“Celebrated, not just endured:” Rethinking Winter Cities

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Abstract

A winter city is any urban centre that experiences a long, dark, cold and/or snowy winter. The Winter Cities movement is a more precise concept, referring to cities taking an active role in becoming more appealing and functional in winter, primarily through physical interventions. The movement also has a social purpose, seeking to counter reclusion and 'hibernation' in winter through greater use of the public realm. The movement is increasingly influential in policy, as part of a broader shift towards promoting livability and sustainability in cities. However, it has yet to receive sustained scholarly attention. This article brings the Winter City movement more fully into the academic sphere, describing its emergence, purpose, and key attributes, while also examining it critically for silences. Drawing on English- and German-language publications, it places particular emphasis on the range of interventions and design approaches intended to promote greater use of outdoor public spaces, and an associated problematization of quasi-public indoor environments.

1. Introduction

"The Winter City movement is a design and behavioural approach to improve the quality of life in northern settlements, to ensure that winter is better coped with and celebrated, not just endured." (Davies, 2015, p. 307)

In a recent stocktake of the new urban agenda, Barnett and Parnell (2016) observe that urban spaces and processes are central to "securing sustainable futures in a range of fields including climate change, economic growth, poverty eradication and food security" (p. 87). Moreover, global policy-making has become increasingly "city-centric", with international networks of urban organizations and governments promoting a vision in which cities are "inclusive, safe, resilient and sustainable" (p. 88). At the municipal level, an array of policy initiatives has emerged to address this vision, often linking sustainability to improved quality of life. There is a broad suite of globally-networked policies that speak to (social) sustainability and livability, with varied lineages and degrees of traction: a partial list includes the WHO-led Healthy Cities and Age-Friendly cities initiatives, the Child-Friendly Cities movement, and the widespread adoption of Pedestrian Charters. These policy fields share commitments to mobility, safety, inclusion and opportunity, especially at the neighbourhood scale (e.g. Buffel, Phillipson & Scharf, 2012; Sun, Phillips & Wong, 2018). Each also critiques earlier (especially modernist) eras of city-building, in which sprawl, land use separation and automobile dominance combined to undermine equity, sociality, community and active travel. In this paper, we focus on a policy initiative that shares these concerns, but is less well-known, in part because of its geographical specificity: the Winter Cities movement. We note that this movement highlights the contextual factors that can

influence livability and sustainability in cities, as well as the critical role of public space in achieving livability goals, and the urban design approaches that make them possible.

The Winter Cities movement first appeared in academic and grey literatures in the mid-1980s, where it was framed as a response to challenges being experienced in northern urban centres, including deindustrialization, seasonal desertion of outdoor public spaces, and design practices that were often insensitive to local climatic conditions (Culjat & Erskine, 1988; Pressman, 1991). After this initial burst of interest, the idea received relatively little attention until approximately 2010, when it re-emerged as both a policy field and, to a lesser extent, an object of academic inquiry. Today, it has increasing international purchase as a set of policy goals and a cluster of professional networks. In an instructive recent chapter, Wayne Davies (2015) identifies its central goal: "to reduce winter's negative consequences and to emphasize its positive features and opportunities, to create more sustainable and liveable settlements" (Davies, 2015, p. 278).

This objective firmly situates the Winter Cities movement within the suite of progressive urban polices referred to above. Proponents of the movement argue it is critical to take winter in cities seriously, because of its profound effects on social activity in the city, and in particular on how and whether people utilize outdoor public space. In these respects, it connects with the core interests of many urban geographers. However, it has received little attention in geographical literature, while academic analysis more generally remains disjointed, with weak connections between studies, and few references back to any foundational work(s). In this article, we bring together temporally and spatially disparate work to chart the emergence, purpose, and key

attributes of the Winter Cities movement. In so doing, we bring a geographical lens to bear on its priorities and implicit tensions, and seek to provide a foundation for further academic inquiry.

