

TALKING TO PRACTICE: EXPLORING CHALLENGES FOR PRACTITIONERS WHEN PLANNING FOR WALKING

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Abstract

Objective – To develop adequate knowledge and tools for practice, we need insight into how practitioners work and what their needs are. Here, we sought to explore the different ways in which practitioners’ map and evaluate walking and walkability, as well as how they approach walking, in urban design projects.

Background – City planning for liveable and healthy cities that promotes walking requires sound evidence-based knowledge, empirical data, and adequate tools. For academic knowledge to be employed by practice, it is important that it meets practitioners’ needs. Hence, we interviewed three experienced Nordic practitioners, working in government and private practice, who in different ways are experts on walking.

Research question – What tools and methods do practitioners use when planning and designing for walking? What kind of data do they employ? What do they point to as knowledge needs?

Methods – We used qualitative semi-structured interviews to gather the experiences of practitioners who have been ‘early adapters’ when working with walking and walkability.

Results – The practitioners’ stories vary according to their different work situations and experience. Yet, there are many similar traits. Counting and observation are central to understanding how people walk in and use a place. The practitioners tend to adapt their approach according to a project’s context and size, using a combination of walking-data depending on available sources. The practitioners all underline a significant lack of sound quantitative data on walking; pedestrians are generally not counted and observed enough. Which, in addition to a lack in data sharing, hinders building empirical knowledge on walking. This also call for more focus on and priority of pedestrians in city planning and development.

Conclusion – Our observations align with findings from previous urban design-research regarding the need for a more systematic approach on how to collect data on walking, and how to assess the walkability of public space. Yet more explorations are needed for a broader picture of current challenges. It is important that knowledge and tools are accessible and useable for practice, moreover, that methods can be adapted to context regarding scale and place. To ensure this collaboration between research and practice is crucial, for example through explorations such as those presented here. To this end, we will continue to our conversations and collaborations with practice.

Keywords: *walkability | evidence-based methods | urban design | planning practice*

Background

Walking and walkability has become an important part of the urban agenda [1-8]. It has been firmly established that walking is important for improving public health and for achieving sustainability goals, locally and globally. Consequently, cities worldwide are working to increase walking shares. Walkability describes to what extent surroundings promote and invite to walking [1, 7, 9]. To stimulate more walking, it is important to ensure that public spaces, and cities as a whole, are designed with a high level of walkability. We have previously explored the topic of walking and urban built environments, see for example [9-12]. One finding is that despite an abundance of literature, many knowledge gaps remain, on several geographical scales, which hinder research in informing and guiding practice. Another finding is that there is a lack of evidence-based tools and methods for mapping and evaluating walkability at the neighbourhood scale. Several design or community-led projects have addressed different ways of mapping neighbourhoods [13-16]. However, they have various shortcomings that must be addressed. As an example, previous research has shown the importance of collaboration between research and practice in developing knowledge and tools for city planning and development [12, 17, 18]. It is important that the knowledge, methods, and tools developed by research respond to the actual needs and requirements of practice to ensure their relevance and usability in projects [19-21]. As a step to enhance our understanding of the needs and preferences of practice, we decided to

interview three acknowledged practitioners¹ with expertise within designing and planning for walking². The aim was to explore the ways in which these practitioners map and evaluate walking and walkability in their practice, which tools and methods, as well as data, they employ, and what these practitioners point to as central knowledge needs. In the following, we first give a description of the three interviews separately. Then, we explore the findings from the interviews considering findings from previous research. Finally, we conclude on some important lessons for further research and works on walking and walkability to strengthen today's practice.

Methods

The interviews were undertaken as semi-structured conversations with a predefined interview guide that was slightly adapted for each interview considering the differences in background and current practice of the interviewees. However, the main topics, methods and data were always approached. Using semi-structured interviews to engage practitioners in talking about their work, methods and experience is a frequent approach within research on design and planning practice, see for example [17, 21-23]. It is particularly fitted to gain insight into the tacit or silent nature of practitioners' experience-based knowledge, which is often undocumented [18, 24-26]. With a small sample, our aim was not to generalise but to gather new insights from experienced practitioners to help further research efforts. The three practitioners were chosen based on their experience with planning and designing for walking, and because they work in a Nordic setting. We chose one from a large architecture practice that has published user guides, teaches, and been part of many projects on public spaces (Gehl Architects); one from a smaller firm that has explored new approaches to urban design (Léva Urban Design) and, a planner working in a municipality with strategic planning and mobility (Municipality of Lahti). All three of them have experiences as early adapters of working with walkability that can be relevant for developing methods further, adding new dimensions to research on walkability.

