



International Conference on Geographies of Health and Living in Cities: Making Cities Healthy for All, Healthy Cities 2016

Beyond the Big City: The Question of Size in Planning for Urban Sustainability

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Abstract

This paper develops a theory of size (distinct from scale) as a means to better understand how urban contexts shape and are shaped by various aspects of sustainability and livability. After considering the question of size in a broad conceptual way, the analysis turns to how size has been considered within urban geography. The paper then explores the opportunities and challenges for a size-based analysis of urban livability and sustainability and the questions posed by the experience of smaller cities. This discussion is a prospectus of potential areas of consideration and research on the issue of size, sustainability, and livability.

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Peer-review under responsibility of the organizing committee of Healthy Cities 2016

Keywords: Urban Geography; City Size; Small Cities; Sustainability

1. Introduction

This paper introduces the question of city size to the consideration of urban sustainability, livability, and associated agendas. Seemingly neglected, or at least under-explored and under-theorized, the ways city size might contextualize and shape urban policies and development in these areas is worth examining. The proper consideration of the potential effects of size (in a range of forms) might add a further dimension to the ways in which these sustainability and livability-related agendas might be better spatially contextualized and locally grounded. It may help avoid some of the pitfalls of applying policies generated “elsewhere,” transferred problematically to cities of different sizes, and could contribute to a more locally developed sustainability plan better contextualized by the urban environment in which it

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is deployed. More broadly, this paper develops Robinson’s argument that “the spatial imagination adequate to capturing cityness – in its diverse forms – must necessarily be multiple and sophisticated”¹ by adding this further spatial dimension, size, to the consideration of urban processes.

In posing the question of how size matters to urban environmental and quality of life agendas and policies, this paper offers three related discussions. First, size itself as an epistemological and ontological spatial element will be considered, especially in relation to questions of the idea of “scale”. The intersections of size, cities and urban geographical research will then be discussed, with a particular focus on how medium and small sized cities have been investigated. As an example of how size, urbanism, and sustainability and livability interact, the paper then suggests a range of ways and potential questions for how sustainability and livability agendas might be shaped by the size variable in smaller and mid-sized cities, drawing additionally on the author’s research in a small city. This paper is very much an opening discussion of the question of “size”, highlighting potential areas for further examination, and possible routes for more active research and future sustainable urban planning.

2. Theorizing “size”

In their broadside against the concept of “scale” in human geography, Marston et al

² reveal one of the factors underlying the opacity of “size” in the spatial understanding. Their first rationale for doing away with the scale concept is that “there is substantial confusion surrounding the meaning of scale as *size* – what is also called a horizontal measure of ‘scope’ or ‘extensiveness’ – and scale as *level* – a vertically imagined, ‘nested hierarchical ordering of space’”³ Size is obscured in two ways: broadly, by the lack consensus about what is meant by scale, and the conflation of these two orientations (horizontal and vertical); and more particularly by the hierarchical (vertical) conception of scale being the dominant frame in geographical analyses. Geographical (rather than cartographic) scale, in its variegated conceptions, has been a central organizing, analytical, and critical idea in human geography, but one which may have hidden the ontological (and perhaps epistemological) role of size.

Marston et al draw on the works of Brenner, Agnew, Smith, Thrift and others to illustrate how two of the fundamental understandings of scale might be inconsistent. They introduce scale as a “hierarchical scaffolding”, a set of vertical differentiations, a spatial “level”, but also as something that does not exist (an “intuitive [fiction]” to quote Smith), not an ontological structure, but an “epistemological one – a way of knowing or apprehending”⁴. These juxtapositions may illustrate the confused notion of what scale may be, but together they also represent the way size might be thought of as fundamentally different from scale. Size, commonly defined as physical magnitude, extent, bulk, or relative or proportionate dimensions, is primarily not generated from vertical differentiation, hierarchical scaffolding or nesting. “Size” instead starts first with intrinsic quantities (such as area, population, volume, etc.). Scale, as commonly framed in geography, emerges relationally (the “local” is local in relation to the “global”, for instance), whereas size has an autonomous foundation based on absolute measures, the relative component (large, small, etc.) only defined secondarily by that primary quantitative foundation. Size, one could say in short, is foundationally intrinsic; scale, essentially relational.