This paper draws on English- and German-language publications and is organized as follows. The first section focuses on definitions and geography of winter cities and the Winter Cities movement. The second section examines the movement's emergence, its livability and sustainability goals, and the tangible physical interventions that may be undertaken to pursue these. The third section identifies the contemporary imperative of improving the utilization and vibrancy of outdoor public space, examines tensions around indoor pedestrian systems, and considers the German Christmas market as an example of adaptation to winter conditions embedded in local tradition. Lastly, the paper considers a major shortcoming of the movement: the assumption of able-bodied, middle-class behaviour, and an associated disregard for the socially-stratified and often conflictual qualities of public space.

2. What is a "winter city"?

Attempts to forge a standard definition of a winter city are complicated by the diversity of winter conditions, encompassing variations in temperature as well as snow, darkness, rain/slush/wet snow, and wind chill. For example, Stockholm, Sweden is unaccustomed to the extreme cold temperatures and snow seen in Edmonton, Canada – but it must contend with much lower levels sunlight levels in winter. Urban centres with long winters are located almost exclusively in the northern hemisphere (indeed, the term "northern cities" is often used synonymously with winter cities). As such, one definition focused on January temperatures, distinguishing between cities

based on whether their average temperatures were above or below 0°C (i.e. freezing point) (Pressman, 1995a). The Livable Winter Cities Association defined winter cities as all urban centres north of the 45th parallel, although Gappert (1987) argued it could be lowered to the 40th. However, cities at the same latitude can have markedly different climates due to factors such as sea-land shape, proximity to the sea and prevailing currents and winds (Cui, Allan, and Lin, 2010). For instance, the Gulf Stream creates warmer conditions in European settlements compared with North American latitudinal equivalents (Davies, 2015). Additionally, "settlements in many high mountainous areas further south have similar problems [to northern cities], as do places in the high latitudes of the southern hemisphere" (Davies, 2015, p. 280).

Here, the term *problems* is instructive, as even across definitions there is a consensus that winter – be it dark, long, cold, snowy, or wet – poses significant challenges to urban life. A primary challenge is reduced use of public space, leading to less social and economic activity in cities (Davies, 2015; Pressman, 1985a; 1985b; 1987, 1989; Gappert, 1987). There is a corresponding tendency for residents' free time to be spent largely within private homes ('hibernation'), or in warmer climates ('migration') (Gappert, 1987). For some residents, including older seniors (Finlay, 2018) and persons with mobility impairments (Lindsay & Yantzi, 2014), physical barriers such as snowbanks, and the heightened risk of slips and falls, can lead to withdrawal from public space in winter that contributes to social isolation. The Winter Cities movement articulates and conceptualizes these challenges, which are experienced to varying degrees in urban centres of all sizes in northern regions of North America, Europe and Asia, and seeks to develop appropriate responses, particularly in terms of public spaces and urban design.

There is a distinction to be made here between a *winter city* (any centre with a long, cold, snowy and/or dark winter) and a *Winter City* (a centre engaged with the international movement to promote a more livable winter environment). While the former is merely a function of location and climate, the latter indicates a commitment to increasing livability and sustainability, and sharing and adapting practices to achieve this end. Strategies for addressing shared challenges are produced and distributed within international professional networks (e.g. The Winter Cities Institute in North America and the Nordic Eight Network in Europe). In addition, the World Winter Cities Association for Mayors has facilitated meetings of city administrators and mayors since 2002 (Davies, 2015), while international conferences such as the Winter Cities Shake-Up, (hosted in Edmonton, Canada in 2017, with 326 delegates attending) have contributed to popularizing the movement.

3. Emergence of the Winter Cities movement

To date, there has been no systematic academic analysis of the emergence and development of the Winter Cities movement. There are several books and chapters (e.g. Pressman, 1985a; 1985b; Gappert, 1987; Davies, 2015),[1] but little by way of peer-reviewed literature. The earliest published work on the Winter Cities movement appears in the 1980s. Norman Pressman from the University of Waterloo in Ontario, Canada is a particularly prominent author in this phase, with key publications from 1985 to 1996. Pressman argues that "climate must be seen as a significant

[1] Most of these were written by academics, but have a generally informal style, including broad assertions made without specific supporting evidence, and limited referencing.

modifier of urban spatial form" (1985a, p. 13), necessitating its consideration alongside more conventional economic, political and administrative factors.

