

Learnings from public life in order to rethink post-corona cities - A human-centered approach to the use of data in urban planning

Liselott Stenfeldt¹ | Jeff Risom¹

¹ Gehl, Copenhagen

Keywords: covid-19, thick data, public life, behaviour, urban design, human-centred, health

Abstract

The outbreak of the COVID-19 pandemic has profoundly impacted cities around the world and raised fundamental questions about urban development.

How do we better upgrade infrastructure? How do we ensure affordability? How do we protect and restore open and green areas? And how do we enhance overall livability for all?

It's clear that the coronavirus will have, and is already having, a profound effect on how we answer those questions and the overall direction that today's and the built environment of the future will take. Learning from the use of public space during the pandemic, has shown us the need for rethinking across content how to better create health promoting cities for everyone. From this perspective, this article focuses on the imperative role of collecting and analysing 'thick data', qualitative information that can reveal social context and a deeper understanding about how people's behaviour has been impacted in a time of crisis.

1 | Studying public life

1.1. The built environment's influence on people's behaviour

Studying public life is by no means a new phenomenon. When we say 'studying public life' we refer to a history and range of research that seeks to understand how the built environment - in all its different forms - influences people's individual behaviours. When viewed collectively, these behaviours are the public life of a place. What we know from decades of public life research, is that there are many direct, indirect and consequential effects on people's behaviour according to the invitations, or lack thereof, that the urban environment provides. From daily necessities and routines, to your sense of personal control, the degree to which you are engaged in socially supportive relationships, and the restoration from stress and fatigue - everything is affected by properties of the built environment and the ways in which we individually and collectively interact with it. As most public spaces are 'human made' we have a responsibility to design those places to not only be accessible to all, but proactively promote and enable individual and collective behaviours that themselves enhance the identity, character and function of place. In this regard, accessible, complete, thriving public spaces are one of the most powerful tools we have to improve people's life quality and drive sustainable change.



Figure 1: Use of public space during Covid-19 (Photos: Gehl)

1.1. The need for a deeper understanding of human behaviour

In March 2020 as the pandemic became a truly global crisis, we each experienced the impact of the necessary restrictions on daily life. As professionals, we quickly came to realise that the almost instantaneous nature of behaviour changes in cities - illustrated by images of entirely empty streets, parks and other public spaces - would have a lasting impact on our approach to urban planning and design, and the principles and decisions that urban leaders would have to take from that point forward. Where before, an emphasis on the flows of people, from point A to B was always a priority - now, in an increasingly localised world, the proximity and experience of place had become the essential focus to ensure public health and the basic, local, daily needs of people. Therefore, understanding how local places and neighbourhoods performed in this 'new reality' became essential knowledge as the basis for place strategies and the appropriate adaptation of public space.

We began to ask the questions:

- How can we better understand how people move and spend time in public space in order to improve physical outdoor areas and help sustain a vibrant city centre?
- How can we map the impact, relevance, and value of public urban programmes and cultural initiatives have on the public life of cities? And how can we learn from these in order to help share new ways to meet socially in the future?
- How can we get a better idea on the importance of local meeting places during Covid-19 and how can these qualities live on, even after Covid-19?
- How has Covid-19 changed the way we move across cities and how has it changed our mobility habits?

1.2. Thick data: qualitative data that reveals social context

With such questions and in the face of obvious and dramatic shifts to collective behaviour, it was also clear that the normal methods of analysing public life would not garner sufficient insights to properly understand what was occurring at a local level, and in the context of wider, city and regional trends. We know that big data works well to understand e.g., the movement flows of people across a city, but it does little to show the fine-grained perspectives of the "lived experience" (or actual everyday life) of and in a neighbourhood: How are people spending time? Where and with whom? When during the day and for how long? It is this level of detail that would be needed to qualify any hyper-local, local or district strategies to best respond practically to lockdown and re-opening phases.

