we walked through the narrow streets, I kept feeling cool breezes although it was in the high nineties. I knew that this was possible because our local builders had done the same and many walks and building corners had wind chills beyond belief. I learned that the clever architects had built it that way! Later on a visit to Oman I saw wind towers built on many structures to catch breezes. All the buildings were white and faced north.

These examples are just scratching the surface of what we would find out if we had speakers from Delhi and Muscat tell us their secrets of keeping cool. Then it would be up to us Northerners to turn it all inside out! Some of us might feel embarrassed that we were building for keeping cool rather than warm, but we would mend our ways by doing the opposite of what hot countries were doing.

Another bit of unfinished winter city business is to see the idea take hold in the United States where it was first developed and publicized. The U.S. confusions about Canada are well known by Canadians, but I never fully realized how deep our ignorance really is. The Winter City movement never caught on in the U.S. because Americans thought the really cold place was that huge ice pack to the north. We ultimately figured out that there are more cold Americans than cold Canadians. Mayor Donald Fraser and I wrote letters to all major U.S. winter city mayors asking for ideas and questions about better urban living in winter and got little or no response. Only Alaska understands! And Americans still are said to drive up to Canada in July with their skis on top of their cars looking for winter sport.

William 'Bill' Rogers graduated from the University of Chicago with a PhD in political science and international relations. He was formerly Director of the World Affairs Center, Continuing Education and Extension at the University of Minnesota, and was a member of the City of Minneapolis Committee on Urban Environment.

In 1980, Dorn Books published "The Winter City Book: A survival guide for the frost belt" co-authored by Dr. Rogers and Jeanne K. Hanson.

Often called "Conifer Bill" because of his preaching that winter cities should plant more evergreens, Dr. Rogers was a founding member of the WCA and served as a Director for some years.

Towards an Ideal Winter City

by WEIMING LU
Vol. 10, No. 4, March 1993

Millions of people throughout the world live in winter cities. For several months every year, they contend with cold, snow and ice - and all of the problems that accompany such offerings of nature.

Acknowledging that there is a wide commonality in the lifestyle of people living in winter cities, one is now discovering that there are significant differences in the way people respond to their winter problems - and that one has much to learn in studying these differences for possible application to one's own regions.

There are a number of common problems associated with northern cities in the winter, which are all extremely familiar to residents in these cities, making little elaboration necessary.

1. Snow and ice can substantially reduce residents' mobility and social interaction, thereby affecting businesses. Driving and walking can become extremely hazardous.

2. Long and cold winters can have substantial impacts on energy consumption, which can increase heating bills for homes and businesses, making area businesses less competitive.

3. Weather can affect outdoor activities. Long cold winters can severely restrict residents' outdoor activities for long periods of time.

4. The winter landscape can be rather gloomy and bleak, and there may be little vegetation and colour.

5. Long winters can affect a person emotionally. One can sense some residents' depression after a long winter.

In the past, one generally accepted these problems as unavoidable and almost insolvable. This attitude has not been helpful in finding ways to overcome these problems.

It can also, in part, make northern cities increasingly less competitive. A change of attitude is needed if one is to address problems associated with northern cities. 500 million people today are living north of 45 degrees latitude, and there is a need to share ideas among cities.

Many things can be done to overcome these problems, and to make our downtowns and inner cities more livable in the winter.

1. What can one do to maintain accessibility in the city?

Better plowing of streets, alleys, and sidewalks in the neighbourhoods is essential to maintain accessibility in the city. Through the city's program, our streets are pretty well plowed. Alleys, however, are not as well serviced, which can hinder our mobility in neighbourhoods where garages are connected by alleys.

With increasingly tight city budgets, private plowing services, or neighbourhood cooperation such as the joint purchase of a plowing vehicle, may be worthy of consideration to ensure resident mobility. Special attention should be given to the needs of older persons.

Current road design and neighbourhood layouts pay little attention to how snow is plowed

and stored. Providing wider roadways and strategic snow-piling areas may make the plowing and storing work easier and more cost-effective. More intelligent snow piling could provide snow banks which would act as windbreaks in the winter.

Salt has been used widely in the winter to improve roadway conditions. However, salt corrodes automobiles, kills curb trees, and even destroys garages which, with increasingly tight budgets, require designs for special protection against salt. Regular washing, inspection and maintenance efforts are needed. More fundamentally, an effective substitute for salt needs to be found.

Heated bus shelters may make bus waiting a little more comfortable, yet more frequent bus service would be truly helpful. In northern cities such as Montreal, Toronto, Stockholm, and Sapporo, rapid transit helps to provide essential services and to shape city form. However, in the Twin Cities, rapid transit remains an elusive goal despite many years of planning efforts.

In the downtown core, skyways can assure easy and comfortable pedestrian accesses. Since their introduction during the 1960s in the Twin Cities, they have become indispensable.

Saint Paul and Minneapolis each have more than 30 bridges connecting major retail, office, government, and entertainment centers, and the system is still expanding.

Many American northern cities such as Des Moines, Spokane, and Duluth, have followed the Twin Cities' example in bridling their skyway system. In Duluth, the long skyways connecting downtown with the Convention Center have been used as indoor walkways for winter exercise.

Some blame the decline of street level activities on the growth of the skyways, when in fact, without skyways, the two downtowns could hardly compete with suburban centers. With the skyways, one has witnessed the healthy rebirth of two downtowns.

On more moderate days, people welcome the opportunity to use streets. To increase pedestrian activities on the street level, more interesting shops and better amenities must be provided.

Recently, there has been increasing interest in enclosing the Nicollet Avenue pedestrian mall in downtown Minneapolis. What is emerging is perhaps a two-level pedestrian-way system, which can help to strengthen downtown activities and adapt downtown even more effectively to winter seasons.

2. How can one design neighbourhoods differently, taking winter into consideration, and make one's city energy efficient?

In renewing downtowns or inner cities, buildings may be properly clustered to save energy and protect residents from strong wind in the winter.

Existing buildings may be retrofitted. Earth-sheltered, super insulated and solar housing may be cost effective. Streets may be vacated and glazed over, and a winter garden created. Solar energy, and return heat from the district heating system, may help to heat the garden in the winter. The North Quadrant Plan prepared by the Lowertown Redevelopment Corporation provides one such example.

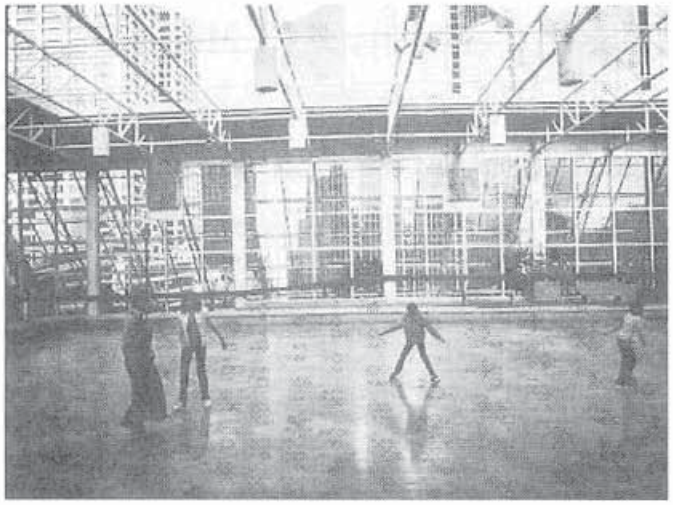
To increase livability, a neighbourhood commons could be created just off the winter garden. Such a commons may include a grocery, nursery, day care, and school - all connected to apartments by the winter garden or covered walkways. Even a neighbourhood hot tub to do away with winter chill could be included. In a northern Japanese village to this date, on New Year's Day all villagers strip and get into a hot tub together. What a way to generate neighbourhood spirit!

Creative neighbourhood design competitions may even encourage the creation of interesting ice sculptures, as in Saint Paul, Sapporo, and Harbin, and snow gardens in selected parks, as Noguchi did in his beautiful earthwork design for Riverside Park in New York City. This could be done throughout the winter, rather than merely at festival times.

3. How can one expand the cultural arts, recreational, and entertainment activities in the winter?

More outdoor activities, including hockey, skating, cross-country skiing, ice fishing, and snowmobiling, will help to combat 'cabin fever', and keep body and mind vigourous and healthy. The magnificent park system in the Twin Cities provides many opportunities for outdoor activities.

More paths for cross-country skiing could be created for recreation, and even for home-to-work trips, perhaps along public parks and river fronts.