Critically, for many authors writing about winter cities, city planning and urban design is too often insensitive to climatic variations. Modernism is singled out for criticism due to its perceived disregard of vernacular styles and local climatic conditions in favour of standardization and efficiency. Pressman (1996) comments at length on how these factors contributed to placelessness in cities, as approaches to building and design were increasingly insensitive to *genius loci*. Thus, building spacing, street orientation, and housing styles came to be similar from downtown Toronto, Ontario to Phoenix, Arizona, despite their drastically different climates (Bosselmann, Arens, Dunker, & Wright, 1995). The internationalizing tendencies of modernism undermined what Ralph Erskine, a British-Swedish architect, termed the "special local flavour of the north" (1968, p. 166).

To the extent that modernism acknowledged winter, it sought to 'design out' exposure to cold conditions through technological innovation. New built forms such as malls and enclosed pedestrian systems offered "a steady-state, thermally neutral environment (constant temperature and humidity regardless of natural conditions) where 'indoors' and 'outdoors' are no longer connected or related" (Pressman, 1996, p. 522). From this perspective, a successful northern city was one that could be navigated without actually experiencing winter conditions, as in Toronto's underground pedestrian system, which is set at 22°C year-round (Zepic, 1987). Yet *outside* of these systems, modernism appeared to worsen winter conditions: high-rise towers contributed to shadowing and wind tunnels downtown; buildings were constructed with little regard for energy efficiency or the aspect of the sun; and vehicle flow was prioritized at street level, to the

detriment of pedestrian safety and accessibility (Davies, 2015). For Pressman (1996), the path forward for winter cities lay not in rejecting outright the technological advances and pragmatism of modernism, but rather in insisting it be more responsive to local climate and culture: an "attempt to mediate between organic regionalism and internationalism" was required (p. 529). Interestingly, clear precedent for such mediation could be found in hot (tropical) climates, where international modernism was adapted to climate and abundant growth, producing a critical regional architecture (Jazeel, 2017).

In addition to the impacts of modernism, two other developments have been identified as contributing to the challenges experienced by winter cities. The first centres on suburbanization, which is perceived to undermine the potential for vibrant public spaces by dispersing populations, reducing the efficiency and desirability of services like public transit (especially in winter), and making snow clearance more expensive (Pressman, 1988). The associated automobile dependence further detracts from the pedestrian experience in winter, both through the direct hazards presented by cars and inconveniences such as roadside snow banks (Davies, 2015). At the same time, public spaces *within* suburbs are often undesirable in winter, with icy sidewalks, windswept culs-de-sac and public open spaces designed without consideration for winter conditions or activities (Kehm, 1987; Zepic, 1987).

A second, and less discussed, set of factors centres on the deindustrialization of cities in Canada and the north-eastern United States in the 1970-80s. Without the promise of employment, rustbelt cities faced depopulation and decreasing quality of life. Recognition of these problems in the 1980s contributed to the development of the Winter Cities movement, as improving livability was central to restoring these centres' reputations and increasing their

competitiveness in the emergent cultural economy (Gappert, 1987; Royle, 1985). The potential of the movement to address these issues – as well as the challenges associated with modernism and suburbanization – lay in its goals of physical and social transformation that could fundamentally change residents' experiences of winter.

