The asocial society and urban form in Canada: A scoping study

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Abstract

In 2018, the Social Sciences and Humanities Research Council (SSHRC) in Canada identified the 'Emerging Asocial Society' as a *Future Global Challenge Area*. This 'asociality'—our collective lack of engagement and disconnection; the pandemic of loneliness—is escalating. And while perceived as worsening, it is not new, and had been identified as a concern in the latter half of the mid-twentieth century. Because this phenomenon also coincides with a significant shift in built form / neighbourhood configuration patterns during the post-War era, a possible link between asociality and urban design is difficult to ignore. Based on the hypothesis that urban form contributes to growing disengagement, this scoping study documents recent research examining the relationship between urban form and social outcomes in Canada. The intent is two-fold: First, to document the extent and nature of social outcome-based urban form research in Canadian municipalities, and second, to examine the research as a body of work. This review reveals an overall lack of Canadian-specific studies on this topic, and what is available lacks geographic and methodological diversity. Though limited by these two aspects, and despite most articles not examining third spaces specifically, the research points to the important role 'third spaces' play in creating social connectivity. Nuanced information about organizing urban form around third spaces also emerges, providing insight into opportunities at different urban scales. Further, viewing the research through this 'third space' lens reveals gaps in knowledge and therefore helps identify future research opportunities capable of influencing residential development policy in municipalities across Canada.

Keywords: Asocial Society; Canada; urban form; scoping study; third space; future research

Résumé

En 2018, le Conseil de recherches en sciences humaines (CRSH) du Canada a identifié la « L'émergence de la société asociale» comme un futur domaine de défi mondial. Cette « asocialité » – notre manque collectif d'engagement et de déconnexion ; la pandémie de solitude – s'intensifie. Et même si cette situation est perçue comme une aggravation, elle n'est pas nouvelle et a été identifiée comme une préoccupation dans la seconde moitié du milieu du XXe siècle. Parce que ce phénomène coïncide également avec un changement significatif dans les modèles de forme bâtie et de configuration des quartiers au cours de la période d'après-guerre, il est difficile d'ignorer un lien possible entre l'asocialité et la conception urbaine.
Fondée sur l'hypothèse selon laquelle la forme urbaine contribue au désengagement croissant, cette étude exploratoire

documente des recherches récentes examinant la relation entre la forme urbaine et les résultats sociaux au Canada. L'objectif est double : premièrement, documenter l'étendue et la nature de la recherche sur les formes urbaines axée sur les résultats sociaux dans les municipalités canadiennes, et deuxièmement, examiner la recherche en tant que corpus de travaux. Cet exercice révèle un manque général d'études canadiennes sur ce sujet, et ce qui est disponible manque de diversité géographique et méthodologique.

Bien que limitée par ces deux points communs, la recherche souligne le rôle important que jouent les « tiers espaces » dans la création de connectivité sociale, malgré seulement un petit nombre d'articles examinant directement les tiers espaces. Ensemble, cette collection de recherches fournit des informations nuancées sur les tiers espaces soit en mettant en évidence les stratégies pour les créer ; décrivant les conséquences de leur retrait ou de leur absence ; examiner l'accès et l'accessibilité de ces espaces par différents groupes sociodémographiques ; ou illustrer les liens entre les tiers espaces et le développement urbain à plus grande échelle.

Examiner la recherche sous l'angle du « tiers espace » révèle des lacunes dans les connaissances et aide donc à identifier de futures opportunités de recherche capables d'influencer les politiques de développement résidentiel dans les municipalités de tout le Canada.

Mots-clés : Société asociale ; Canada; forme urbaine ; étude de cadrage ; troisième espace ; recherche future

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Introduction

In 2018, Canada's Social Sciences and Humanities Research Council (SSHRC) identified the 'Emerging Asocial Society' as a *Future Global Challenge Area* (Government of Canada 2018). This 'asociality'—our collective lack of engagement and disconnection; the pandemic of loneliness—is escalating. And while currently perceived as worsening, it is not new, and was identified as a potential concern in the latter half of the mid-twentieth century (Nisbet 1953). Because this asociality coincides with a shift in built form / neighbourhood configuration patterns during the post-War era (Filion and Hammond 2003; Millward and Xue 2007; Sandalack et al. 2013), the potential relationship between asociality and urban form is difficult to ignore. This relationship is not necessarily unidirectional, however. As a cultural artifact, the city represents a collective, and in Mumford's (1938) words, is: "a point of maximum concentration for the power and culture of the community" (p.43). As a manifestation of power and culture, a city is the product of the society inhabiting it and is therefore a social outcome. Conversely, urban form maintains social implications and can facilitate or inhibit social interactions (Hillier and Hanson 1984; Jacobs 1961; Newman 1972) by fostering and/or promoting human isolation, or at least segregation. More obvious examples of urban form's direct influence on the social lives of residents is seen in gated communities or private roads in suburbs (Grant and Curran 2007), anonymous living in high-rise buildings (Kitchen, Williams, and Chowhan 2012; Sano, Filipović, and Radović 2020), or even its influence on socio-political values (Walks 2008). In this way, the *Emergent Asocial Society* is both a product and producer of built form because it both creates and reflects collective ideas about urban spaces.