This is where Thick data comes in. While Big Data is information that reveals overall patterns with a large range of data points, Thick data is sets of information that reveals a deeper social context of and connections between a selected part of the many data points. This more “zoomed in” and highly site-specific data bridge the knowledge gaps between the overall tendencies on a citywide level and the very specific needs or behavioural patterns a citizen might have within a smaller space and in regard to social relations within this. By collecting and analysing Thick data we were able to better understand why something happened, which lead to a deeper understanding on e.g., the use of public space and the effect it has on people’s behaviour.

2 | Covid-19 and the effect on public life

2.1. Covid-19: an unprecedented opportunity to understand public life

As lockdowns were imposed across the world, we, as urban strategists, designers, anthropologists and social scientists realised that there was an unprecedented opportunity to document the most fundamental elements of public life and the effect on people’s behaviour when the normal invitations of places were restricted or removed altogether. In essence, we had a unique window to study public life in its most basic form.

2.2. Public space, public life, and covid-19 (and the methods we used)

During two full days in March and again in May, we mobilised over 80 people across the four Danish cities Horsens, Svendborg, Helsingør and Copenhagen. Their task was to observe and collect data on how people used public space, aided by Gehl’s web-based Public Life App. The data was stored in real-time on our cloud-based server and could be exported and cleaned in the same moment it was collected.

As our surveyors registered people’s observed behaviour in public space, we began to see clear patterns in the numbers. These observations were great for stats and for understanding the behaviour in a selected site, but gave us little insight into any detailed rationale, feelings or perceptions of why people were using public space as they did. With physical distancing the new necessity, capturing these insights via our normal on-street intercept surveys was not a recommended practice, so we instead turned to the map-based online survey-tool Maptionnaire. The survey was sent out to the citizens of the four Danish cities where we were able to ask questions related to the intrinsic reasoning behind people’s actions in public space, and their perception of the choices they now had to get around and use public space, e.g.,

- Do you value your neighbourhood more as an effect of the pandemic?
- Have you found new favourite spots in your close surroundings since the lockdown?
- Why do you go outside, when and for what purpose?
- How do you move around in the city? By foot, public transportation, bike, by car?
- Which transportation alternatives do you feel safe using?
- Did you explore any new places in your local area, or outside it?

2.3. Connecting thick data with big data

With observational and qualitative online survey data at hand we had a clear picture of who the people using public space were (age group, gender), what they were doing (eating, drinking, watching people, using their phone, talking to friends, reading a book etc.), their postures (sitting, standing, lying etc.) and how they moved through the observation sites (walking, by bike, using micro mobility solutions, with a stroller, on skateboard etc.). Now we had to cross-reference this data

with available big data to reveal new insights and consequential effects between local areas. Using WIFI sensing data from the company JC Decaux's advertising billboards and metro station entrance and exit counts from Copenhagen's Metroselskabet (only applying to Copenhagen) we were able to gain a better idea about people's changing mobility habits and correlate this against answers we had received on feelings of safety in public transportation.

Due to the novelty of the situation and the acknowledgement that we, in this unique situation, actually didn't know all questions to ask, we wished to enable a more creative approach instead of analytical and descriptive question usually asked in other cases, partly inspired by the well-known technique Cultural Probe. For this, we analysed the social media platform Instagram. By mapping over 400.000 posts, hashtags (#) and recognisable places featured in images across the four Danish cities, we were able to induce general moods of the urban population, be it happy, sad, anger, hope etc. With multiple datasets, we were able to achieve deeper insights and to explore the consequential effects of behaviour across local sites, neighbourhoods and city scales.

3 | What we've learnt and how it can be used in order to rethink post-corona cities

The pandemic has shown us just how fast people are adapting to new conditions, and how this adaptation leads to a different type of public life, and in turn, how that public life has varied consequences for society, both socially, economically and in relation to the environment. As other major crises have had major impacts on our physical surroundings and the way people experience everyday life, so too will this pandemic prove impactful.