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3.1 Livability and Urban Environments

Since its formation, the Winter Cities movement has been rooted in a desire to improve urban livability (Pressman, 1985a; Pressman, 1985b; Gappert, 1987; Davies, 2015), although what this means has seldom been well-defined. One early contribution did develop the concept and consider its specific application to winter:

> Evidently most of the characteristics which make a city livable – safety, prosperity, variety, accessibility, beauty – are for all seasons. Specific measures to enhance livability in winter can be sought in two directions: increase in the enjoyment of winter's positive aspects, and protection from the negative ones (Blumenfeld, 1985, p. 47)

Simply put, many northern cities have failed to enhance the positive aspects of winter, while diminishing its "inconveniences" (Pressman, 1985a, p. 15). Consequently, winter remains an untapped resource; it is a source of beauty and unique experiences that often goes unappreciated. These experiences may include, for example, "walking in wintry landscapes with bright sun shining on pristine white snow" (Finlay, 2018, 81). The concept of livability is invoked to guide policies and interventions to address this challenge and shift attitudes.

Pressman (1985a) suggested that changes need to be made at the micro, meso, and macro levels to create livable winter cities. The micro level comprises primarily physical alterations and typically focuses on individual building design, e.g., orientation or insulation. The meso level encompasses larger areas ("sectors") within cities, such as neighbourhoods or commercial streets. It is here that comprehensive steps to improve the quality and experience of outdoor public spaces in winter are likely to be undertaken. Lastly, the macro level comprises the entire city. Efforts "to ameliorate the *total environment* of our cities" (Pressman, 1985a, p. 16) promise the most profound changes, but are also the most difficult to operationalize.

Later, Pressman (1989) identified three realms – the physical, social and economic – as a means to classify problems and responses. In so doing, he discussed a range of possible economic interventions at the macro level, such as subsidies on winter heating fuel for low income groups and winter-specific tourism promotion. Long and Richardson (1989) suggest that, for small winter cities, improving tourism and recreation systems are crucial to the communities' social and economic well-being. Socially, Pressman (1989) identifies education for cold-weather health and safety, community snow removal, special services for vulnerable groups (e.g. the mobility-impaired), and winter-oriented celebrations such as festivals. Pressman's suggestions around physical intervention were more varied in terms of scale, but consistently refer to ideas of providing residents with a choice between safe, warm indoor space and comfortable, climate-considerate outdoor space.

3.2 Climate Sensitive Design

Climate sensitive design is an influential concept in the Winter Cities movement. Also known as bioclimatic urban design or climate responsive design, it connects climatology and urban design (Eliasson, Knez, Westerberg, Thorsson, & Lindberg, 2007). Ralph Erskine, who championed high-quality design in northern latitudes, provided early inspiration for this approach:

> Here [in the North] houses and towns should open like flowers to the sun of spring and summer but, also like flowers, turn their backs on the shadows and the cold northern winds, offering sun-warmth and wind-protection to their terraces, gardens and streets (Erskine, 1968, p. 167).

Inherent in Erskine's observation is a concern for the outdoor spaces that are critical to public life in the city. From the 1980s, there has been increasing recognition that these spaces need to be designed to mitigate problems associated with snow, darkness and cold (Culjat & Erskine, 1988). Improved design of such environments is beneficial to the quality of life of locals and helps to attract new business and residents (WinterCities Institute, 2017).

The relationship between climate, the built environment and people is complex but tremendously influential in shaping how, when and where people spend time outdoors. Climate sensitive design considers the impacts of the built form, and leverages design to create welcoming microclimates. Principles for improving microclimates in winter include designing buildings and landscaping to protect pedestrians from northerly winds, orienting pockets of public space in so as to capture low-angle sun from the south, and using canopies, arcades or similar overhead structures to shelter pedestrians from snow and rain. Privately-owned spaces

such as residential courtyards and café and restaurant patios can also benefit from application of climate sensitive design principles. Both Pressman (1989) and Davies (2015) claim that such approaches can extend the season of comfortable outdoor activity by up to six weeks.