Understanding how, and the extent to which, urban form influences residents' sociality is crucial to addressing this Future Global Challenge area, and this project summarizes research examining asociality in Canadian urban centres. Here we highlight what is known and identify knowledge gaps with a view to informing municipal development policy decision-makers, urban designers, and planners. To communicate our findings, this paper is divided into three sections: Section 1 outlines the methodology used within this scoping exercise; Section 2 summarizes scoping study results and examines these results as a body of work; and Section 3 suggests research gaps emerging from the review process.

Methodology

Within this research, *asocial*, and by extension *asociality*, is understood as the result of, or the state of being in, *involuntary* isolation or dis-connectivity from society and other people, and is distinguished from 'loneliness', a more subjective state that can occur even in group activities. This contrasts with our understanding of *anti-social* as a self-imposed or *deliberate* isolation or separation from society, often expressed through disruptive, hostile, or violent

acts towards others. While we recognize that asociality may also be *voluntary*, we use narrower definitions to allow for a greater focus within this review. Additionally, the term *asocial* is not widely used in contemporary discourse, and within existing research *anti-social* is often used interchangeably with this project's understanding of *asocial*. Both terms speak to a strong self-referential perspective and so the literature search, therefore, uses both terms as keywords to capture as many studies as possible.

For the scoping review, we use Arksey and O'Malley's (2005) methodological approach because it accommodates revisiting searches as new relevant terminology is uncovered. This flexibility is important because of the broad vocabulary used to describe 'asocial' and 'asociality'. In addition to the above methodology, the results of a snowball search using research cited within any of the final articles, are also included. The database search includes only academic and peer-reviewed research published between 2001–2021. This timeframe, based around the one-decade (2011–2021) requirement stipulated by the granting agency, is expanded for this review to provide broader context. We acknowledge that this constraint excludes several foundational studies relating to Canadian New Urbanist developments published in the 1990s that would otherwise be included (for example see, Talen (1999)). Other deliberate exclusions include research on 'walkability' and 'depression'. Walkability is omitted because international research demonstrates that while walkability leads to more walking, it does not necessarily lead to increased social connectivity (Abass, Andrews, and Tucker 2020; Hanibuchi et al. 2012; Herrmann et al. 2017; French et al. 2014; Nasar 2003; du Toit et al. 2007). Depression is excluded because, as the product of multiple interacting variables, its relationship to urban form is not easily isolated.

Article inclusion criteria

Relevant works are identified using the following eligibility criteria:

- Study Design: All types of quantitative and qualitative studies are included, and articles collected deploy a selection of variables based on socio-demographic criteria such as age, income, (dis)ability, ethnicity; data collection techniques using surveys or interviews, census-tracks, and observational or empirical studies, all at scales ranging from hyper-local to national.
- Types of Outcomes: Any study with results tied to social interactions and urban form are included, as well as site-specific urban design (place-making or programming) interventions.
- "Indirect" Studies: The nature of this inquiry requires flexibility because asociality or social connectivity is found in urban form research not specifically designed to measure or identify social outcomes. Therefore, studies relating to mental health, social cohesion, safety, and urban form approaches (Smart Growth, New Urbanism, etc.) are sometimes included as part of the first phase of article identification. They are included in the final article list only if the findings provide information relating to urban form when revealed by a full text review.

Information sources

An electronic search through three academic databases covering a twenty-year period beginning in 2001, include: Urban Studies Abstracts (via EBSCO host), Sociology (via SocINDEX and EBSCO hosts), and the Canadian Research Index (via ProQuest host). Only English-language results are used.

Search strategy

Initial search results are not limited geographically by using "Canada" or "Canadian" in search terms. This strategy provides an informal comparison against international research and contextualizes Canadian findings. These international search results are included in the total and are subsequently triaged to isolate countries with similar developmental and colonial histories to Canada, namely the United States (US), New Zealand, and Australia. While comparative research studies between Canada and other countries are included, merged data is not; for example, in Levasseur et al. (2015) where Canadian and US results are amalgamated. The flow diagram in Figure 1 illustrates the search results process for this scoping exercise.