Skating rinks, warming houses, and tobogganing areas would be welcomed by children and adults alike. However, tight municipal budgets can at times trim the operating period for skating.

Perhaps igloos could even be constructed in the neighbourhood parks for recreational and educational purposes.

Special consideration should be given to old persons. Their mobility, for example, is a winter problem. Car pools and van systems could be provided to extend sight-seeing, socializing, shopping, exercise, and the like. How the sidewalks in front of their houses are cleared after snow is another problem. Whether it could be done through private contract services, neighbourhood volunteers and collaboration, or other means, should be considered.

Safe, secure housing in an urban core, at an affordable level, can make it easier for the elderly to get around, and there are many amenities at hand. A skyway system helps to make these amenities accessible. The potential for developing safe, attractive and supportive environments has not yet been fully realized.

More indoor activities, including concerts, plays, poetry readings, cinemas, libraries, and exhibits, can make winter enjoyable. Arts and cultural programs in the Twin Cities are benefiting the people greatly, and are important factors in keeping or attracting business to the area.

More community-wide celebrations (like Saint Paul's Winter Carnival) and other activities, can help to generate lots of winter fun, community spirit, and national publicity. Saint Paul's Ice Palace, built in the winter in 1986 by hundreds of volunteers, stimulated great public interest and civic pride, and was a very successful example.

Incidentally, the introduction of new fabrics, which are light of weight but give effective insulation, is crucial to winter clothing. Certainly, winter clothing can be attractively and fashionably designed. Why couldn't more winter fashion shows be initiated?

4. How can we beautify our winter landscape?

Winter landscapes need not be bleak or depressing. Beyond greater use of evergreens, sensitive articulation of the terrain can make the winter landscape more interesting. Warmer coloured street lighting can create a warm glow on dark winter nights. Housing exteriors need not be somber and monotonous. Better articulated building facades, such as with window set backs, etc., and the intelligent use of colours, can add much interest to buildings and strengthen the identity of a neighbourhood.

In the winter, the days are short, people go to work and return home in darkness. If the downtown skyline can be effectively lit, it would become more distinctive, and our daily journey to and from work would be that much more interesting. The lighting idea for the skyline was included in the Metro Center '85 plan for downtown Minneapolis, which is one such example. During the Christmas season, lighting can be made far more creative. Selective use of neons, and new technology including laser lights, can make the downtown skyline an exciting palette for artists.

For some people, winter can be depressing because of the longer nights and shorter days, the length of the season, and the inconvenience of restricted mobility. There is a need to combat such depression and negative psychology.

If one assures accessibility, participation in diverse arts and sports activities will go a long way to combat depression. At the beginning of each winter, why couldn't special seminars and events be conducted to prepare people psychologically for the season, to think about its positive aspects, and to plan for activities which help them enjoy rather than dread winter? Why couldn't more festivities be held throughout the winter?

Perhaps for others, long winters and shorter days may affect them physiologically, and a remedy such as daily exposure to simulated sunlight panels may be needed. A short vacation in the South during the middle of winter would be therapeutic.

On the other hand, for some longtime residents of the sun belt who have never been to the North in the winter, experiencing our White Christmas can be most memorable and enjoyable. Why couldn't some initiatives, such as sister cities programs (which can facilitate people in the north and south to exchange residences during winter vacations) be explored?

In 1986, two CBS weathermen, one from Phoenix, the other from Minneapolis, exchanged jobs for one week during the winter. Each gained much insight into the other city, and helped residents in each of the two cities to learn from the other city.

Finally, winter could be and should be enjoyed for its own beauty and serenity. More time could be found for quiet reading and reflection. Many persons choose to live in the north because of this advantage.

To sum up, an ideal winter city should be many things to many people. It should be a city of choices. It has plentiful job opportunities. It provides a variety of housing. Accessibility to arts, cultural, recreational, sports, and entertainment activities must be assured for all people. There should be equal choices for indoor and outdoor activities.

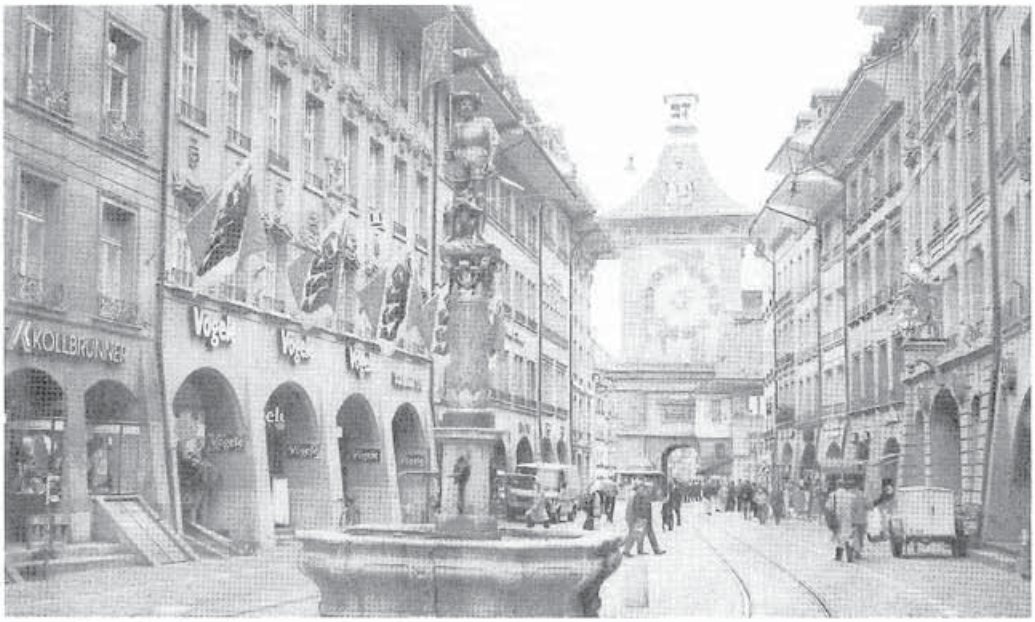
It should be an energy efficient city. Residents will find well-designed and insulated homes. Energy costs will not be excessive, in order to allow business to be competitive. The city would be compactly developed.

It should be a city of love, where mutual help becomes a way of life. There is a common belief that, by working together man can overcome whatever inconvenience, difficulty, or emotional burden is placed upon him by winter. Only then, may each of our cities indeed be 'a city for all seasons'.

At the time of writing Weiming Lu was on the WCA Board of Directors and was Executive Director of the Lowertown Redevelopment Corporation, St. Paul, MN.

Cities in Winter
Solutions to Cold-Climate Living

by NORMAN PRESSMAN
Vol. 18, No. 1, Winter 1999



More than 8km of weather-protected arcades improve pedestrian-level street life in Marktgasse, Berne, Switzerland.

Harsh and foreboding climate such as that embodied by northern winters has worked its way into the national psyche of cold nations. Canada, for example, has been imaged by others - and images itself - as a product of climate, to a large degree. Winter has, to a considerable extent, shaped its history, helped to develop its customs and traditions, and has repeatedly been a central theme in both Québecois and Anglo-Canadian poetry, literature, art and other forms of cultural expression.

This also tends to be the case in other northern societies such as the American mid-west, Sweden (particularly its northern regions), Finland, Norway, Iceland, Japan's Hokkaido region, and much of the former Soviet Union. The northern bleakness, with its cover of ice and snow and its blustery, bone-chilling winds, is deeply embedded in the hearts and souls of those who inhabit the north. One the whole, these cultures work hard at attempting to resist and deny this hostile season. However, at times, they also delight in the snow-reflected light, the visual beauty and the outdoor sports, carnivals and festivities made possible by the snow-covered landscape.

The attempts to generate "climate-responsive" northern urban form are part of the relatively recent phenomenon and field of investigation. These attempts - and the international winter cities movement - have established the need for explicit, systematic inquiry which analyzes national and local strategic action directed at improving the comfort and lifestyles of northern dwellers.

A Visionary Approach to Planning for Winter

A broad range of winter-induced problems is experienced on a daily basis for roughly five months each year; during the late autumn, winter, and early spring periods.

Very few solutions have emerged to alleviate these problems and there are hardly any "ideal" cities that function in an exemplary manner during winter. In fact, present experience, in most cities throughout the "winter city" world, has tried to create "summer city" conditions throughout the year, instead of highlighting those characteristics unique to northern communities - which reduce nuisances and celebrate winter's beauty.