Alongside a utilitarian concern for thermal comfort is an interest in the beauty of design, particularly in the form of local traditions (Erksine, 1968). Pressman (1996) adds that nature is the best source of inspiration for climate sensitive design, and because nature and climate vary so widely from place to place, it is difficult to offer prescriptions. Climate sensitive design is therefore a general rather than specific approach to built form. For example, a common challenge at high latitudes is low light conditions in winter. In response, cities have begun to introduce varied forms of bright and colourful lighting, particularly in key outdoor spaces where the public may gather, such as market and festival sites (Davies, 2015). In several European mountain towns, extensive shading has been addressed by using mirrors to catch sunlight on the nearby peaks and reflect it down onto streets and squares (Bachinger & Pechlaner, 2010; Davies, 2015).

Adding podiums to buildings to reduce wind exposure can make streets and squares better suited for winter use (Meng and Setoguchi, 2010). By creating a wider base for tall buildings, downdrafts from the top of the building can be diverted away from street level, making open space considerably more pleasant in winter. K. Davies (2014) considered how to increase usage of public parks in winter, with a focus on Edmonton, Alberta. Key recommendations included to "increase connectivity and permeability across park borders" and "add vibrant and playful colours and lighting" (p. 3). More generally, parks and squares can benefit from the addition of winter-specific features (e.g., skating rinks, ice sculptures), small-

scale commercial activities (e.g., cafés, food trucks), selective snow removal and south-facing public seating.

Returning to Pressman's (1985a, 1989) framework for classifying actions to enhance livability in winter cities, applications of climate sensitive design are interventions in the physical realm (from which social and economic benefits may follow) applied at the micro and meso levels. These applications also seek to ameliorate winter conditions, without "overcoming" winter through technology and capital-intensive construction (Pressman, 1991).

4. Problems in Winter Cities: Public Space

The central problem the Winter Cities movement seeks to address is decreased livability in winter, which is manifest in less utilized and less vibrant public spaces. Reduced use of public space in turn contributes to perceptions of winter conditions as undesirable. Neglect and abandonment of public spaces in colder months is testament to climate *in*sensitive design, represents missed opportunities for social and economic activity, and is detrimental to the wellbeing of residents. However, when it comes to addressing this problem, there are two opposing schools of thought.

One approach emphasizes adapting or responding to winter conditions by protecting people – bringing them into enclosed and heated pedestrian spaces intended for movement, commerce and socialization. Here, the foremost examples are grade-separated pedestrian systems (GSPS) (e.g. pedways/skywalks, tunnels), and the shopping centres to which they are often attached in downtown areas. Such infrastructure is not limited to winter cities, but is particularly

common within them, especially in North America (Cui et al., 2010). Several early accounts of winter cities lauded such development as successful climate sensitive design, and "a partial solution to the problem of winter" (Gappert, 1987, p. 11; see also Pressman, 1989).

The alternative approach emphasizes the value of outdoor, publicly-owned space, and envisions its revitalization as central to the success winter cities. With greater use of climate sensitive design to ameliorate winter cold and darkness, residents will be encouraged to utilize streets, square and parks throughout winter, for both utilitarian and recreational purposes. Here, value is placed on urban residents' physical presence outdoors, and analogue indoor public spaces (i.e. pedways, tunnels, indoor shopping centres, etc.) are problematized for the way they insulate people from winter experiences. This focus is accompanied by efforts to activate public space in winter months, through increased emphasis of seasonally-themed events, recreation and tourism (Pressman, 1987).

4.1 Case study: Pedestrian systems and the perils of indoor space

Grade separated pedestrian systems (GSPS) appear in a wide range of forms, scales, and designs: from small connections between several buildings to multi-level, complex networks that connect transit lines, expansive shopping areas, and entire districts of cities. As indoor alternatives to the sidewalk, they may serve several functions, including separating pedestrians from traffic and improving accessibility for persons with limited mobility. However, they have come to be promoted in particular for their ability to improve pedestrian comfort in cities that experience extremes of heat or cold (Cui et al., 2010). For example, the skyway system and indoor shopping

malls in Minneapolis are valued by older residents as "a major aid to winter mobility and activity", being places of socialization where walking is safe, comfortable and relaxing (Finlay, 2018, p. 80).