The pandemic may not last forever, but our response to it will shape the future of our cities for the coming decades. Following are four predictions that we believe will shape the planning of health proofing post-covid cities:

The future is local!

Learning: local meeting places thrived during lockdown, and continued to do so in the first reopening phases

While the number of pedestrians on the main pedestrian street in Copenhagen, Strøget, fell by 80% during the lockdown, the number of people spending time in two local areas (Superkilen in Nørrebro and Sundbyøster Plads in Amager) increased by almost 20%. In these local areas, we also witnessed a big redistribution of user groups and their activities.

Starting as a consequence of working more from home and children not being able to go to school, people seemed to more naturally getting exposed to new local sites. In the reopening phases over 60% of the citizens being asked, said they had started to value the different offerings in their local area differently. This tendency was confirmed in our studies, and in general the increased activity in the city centres at this time were primarily people moving through, whereas the local neighbourhood invited people to spend time and to take a break.

For the post-corona cities: How can we design for a decentralisation of services, new spaces to work in (close to home, but not in the home) and functions supporting the daily life in local areas?

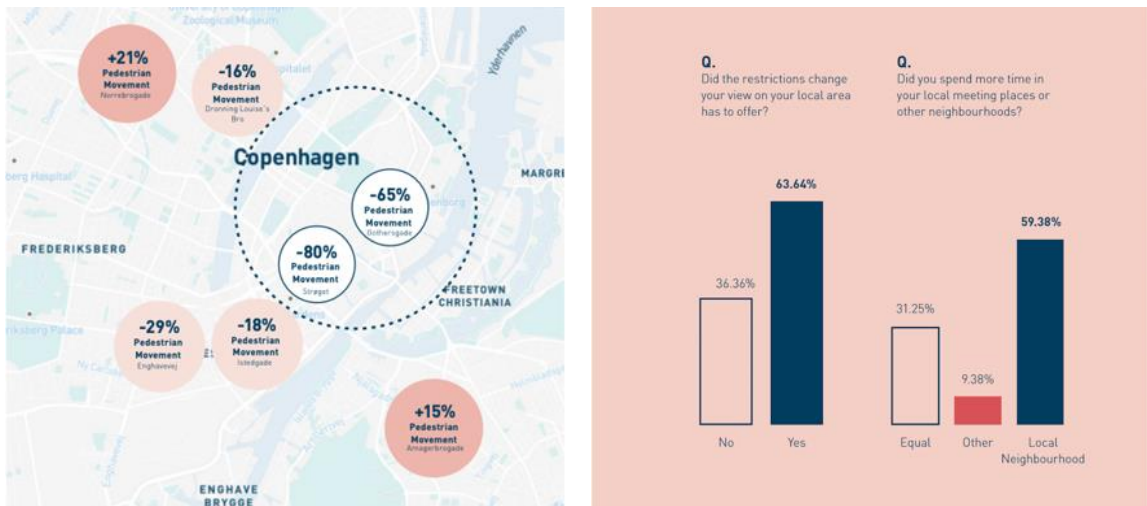


Figure 2: Results from the survey on how Covid-19 affected the view on the local neighbourhood.

The power of reachable open and green spaces – for everyone

Learning: Nature and open space to move around seemed to support the feeling of wellbeing while still allowing physical distance

Public demand for urban parks has been high during this pandemic, and already early on in our studies we were surprised to see a redistribution of user groups in certain areas. Areas that prior to covid-19 had been used primarily for “programmed activities”, such as trade, outdoor café areas or sport activities, was now (due to the lockdown) being used by e.g., a younger group of people in the middle of a creative game or elderly people sitting down, having conversations in a safe outdoor environment. In fact, despite the fact that elderly people were supposed to be the most vulnerable group during covid-19, we registered more elderly moving around in these open spaces than we ever did before.