The second differentiation of size from scale is illustrated by the second set of descriptions cited by Marston et al. Whereas scale can be quite easily construed as an epistemological lens, an analytical framework, or conceptual fiction, (or heuristic, if we’re being more charitable), size *does* have an ontological dimension. It is typically very material (number of people, volume of objects, territorial extent, etc.),[†] and that that materiality can be seen as a fundamental shaping context for social and environmental processes in a given place. Size is certainly not merely an abstract conception helping organize the understanding of the human world. It is a human creation in the sense that measurement is a human artifice, and to the extent that dimensions have to be defined and delineated (which, as geographers, we know is not a straightforward task). But, at its core, size describes a set of material, measurable circumstances in which things and processes exist.

[†] One can also argue that it can be produced immaterially: visions, ideas, etc. can be “sized” too; size can certainly exist as a mental construct. This paper will address these ideas in a partial way, but a consideration of the imaginative or discursive creation of “size” remains forthcoming.

In conceptually disentangling size from scale, I have tried to demonstrate that size is something worth explicitly considering when trying to understand the human world. It should not be merely subsumed under the more common analyses and interpretations of scale. Accordingly, this prospectus is also attempting to develop Jessop et al's assertion that we should broaden or combine our use of spatial dimensions in our research.⁵ Stronger theorization occurs, they argue, when we go beyond using a single spatial dimension (such as territory, place, scale, or network), but consider interconnection, combination, and the more complex development of these "socio-spatial relations". Developing this understanding of the potential importance of size, and clarifying the relationship between scale and size adds, I would argue, another spatial dimension as a theoretical starting point. It at least refines our consideration of scale, in a way that might have value when we address issues of environmental change and twenty-first century urbanization and planning.

A further reason to consider more clearly the size dimension can be seen in the limitations of the traditional global-local scalar binary, often deployed in analyses of urbanization and environmental challenges. An illustration of one weakness at each end of the binary will suffice here. First, the global. Olwig, in his critique of the "globalism" perspective demonstrates how "thinking globally, acting locally" can be a notably unproductive, often counter-productive, strategy. With a particular focus on landscape, he illustrates how environmental issues, when conceived globally and with the assumption that there is a "scalar spatial relation between the global and the local," cannot be properly addressed at the local scale because "the Earth cannot be reduced to the common denominator of scalar isotropic space."⁶ He offers a compelling case study of a community in Denmark (Samso) where a thriving, small-scale wind energy system was superseded by a much larger scheme by a globally minded government in an attempt to support the power industry and offer a more significant global environmental impact. The result was that while before the windmills were popular, they are now strongly resisted and many fewer have been constructed. The limitations of "global" thinking, echoed elsewhere,⁷ should make us thoughtful about prioritizing scale when considering environmental issues, especially when reaching down to the level of cities or smaller communities.

The crudeness of interpolating the global into the local can also be seen in the relative neglect of fully considering what the *local* actually is. The "global" side of the binary is relatively straightforward, however problematic globalist thinking may be – it is, in theory, the finite, full Earth. What is the local, however? Where does it end? It would be crude to think of it as anything at a lower level than the global scale, but the use of "local" as a scale across the literature has been diverse. Apropos the critiques and case studies provided by Olwig, it seems valuable to be more robust about what is meant by "local," and a consideration of size might be a way of addressing this apparent lacuna. I would posit that how big the "local" is may have some bearing on the human or human-environmental processes found in that analytical category.