While GSPS provide infrastructure for navigating the winter city, they are a problematic response to the challenges posed by cold weather. The challenge is primarily one of social inclusion. On the one hand, they can appear to be busy areas of public life, consistent with a vision of comfortable grade-separated socialization: indeed, commemorative signage in Calgary's elevated GSPS quotes its original proponent, Harold Hanen, as saying "increased social connection" would be "the most significant benefit of the +15 system." On the other hand, private ownership, securitization and restricted opening hours may create a quasi-public space akin to shopping malls (Cui, Allan, & Lin, 2015). GSPS often remain subject to private control and exclusionary logics, and as such they are unlikely to replicate the social mixing possible on the street (Byers, 1998; Davies, 2015). Indeed, the City of Edmonton's (2016) *Winter Design Guidelines* contend that GSPS, including its own pedway system, create a "social hierarchy" with "wealthier classes in quasi-private spaces at certain times, and poorer citizens occupying public spaces at all hours." This recognition stands in stark contrast with earlier winter city literature, which considered GSPS a successful adaptation to climatic conditions, and gave little consideration to the social stratification associated with these systems.

A second issue concerns the extent to which GSPS may compromise the vibrancy and appeal of street-life in winter – one of the Winter City movement's foremost objectives. Their impact on pedestrian activity depends on a range of factors, including the city's population and density, the characteristics of the system itself, and the quality of urban design at street level (Cui

et al., 2015; Terranova, 2009). The sidewalks of densely populated centres such as Toronto are often able to able to remain busy, even amidst large GSPS networks (Terranova, 2009). In less dense cities, pedestrian activity at street level drops precipitously, and in the worst instances both GSPS and sidewalks become underused (Cui et al., 2015). GSPS may also detract from urban design as offering attractive internal space for retail uses can potentially increase the number of empty storefronts and blank walls at the street level, contributing to an unappealing experience for pedestrians (Davies, 2015).

GSPS are effective in providing protection from weather, and often reflect a mindset that winter is something to be avoided, rather than embraced (Davies, 2015). This renders them problematic from the perspective of the contemporary Winter Cities movement, which focuses on interventions that encourage people to stay outside, while generally criticizing spatial forms that isolate residents from the unique experiences that winter offers. Indeed, the Winter Cities movement has come to be *defined* by its emphasis fostering use of outdoor public spaces in winter, and by a corresponding critique of enclosed alternatives.

4.2 Case study: Learning from tradition - German Christmas markets

In sharp distinction to GSPS, an example of how winter may be celebrated in cities' outdoor public spaces is the Christmas market. Found throughout Germany, Austria and Switzerland (Kuhn, 2012; Sikos, 2013), Christmas markets contribute significantly to the social and economic vibrancy of cities in winter. As noted above, one strand of the Winter Cities movement problematizes and seeks to resist the standardizing forces of modernism. In so doing, it places

considerable emphasis on local tradition, and historical adaptations to the challenges of winter. Christmas markets exemplify Winter tradition in Germanic countries and have proven resilient and successful in invigorating towns and cities through the shortest days of the year.

Dating to the Late Middle Ages, these markets began to assume their modern form, with a focus on specialty Christmas goods and decorations, in the 18th century (Hirschfelder, 2014). Their popularity and geographical distribution increased in the post-1945 era, including in East Germany (the Deutsche Demokratische Republik), where religious aspects were downplayed in favour of winter fairytales (Schulte & Widl, 2014). From the 1970s, there was an increasing emphasis on food and drinks (especially mulled wine) and the sale of toys (Hirschfelder, 2014). Today, these markets vary greatly in size and style - from urban "mega-markets" that are decoupled from Christmas and focus only on Winter themes, to smaller more traditional markets situated in front of churches. Outdoor Christmas markets in all their forms are highly anticipated major events that make use of public space and have a central place in the German relationship to winter.