Ice sculpture in the town park, Lulea, Sweden

A "northern" urban design and planning approach is most effective to achieve optimum results for humanizing the urban environment and minimizing human discomfort. Some of the issues that must be urgently addressed, if our cities are to function more efficiently in winter, include the following:

1. Recognize prevailing winds and solar conditions in site planning, orientation of buildings, and configuration of streets (in new subdivisions). Passive solar principles should be incorporated into the designs.

2. Formulate sensitive design and policy guidelines with respect to optimizing relationships to sun, shade, wind, precipitation, and climatic elements such as snow drifting, wind tunnel effects and their impacts upon urban form.

3. Utilize landscape and design principles that can enhance the microclimate of any given site or development area. For example, the judicious planting of trees can absorb and minimize unpleasant effects of wind, and reduce the wind chill factor.

4. Re-evaluate existing by-law frameworks so that they will guarantee protection for the pedestrian network - such as continuous canopies over sidewalks, covered arcades and galleries linking parallel streets at mid-block locations. Superb examples are found throughout major European cities, such as Brussels, Berne, and Bologna.

5. Organize redevelopment plans in a way that both open-air and climate-controlled (enclosed) spaces are interconnected offering a greater degree of choice to users in the way in which they elect to move about the city. Once must strive to create a balance between "open" and "closed" public spaces that can be used in different ways throughout the seasonal variations.

6. Improve the overall quality of urban environment using solutions that will ideally reduce energy costs. The environment must at all times remain humane and many of the high-technology solutions such as "domed cities" or "subterranean building" which cut people off from the natural elements are not always desirable from a psycho-biological point of view.

7. Devise management policies for existing transit systems that are seasonally adjusted in order to minimize adverse conditions created by harsh climate. (To wait 20 minutes for a bus in January is surely more debilitating than waiting for the same period during July). Thus, organize more frequent service in winter, and provide heated bus shelters at frequently used stops.

8. Re-organize development policies so as to reduce dependency on the automobile, emphasizing not only transit but also walking as a major mode of movement within areas of population concentration. This also reduces atmospheric pollution.

9. Encourage mixed-use activities and incorporate the climate-protection principles in the designs, thus bringing people closer to entertainment, shopping, places of work and recreation - trapping the sun whenever possible.

10. Create "winter gardens" and "indoor parks" at strategic urban locations. Calgary's Devonian Gardens is a very good example.

11. Organize better winter-use of summer playgrounds and build special purpose "piruvik-type" play areas that emphasize and recognize the beauty of ice and snow and their play characteristics.

12. Selectively "roof-over" existing streets in urban centre. The St. Roch Mall in Québec's lower town is a good example.

13. Consider the adoption of legislative measures calling for "wind impact statements" and "sun and shadow impact statements" with regard to new developments injected into the urban fabric.

14. Increase development densities in areas surrounding or adjacent to shopping malls so as to maintain and encourage a strong heat island while keeping street level temperatures as high as feasible.

15. Employ a range of colours in the built environment to enhance and counteract the monotonous visual dimension of winter's stark-white. A special "colour palette" of hues appropriate in northern regions is worth considering.

16. Utilize ice and snow as art forms such as illuminated fountains, floodlighting of frozen waterfalls, umbrella sprays left from fountains during freezing periods, ice sculpture and other decorative features.

17. Apply creative illumination for the "dark" periods. This will improve both public safety and aesthetic quality. The famous "Bahnhofstrasse" (main shopping street) in Zurich is a superb example of downtown illumination on a high artistic level.

18. Heat sidewalks and ramps where cost-efficiency permits and where recycled heat from refuse combustion or district heating plants can be harnessed.

19. Program and sustain winter carnivals and festivals (Ottawa's "Winterlude / Bal de Neige", Québec's "Carnaval", and Sapporo's "Snow Festival" are grand celebrations of winter promoting positive images of the season.)

20. Incorporate cross-country ski trail networks within the urban fabric. In Norway, Oslo's ski trail system includes more than 200 km of paths, many of them illuminated for night-skiing and for handicapped persons.

There is a large spectrum of urban sector interventions that can help to decrease some of the deleterious effects of winter on urban inhabitants. Most of these strategic interventions or measures are of the type which attempt to manipulate physical and spatial components of the environment and the ways in which they are both perceived and utilized.

However, there is another dimension to the user side of what is referred to as "quality of life". This deals with rules and codes of behaviour from socially desirable and legally acceptable frameworks. How we are trained and educated to use the environment within which we dwell and the actual manner in which it is used can also seriously affect the quality of "winter living". Several examples should suffice to indicate the nature of these considerations.

Winter Driving

One of the most stressful situations arising from the winter season is that of hazardous driving conditions. With snow covered, icy roads often subjected to "white-outs" during snowstorms, traffic fatalities tend to soar with the accelerated accident rate that accompanies winter's arrival. What can be done to deal more effectively with such a phenomenon? A partial answer would appear obvious - better driver education suited to extreme weather conditions! Why not encourage - indeed require - the driver population to enroll in skid control schools so that they may better respond to and control potentially fatal accidents caused by winter conditions. The Nordic nations all require skid-control driving courses to be taken. Surely, the communication of winter driving techniques would contribute to the support of human life. Why are driving tests administered to first-time permit applicants not administered during winter? Perhaps, there ought to be two tests: a summer as well as a winter one, without which no driving permits would be issued.

Inequitable Use and Distribution of Resources

Opportunities and choices with respect to the benefits of winter-related recreation are not available on an equal basis to all economic strata. Even though, quite frequently, activities such as ice-skating - on Ottawa's Rideau canal system - appear to be "free" since there is no actual fee that is charged to users, the economically disadvantaged must make choices if they are to benefit from such facilities. Transportation to the site is essential, as is equipment and warm clothing. The Ottawa-Carleton transit authority operates an exemplary "free bus" service

The main street (Storgatan) in Lulea, Sweden, has log-burning fireplaces for warmth and light. Sidewalks are heated, creating a non-slip surface.

during Winterlude days, but this cannot be sustained on a continuous basis. Hence, what might appear to be free necessitates choice making within a broader context of priority setting. Winter has the potential of creating difficulties - essentially of a financial nature - for "limited means households". The design and management of such facilities need to be carefully analyzed in the light of such considerations.

Conclusion

For northern cities to function more satisfactorily, the negative impacts of winter must be reduced while its beneficial characteristics are enhanced. While not all summer activities can or should be abandoned during winter, proper microclimatic control is essential if human life is to be retained outside. The outdoor season should be extended since so much indoor isolation occurs. The main principles to be incorporated in exemplary "winter city" design should be round usability, user participation, cultural continuity, and the creation of comfortable microclimatic conditions throughout most of the city's open spaces. Adopting a climate-sensitive approach to planning policy and urban design can render everyday life less stressful, especially during the lengthy winter periods found in many northern latitude and high altitude settings.

Planners, designers and policy makers must encourage and promote application of climatological know-how in land use and urban design concepts, while keeping abreast of newly developing information. Builders should be provided incentives to demonstrate advantages of climate-adapted projects on particular sites. Local governments must embrace climatically-sensitive development as part of their policies through the adoption of new design guidelines, revision of official plans and zoning by-laws, and inclusion of climate-oriented performance standards. Approvals for building and site planning projects should be subjected to rigorous review of how well designs are adapted to the local conditions in conformity with explicitly stated "winter livability" plans and criteria.

Coordination of worldwide information and experience in the design, planning and management of winter cities is needed. We possess a great deal of knowledge about designing with climate but most of this information tends to be limited to the hotter, more arid regions of the world. The lion's share of existing data rarely makes mention of cold-climate planning. It is in this realm that both the literature and transfer of knowledge is deficient. Greater efforts must be developed in order to more meaningfully understand and apply key concepts and planning principles with the aim of building, redeveloping and managing cities and environments situated in cold regions. More than this, innovative experimentation and thinking will be essential if our urban settings are to be made more livable, not only in winter but also year-round.

Norman Pressman is Professor Emeritus of Planning (University of Waterloo) and a planning consultant specializing in cold-climate policy and design. He has worked and lectured all around the circumpolar world, and can be reached as follows:

Phone: (519) 886-1534
Fax: (519) 725-8950

His book Northern Cityscape: Linking Design to Climate received an Award for Planning Excellence by the Canadian Institute of Planners.

Pedestrian Mobility In Winter

by PATRICK J. COLEMAN, AICP
Vol. 20, No. 1, Summer 2001

Since the beginnings of the Winter Cities movement in the early 1980's, a growing network of communities, large and small, have benefited from networking, research and promotion of solutions to common problems. Awareness has been raised about the unique issues and opportunities of northern cities. Participants in winter cities conferences have become inspired to take positive action to improve winter livability in their communities.