Results

In this section our aim is to show the experiences of the urban designers told as a story from practice [17]. The stories have been shortened, and centre around data collection and the use of tools when planning and designing for walking.

The architect from Gehl Architects in Denmark emphasises the importance of walking as part of everyday life. Walking is often linked to efforts to improve public health, but the effects of increased walking shares on public health is often difficult to document as the latter is influenced by a wide range of factors. In comparison, cycling is often measured in terms of money saved (for example by not driving). Moreover, there are many advocates for cycling but fewer for walking. Walking is, however, fundamentally interesting for practitioners as "everybody walks", even when they drive (to get to and from the car). In a project, Gehl Architects strives to see things from the perspective of the end user while retaining their expert view. They have developed their own methodology for mapping and evaluating walking and walkability in public space, which emphasises observing and counting dynamic and static uses of public space, pedestrian flows, length and purpose of activities, and so forth [27-29]. Gehl, both as a professional and as part of an architectural firm, has developed much knowledge on walking and public space, collected stories of best practice, and carried out numerous walking-mappings around the world. The method Gehl Architects applies is flexible but requires empirical data, generally collected by the architects and hired help. In a project, everything is context-dependent, and so they try to understand how a place 'works' (where do people move, stay, do not go, how is it used and the like). The practitioner will not have the local knowledge of the inhabitant. Which tools the architects at Gehl apply depends on the purpose of a project. In addition to existing data (when available), observation and interviews are the most important methods for measuring, mapping, and evaluating public space and walkability. It is important to find the right places for counting and observing, which is often combined with photo documentation for before and after studies. For walking, existing data is frequently lacking; cars are still, generally, counted more often than pedestrians. It is important to make people and human activity (in public space) visible through mapping. This makes sense everywhere, and is particularly important for political decisions, and for prioritizing projects that promotes walking. Gehl Architects uses GIS to some extent, if enough data is available from the client.

The environmental psychologist from Léva Urban Design in Norway explains how mapping walking in a project is part of addressing how a place is used, for instance where do people walk or not walk. Léva adjusts their methods according to the project and the budget, but always strives to combine social and physical aspects. Walking is often included as a small but integral part of a larger place-based analysis for larger zoning plans or projects on a neighbourhood level. Although there is rarely a direct transferability from one project to another, they usually look back on previous projects when starting a new one. It is furthermore important to focus on the user, and to include local knowledge in the analysis of a place, which the consultant will often lack. Léva generally use a framework based on Alfonzo's hierarchy of walking needs [30], which connects walking to feasibility, accessibility, safety, comfort and pleurability. According to the environmental psychologist, Alfonzo's hierarchy provides a good representation of walking as part of everyday life. The framework is often combined with an approach that maps various qualities of streets, in addition to counting pedestrians or using mapping apps. There are several challenges, however, linked to

¹ Practitioners in this context comprises urban designers and planners working in public service or private practice, the terms are not differentiated between.

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the transferability of methods and tools from a North American setting to a Norwegian (or Nordic) one. North American concepts such as ‘plaza’ or ‘backyards’ are, for example, difficult to translate. However, as few urban planners and designers work like this in Norway today, Léva – at least for now – uses North American tools. Participation is also an important part of Léva’s work, and they often triangulate mapping with qualitative methods like ‘walk along’. Léva Design would like to use more GIS-based tools and have done some tests with participatory mapping in recent projects. In projects, Léva frequently uses data from apps like Strava. They also use data from travel surveys and similar collected by others if possible. All of the above depends on the time and resources allocated to such work. In their experience, there is often an unbalance between how much time and resources are allocated to car traffic compared to walking; the former is generally prioritised. Walking is, moreover, often combined with cycling despite significant differences in needs and behaviours. The environmental psychologist calls for a more systemic approach to data collection on walking, preferably with a national registration form and database for quantitative data for practitioners to gather their data. This could help strengthen knowledge building on walking and urban design.

The interviewee from the Municipality of Lahti³ in Finland is one of the chief urban planners of the city with a background, in part, from urban design and architecture. When talking about methods and tools, the urban planner focused on their experiences from revising the master plan (to be finished in 2020). For this work the municipality have combined mobility planning through the Sustainable Urban Mobility Plan (SUMP)⁴ with physical planning via the Municipal Master Plan. The aim of the SUMP in Lahti is to reach a modal share of 50/50 between cars and sustainable modes. Integrating the two types of plans has led to a larger focus on mobility, including walking and walkability. Working on the current as well as the future municipality master plan requires much counting, but also qualitative analysis of the city development. Lahti has completed several mappings and counting of children’s movements since 2014. As an example, the municipality maps distances to schools, and has a buffer of one kilometre for walking to school to first and second grade and three kilometres buffer for larger children. Another objective is that people should live within 300 meters from a green space.⁵ Currently, 90 percent of the population of Lahti lives within this distance. To follow these goals, the urban planner sees a need for new methods and routines for collecting data, including modal split. National travel surveys are, for example, undertaken every six to eight years, but should be complemented with more frequent local surveys. As an effort to improve their knowledgebase, Lahti is exploring methods to map and evaluate walking and walkability in collaboration with universities. This includes public participation GIS (PPGIS), which uses online tools for mapping by citizens. The next step here is to render the collected data publicly available for everyone who would like to use them. Finally, the urban planner underlines the importance of a constructive, ongoing dialogue with citizens, and to have conversations on all planning levels about the kind of city one wants and how to get there. As a planner one does not have the local knowledge about how it is to live in the area.