Table 1 provides a summary of the keywords and search terms used in the literature search. Approaching the issue from both urban form and behavioural outcome perspectives is achieved by varying the order of keywords used in each search session. Care is taken to include 'negative' and 'positive' terminology, for example, spatial equity and inequity, or sociability and anti-sociability.
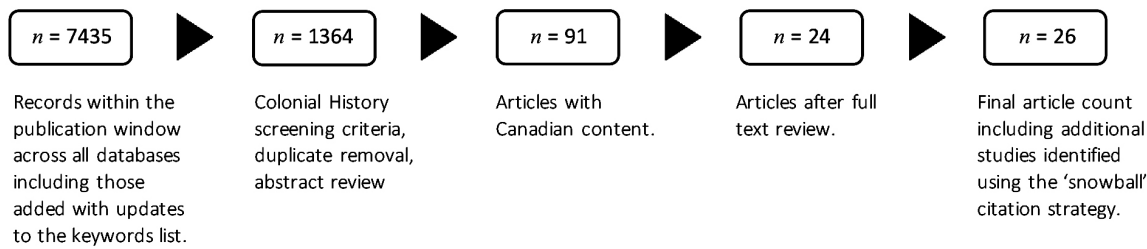
Figure 1
Search results flow diagram

Table 1
Keyword search list

Community Planning	Dis/Connectedness/Connection	Social/Sociable Architecture	Modernism
Accessibility	Closeness/(dis)Trust/Care	Seating/Shade/Amenities	Neoliberalism
Urban Morphology/Form	Loneliness/Isolation/Mistrust	Inhuman / Hostile Design	New Urbanism
Human-centric Design	Engagement/Disengagement	Form-based Codes	Smart Growth
Compact City	Social Gathering/Exclusion	Missing Middle	TND
Mobility Planning	Social Capital/Networks	Place-making	Urban Renewal/Revitalization
Pedestrianization	Social Interaction/Inclusion/Cohesion	Third Spaces/Places	TOD
Spatial In/Equity	Community Isolation	Social Infrastructure	Sustainability + Resilience
Spatial Heterogeneity	Individualism	Public Realm Design	15-minute city
Sprawl	Depression / Mental Health	Greenspace	Situationism
Dis/Contiguous	Collectivism / Community	Modernism	
Spatial Connectivity	Anti-Social / Sociability	Human Scale	
Land use/zoning	Indifference	Tactical/Guerilla Urbanism	
Suburbs/Suburban	Anonymity	Neighbourhood Houses	
Densification	Geosocial		
Built Environment/Form	Polarization/fragmentation		
GEOGRAPHICAL TERMS			
(in)(across) Canada/Canadian	Urban/Urban Centre	(In)Cities	City / Municipal/Municipalities

Review strategy

Each of the final twenty-six articles is identified as being either 'indirect' or 'direct'. This distinction reveals the extent to which this topic area is under active investigation (direct) or if findings linking social outcomes to urban form are revealed as a 'by-product' of research (indirect), that is, there is a reference to urban form in the findings, but form is not central to the research. The difference between the number of direct and indirect studies roughly demonstrates the level of active interest in researching this topic, but beyond this it does not provide in-depth insight. Final article lists are provided in Table 2 (Direct) and Table 3 (Indirect), with both tables containing thirteen entries.

Article content is reviewed using six categories suggested by Arksey and O'Malley (2005) to provide insight on two levels. First, the nature of the research and its investigative approach, and second, research results. The categories used to extract this information are, Year of Publication; Location and/or Scale, Topic Area and Study Population (if applicable); Methodology; and Results and/or Conclusions. These are summarized below.