For the post-corona cities: How can we make sure to plan for safe routes enabling everyone to have a reachable access to open areas – also in the city centers?

True resiliency lies in a mix of amenities and functions

Learning: An area that only offers commercial activities will have a hard time to stay resilient and vibrant in time of crisis

The “15-minute” idea is based on research into how city dwellers’ use of time could be reorganised to improve both living conditions and the environment. As a part of our studies, we zoomed in to an even smaller area – a 10-minute walk (or 500m radius) – to benchmark selected areas in regard to their proximity to a diverse set of amenities, functions (both commercial and civic), green and open areas.

While looking at local neighbourhoods and their activity, it was paramount to identify and compare the split and diversity of amenities for the completeness of local meeting places. The more visited areas (such as Sundbyøster plads in Amager, or Superkilen in Nørrebro, both in Copenhagen) seemed to have a very good mix, while city centres across the four cities seemed to primarily offer commercial activities and very little civic amenities or green spaces.

For the post-corona cities: How might we ensure areas (especially city centres) to be more diverse and resilient by inviting a mix of stakeholders (creative, civic, commercial) to contribute with new services that are not only supporting consumerism?

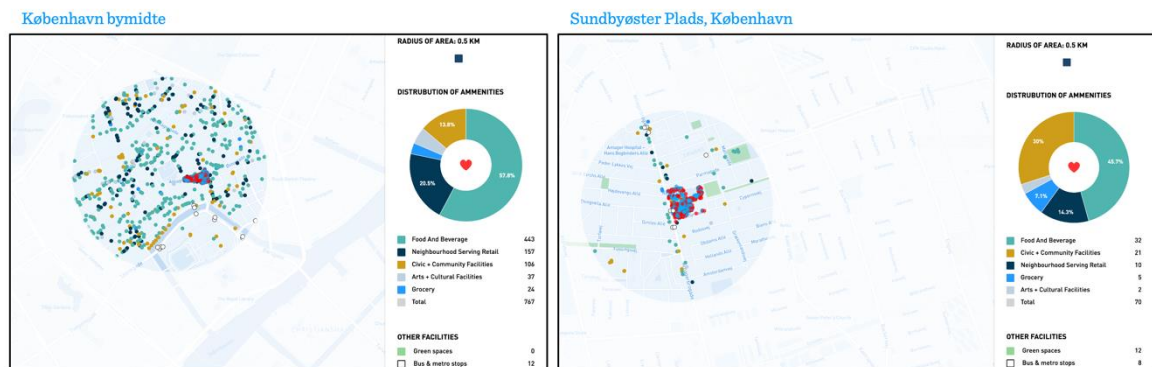


Figure 3: Analysis of activities within the “15-minute”-neighbourhood.

Full speed ahead with the green transition!

Mobility habits changed dramatically and the trust in public transportation decreased

Already before the pandemic, there was a global trend of private car ownership increasing. Green parties in cities like Denmark have also been out bidding one another for promoting more electrical vehicles.

Our surveys showed us both perceived and real changes of people’s preferred choices of transportation as a consequence of covid-19. The tendency to choose the private car increased at the same time as the popularity and the feeling of safety in using public transportation decreased.

One popular resulting trend from the pandemic has been for people to explore new areas further out of the city centre, usually being reached either by foot or bike. The least safe modes of transportation options seem to be the Metro in Copenhagen and the busses in all 4 cities.

For the post-corona cities: How can we improve accessibility in and across the city, by developing new ride sharing options, plan for safe routes by foot and rethink the use of public transportation? (Not only focusing on transitioning people away from private vehicles to public transportation options, but also about decreasing single occupancy vehicle use in order to make room for open space).