3. Cities and size

A strong case can be made to foreground the spatial dimension of size in the examination of human geographies. Extracting "size" from its concealed place in the confused epistemologies and ontologies of scale should help us explore more explicitly how factors of size might provide important contexts and settings for human processes. To bring this spatial sensitivity into our particular geographical realm, the intersection of cities and size should be discussed, before we examine the opportunities for sustainability and quality of life questions. This consideration of the interplay of cities and size will also help demonstrate that when including size as an explicit socio-spatial dimension, we can avoid approaching it as naively "given," as some simple, empirical "container" for action.

The organization and ordering of cities by size has received analytical attention from urban theorists and urban geographers for some time. The "rank size" model of Christaller, for instance, is perhaps one of the earliest and best known theories of urban systems⁸. More recently, and more mathematically, various considerations of Zipf's law offer new insights into the patterns of city size and rank relationships.⁹ Size, complexity and growth and the consideration of fractal dimensions to cities have also been recently examined.¹⁰ Such analyses and models offer quantitative insights into isotropic or theoretical urbanism, but have less to say about the way size operates as a place, rather than space, context.

The global and world cities literature offers more in the way of a (often implicit) role for size in the connection between urbanization and globalization. From early discussions of world city hierarchies,¹¹ to world city systems and networks,¹² to the seminal elucidation of the "global city" type,¹³ the fusion of global (primarily) economic flows with

command-and-control metropolitan centers has added a more qualitative dimension to the role of city size. It is not just size that matters, but how their particular agglomerations of power, professional services, infrastructure, and administrative consolidation offered by that large size enable these cities to steer flows of global capital.

The attention lavished on such “global cities” has prompted some to call for a refocusing of urban scholarship to include what some have characterized as “ordinary cities”.¹⁴ Robinson, for instance, has written at length about the need to consider cities outside the “West”, and move away from hierarchies that prioritize these global cities. She advocates for an approach “without categories and more inclusive of the diversity of experience in ordinary cities.”¹⁵ Robinson critiques the “league table,” approach to world city categorization, and the way it excludes many cities from attention, including detailed analysis of the prioritized major cities themselves. The more “cosmopolitan” approach she outlines draws attention to the “broad economic potential of all cities” not merely those anointed as global and the danger of the aim to be a formulaic global city by other places, which “may well be the ruin of most cities.”¹⁶ Elsewhere she advocates for an urban studies “which is drawn to learn from cities everywhere – from a world of diverse, distinctive cities – and which is not limited to or fixated by the processes and places of the powerful.”¹⁷ Beyond avoiding a “developmentalist” conception of city size and economic power, this would seem to open the door to considering cities at a range of sizes, avoiding, in the avocation of Walker, the “oversight of smaller cities”¹⁸

The global and world cities literature, and the “ordinary cities” response, highlight two things. One, that the categorization and hierarchicization of cities can offer a heuristic to understanding how cities interact in different ways with processes beyond their immediate boundaries, but that this organizational device can also obscure and exclude. Two, size, as an explicit spatial dimension, is largely implied or ignored in this literature and seems ripe to be explored as a spatial factor in a more “cosmopolitan” urban studies and not just assumed as a given or subsumed under an economic proxy. The primary gap that these studies present, wrapped though they are in the apparent logic and interplay of spatial scale and based on an implicit assumption of the power of size, is the question of how size actually plays a role in shaping urban economic, social, and environmental processes and outcomes. Size is typically presented as incidental; can it be foregrounded as contributing to the variegated trajectories of diverse cities or offer an alternative heuristic to understanding contemporary urbanism? Can an understanding of the role and context of size offer insights into the opportunities and challenges of sustainability and quality of life in present-day cities?

4. Smaller/mid-sized cities and sustainability and livability

The focus on size as a variable factor and not just an incidental outcome of urbanism can be seen in the still-nascent “small cities” research agenda. I wish here to briefly review this literature and its opportunities, before examining more closely the way a size-based approach might shape questions of city sustainability and livability.