Table 2
Direct research article list by author

Author + Year	Title	Scale*
August, M. (2016)	Revitalisation gone wrong: Mixed-income public housing redevelopment in Toronto's Don Mount Court	L - Don Mount Court (Toronto)
Broudehoux, M. (2019)	Montrealism or Montréalité? Understanding Montreal's Unique Brand of Livability	M (Montreal)
Engel, L., Chudyk, A.M., Ashe, M.C., et al (2016)	Older adults quality of life exploring the role of the built environment and social cohesion in community dwelling seniors on low income	M (Vancouver)
Farah, L., Li, C., Tardif, B. (2017)	Neighborhood regeneration and vulnerable youth engagement through micro-level gardening interventions	Nd - Flemingdon (Toronto)
Ghosh, S. (2014)	Everyday lives in vertical neighbourhoods: Exploring Bangladeshi residential spaces in Toronto's inner suburbs	L – High rises (Crescent Town + Scarborough Village, Toronto)
Hanna, K., Dale, A., Ling, C. (2009)	Social capital and quality of place: reflections on growth and change in a small town	M (Merritt, BC)
Hess, P. (2008)	Fronts and Backs: The Use of Streets, Yards, and Alleys in Toronto-Area New Urbanist Neighborhoods	Nd (Toronto)
Laughlin, D.L., Johnson, L.C. (2011)	Defining and exploring public space: Perspectives of young people from Regent Park, Toronto	L - Regent Park (Toronto)
Levasseur, M., Naud, D., Bruneau, J.F., et al (2020)	Environmental characteristics associated with older adults' social participation: The contribution of sociodemography and transportation in metropolitan, urban, and rural areas	P (Quebec)
Schellenberg, G., Lu, C., Schimmele, C., et al (2018)	The correlates of self-assessed community belonging in Canada: Social capital, neighbourhood characteristics, and rootedness	N
Townshend, I. (2002)	Age-segregated and gated retirement communities in the third age: The differential contribution of place - Community to self-actualization	Nd – multiple (Calgary)
Wood, P.B. (2013)	Citizenship in the 'In-Between City'	M (Toronto)
Xu, J. (2019)	From walking buffers to active places: An activity-based approach to measure human-scale urban form	M (Toronto)

*Refers to the geographic scale of the study, where L = Local (a development or building); Nd = Neighbourhood; M = Municipality; P = Province, and N = National

Table 3
Indirect research article list by author

Author + Year	Title	Scale*
Anderson, V., Gough, W.A., Agic, B. (2021)	Nature-based equity: An assessment of the public health impacts of green infrastructure in Ontario Canada	P (Ontario)
August, M. (2014)	Challenging the rhetoric of stigmatization: the benefits of concentrated poverty in Toronto's Regent Park	L - Regent Park (Toronto)
Basu, R. (2013)	In Search of Nimmathi for Social Sustainability? Imagining, Building, and Negotiating Spaces of Peace in Toronto's Diverse Neighbourhoods	Nd (Toronto)
Bucerius, S.M., Thompson, S.K., Berardi, L. (2017)	"They're Colonizing My Neighborhood": (Perceptions of) Social Mix in Canada	M (Toronto)
Kitchen, P. (2012)	Sense of Community Belonging and Health in Canada: A Regional Analysis	N
Komakech, M.D.C., & Jackson, S. F. (2016)	A Study of the Role of Small Ethnic Retail Grocery Stores in Urban Renewal in a Social Housing Project, Toronto, Canada	L - Regent Park (Toronto)
Markovich, J., & Hendler, S. (2006).	Beyond "Soccer Moms": Feminist and New Urbanist Critical Approaches to Suburbs.	M (Markam, ON)
Raphael, D., Renwick, R., Brown, I. et al (2001)	Community Quality of Life in Low-Income Neighborhoods: Findings From Two Contrasting Communities in Toronto, Canada	L - Lawrence Park + Riverdale (Toronto)
Ray, B., Preston, V. (2009)	Are immigrants socially isolated? An assessment of neighbors and neighboring in Canadian Cities	P (British Columbia, Ontario, Quebec)
Rugel, E., Carpiano R., Henderson, S. et al (2019)	Exposure to natural space, sense of community belonging, and adverse mental health outcomes across an urban region	M (Vancouver)
Thompson, S.K., Bucerius, S.M., Luguya, M. (2013)	Unintended consequences of neighbourhood restructuring	L - Regent Park (Toronto)
Wakefield, S., Yeudall, F., Taron, C. et al (2007)	Growing urban health: Community gardening in South-East Toronto	Nd (multiple, Toronto)
Yilmaz, M. (2008)	Sustainable Community Design - Benny Farm, Montreal as a Sample	Local - Benny Farm (Montreal)