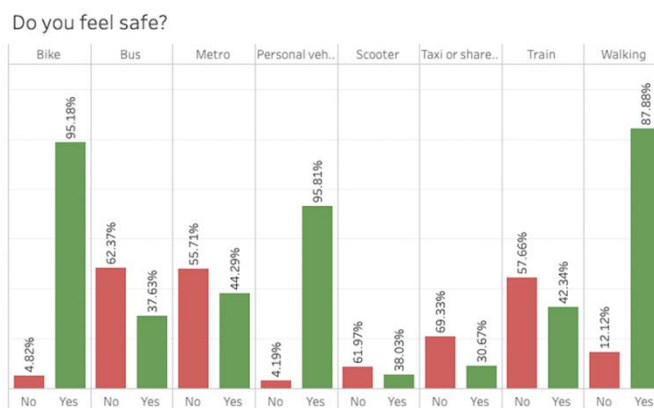


Figure 4: The feeling of safety using different kind of transportation means.

4 | Conclusions

Acknowledging the tragic consequences of COVID 19 globally, we have also been presented with a unique opportunity to see our cities and our relationship with them more clearly. Our surveys in four Danish cities during lockdown and again during reopening have revealed a nuanced picture of how public spaces invite or hinder certain activities and behaviour. Collectively, these activities make up the public life of places that we can now judge to be safe or unsafe, vibrant or in-decline, accessible or inaccessible according to our 'new reality' norms. We can also match this objective picture of place with our expectations for a safe, health promoting and resilient urban future - or rather we can use them to help decide what is feasible according to context to create that safe, health promoting, sustainable future. One thing is clear from initial reflections and that is we have to use these insights as drivers for future decision making. Without continually highlighting how places are actually performing, we will never overcome the embedded norms and subjective opinions of place to achieve the radical transition needed to achieve sustainability and resilience.

Through the surveys already undertaken during covid-19, we now have a baseline, but to be able to make informed design decisions that can actually improve everyday life, we need even more studying of public life and the influence of physical space on people's behaviour. We all need to pay attention and learn - sharing this data and knowledge can be essential for shaping the future cities for everyone.

5 | REFERENCES

Web-based articles

- Evans W. Gary (2003) The Built environment and mental health, Journal of Urban Health <http://www.mentalhealthpromotion.net/resources/the-built-environment-and-mental-health.pdf> [accessed December 2003]
- Finansministeriet (2020), Veje til en grøn bilbeskatning, <https://fm.dk/udgivelser/2020/september/delrapport-1-veje-til-groen-bilbeskatning/> [accessed September 2020]
- Gaver, Bill, Dunne, Tony and Pacenti, Elena (1999), ACM, Design: Cultural probes, <https://dl.acm.org/doi/10.1145/291224.291235> [accessed January 1999]
- Gehl, (2020), Public space, public life, and covid-19, covid19.gehlpeople.com
- Mashey, John, 1987, Big data and the next wave of infrastress, https://static.usenix.org/event/use-nix99/invited_talks/mashey.pdf
- Siodmok, Andrea., (2020) What ethnography and 'thick data' will mean for policymaking, Apolitical, https://apolitical.co/en/solution_article/how-ethnography-and-thick-data-can-improve-policymaking
- Tukey, John W., (1961), The future of Data analytics, https://projecteuclid.org/download/pdf_1/euclid.aoms/1177704711
- Wang Tricia, (2013), Why big data needs thick data, Ethnography matters, <http://ethnographymatters.net/blog/2013/05/13/big-data-needs-thick-data/> [accessed May 13 2013]
- Wikipedia, COVID-19 pandemic in Denmark, https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Denmark

Books

- Gehl, Jan (1971), Life between buildings, Copenhagen: The Danish Architectural Press

Gehl, Jan (2010) *Cities for people*. Washington, DC: Island Press.

Pallasmaa, Juhani (2012), *The eyes of the skin – architecture and the senses*, New York: John Wiley & sons

Sim, David, *Soft City* (2019), *Building Density for Everyday Life*, Copenhagen: Island Press

Svarre, Birgitte, Gehl, Jan (2013), *How to study public life*, Copenhagen: Island Press