While great improvements have been made to improve the planning, quality of life, the economy, snow management and transportation in participant cities, much work remains to be done to overcome the challenges of living in, and managing the winter city. There has not been widespread acceptance of the principles of winter city management. Many cities remain in denial of winter by planning and implementing projects without full consideration of the winter season.

For this reason, it is important to continue the winter cities movement through the conferences, research, publications and other efforts, so that citizens of northern cities around the world may enjoy an enhanced quality of life and so northern cities can remain attractive for investment, business and as places to live.

A snowblower attachment cleared snow from this walkway

One of the keys to being a "good winter city" is to question and reconsider all municipal actions relating to the winter season. It is imperative for cities to seek out and implement new or different ideas for improving services, infrastructure, public spaces, and the environment. There has been considerable attention, resources and energy devoted to improving urban infrastructure, transportation facilities for automobiles, the environment and urban design in the winter city. Some winter cities have addressed winter pedestrian conditions by completely sheltering pedestrians from the cold and snow in underground passages or above-grade walkways. Outside of these interventions, little has been done to influence pedestrian conditions in North American winter cities. This paper will describe the problems of pedestrian mobility, and identify some innovations, approaches and projects that can improve pedestrian conditions in winter cities.

Winter and the Pedestrian Problem

Winter greatly affects the mobility of pedestrians in northern cities. Cold, snow, and the decreased light levels in the north all influence not only the ability of people to walk in winter, but also the desire to walk.

Cold weather is not so bad by itself, as one can wear the right clothing and be comfortable. When cold is combined with wind, walking can be very uncomfortable, if not dangerous.

Snow and the condition of the walking surface itself are major factors with mobility. A packed snow surface actually is one of the best walking surfaces. Four centimeters of fresh snow and walking becomes more diffi-

cult. If the snow is old or has thawed, and the surface is icy, then walking again becomes difficult and dangerous, especially when combined with a sloped surface.

Decreased light levels also influence walkability. Pedestrians are more susceptible to auto collisions under decreased light levels. It becomes difficult to see ice and obstacles. People are not always comfortable walking at night, unless the walkway is well-lighted.

Among winter cities, one also finds a variety of winter climactic conditions. Conditions range from very cold with little snowfall, to moderately cold with much snow. The latter conditions, such as experienced in Aomori, Japan and Marquette, Michigan, are the most difficult to create good pedestrian conditions consistently and requires more responsibility by the city government and citizens to become a walkable city.

Fashion, particularly ladies shoe and boot fashions, has been clearly out of step with winter. Most women's boots have smooth soles, not suited for walking on slippery surfaces.

Recently, I reviewed literature relating to pedestrians and slip and fall accidents, including the book Slip, Stumbles and Falls: Pedestrian Footwear and Surfaces, by B. Everett Gray. This book was published by the American Society for Testing and Materials (ASTM). There was no mention of winter and its effects on pedestrians and walking in this book. Was this an oversight and winter was merely forgotten? Or, perhaps it is just another example of winter and its challenges being left out in the cold.

Handrails are a nice feature on this downtown Marquette walkway

It is generally recognized that most northern cities were not designed for the winter climate. This affects the pedestrian directly. Older city development patterns, such as the grid system, frequently have walkways. However, in snowbelt areas, the space used for the walkway becomes important for snow storage. In newer suburban areas, walkways were frequently not constructed at all.

If the city were to be designed for the pedestrian, the walkway would take on more prominence, with separation from traffic, windscreens using earth forms, evergreen trees, and adequate snow storage along streets.

During winter, walking becomes more difficult and often uncomfortable. This is a simple fact. If we, as winter cities, desire to make our communities more walkable, then we must consider all these environmental and psychological factors in our infrastructure and maintenance. The problem is, these factors are not considered, in fact, the prevailing thinking is that people do not or will not walk in winter no matter what.

Cultural Barriers to Pedestrian Mobility

In the auto-oriented culture of Canada and the United States, many northern cities have ignored the pedestrian in winter time, with most attention and resources devoted to keeping streets and highways clear of snow and ice for the automobile. In fact, in many cities, neighborhoods, even entire suburban communities can be found without walkways. Most suburban commercial developments are constructed without pedestrian connections or any means of walking between businesses, much less walking to the commercial development from a neighboring residential area.

The auto-oriented culture further compounds the problem of pedestrian mobility. We have become so dependent upon cars, and related roads and parking facilities, that the needs of parking and roads outweigh the needs of the pedestrian. Parking requirements for public and private facilities, often legislated by the city government's own zoning and land use controls, have created unrealistic perceptions by the public that walking is undesirable. An architectural pundit might say that the new rule of design is "form follows parking".

People expect to be able to

park by the front door of their destination; anything further is inconvenient. This perception further erodes the economic viability of the traditional downtown shopping district, where parking is often in ramps and distant surface lots, in favor of the malls and big box retail centers located at the urban fringe.

This total dedication to the auto is changing, however, as more persons are choosing to walk in winter cities and demanding better pedestrian conditions. This change is primarily driven by the need and desire of many to walk for health benefits. Walkability also influences a city's ability to attract new investment in business, jobs and residents to the central city, as more people desire to spend less time commuting and to live near where they work.

Creating a good walking environment requires a commitment to maintain the walking surface for pedestrians. This of course is much easier in cities with light or sporadic snow events, as compared to areas that receive more snow. City governments in snowbelt areas generally have been reluctant to commit to walkway maintenance because of cost, and the belief that "people do not walk in the winter". It is simply a matter of priorities!

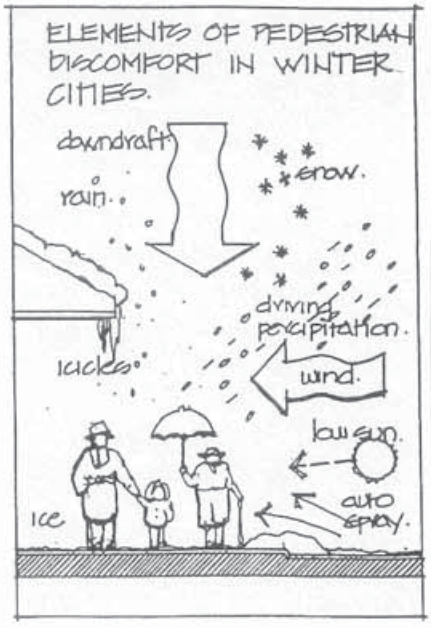
In some winter cities, the burden of sidewalk winter maintenance is left to the property owner. Some communities have ordinances or bylaws relating to maintenance of walkways, however, these are not always enforced consistently.

The whole question of liability also limits winter maintenance of walkways. Our society today is much more litigious than in the past. It seems someone else is always to blame for misfortunes, and slip and fall accident claims are common in the courts. If it is the city's responsibility for maintenance, then the city government may be liable for injuries due to accidents, slips and falls. Many local governments are reluctant to assume this perceived liability.

There is of course, a recognized cultural barrier and bias against winter in the fields of city planning and engineering. While great strides have been made in the awareness of winter problems, most northern cities continue to plan and construct city developments without regard for the dominant season of winter.

Solutions for Pedestrian Mobility

In winter cities around the world, we find a wide disparity in the commitment to create good pedestrian conditions, and a variety of positive solutions and techniques to create better pedestrian mobility.



At the dawn of the winter cities movement, much attention was focused on the winter needs of the central business district and to link various buildings together to reduce the need for people to walk outside. A number of northern cities created indoor and elevated pedestrian movement systems in the central business districts.

Minneapolis/St. Paul, Minnesota and Calgary, Alberta, Canada are great examples of winter cities that were pioneers in linking buildings together to create an indoor walkway system. Skyways, skywalks, and plus 15's are words describing the pedestrian bridges that are the arteries of these systems. Today, one finds these elevated walkways in many cities, including Duluth and Rochester, Minnesota, and Edmonton, Alberta.

In Houghton, Michigan, a small city (population 7,000) in the Lake Superior snowbelt, a system of overhead walkways and "doors between stores" was created in the mid-1980's. This project won an award for urban infrastructure at the 1988 Edmonton Winter Cities conference for its creativity and adaptability to large and small towns everywhere.

Toronto and Montreal, both major population centers in Canada, have linked vast areas of the central city underground with walkways that double as shopping arcades and malls.

While underground, above-grade and through building arcades and walkways have ben-

efited the downtown areas of cities, some question their value. The primary criticisms are that they often reduce street level animation and life, and create negative impacts on street level retail establishments. Retail becomes focused inward, rather than making the street an interesting place. And it widely recognized that street animation is a vital component of a healthy downtown.