*Refers to the geographic scale of the study, where L = Local (individual development or building); Nd = Neighbourhood; M = Municipal; P = Provincial; and N = National
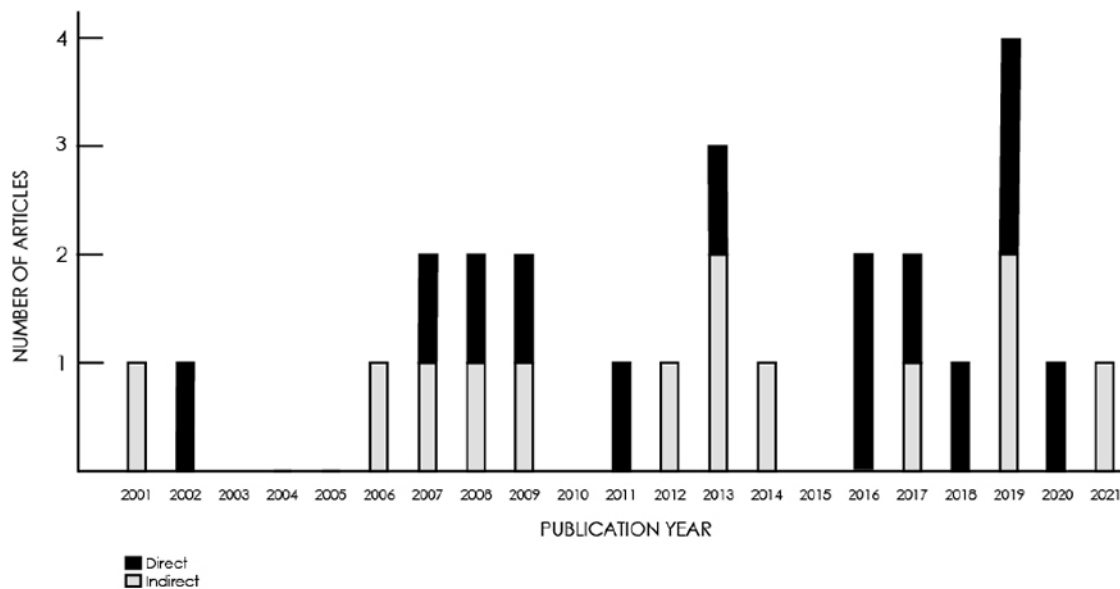
Figure 2
Year of publication

Findings

Year of publication
The equal number of articles categorized as *indirect* and *direct*, reveals that research tying urban form to social outcomes is lacking in general and half of what is known in Canada, is collected informally. This, along with the low number of articles overall, suggests that this subject is not widely investigated, though, as shown in Figure 2, interest has slowly increased over the past decade or so.

Location and/or scale
Of these results, only seven different Canadian municipalities are represented (Victoria, Vancouver, Merritt (BC), Calgary, Markam (ON), Toronto, Montreal). Only three different provinces are captured by provincial-scale studies (British Columbia, Ontario, Quebec), along with four national studies, three of which rely on data collected in broad Government of Canada household surveys.

Topic area and study population
After a full text review, the articles can be grouped using six thematic categories, these are: 1) *Housing Type*, 2) *Greenspaces and Gardening*, 3) *Third Spaces*, 4) *Programming*, 5) *Land Use*, and 6) *Form and Design*. Not all articles fit within a single category, and so categorization is tied to each article's primary research focus. The number of articles falling within each category is illustrated in Figure 3.

Low-income households, as a study population, feature in eleven articles and are found in all topic areas, representing the largest targeted group. Within this population, youth, seniors, families, and immigrants are represented, and of these eleven articles, six examine the impact/implications of public housing revitalization on residents. Other targeted groups include women (1) seniors (3), and immigrants (2), bringing the total number of studies focused on vulnerable or marginalized residents to sixteen. Excluding Grant and Curran's (2007) more exploratory study lacking a specific study population, these sixteen articles represent 64% of the studies. This is an important finding because asociality, as a society-wide phenomenon, impacts all groups, albeit inequitably. Isolating marginalized groups might signal that the problem is not a mainstream issue or allow results be dismissed as niche or irrelevant for other socio-demographic groups.
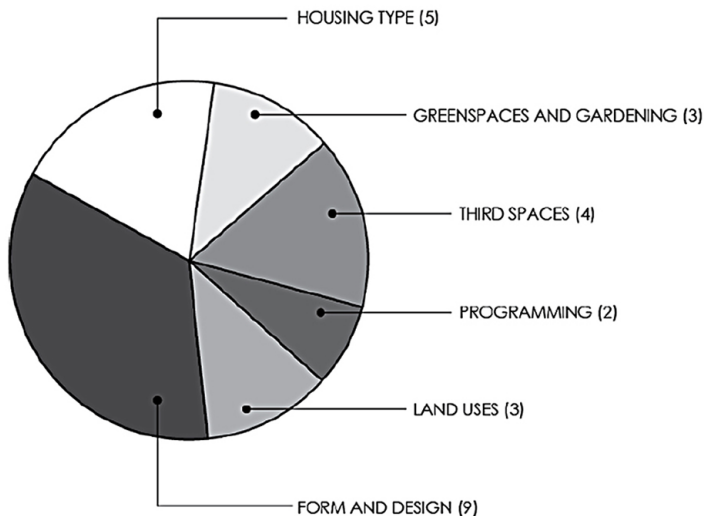
Figure 3
Number of articles within each topic area category

Methodology

Four data collection methods dominate the research: 1) interviews/focus groups; 2) targeted surveys/questionnaires; 3) national survey results interpretation (for example, using Statistics Canada's *General Social Survey*); and 4) on-site observation, which includes analyses of interventions and programming. The geospatial analysis conducted by Xu (2019), provides the only methodology falling outside those mentioned above.