Taking the dimension of size explicitly, the “small cities” literature seeks to foreground the particular experience of urban areas typically overlooked by the large metropolitan focus of much of urban geography. These works posit that rather than being incidental, the fact of a city’s size matters and profoundly shapes their processes, opportunities and challenges. Most comprehensively, Bell and Jayne’s edited collection¹⁹ offers not only a compelling rationale for considering the “urban experience beyond the metropolis,” but a valuable collection of case studies that draw out the author’s thematic focuses. Their argument is that a city’s size, in this case its relative smallness, has an important influence on four areas: political economy, the urban hierarchy and competitive advantage, cultural economy, and identity, lifestyle and forms of sociability.²⁰ Size, to them, is not in the background, but a key variable in the urban patterns and processes that shape cities. In their assessment here and elsewhere²¹ they demonstrate the confusing state in which small and mid-sized cities find themselves. Policies and initiatives often have to undergo a degree of “re-scaling” and translation from the larger metropolitan areas from which they typically originate, exemplifying a “me-too-ism” inter-urban competition generates, with a fixation on “upward mobility” for these middle sized cities.²² Citing Gray and Markusen,²³ they talk of “would-be cities,” offering a “kind of emulation mixed with jealousy mixed, contrarily, with often obsessive parochialism.” The “love/hate” relationship between the small and the large city poses, they argue, “all kinds of problems.”²⁴ In particular, “the adaptation of big-city policies and ideas in small-city contexts” is challenging: “lofty ideals and policy promises are translated into ineffectual practical outcomes as a result of a variety of local cultural factors such as staunch localism, conservatism, risk aversion, traditionalism and lack of ambition.”²⁵

The work of Bell and Jayne, and others (such as Ofori-Amoah,²⁶ and Norman²⁷ in the U.S. context, and a range of other studies²⁸) has brought some attention to the particular characteristics of smaller cities and the qualitative effect size may have beyond simply its quantitative character. Scholarship that takes as its frame and focus the question of size, and in particular “small” cities, however, remains limited in extent. Part of the issue may be the uncertainty of determining and (though Robinson and others would resist) categorizing “size” in urbanization. What is a “small” city? What is a “mid-sized” city? When does a large city start? Part of the problem lies in the different ways of bounding cities and accounting for urban areas around the world, of course. But with the emphasis on small city visions and conceptions articulated by Bell and Jayne and others, we can more broadly cast “small urbanity”²⁹ as a state of mind, set of cultures and processes rather than merely being simply about numbers.³⁰ The quantification of size is a starting point, but the qualities, features, and forces of that size are the principal focuses of study. I would suggest that a comparative urbanist approach might offer a useful starting point for deepening the understanding of size categories and the various effects of size in different geographical circumstances.³¹

Little is to be found on the urban geography side of the small/mid-sized city literature about size and questions of sustainability and livability. Sustainability theorists and environmental scientists have posited some assessments about how various “environmental” outcomes might differ as city size changes,³² or, intriguingly, how quality of life and city size might be related,³³ but have principally focused on comparing larger metropolitan areas.³⁴ Small and mid-sized cities have received growing attention in recent years.³⁵ Building on previous studies that found that small to mid-sized cities (in this case 25,000 to 300,000 in population) were less likely to have implemented clean energy initiatives than larger cities,³⁶ Pitt and Bassett examine how such cities adopted and these policies.³⁷ They acknowledge, however, that “[r]elatively little research in planning or urban studies has used small to mid-sized cities as a focused unit of analysis.” Citing Bell and Jayne (2009) and their discussion of the ways policy in small cities has been marginalized or ignored, they support the call for a small cities research agenda. While most studies on small cities have focused on economic development issues, “some of their findings and recommendations provide interesting parallels for our work on planning for clean energy”.³⁸