Much can be learned about pedestrian mobility from the cities of northern Scandinavia. Here we can find positive examples of both a physical and cultural bias in favor of the pedestrian. It is here where pedestrians are given some priority and favor. I believe it is because culturally, the pedestrian is more important, and also because winter is an important part of the life of this region.

Traffic calming improvements, such as raised crosswalks at street intersections, are employed to slow down vehicles and provide a dry walking surface for the pedestrian to cross the street. In Lulea, Sweden, much of the main shopping district is free from cars, with a total pedestrian orientation.

In Kiruna, Sweden, major traffic changes some years ago resulted in a one-way street system. This was designed to favor the traffic flowing uphill, resulting in a 30% decrease in auto emissions in the city. More importantly, the traffic improvements allowed the narrowing of major streets to provide more space for pedestrians in the centrum (central business district).

In both Kiruna and Lulea, much care is taken to provide the pedestrians with a good consistent-walking surface. No salt or de-icers are used, rather, small diameter gravel is used for an abrasive to improve traction. Walkways are scraped clear of loose snow, leaving a packed snow surface, perfect for walking.

Traditional kicksleds, or sparks, are used by many persons in northern Scandinavia to assist with walking in winter. Consisting of a chair mounted on long steel runners, the kicksled has been used for over 100 years and remains an important transportation mode of travel. They are especially favored by older persons and mothers with children. The kicksled provides stability and support on the winter walking surface. They can be ridden on downhill grades, or propelled by standing on one runner and kicking the snow surface. Small parcels may be carried on them and the chair provides a place to sit and rest.

Scandinavian communities consider the kicksled when maintaining walkways. When spreading the gravel abrasive, clear lanes are left for the sleds. There are even special parking places for the kicksleds in Kiruna.

Some northern cities in North America do take special measures for the pedestrian. In Marquette, Michigan, hosting a winter cities conference in 1997 resulted in increased awareness of winter problems and opportunities. The City of Marquette has made winter livability a priority in many areas of public works and facilities.

Key walkways through neighborhoods are plowed for pedestrians. Walkways leading to schools are priorities.

In the historic downtown district, it was recognized that winter conditions, as well as steep grades, were a major barrier to downtown's competitive advantage over outlying shopping areas. A program was developed to improve this situation.

Winter maintenance of downtown walkways and parking areas is now a priority of the city's downtown development authority. This group took over this responsibility from the city public works department. Linkages between parking areas and the retail street have been designed for comfort in the winter season. A new elevator/stair tower will remedy the steep grade between parking and the main street while providing a more direct, convenient and weather-sheltered route for downtown patrons.

The downtown development authority clears snow from the sidewalks using a small tractor with sweeper, rotary and blade attachments. It leaves the walkway in pretty good condition. Property owners may elect to scrape and do further maintenance if desired. Sand and/or deicer is spread for icy conditions. The maintenance includes opening areas in the snow windrow along the curb left from street plowing. This provides more convenient access from on-street parking. While not entirely perfect, the attention to winter maintenance has improved attitudes among downtown office workers and retail patrons in Marquette. Constructing these links, however, is expensive, both to construct and to maintain.

Anchorage, Alaska, has devel-

... continued on page 26

Winter and the Elderly

by HAROLD HANEN
October 1988

"The difference between survival or not may be based upon something as simple as the occasional option to move freely in a warm, bright environment". - Dr. Persinger, Winter City Showcase 1986

The organization and management of winter cities movement systems impact dramatically upon the quality of older citizens' lives.

The "golden years" - a time for reflection and harvesting our just rewards. But also the time when our mental and physical dexterities diminish, when the once petty annoyances of daily life expand and cut off our ability to participate in a full urban life.

Added to the normal difficulties of getting about in the contemporary city, older people must also cope with winter's additional physical and psychological demands.

Robert Sommar, a noted environmental psychologist, commenting on the contributing role of sensory stimulation to the quality of life of the elderly, said: "Vision, hearing and taste fade, and the intensity of stimulation is reduced, thus making the elderly more bored, discouraged and depressed. What is needed are urban places where there is no noise of traffic to drown people's voices, nor exhaust fumes to mask pleasant smells, but rather intensely pleasurable sensations - perfumed and colourful flowers, the splashing sounds of water, good conversation, street musicians and so on. In such contexts, even those whose senses are diminished may still be able to take pleasure in all they see and smell and hear."

Appropriate mobility alternatives that address the four seasons' realities are fundamental to health and happiness at all stages of life. For seniors, it is imperative for emotional health (independence and freedom), for exercise (which, though different from when young, is more important as we get older), for accessing basic survival needs (food, medicine) and for connecting to the world of other humans and nature.

Even the thought of harsh urban winter conditions can inhibit a senior citizen's mobility. Concern about the dangers and discomfort of going out into whitened, windy streets often leads to isolation or dependence on friends or special transit services.

If an older person's will is sufficiently strong to overcome these natural anxieties, then they must face the real and formidable risks of injury through falls, hypothermia or traffic accident.

They must also contend with the discomfort of cold while waiting at bus stops, of being sprayed by passing car slush, and of inhaling the nauseous fumes of condensed, lingering exhaust. The aged are among those most emotionally vulnerable to winter's grip, especially when exposed to the same small environment day after day. Winter's icy blasts and unprotected city movement systems conspire to thwart their engaging in everyday city social activities, such as conversations with neighbours and shopkeepers or simply watching people.

A re-examination of the principles and values underlying 20th century city transportation planning as it affects senior citizens is now required. The need is fueled by the trend of the last decade toward significant increases in the number of retired persons and the growing inability of existing transportation systems to meet current demand.

Why do the daily physical boundaries of the aged tighten? Is it an inevitable fact of life's aging process? Or is this the fault of unaware and unresponsive city shapers who, in youth or affluence, are unable to empathize with a continuum of life they have not yet experienced?

There is little dispute that in this

century's mad rush to technology and material improvement, our cities have become rigid places, tailored more to meet the wants and needs of working male adults than those of children, women and the elderly who seem to be merely tolerated.

One way cities may be viewed is as a layering of movement systems that orchestrate individual and group choreographies. The quality of a city depends, like the quality of a symphony, upon the harmonious and fluid interplay of these flows.

Over the last four decades the street, traditionally the city's communal living room, the place to stop and talk with friends and acquaintances, has taken on as its prime function the transit of motor vehicles. Slowly and insidiously this has reduced the livability of the "public" city.

The typical Canadian suburban neighbourhood consists of low-density single land use, car-dominated streets and few opportunities for casual social encounters. Travel for the wheelless to necessary services is distant and difficult.

An elderly person's loss of access to a private car often has a dramatic impact on their feelings of independence and their ability to access basic needs and to maintain a social network. In even moderate weather conditions, the alternative modes of moving about the city (walking, cycling and public transit) do not provide the elderly with high standards of safety, comfort or convenience.

In North America since World War II, planners have given little recognition to the effect of severe climatic conditions on the mobility and lifestyle of the elderly. There have been isolated attempts in Canada, especially in Ottawa and Calgary, to provide recreational bike and walking trails. However, these efforts have not become part of the mainstream of city planning practices or an integral part of more comprehensive transportation planning.

This unawareness of winter's impact is reflected in all scales of physical design and operation. For example, the snow clearance practices of Canadian cities give priority to clearing vehicular roadways at public cost while leaving pedestrian walkways to the inconsistent individual efforts of adjacent private landowners. (Interestingly, the practice is almost the reverse in Norway.)

Other problems include the design and placement of sloping driveways and corner ramp cuts for the handicapped, both of which become dangerous ice slides in winter; and the timing of pedestrian signals. which is insufficient to allow cars and pedestrians to clear slippery intersections.

What can be done to ensure more responsive elderly access options, both in city centres and outlying areas? Several cities have developed concepts beneficial to senior citizens living in predominantly residential neighbourhoods of winter cities.

An example in Germany is appropriately called Wohnstrasse - living street. In consists of a street closed to vehicular through-traffic, edged with high-density mixed use development, though with a residential emphasis. Pedestrians and vehicles share the roadway but vehicles may move only at walking speed.

Such a street offers opportunities to observe daily happenings, to exchange a few words with the postman or the milkman, to do some shopping, to have a cup of coffee and a little schnapps. In a natural way it allows for the development of new relationships to replace those lost because of age and retirement. To do all of these small and apparently trivial things in their totality is an important part of life.