Results and/or conclusions

The subtext within this collection of research highlights the importance that undermining anonymity plays in supporting pro-social outcomes. Content and conclusions demonstrate how anonymity can be undermined by leveraging three objectives for human interaction: a) *co-locating*, allowing proximate individuals open-ended opportunities to linger, b) *co-opting*, allowing for blurring between private and public spaces, or injecting additional uses into spaces, and c) *co-mingling*, between diverse people. These aspects, in tandem with Oldenburg and Brissett's (1982) assertions about the component attributes of third spaces, namely 1) its location is well integrated into daily life, 2) activity in the space is not special or unique, 3) spending time there does not require spending money, 4) there is an opportunity for continuous involvement, and 5) it allows for personalization, provide a framework to understand the connection between urban form and asociality captured in this review. Below, research is examined within the context of anonymity and *co-location*, *-opting*, and *-mingling*, at different urban scales.

Building scale

Successful *co-locating* is visible in the architecture of one of Montreal's two- or three-storey 'plex' residential buildings where one unit occupies each floor, and unit access is via an outside stairway rather than an internal shared corridor (Broudehoux 2019). Here, these distinct street-oriented stairways, balconies, and stairway-integrated balconies allow for chance interactions between neighbours entering and exiting and/or spending time on balconies. Where balcony and stairs are integrated, *co-opting* occurs when residents embellish spaces with lights, flowers, or décor. Also at this scale, *co-opting* is found in Ghosh's (2014) case study exploring the social lives of Bangladeshi immigrants living in two Toronto high-rise buildings. Here public corridors are used by residents as children's play areas, the building laundry room is a hub for socializing as well as chores, and residents pool economic resources to pay for a suite to use as a mosque.

Lot/block scale

In Benny Farm, a low-rise multi-building development in Montreal described by Yilmaz (2008), *co-locating* and *co-mingling* occur because the building includes extensive outdoor amenity space, re-imagined to include, among other uses, food growing (Yilmaz 2008), but also similar stairway and balcony structures found in the plex neighbourhoods referred to above. Meanwhile, Grant and Curran's (2007) empirically-based study of private roads in residential enclaves provides an example of an environment hostile to *co-locating* and enabling anonymity because of its vehicle access-focused urban form. August's (2016) case study of Don Mount Court in Toronto pre- and post-redevelopment, demonstrates how the removal of the original central greenspace and play area eliminated previous opportunities to *co-mingle* (August 2016). Further, because the redevelopment also eliminated residents' private yard space, casual and unscheduled encounters between neighbours *(co-locating)* also disappeared (August 2016). A final positive example is found in August's (2014) research on Regent Park in Toronto. Prior to its redevelopment into a mixed-use, high-rise neighbourhood, Regent Park consisted of multiple low-rise buildings and townhouses where residents maintained a "dense network of friendship and support" (p.1317) and considered their community "tight knit" (Thompson, Bucerius, and Luguya 2013). While intersecting variables such as socio-economic homogeneity and community organizing contribute to this successful *co-mingling* (August 2014), other positive factors, identified by other Regent Park-based research, include: the development having a small-town feel, the insular walkway system, and basketball courts, among others (Bucerius, Thompson, and Berardi 2017; Leahy Laughlin and Johnson 2011; Thompson, Bucerius, and Luguya 2013); a small local grocery store(s) (Komakech and Jackson 2016), and; a resident-initiated community garden created specifically to promote 'Positive Lingering' (August 2014).

These above examples contradict Ray and Preston (2009) and Schellenberg et al. (2018) who report low levels of social connectivity and sense of community in low-rise dwellings based on national survey results. Though the evidence is anecdotal, what is clear is that low-rise dwellings with public or semi-public spaces allowing *co-opting*, *-locating*, and *-mingling* can and do support social connectivity in this dwelling type. Further, that provincially (Ray and Preston 2009) and/or nationally-collected data (Schellenberg et al. 2018) suggest otherwise, indicates that the issue may not be the dwelling type itself, but its context, and/or, as Schellenberg (2018) suggests, length of residence.

