What makes an active public realm? Opportunities and challenges for research

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Contemporary cities have more extensive public spaces than ever before. Consider the vast expanses of highways, parking lots, and sprawling floorplans of malls and shopping centers. These are all, technically, available for public use, the habitat for our everyday experiences outside the privacy of our homes, schools, and workplaces. Right outside our front doors, they are by far the most convenient places for physical activity and community engagement. Yet the omnipresence of these spaces does not translate into quality. The vast majority of the public realm does not invite us to spend time within it, develop a sense of place and identity, or travel under our own power to convenient destinations. It is unsurprising that physical activity has declined precipitously in recent decades while our public spaces have become predominantly bleak, utilitarian, and designated for fast and efficient roadways. We have traded well-designed public spaces for well-engineered guideways for private automobiles.

What distinguishes many of the most active, enjoyable, and self-maintaining public spaces is the variety and interaction of their uses, a stark contrast from the ideology of functional separation that has dominated modern land and transportation planning. Consider the Greenwich Village commercial street described by Jane Jacobs, with small shops on the ground floor and a mix of apartments and offices above. Those who live or work in this space have an interest in its maintenance and keep “eyes on the street” simply by virtue of their presence. For shoppers, the street provides an opportunity to purchase goods and services among the backdrop of an interesting social scene and an opportunity for incidental physical exercise, providing a range of public and private goods at hand. Everyday trips meet a handful of practical and emotional needs. Such benefits are not exclusive to dense commercial blocks. A neighborhood street like the Dutch woonerf or British home zone is a safe place for children to play and adults to enjoy the outdoors and socialize with neighbors who come and go. The public realm, when it feels safe, inviting and interesting, draws us to engage in social and active recreation on an everyday basis with little additional effort. If we instead spread our homes, work, shopping, recreation and community-building between farther and more exclusive spaces we are simply less likely to manage each activity on a day-to-day basis.

Physical characteristics of public spaces cannot be fully credited with their success or failure. Myriad cultural and economic factors must also conspire to allow a vibrant public realm to emerge. Nonetheless, design creates an important framework for public life and there are notable patterns among successful public spaces that have evolved across numerous cultures. At the scale of cities and neighborhoods these spaces tend to connect a mix of land uses within a walkable distance and offer multiple ways of navigating from one place to another. Cities with short, densely connected streets are often considered both more practical and enjoyable for walking than those with superblocks and a hierarchy of streets leading to disconnected cul-de-sacs. At the scale of streets, successful public realms are often compact and human-scale, allowing people to comfortably communicate by voice or recognize a person on the other side of the street or in the upper story of a building. They tend to be comfortably enclosed by the arrangement of buildings or trees, forming the sensation of outdoor rooms. Their horizontal layouts tend to prioritize access for pedestrians, the most fundamental transportation mode, giving faster bicycles and motor vehicles the ability to share the space, not the right to dominate it.

While these descriptions evoke romantic images of a successful public realm, they are hardly a recipe for successful spaces. Existing literature underscores the importance of both the presence and design of public spaces for physical activity. Yet, the terms with which we measure physical and experiential characteristics of public spaces are vague, and the relationships between them remain difficult to ascertain. Several emerging areas of research could help us better understand public spaces and their role in supporting physical activity.

It will be important to refine our understanding of public space attributes that are most relevant and desirable for encouraging physical activity and related community benefits such as “eyes on the street,” increased social interaction, or improved pedestrian safety. However, concisely defining these attributes may require that we embrace normative frameworks. Kevin Lynch’s principles of “good city form,” for example, identify attributes such as legibility, transparency, and enclosure, though measuring them reliably has proven to be more difficult than expected. Accordingly, the predictive validity of these attributes has
also been weak. Research investigating how these attributes are mani-

fested in more readily-accessible measurements may help us account
for them more efficiently and reliably.

There are also research opportunities in examining how the impor-
tance of public space attributes vary across spatial scales. At the macro-
scopic scales of neighborhoods or cities the mere presence of public
spaces and their accessibility for individuals are clearly important. Mac-
rosopic characteristics like street geometry and park size have been
well-studied with convenient secondary data assessed in geographic
information systems. At a more microscopic scale, design and mainte-
nance characteristics affecting the quality of public spaces are conceiv-
ably just as important for facilitating their use. Nonetheless, gathering
and analyzing data at the scale of individual streets and buildings has
been substantially more challenging, traditionally requiring in-person
audits, intercept surveys, and interviews with residents and passersby.
Innovations in automated image interpretation, architectural-scale
geodata, and crowdsourcing using mobile apps and social media create
opportunities for more efficient and fine-grained analysis.

Even at the scale of particular streets, there are questions about what
matters most for individuals. Is quality of experience affected more by
building setbacks, height restrictions and other land use and design pol-

icies, or by smaller characteristics controlled by individual landowners
and public works agencies? Treasured public spaces include details
that compel interest, provide a sense of security, and create an inviting
connection between public and private areas. These details may be for-

mally designed and intensively managed, like elaborate façades and
well-kept front gardens. Or they may be informal, gritty, and even cha-

otic, like produce vendors sprawling out into the walkway of a public
market. Either is visually engaging, teaches the passerby something
about the surrounding landscape, and projects a sense of care and atten-
tion to the space. To set policies that promote a vibrant public realm we
must better understand which characteristics matter most and who has
agency to control them.

Related to issues of scale are decisions about how researchers con-
ceive of their analyses. Are we concerned about how public spaces are
configured within communities, or how individuals experience them
at the street-level? Neither view is necessarily correct or superior.

They both respond to the varying ways in which public spaces are
planned, implemented, maintained and used. Yet, there is an increasing
need, and an emerging opportunity, to better understand people's expe-
riences in public spaces. Using actual behavior to measure quality of ex-
perience has been predominantly limited to blunt measures such as
number of visits, time spent, or travel mode share. Improvements in
technology, together with the emergence of individual-level data sourc-
ing en masse, create opportunities for person-level performance metrics
that may rely on self-reported data (as collected, for example, in ecological
momentary assessments) or physiological indicators that may act as
surrogates for personal states such as happiness, stress, and mindful-
ness. By better understanding what triggers a stressful response we
may infer important characteristics of public spaces.

The suggestion of using person-level metrics to evaluate public
spaces raises knotty questions about the ability to generalize from
human experience. Is it possible to aggregate across individual experi-
ences to identify desirable public space characteristics? Or is the experi-
ence of a person, or subgroups such as children, older adults, females, or
high-income individuals, so unique that generalizing is not possible or
scientifically responsible? We can take cues from marketing researchers
who have already indicated that generalizing is difficult and have guid-
ed their practice towards the tailoring of products and spaces, from re-
tail shops to restaurants and vacation locations, to specific subgroups. In
practice, we expect some aspects of people's experience to be informed
by culture and personal context while other aspects may be more
universal.

In understanding public spaces and their impact on the human expe-
rience we might choose to prioritize diverse uses, active users, economic
prosperity, aesthetic unity, or even human happiness. However, we are
far from being able to concretely measure most of these outcomes, let
alone in efficient and localized ways, while accounting for myriad per-
sonal, social and environmental conditions. Research on public space
design faces substantial and technological obstacles, many of which
are being tackled currently, but with emerging logistical and data man-
agement issues. By addressing these obstacles, such research has the po-
tential to help shape one of the most widespread and influential human
landscapes for decades to come.