Contemporary Christmas markets tend to offer a standard selection of goods, and a common experience centred around "excessive consumption of food and drinks" (Hirschfelder, 2014, p.10). At the same time, the influence of local traditions remains evident, with certain markets known as the origins of particular delicacies (e.g. gingerbread in Nürnberg and fruit loaf in Dresden). Similarly, decorative Christmas trees are common in markets, but Munich is renowned for its huge tree, adorned with 3000 lights (Hartzog, 2002). Running from late November/early December to Christmas Eve, the markets have assumed considerable economic importance as sites for purchasing gifts, and collectively attract millions of visitors annually

(Hirschfelder, 2014). As major sites of consumer activity, there is potential for various forms of social exclusion. In practice, however, Christmas markets are free of entry fees and gates, and are open to anyone to stroll through, which mitigates the role of income in participation. Moreover, they are attractive in large part because of their atmosphere: a multi-sensory experience which can be enjoyed at little or no direct cost (Hirschfelder, 2014; Sikos, 2013).

Although they are central to the Winter experience in Germanic countries, Christmas markets are not (as yet) specifically embedded in Winter City strategies. A possible explanation is that the movement has less urgency in this context precisely because there are already successful uses of outdoor public space. The markets have helped to prevent the abandonment of city centres and have contributed to enshrining winter as a season to be enjoyed outdoors. Their success and endurance speak to the way in which dark and cold conditions can create unique opportunities for utilizing public space, and to the value of local traditions in facilitating this. Such traditions are not, of course, static - as innovations such as the "Pink Christmas Market" in Munich aimed at the queer scene illustrate. The Christmas market can be approached as an exemplar for bringing life into city centres in winter, and in this respect its recent adoption in other contexts – for example, Birmingham, England (Hirschfelder, 2014) and Toronto, Canada (Toronto Christmas Market, 2017) – is noteworthy.

5. Mind the gap: Winter and social exclusion

As noted above, adaptations such as GSPS raise questions about social exclusion in winter cities. However, the Winter Cities movement has relatively little to say about such issues. We contend

this is a problematic silence. In Winter Cities policy, the primary focus of intervention has become encouraging *the choice to go outside when the weather is cold*. In one respect, this is an understandable response to the problem of an uninviting, neglected and depopulated urban public realm. At the same time, the *choice to go (or stay) inside* (and thus to be protected from potentially harsh conditions) does not receive the same level of attention or support - and may be criticized. Yet not all urban residents are equally well-placed to enjoy winter - a point that was recognized in Pressman's early work but has since been somewhat lost from view: "There is a unique beauty intrinsic to winter, but not all urban dwellers will be able to appreciate this beauty; e.g. the elderly, handicapped persons, those with medical problems, people who are extra-sensitive to the cold, etc." (Pressman, 1985a, p. 15). To this list we add the homeless, for whom enclosed, heated spaces may form a vital and life-supporting resource in winter.

There appears to be an implicit assumption in much of the literature that all urban residents have access to warm, safe indoor spaces (private homes, workplaces, commercial buildings), and that the role of Winter Cities movement is therefore to focus on measures that will enhance access to, and discretionary experiences of, winter in shared outdoor environments. There is a corresponding lack of focus on the need for shelter, on the costs of home heating in winter, or on the increased demands of home maintenance (e.g. snow clearance). Equally, insufficient attention is given to how key outdoor public spaces (usually located in or near downtowns) can be *accessed* – including by those who depend on transit, which becomes less reliable in winter, and others who struggle to negotiate the snowbanks and icy conditions that often prevail in residential neighbourhoods (see Lindsay & Yantzi, 2014).

Davies (2015, 279) acknowledges that winter may decrease the quality of life of residents experiencing poverty or limited mobility, including "[c]hildren, the old, the poor and the infirm, as well as the homeless," and contends that "improv[ing] the life of the most vulnerable" (p. 279) is (or should be) a primary aim of the Winter Cities movement. However, there is very limited uptake of this goal in the broader literature; the field has developed with few propositions that specifically address the different winter needs of various social groups. It predominantly seeks to ameliorate winter for a universal urban citizen (healthy, able-bodied and with discretionary time and income), creating opportunities for outdoor recreation and associated consumption. At no point does it consider how, for certain groups, winter can be a life or death matter, and not just a season lacking in engaging activities. Pressman came closest to articulating a socio-economically inclusive understanding of a winter city, proposing interventions that are potentially beneficial to all citizens (e.g. education regarding safety), as well as initiatives specifically targeted to those with low incomes.