Similar negative social outcomes are reported in national surveys for high-rise developments (Kitchen, Williams, and Chowhan 2012; Schellenberg et al. 2018). But again, the lack of counter-examples outside the one mentioned above by Ghosh (2014), the inherent asociality of high-rise residential towers remains unclear because of other potentially confounding variables. In the context of this research, however, the consistently high level of sociability found in Montreal's plex neighbourhoods, encompassing some of North America's most densely populated residential environments (Broudehoux 2019), seems to imply that population density is not necessarily the downfall of high-rise tower sociability. The difference between high-rise towers and low-rise dwellings is likely related to resident anonymity in conjunction with space for *co-opting*, *-locating*, and *-mingling*, that is, its context. Most of what is known about high-rise asociality in this review is collected from research on Regent Park and its redevelopment and conversion into a dense, high-rise, and socially-mixed (mixed-income and tenure) neighbourhood (August 2016; Thompson, Bucerius, and Luguya 2013), as such, isolating the causal relationship between a tripling in density and social mixing to reported declining social connectivity, is difficult.

Neighbourhood scale

Regent Park and the two Montreal examples demonstrate ways in which asociality is also a land use issue. Research here shows that merely providing, or having access to, public space is not enough in itself to build or enable social connectivity (Hess 2008), in part because social connectivity requires repeated personal exposure to build trust (Basu 2013). Further, Hess (2008) reveals that serendipitous *co-locating* in a residential back alley is contingent on the intended destination of users, not the inherent nature of the space. This interrelationship reinforces Oldenburg and Brissett's (1982) assertion about the importance of integrating third spaces into daily life, and is supported by research linking street network connectivity to social participation, particularly for seniors (Engel et al. 2016; Levasseur et al. 2020). Physical connectivity and integration into daily life highlights the role played by land use/zoning and proximity in encouraging pro-social outcomes; particularly for residents with lower capacity for independent mobility, such as children, youth, and women, especially those from low-income and/or immigrant households (Markovich and Hendler 2006; Raphael et al. 2001).

In the context of *co-locating* and *co-mingling*, land use configuration incorporating chained destinations, that is, diverse uses *en route*, to common or magnet destinations, draw more pedestrian activity than isolated destinations (Xu

2019). This suggests that programs and uses already attracting participation by diverse groups, such as gardening or food growing (Anderson, Gough, and Agic 2021; Farah, Li, and Tardif 2017; Wakefield et al. 2007) and greenspaces (Rugel et al. 2019), can be leveraged for *co-locating* and *co-mingling* through integration with other magnet uses and destinations, such as schools, services, community resources, transit, etc. For urban centres focusing on peripheral expansion rather than containment, new car-centric neighbourhood developments have doubling impact by not only undermining anonymity of nearby residents, but also drawing residents away from established areas possessing pro-social features (Hanna, Dale, and Ling 2009).

This review demonstrates that addressing social isolation and loneliness involves pro-social decision-making beyond sidewalks, shallow setbacks, and front porches. It is an issue requiring a multi-faceted and coordinated approach spanning the building, block, and neighbourhood scales. Undermining anonymity cannot thrive in car-oriented landscapes, or in purely public spaces designed without, or even hostile to, open-ended *co-mingling*, such as passing in the street, at a bus stop, or in a parking lot (Hanna, Dale, and Ling 2009; Wood 2013).

Gaps and future research

Results emerging from this scoping review are important for the future of Canadian research into growing asociality, not only empirically but also from a design and policy perspective. Research gaps and related potential research trajectories and opportunities are discussed below.

1. There is a lack of specificity within New Urbanism (NU) and Smart Growth (SG) policies in promoting pro-social outcomes (Congress for New Urbanism 2015; Couroux et al. 2006; Talen 2002). While the tenets of these planning approaches include "social sustainability", this refers primarily to income diversity, not social connectivity (Talen 2002; Webber and Hanna 2014). Pro-social outcomes are not often prioritized nor measured in these approaches, with some exceptions tied to specific design elements, such as back alleys (Hess 2008). The pervasive belief in the power of built form to influence social outcomes is found in contemporary municipal planning and 'visioning' documents across Canada. For example Calgary, Alberta's *Municipal Development Plan* (City of Calgary 2013); Victoria, BC's *Official Community Plan* (City of Victoria Planning and Development Department 2012); Regina, Saskatchewan's *Design Regina: Official Community Plan* (City of Regina 2013); Ottawa, Ontario's *Official Plan* (City of Ottawa 2011), among many others. Given the widespread adoption and integration of SG and NU principles into municipal policy documents along with the variability in how SG/NU guiding principles are deployed in the real world (Grant 2002), suggests that examinations of the pro-social outcomes of plans deploying these approaches would be beneficial.