A city centre that exhibits similar user-friendly features was developed in Calgary. In the late 1960s a comprehensive transportation plan was devised for the downtown core which is now being recognized internationally for its climatic responsiveness. At grade, streets were designated for specific vehicular functions (e.g. a public transit corridor, one-way streets to meet high-capacity needs and two-way streets for slow flows.) This street network was then overlaid with a pedestrian system that included river walkways, two intersecting malls and block-encircling sidewalks enhanced with arcades and open spaces.

Then at one, two and three levels above ground, a continuous, protected network of walkways linking retail, residential, cultural, recreational, commercial and educational activities and parking garages and public transit was developed. The upper levels are referred to as the +15, +30 and +45, these being their nominal clearance, in feet, above grade-level. Stairs, escalators and elevators provide vertical transition between levels.

At the upper levels there are currently 42 bridge connections and 9km of public easements, making this the largest above-grade pedestrian system in the world.

The +15 system's influence on the lives of residents of a senior citizen's housing complex linked into the network is significant. It provides traffic- and weather-protected access to the downtown's rich array of services including restaurants, library, museum, shops, offices, other apartment buildings, hotels, city hall, theatres, educational facilities, etc. In their daily winter outings the residents come into direct contact with a very wide range of social opportunities, reminiscent of those of the Wohnstrasse, but richer in diversity and uniqueness.

As cities get more complex and people become less satisfied with reductive and fragmented approaches to organization and management, new urban strategies will have to be devised. The criteria for tomorrow's cities must reflect an appreciation of the essential role of mobility to a good life. They must respect basic needs for safety, comfort, convenience and delight. They must incorporate transportation not as moving hardware but rather as user-friendly, multi-modal, integrated and continuous movement systems.

Canadian cities will continue to grow and change. The challenge is to grow quantitatively, open to the subtleties and nuances of all aspects of cities, the excitement of diversity, the richness of detail, the cohesive power of negative spaces and the beauty of movement in the four seasons.

At the time of writing Harold Hanen was an adjunct associate professor at the University of Calgary's faculty of Environmental Design and President of Harold Hanen and Associates. He was a vice-president of the Canadian Livable Winter City Association, chairman of the Calgary Chapter and co-ordinating director of the Livable Winter City Inter-disciplinary Research group at the University of Calgary.

Planning & Design for Children in Winter Cities

by MICHAEL BARTON
Vol. 18, No. 2, Spring 1999

About 45 years ago, my own experience of moving around the city was a combination of walking, bussing, cycling and using trains. This provided me, along with my peers, an intimate knowledge of routes to and from bus stops and train stations. It also provided us with a junior expertise on types and models of buses and trains. We had many favourite "nodes" although this word was unknown to us. Our geography was very experiential!

Recently, Professor Greg Halseth of UNBC has revisited "kids-mapping" studies in Prince George. From the studies, it is apparent that children's experiences of these routes are more likely to be from the back seats of automobiles. Changes in city planning in North America have not been sympathetic to the needs of children (or indeed, the old, the poor and the disabled). As Colin Ward said, nearly 20 years ago;

"Our problem is not to design shops, streets, housing ... that can lend themselves to play, but to educate society to accept children on a participating basis."

It is much the same problem in northern towns. We are becoming used to designing for snow drifting, prevailing winter winds, orientation, and using heliomorphic form generation etc. For children however, it is the links and pathways which connect house and school; school and park, which are so important. Often, the experience of getting to places is more important than arriving.

Many northern towns are scattered into specific zones which are spread out over a landscape. Typically, there will be an original core; an industrial zone; then, a school here, a recreation centre there, a park over here, a college campus way out over there, and so on. In between these zones, there will be amorphous spaces of uncertain designation. Quite often, the distances between the zones, (and user-unfriendly transit systems), deter walkers and cyclists. The result is the endless ferrying of children from place to place in cars, which so many of us are familiar with.

Because of the mania for the efficient movement of vehicles through urban centres, together with the upsurge in "sub-urban" residential zones, the integral networks which existed in the urban villages of the '30's and '40's, between home, school, neighbourhood, friends, street, park, and workplace, have changed dramatically.

Looking for Solutions

Having briefly looked at "how we arrived here," we should ask ourselves "what is it that now needs to be done in order to achieve a measure of user-friendliness in this (or any other) northern town?"

To begin with, things should be more compact. Places should be accessible by a variety of means, and by the young and the old. The links between the zones that were previously mentioned should be person-related, not vehicle-related. Some of what has happened in downtown Vancouver, for example, is good. The old industrial area is now an integral mix of housing; retail space; market place; recreation areas; footpaths and cycle paths. All of this is within easy reach of the core, (using public transit).

Another example worth mentioning is Nuuk, Greenland, where the schools are accessible by pathways and bridges, so there are no main roads to cross.

It is a curious paradox that in the land of Disney; where there is such a current proliferation of thematic enclaves, there is very little design and planning with children in mind.

Micro-level

As it will be some time yet, before planning and urban design enables children to participate in their environments, we might have to make a start at the Micro-level of neighbourhoods. People that have taken the time to study

children in the urban environment, come from a very broad range of disciplines, for example; architecture, planning, environmental psychology, geography, recreation, medicine, and so on. However, some of the things that they have collectively noticed include:

- Differing sight lines.
- Scale, proportion and distance.
- Anthropometrics.
- Ergonomics.
- Colonization of small spaces.
- Prospect and refuge.

Some of my own research, which has taken place in various settings, such as; classrooms; clinics; hospitals; playgrounds; housing estates; airports, and the street, has produced a myriad of behaviour environment information.
The social scientists call this behavioural settings. There are two or three examples of these behavioural settings shown here, which are from a research study at a children's treatment centre.

The Northern Ecological Model

This model is a result of combining the kind of design-relevant information which has already been alluded to with northern appropriate design and planning information. The latter component is also a blending of climate related criteria and socio-cultural information, which comes from observing people and movement patterns in small northern communities.

This model demonstrates the way a community is able to expand and contract; not in a physical sense, but in the way people are able to accomplish things and move around.

In design principle terms, winter is concerned with 'refuge' in varying degrees. Of course, 'prospect' may also be afforded when viewing the low winter sun from a wind-sheltered spot. The summer season however, promotes expansion through the use of the sensory environment and the external range.

The qualities listed below would be part of a community model of this type:

- Climate-appropriate orientation.
- High-density and compactness.
- Clustering of units and structures.
- Using natural topographic forms for buffering and protection.
- Having a central meeting-gathering place.

This model could lend itself to a small community by itself; or be part of a town or neighbourhood. A sense of place would allow child participation in a natural, risk-free but challenging setting.

Michael has worked in the North since 1987. Before moving to Whitehorse he spent three years in the Arctic as Western Regional Architect. Before this period he was in B.C., mostly in Victoria. Approximately 10 years were spent in Private practice, during which time Michael specialized in Planning and Design for Children. Since becoming a Northerner, he has also specialized in Northern-Appropriate Design and Climate affected design approaches. He is Principal of "Circumpolar Research and Design for Architecture". In the last few years he has been endeavouring to find ways to combine these two areas of specialization.

Michael L Barton, Dipl. Arch., M.A., michael.barton@gov.yk.ca

---

oped a multi-use, non-motorized trail system linking various parts of the city. One can walk, run, ski, and ride bicycle on this trail in the winter. Marquette, Michigan is also considering maintaining a bike path in winter for multi-use. Once again, cost is a consideration. Special equipment must be purchased and used in order to pack and prepare the snow surface for multi-use.

This public cost of building and maintaining walkways for winter use must be compared to the value the community places on winter pedestrian mobility. Many will argue that pedestrian mobility in winter is not an achievable goal, or that the desire to walk in winter among citizens is not there. In the not-so-distant future, multi-seasonal access and mobility will have a far greater value, as more persons choose to live near where they work and forsake the traffic congestion and long commutes associated with many large cities.

Patrick J. Coleman, AICP, is an urban planner and President of U.P. Engineers & Architects, Inc., a multidisciplinary firm located in Houghton, Michigan, USA. A long-time advocate and expert on northern design and planning, Patrick is the immediate past-president of the Livable Winter Cities Association (WCA-North America), and has been on the Board of Directors since 1993. He has written numerous articles for the WCA journal "Winter Cities" and has been a speaker and presenter at international winter cities forums and planning conferences in Michigan, Wisconsin and Minnesota. He is a member of the American Institute of Certified Planners.

The Winter Tourism Challenge

by RICK MYSTROM
Vol. 18, No. 2, Spring 1999

Anchorage in winter

The Potential

For cities of the North, there is wealth to be found in our winters. Winter tourism holds great promise for our future, promise that has been largely untapped. We live in lands of great beauty. We enjoy natural wonders experienced by only a small minority of the human race. Our wildlife is abundant.