While much of the literature discusses improved, warmed, sheltered public space, this space is intended primarily as a recreation zone for middle class residents and does not consider potential benefits to those less fortunate. It does not engage with ongoing debates around public space and who as access to it, and indeed seems to forget there is even any tension in public space. Relatedly, it has little to say about how experiences of a winter city may be shaped by gender, ethnicity or sexual identity.

Conclusion

With increased international attention on livability and sustainability in cities, we contend a critical reflection on the Winter Cities movement is timely. The first contribution of this paper has been to piece together an account of the movement's origins and foci. Academic literature on winter cities is not extensive, with Norman Pressman's 1985-96 work still accounting for a substantial proportion of the total. More generally, published material on this topic is poorly connected, with a lack of clear, agreed-upon understandings of key concepts, including the Winter City movement itself. We sought to resolve this ambiguity, by developing definitions, describing the movement's historical emergence and contemporary emphasis on livability and climate sensitive design, and analyzing the central but complex role of public space in Winter City policy. We also provided two case studies to illustrate ambiguity and success in winter-time use of urban public space. Our example of a successful initiative is instructive: German Christmas markets flourish as sites of commercial and social vibrancy, have deep historical roots, few barriers to participation, and are generally located in central areas of towns and cities.

How might the Winter Cities movement be understood relative to other, generally better-known policies intended to improve the quality of urban environments? It shares with these initiatives concerns about the impacts of modernism and a desire to protect and enhance the local distinctiveness of place. Like policies to rework urban spaces to be 'friendly' (e.g., to children, seniors and pedestrians - and healthful activity more generally), it also has a focus on the public environment of the city, and an interventionist focus, particularly at the micro- and meso-scales. However, the particularities of context also complicate efforts to create vital public spaces:

winter conditions can make revitalizing outdoor public spaces challenging, especially when climate-controlled indoor analogues exist.

The second contribution of this paper was to identify a central (if usually unspoken) tension in the Winter Cities movement vis-à-vis public space. Specifically, it is unclear whether its goal of enhancing livability in winter be achieved through quasi-public spaces such as malls and enclosed pedestrian systems, or *only* via high-quality, well-designed outdoor public spaces, such as streets and parks. While either approach may help to counter the tendency of urban residents to withdraw from public life in winter, only the latter facilitates experience of (and potential appreciation for) winter conditions. Consistent with this view, the Winter Cities movement has an increasing focus on enhancing the appeal of traditional public spaces - and parts of the private realm with which they interface (e.g. residential courtyards, restaurant patios).

The paper's third major point follows from this focus on the physical realm and its potential (re)design. Specifically, the social and economic realms of winter cities receive less attention than physical challenges and interventions, and there is a (near) silence in the literature on issues of inclusion, exclusion, and difference. Future work on winter cities must be more attentive to the diverse needs and preferences of people with different incomes and abilities, etc., which can lead to profoundly different takes on winter, as recent work on the experiential geographies of seniors (Finlay, 2018) and the mobility-impaired (Lindsay & Yantzi, 2014) highlights. Increased acknowledgement of diversity may challenge the increasing tendency of the Winter Cities movement to valorize outdoor public space: here, it may be useful to reconsider Pressman's (1985a) emphasis on providing residents with a *choice* between safe, warm indoor

space and comfortable, climate considerate outdoor space. More research also remains to be done on the enduring tension between desires to escape winter (partially materialized in modernist city-building) and the contemporary Winter City movement's emphasis on experiencing and embracing it. We suggest this work should acknowledge that winter cities face complex tradeoffs, while insisting on the value and importance of public spaces that are accessible and inclusive all year round.

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