2. Specific information on the relationship between density, dwelling type, neighbourhood form, and a/sociality —or different combinations of these elements—in Canada is lacking. As shown here, there is very little exploration using quantitative methodologies and except for Xu (2019), most geospatial inquiries leverage geographic information technology to identify census areas rather than examine urban form and morphology. Combining geospatial techniques with qualitative data has been successfully used in international research related to this topic (Fan and Khattak, 2009; Miles et al., 2012; Pun et al., 2019; Wood et al., 2010) but is lacking for Canadian cities. A recent study by Sepe (2020) testing the Ecoliv@ble+ design method in Vancouver, BC provides an important contribution, but these results are place-making driven and focused on re-habilitating urban spaces rather than greenfield development or largescale brownfield site redevelopment. Related to this and given the push towards densification in many of Canada's urban centres, understanding the nuances of this relationship in a Canadian context and in a variety of municipalities, thereby reflecting local culture and infrastructure, is crucial for enabling pro-social urban growth and change. Canadian research captured by a scoping review by Barros et al. (2019) offers inconclusive results outlining the 'best' type of housing and/or density for social connectivity. An exploration similar to that completed by Lai et al. (2021) in the United Kingdom could provide important information for new and infill developments because of resonating impacts into other aspects such as outdoor space usage, as explored, for example, by Lang et al. (2020). Further, connecting this data to neighbourhood form and land use would contribute significantly to the research landscape.

3. Half of the Canadian urban form-based asocial research captured in this review focuses on marginalized groups, specifically those in Toronto, Montreal, and Vancouver. Understanding impacts on less-privileged residents is profoundly important and results here demonstrate that a shift in housing approach has had detrimental effects

on established low-income communities. Benny Farm, as a resident-led re-development initiative stands apart from the top-down approaches used in Regent Park, and also explored in research excluded in this review, by Mösgen, Rosol, and Schipper (2019) and Rosol (2015).

4. What are the links between voluntary and involuntary a/sociality and urban form? Forced exclusion/rejection from mainstream society because of disability, race, gender expression, etc. impacts self-reported impressions of connectivity, and according to Cao et al. (2020), perceptions of accessibility and accommodation impact social participation rates. While Cao et al.'s research refers to disabled seniors and the visibility of ramp access, it suggests that other urban and architectural design attributes also undermine or encourage pro-social interactions (Negami et al. 2018). Are these different for different groups? This area of exploration overlaps with research tied to *Universal Design* and offers an opportunity to expand this lens beyond mobility and disability. This further connects with other age groups also undermined by urban form, specifically children and youth. The youth-focused studies captured here centre on low-income teenagers in subsidized housing or low-income neighbourhoods, but as mentioned previously, the asocial society is society wide.

5. Related to the above point, *insularity* also emerges as an important, and ostensibly, pro-social element in urban form, though the lack of research and data precludes drawing conclusions. Townshend (2002), included in the review articles, suggests that retirement enclaves, as a self-selected urban form, provides, or promises, the social connectivity desired by seniors, but the private roads used in many retirement enclaves can undermine social interactions (Grant and Curran 2007). Meanwhile, prior to redevelopment, Regent Park residents listed the insularity of their neighbourhood as a feature worth preserving (Leahy Laughlin and Johnson 2011; Thompson, Bucerius, and Luguya 2013), this is echoed in other research in this review but is not explicitly explored as a pro-social urban form solution.

A final thought:

While general examinations of Canadian urban form exist within the time constraints of this scoping exercise (for examples see: Filion (2003); Graham, Han, and Tsenkova (2019); Guo and Fast (2019); Han, Graham, and Tsenkova (2020); Robertson and Neuhaus (2022); Smith and Randall (2008); Xu (2017), among many others), there are a limited number of explorations examining how urban environments impact residents socially. Domestic and international results suggest that other factors influence a/sociality such as socio-economics (Jun and Hur 2015; Sandalack and Alaniz Uribe 2009), urban design (L. Wood, Frank, and Giles-Corti 2010), the presence and placement of 'third spaces' (Mehta and Bosson 2010), land use designations and mix (Fan and Khattak 2009), or a combination of all three (Lund 2003; Talen and Koschinsky 2014).

Beyond the nuances contained within different schools of thought relating to urban form and development, we are left with a profound conundrum for this project: The term "asocial" describes a state or frame of mind generally loaded with negative connotations. In doing so it implies a sister term with a more positive attribution, that is, "social". But what would a social society be, or when did we live in a social society? The city as an artifact has a very long tradition in aspiring to be ideal and perfect, while always failing. *Utopia*, originally coined by Thomas More in his 1516 book of the same name (More and Logan 2011), has been the aspiration for cities throughout history. A place with perfect conditions for everyone. This implied aspiration is an interesting parallel between this "asocial" research and the subject of "city".

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