Amortizing our Investments

Winter tourism is one of the more immediate ways winter cities can improve their economies. As we find ways to attract more wintertime visitors, our tourist businesses will become more profitable year-round, encouraging greater investment.

Anchorage has 6,800 hotel rooms and 900 bed & breakfast beds. Many of these rooms remain empty in winter. Our upscale hotels enjoy 94 percent occupancy in the summer, while averaging only 62 percent the rest of this year. In December and January, occupancy drops to 52 percent. The potential lies in filling those rooms in the winter.

The Challenges
Competing with Giants

As we aim to attract winter visitors, we are competing with the giants in the tourist industry. In 1996, Hawaii spent $245 million, mostly to attract the wintertime traveler. Alaska spent only $7.8 million for its year-round tourist promotion, and only a small percentage was dedicated to the winter market. As a result, we in Anchorage have taken the initiative ourselves, spending $4.2 million last year alone.

Strategies for Success:

1. Quality facilities that appeal to the affluent adventurer.

Our survey data show that winter tourists in Anchorage are, on average 10 years younger than our summer tourists. They are better educated, more affluent and spend more money per trip than their summer counterparts. Obstacles in the minds of our winter travelers are the false perceptions that northern accommodations are primitive and uncomfortable. Our success depends on convincing potential winter visitors that they will be warm, safe and well-supported as they enjoy winter adventures.

2. Unique activities and events.

Harbin, China

The 'Ice Lantern Gala' is truly one of the wonders of the winter

Native participation in "Cultural Tourism"

world. This 45-day ice and light spectacular, held in Zhaolin Park, has been China's first festival of the year for the past 23 years. By establishing this remarkable tradition, Harbin has developed world class artists and sculptors and has become a 'must see' for all winter travelers.

Edmonton, Alberta

Edmonton's success comes from world-class sports and shopping. This dynamic city has gained a reputation for outstanding professional sports teams and events; hockey, football, and rodeo. But perhaps most remarkable is the success of the West Edmonton Mall. This shopping centre, encompassing 24 city blocks, attracts millions of visiting shoppers each year. Tourism contributes more than $1 billion annually to Edmonton's economy.

Tromso, Norway

Tromso is successfully marketing winter visits for Aurora viewing, mostly to Japanese visitors.

Aomori City, Japan

Here, a village of Snow Huts is available for both citizens and tourists. Each of these igloo-like dwellings offers dining delicacies - from Ghengis Khan barbeques to local 'Jappa' stew. Aomori has learned that visitors are drawn to their city by the 'taste' of winter. Wintertime seafood, taken from colder seas, is richer in oils and tastier.

Anchorage, Alaska

The Iditarod Trail Sled Dog Race is a unique winter event in Alaska. Beginning in Anchorage each March, the 'Last Great Race' has contributed to the mystique and appeal of wintertime Alaska. It commemorates a heroic and life-saving episode in 1925 when courageous men and dogs, in the depth of winter, carried diphtheria serum 1,600 km from Anchorage to Nome. The modern race has captured the imagination of people all over the world and opened up remote Alaska villages to winter tourism.

3. Participation by Aboriginal peoples.

Cultural and historical tourism is one of the fastest growing areas of tourism worldwide. Of special interest are indigenous people - their art, music, dance and traditions. Cultural tourism requires sensitivity and tact. The key to success in Alaska is Native ownership.

Historically, Aboriginal people have been exploited by more dominant cultures. In the past decade in Alaska, however, we have seen dramatic change, and this change is working to the betterment of all.

Seventeen new companies provide tours of Alaska Native villages, interpreting Native cultures. Fifteen of these are companies owned by Natives. With Native ownership has come local partici-

... continued on page 32

The Iditarod Trail Sled Dog Race brings participants, spectators and media from around the world

Canadian Winters and International Nordicity

by LOUIS-EDMOND HAMELIN
Vol. 19, No. 1, Winter 2000

Even in scientific literature, the natural connection between the notions of winter and the north has hardly been considered. The non-liaison seemed logical; while the word winter refers to the concept of "season," which is of a relatively short duration, the word north applies to a "territory," a permanent space. Nonetheless, winter constitutes a major climactic characteristic of every Arctic and Subarctic area, and should be closely interwoven.

It has been written that winter resides less in the cold, the snow, and the ice than in the head, in the imaginary world, and in ideology. The "dead season" is found more in us than around us. Consequently, there should exist the notion of a total winter composed of the physical element represented by the freeze-up of materials and the human element that may be assessed by evaluating citizens' attitudes.

The study of weather is not the exclusive domain of specialists in the atmospheric sciences; it is equally interesting to social scientists, technologists, writers and artists. Winter, an eminently multidisciplinary subject, might therefore be defined: the cold period of the air-land-sea interface, variable according to latitudes and the perceptions of individuals.

Our global approach to the conception of the winter season leads us to consider the areas concerned as being socioclimatic.

In regard to the number of inhabitants, a distinction must be made between the zone in which winter lasts at least three months (the Nordic World) and the densely populated peripheral fringe of this zone (the Temperate World). The Nordic World stretches from the pole to latitudes as far south as 50 degrees, and the Temperate World stretches up to a maximum of 60 degrees and down to 30 degrees.

The Nordic World

Most people do not recognize the importance of this zone. This immense circular network involves in part three continents and three oceans. The whole network covers about 15 percent of the Earth's area. It is important to note that, although it is called Nordic, this zone is not restricted merely to the Finno-Scandinavian peninsulas in Europe. Within this vast world, the different types of winter weather, not all of which are well known, are harsh and stretch out over an irregular latitudinal scale.

The zone numbers fewer than 13,000,000 permanent residents. The Inuit seem to be best adapted to the "Far North," as demonstrated by their igloo. However, important urban concentrations are found in Northern Russia. Northern Europe has the greatest rural densities. In comparison, Nornam (North North America) remains sparsely populated.

Like other zones, this Nordic zone has both advantages and disadvantages. These traits become apparent in the realms of indigenous peoples' cultures, development, wildlife sanctuaries, freshwater reservoirs, jurisdiction over ice-covered seas, scientific laboratories, military shields (radar; training flights), human adaptation to ecological conditions, and adventure tourism.

The Temperate Zone

South of the zone of intense winter is located a fringe that also circles the world where the duration of the cold season is not greater than three months. In this band, nearly as wide as the Nordic zone, almost two billion people see snow fall. Among them, several

hundred million experience more than thirty days (not necessarily in a row) of subzero temperatures, yet the seasonal variations have not hindered their technological discoveries. Indeed, the countries in the middle latitudes represent the principal developed area of the world; they are designated the North in the North-South biotope of humankind.

In the whole of the Nordic World and its peripheral fringe, the season becomes less intense as we move away from the pole. Lasting more than eleven months in the Central Arctic Ocean, winter takes up three or four months in the Moscow Plain, but only a few weeks in some very densely populated countries. Continuing towards the nonmountainous south, cold conditions may last only a few days per year. Nevertheless, in regions with a Mediterranean climate, fruit trees may freeze. Still farther south, around the latitude of 30 degrees, we leave the continuous "winterlands" for good.

In Canada, winter territories may be divided into two large groups: that of Northern Canada in the strict sense of the term and that of Base Canada. Northern Canada stretches from the Arctic Ocean to 50 degrees latitude east of Saskatchewan, and to 55 degrees to the west. Base Canada lays between the limits previously mentioned and the frontier of the United States. From one stage to another, the severeness of the climate and the agricultural potential assume a very different appearance. In the North, the number of months with an average temperature of 14 degrees C oscillates around 0, 1, or 2, a thermal threshold that precludes outdoor agriculture; in Base Canada, there are three or four such months, affording a good period for cultivation as well as a very acceptable environment in the eyes of the great majority of the population.

Winter is one of Canada's faithfully recurring features, like icebergs in offshore Newfoundland. It presents a certain unity: 50 degrees below zero in Winnipeg and 50 degrees below zero in Denedeh are after all 50 degrees below zero; a blizzard in Regina resembles a blizzard in Iqaluit, but patterns are not uniform with respect to space and intensity.

Many types of regional winters may be discerned: fierce, humid winters in Southeastern Canada; briefer and less oppressive winters in Southern Ontario; rainy winters in Southwestern British Columbia, cold dry winters in Alsama (Alberta-Saskatchewan-Manitoba); Middle North regimes showing transitions between the monoseasonal winter in the Temperate Zone and the triseasonal winter in the Arctic Zone; a few months of darkness in the Northern Zone (Queen Elizabeth Islands). On a local or regional level, physical changes are brought about by urban warming, the snow-eating Chinook in Alberta, vast water bodies (Great Lakes, the Gulf of St. Lawrence, Hudson Bay), winds, and continentality.