Similarly, the livability agenda as it connects with city size has been little engaged within urban geography. “Livability”, referring to questions of quality of life and human appeal – prioritizing vitality and viability -- within the city (as distinct from “sustainability” with its greater environmental focus and impacts beyond the individual city), can be seen as a critical component of urban performance, and has engendered a diversity of analyses.³⁹ The vitality, “legibility,” and appeal of even “sustainable” urban areas is essential to their success in drawing in residents; people, after all, have to actually want to live in sustainable settings in order for them to deliver on their goals. The limits of density or compactness, absent a broader human/social dimension, as defining features of a “sustainable” city have been discussed.⁴⁰ But the opportunities or challenges for, particularly, smaller sized cities to provide more livable city environments as they intersect with sustainability has been less explicitly explored.

Building on these beginnings, one can identify three directions in which city size and sustainability/urban livability studies might be developed further: city size (overall) as an explicit focus or consideration in sustainability and livability research; the particular consideration of sustainability and livability in small/mid-sized cities; and the consideration of *how* size (in particular, city small-ness, perhaps) effects environmental or quality of life policies and initiatives.

5. Directions and questions for small to mid-sized city sustainability and livability

Small and mid-sized cities are important to consider in terms of sustainability planning. As Pitt and Bassett point out, small to mid-sized cities in the U.S. contain almost 87 million people, nearly 30% of the U.S. population.⁴¹ In their numerousness, they also, as municipal entities, contain a very large number of government and planning units through which much environmental and community planning takes place. Moreover, in terms of urban livability, smaller cities have sometimes been held up as models: perhaps Howard’s 30,000-person “Garden City”⁴² is the ur-example, but one can see in the theories and built developments of the New Urbanist movement a similar tendency to emphasize a more compact “community” size of settlement (as well as the even smaller sized “neighbourhood” scale of consideration).⁴³ Some of the more recent lauded case studies in urban design and sustainability embody this sub-metropolitan size: Freiburg, and in particular the Vauban district; BedZed in south London, and various other

European examples seem to offer relatively small-sized models for highly livable and potentially sustainable urban living.

I will bring this prospectus for integrating size and urban livability and sustainability to a close by drawing on my own research on urban planning and policy-making in a small city (Harrisonburg, in Virginia in the U.S., population around 52,000) to pose some questions and considerations for sustainability and livability planning in smaller cities. This concluding collection will hopefully point toward some critical directions for future research in these areas. I group these notes under five related areas of concern: placemaking and identity; governance and citizenship; policy rescaling; ecology and local food; and geographical issues.

5.1. Livability: placemaking and identity

Do smaller cities have a stronger (collective) sense of place and identity? How does this stronger (or weaker) sense of place inform urban planning and policy-making? Does it make it more conservative, or more focused with greater community engagement? My experience in Harrisonburg suggests that smallness has meant that when demographic change has come (the city contains a significantly growing Latino population, for instance), political divisions do seem to get more acute and municipal planning becomes more modest.⁴⁴

How do smaller cities respond to the “lifestyle urbanism” and creative class focuses of contemporary urban culture? How do urban distinctiveness efforts such as downtown renewal work in a smaller setting? What are the particular challenges to urban sustainability agendas for “college towns”? How can one overcome town/gown division in a smaller city setting? How different are the economics of urban livability in small cities versus larger cities? How can we ensure economic and social equity in a smaller community? Do smaller and mid-sized cities offer “sweet-spot” urbanism: offering the social, cultural amenities of larger places, but the reduced (collective) environmental impact and healthy cities opportunities of smaller places? How can mid-sized cities develop the opportunities of their “in-between” status? How can “compactness” be made more livable in smaller cities?