It seems that the many cultures that comprise the Canadian mosaic do not respond in the same way when confronted with the snow.

On a human level, within the obligatory interface between nature and people, a good part of what constitutes "winter" comes from the attitudes of men and women. It seems that the many cultures that comprise the Canadian mosaic do not respond in the same way when confronted with snow, sports, heating, clothing, and the depression of winter life. The same is true of age categories and social groups.

The Laurentian winter lasts three to four months and consists of three mechanisms: a series of nonconsecutive snowfalls over about 10 to 20 percent of the days; cold fronts for 20 to 35 percent of the days; and spring-like days in between that would take up about 50 percent of the days. These three mechanisms, however, appear irregularly.

A blizzard that reduces visibility to a dangerous level occurs only two hours per winter in Quebec City in comparison with 103 in Iqaluit.

A snowfall is calculated on an hourly scale, and it rarely lasts more than half a day. Most snowfalls would be classified as medium or thin as opposed to thick or very thick; that is, in most cases it would take no more than a quarter of an hour to shovel an automobile out of the

snow. According to Environment Canada, a blizzard that reduces visibility to a dangerous level occurs only two hours per winter in Quebec City, in comparison with 24 in St. John's, 31 in Regina and 103 in Iqaluit.
It is fundamental to forecast trouble the moment a storm begins. The worst situation occurs when a "very thick" blast, closely following a previous blast, is accompanied by a fierce wind about eight o'clock in the evening. Yet the worst inconvenience results not from the quantity of snow fallen but the snow banks accumulated downwind against obstacles. The next morning, plants, offices and schools are closed. To have a good winter, one must learn many things. The best wintering is a matter of practical intelligence.

Harsh anticyclonic weather consists of either "moderate cold" without any major inconveniences or "severe cold" (from -20 to -30 degrees), which occurs in several interludes lasting a few days. The wind factor, in addition to increasing the local snow cover, makes temperatures lower; it also increases human heat loss and transforms tolerable temperature conditions into conditions demanding more clothing. In Quebec City, the "windchill factor" brings the temperature down to -50 degrees for a few hours per winter.

Besides the irregular recurrence of these three types of weather - snow, cold, and pseudo-spring - Laurentian winter is divided into three phases called prewinter, hard winter, and winter's end. In Base Quebec (the more heavily populated South), from the second half of November to early April, the season is not a homogenous period.

The beginning of winter is characterized by little snow, little sunlight, moderate cold, the freezing of humid materials, and the formation of ice cover on the shores of water bodies. This nonlinear progress of the phenomena takes up almost the entire second half of autumn. The three mechanisms (storm, cold, pseudo-spring) and three phases (prewinter, hardwinter, winter's end) combine to produce almost daily dynamic atmospheric conditions.

Hardwinter centers especially on the storm-cold pairing and usually begins during the last week of December. In clear weather, the landscape takes on a pastel or golden hue.

Toward the last week of February, winter's end hesitantly sets in the lengthy sunlight, milder air, floating-ice system serving as a dam for the abundant meltwater, rising of maple sap, and potholes.
The three mechanisms (storm, cold, pseudo-spring) and three phases (prewinter, hardwinter, winter's end) combine to produce almost daily dynamic atmospheric conditions. These frequent recurrences influence attitudes and choices in dress habits, travel planning, achieving work objectives, health protection, and sports. The chronological mobility of winter conditions leads many people to become constantly involved in choosing the best responses to changes that occur at short intervals. Wishing to remain ignorant or adopting a policy of "inaction" exposes us to many little irritants, unless we wish to accumulate them in order to justify rejecting winter!

Not seeing things as they are or borrowing ideas from elsewhere affects Laurentian wording. First, some speak of the "winter of 1992" as if it will not begin until January. It would be closer to reality to continue to use the old designation that included the previous autumn; this realistic view would be expressed by the "winter of 1991-1992." The period begins before December 31st. In fact, in Quebec City, there is a 100 percent chance of having a "white Christmas" and an 84 percent chance in Ottawa. Without any doubt, December should be included in the season.

Therefore, one must know how to identify the beginning of each type of winter: the psychological winter of hibernophobes (after July), climactic winter (second half of November), astronomical winter (December 21st) and winter as indicated in the Linguistic abbreviation (January 1st).

Over the last thousand years, natural winter has changed. Better solutions to different problems (heating, lighting, housing, transportation, food conservation, and urban snow removal) have gradually alleviated a part of the winter mortgage of yesteryear. Today, in

downtown areas, if one forgets the noise of snow removal at night, the repulsive slush along the sides of streets and the short bouts of "severe cold," the rigors of the season have been reduced. Within the vast dome that envelopes large cities, urban warming reduces the local effects of winter. This warming turns a part of the precipitation that would otherwise be snow into rainfall (sometimes turning it into freezing rain), and shortens the duration of snow cover on the ground and ice on sidewalks by a few weeks. At the local level, urbanism works against winterness. Therefore, it becomes almost incomprehensible that this dewinterization has not resulted in less grumbling by winterers! Thus we see that nature, technology and attitude evolve neither in the same direction nor at the same rhythm.

In Canada, winter's mental and material significance is proving to be fundamental. No doubt we first notice additional costs imposed on heating, clothing, road maintenance, enterprises, construction and health. Estimates vary widely but appraisers think that the annual winter expenditures of a family equal annual residential mortgage payments. The financial assessment must also take into account industries and services which, operating during this time of the year, stimulate economic life. In many fields, the main season for work and artistic activities occurs between autumn and spring.

This concentration of activities presents different problems that, in fact, confront the whole society. Would it suffice to make better mental, linguistic and technical adjustments to the real dimensions of winter? Should we not take the opportunity to assess our personal relationship with the environment pertaining to the resources used and the optimum art of living? Neither nature nor the city dweller would gain from improved snow removal in the city if polluted snow were going to degrade rivers farther away. Consequently, normative winterism goes beyond natural rigors of winter and voluntarily entertained fears. A people whose mythology of winter would be derived from a new formula incorporating science, conscience and emotion would know how to take on intelligent, fruitful commitments. Could we not, therefore, expect that such a people may even include winter in its nationalistic boasting?

Louis-Edmond Hamelin is Emeritus Professor, Geography, Laval University, Quebec City.

---

pation, a welcoming spirit and a dedication to accurate representation of Native traditions and values.

4. Strong marketing programs.

Marketing is vital to success. Using wildlife cartoon characters and the theme 'Wild about Winter', the Anchorage Convention and Visitors Bureau has marketed winter time in Anchorage as a great place to have fun. The ACVB team of 37 employees is financed by half of the receipt of a hotel bed tax. This tax generated $9.6 million in 1998. The majority of ACVB efforts focus on non-summer markets, and the results have been impressive. From 1993 through 1997, annual tourism sales in Anchorage, as reported by North American wholesalers and travel agents, have doubled from $33 million to $66 million. The economic impact of conventions and meetings in Anchorage has also nearly doubled - from $33 million to $57.5 million. Eighty-two percent of the conventions and meetings took place outside of the summer season. Last year's total of $128.6 million in tourist sales represented a return of $32.61 for every dollar invested in promotion.

Conclusion

The most important aspect of successful tourism, regardless of the season, is the friendly attitude of people. That is the key, above all else, to help our guests enjoy themselves and make them want to return.

Adapted from a speech presented by Rick Mystrom, Anchorage, Alaska, at the Winter Cities Forum, 1999

Winter Cities
ASSOCIATION

Members are encouraged to submit articles, book reviews, events and other news to the Winter Cities Magazine. We also welcome your suggestions for possible topics and authors you would like to see in future issues. The editorial staff may be contacted at wintercities@aol.com or c/o René Akre, 305 Virginia Avenue, Ann Arbor, MI 48103, 734.645.7874.

Articles are generally 1,000 - 1,500 words. Greyscale images are preferred in a tiff or eps format. High-resolution jpgs are fine. Scanned images should be set to 300 dpi (150 line screen) minimum.

The Winter Cities Magazine is published in February, May, August and November. The submission deadlines are the first day of the month of December, March, June and September.

BIENNIAL WINTER CITIES FORUM AND TRADE SHOW

Invitations are extended to North American municipalities to host a biennial (odd numbered years) Forum and Trade Show. Bidding criteria are available from the Association and via e-mail: nechakoriver@shaw.ca.

Web site: www.wintercities.com