5.2. Engagement: governance and citizenship

The potential conservatism or parochialism of smaller cities has already been mentioned, but one should ask how the politics of a smaller city – perhaps at a point between deep rural conservatism and entrenched urban progressivism (such as Harrisonburg) – can be marshalled to develop appropriate strategies for sustainability and livability. Further, does the smaller sized city offer another “sweet spot” of political engagement, as seems to be the case in Harrisonburg, for example: the city is large enough to offer the opportunity for funding and supporting reasonably impactful initiatives, but small enough to allow the individual citizen to access and participate in municipal planning and governance with some ease. The city government of Harrisonburg, for instance, is not some remote or politically entrenched bureaucracy, but still something very immediate and accessible. The trends toward dialogic democracy, engagement with knowledgeable communities, and associative democracy seem particularly vivid in smaller cities.⁴⁵ In smaller cities, the nature of the bureaucracy itself might be a focus of research: Harrisonburg, for example, seems to demonstrate a highly personalized (managers and planners within the city government work very closely together, across departments) and closely networked approach – perhaps necessarily, given the relative limits on funding, and the small size of that bureaucracy. Does this lead to more “holistic” planning and more integrated policy agendas?

5.3. Policy rescaling

How can agendas relating to environment and livability set elsewhere (typically larger metropolitan areas) be “rescaled” or translated to the small city? What are some essential “best practices” for translating sustainability best practices to the smaller city? Should the agendas even be the same? What can smaller cities do better than larger ones? How do policy mobilities work between smaller cities? How much should these networks be developed? How should particular principles or agendas, such as “smart growth” or traditional neighborhood design be reworked for the smaller city? How might sustainability indicators be tailored to the smaller city?

5.4. Ecology and local food

In a way that fuses both livability and sustainability, smaller cities would seem to have some advantages in the “local food” movement: those located in more rural areas would seemingly have a closer and deeper connection with a surrounding agricultural hinterland (depending on the regional environment). In recent years Harrisonburg has deeply invested in its agricultural roots, supporting local food production, and embellishing its more progressive (and distinctive) urban culture, features that can then be used in tourist and business promotion. A large farmers’ market has been developed, city ordinances have been loosened to allow more commercial urban horticulture and backyard chicken keeping, and various local community supported agriculture efforts have emerged. The analysis of and investment in landscape ecology in smaller cities might pose both challenges and opportunities. Restricting development spatially can be challenging with a strong developer community and a more conservative polity, but smaller cities also have the opportunity to maintain and develop green infrastructure that connects even quite central parts of the city to the outside environment, simply because of their smaller size. In a similar way, how might biophilic design elements vary between large and small cities?⁴⁶ Are there particular aspects of biophilic design that would be most effectively deployed in smaller cities?

5.5. Geographical issues

There are a range of more explicitly geographical questions that might shape the experience and processes of smaller cities. How does the potential for “walkability” work in a smaller city: is it too large to be entirely walkable, but not big enough for an efficient transit-and-pedestrian system? How is density related to smaller cities? Does density work in different ways in smaller places than larger? How does the location of the small/mid-size city matter? Does geographical location have a greater effect the smaller the city? How is the experience of smaller cities in rural areas different from that of smaller cities in suburban regions? The experience of Harrisonburg as a small city in the rural Shenandoah Valley, for instance, is economically, politically, and culturally different from a city of the same size in the Northern Virginia/Washington DC metropolitan area. How does size intersect with those different geographical settings and modify them? Does size become less important as a variable the closer a city is to another city?

6. Conclusion

This paper has sought to elevate the spatial dimension of size as an epistemological and ontological focus for research into urban sustainability and quality of life. It has been an introductory discussion of the potential theorization and deployment of size as a concept, indicating some directions for future research. As with other socio-spatial dimensions, it should not be considered in isolation, but carefully examined for how it interacts and shapes other variables, such as economic processes, political forces, cultural issues and the non-human environment. Urban size, and in particular the contexts, opportunities, and challenges for small/mid-sized cities, has been a neglected dimension to sustainability and livability planning. A focus on smaller cities might offer an especially productive diversification of the sustainability and quality of life agendas. The opportunities for smaller cities are manifold. To finish with the words of Aristotle, “a great city is not to be confounded with a populous one.”⁴⁷

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