Discussion

There are many works on walking and walkability, as well as on the use of knowledge and tools by urban design practice (see for example [19-21]). The findings from the interviews largely align with previous research. There is less knowledge on how practitioners map and evaluate walking and walkability in their work, nor on the kind of data and knowledge practice needs. The interviews offer further insights, as well as new understandings of previous findings. Several issues stand out as important for further elaboration to improve knowledge production on planning and designing for walking. In the following paragraphs we reflect on three key aspects.

Methods must be easily available, simple to use, and adaptable to context

From the interviews we see how the practitioners often combine several methods to map walking and walkability. These span from Space Syntax, GIS and softGIS to more traditional fieldwork, often combining qualitative and quantitative methods. This is seemingly due to a lack of methods and tools that are capable of combing the different perspectives deemed necessary by the practitioners to adequately analyse how a public space ‘works’ – including walking and walkability. Counting and observation of people in public spaces, and how to best do so in different contexts, is a recurring theme. The interviewees underline the importance of being in the field to observe and experience a place in person to be able to properly address walking and walkability in a project; local context is put forward as highly important. Hence, the configuration of methods often varies depending on scale and place. Although certain topics and issues might be the same from one project to another, local variation and place specific challenges must be taken into consideration. It is also important to consider the user perspective and the local knowledge they have, but one must be aware of the multitude of opinions and interest different users might have. The significance

³ Lahti is a municipality and a city in Finland with around 100.000 inhabitants. The city is on the same latitude as Bergen in Norway and is located inland from the coast. It is known for its winter sports. The municipality are participating in a research project with the University of Helsinki and Aalto University called Urban Aesthetics in Motion (UrAMo), that looks at the esthetical experiences and how to improve the walkability and bikeability

⁴ Sustainable Urban Mobility Plans (SUMP) is legislation from the European Union (2013) that should to be integrated into the different member states legislation. In Finland the municipalities must implement these in the future strategic planning.

⁵ The distance here was set by the Finnish Environmental Institute as one of several indicators of ‘wellbeing’.

given to the initial site-analysis to understand a site's functioning and needs – physical and non-physical – aligns with previous research[12]. Rynning [12] furthermore found that mobility is a central part of these kinds of analyses; establishing knowledge on how inhabitants in an area move around at different times of a day can, for example, provide valuable information on how a space is used and experienced. This resonates with our observations. The interviewees similarly highlighted the importance of exploring different kind of uses of public space to assess walking and walkability – and vice versa.

A larger firm like Gehl Architects often have their own approaches and selection of methods that they use. Many smaller private practices, however, like Léva Urban Design, depend on methodological approaches developed by others. Several current methods stem from a North American context, which is not always applicable to the Nordic context. We found similar challenges when reviewing the literature and existing tools for walking and walkability [9]. The need for context-based interpretation and adaptation can significantly influence the quality and robustness of a method, and in the longer run weaken its reliability and validity. Moreover, methods that are not relevant for the challenges and needs of a specific local context can result in problematising issues that are not important, in turn leading to the wrong decisions being made based on a weak (or wrong) knowledge basis. At the same time, developing specific methods or tool for 'every' urban context is unlikely. Rather, approaches and methods to map and evaluate walking and walkability ought to have a high capacity for adaptation to the context in question. Another important aspect, based on earlier research, is that tools intended for practice must be simple and easily accessible, quick and easy to use, relatively cheap (or free) to use, and not too technical [20]. This is furthermore important to ensure relevance for smaller firms and can – in a longer run – strengthen their competence as well as their competitiveness. Combining current physical planning and place-based analyses with softGIS can be an interesting approach to add a broader perspective. SoftGIS can, for example, strengthen the user perspective to spatial analysis through participatory mapping. Finland has explored this from both a research and practice perspective with interesting results, as the example from Lahti shows. Other Nordic countries could likely benefit from their experiences if shared through the right channels. This could increase the integration of land use and transport planning at the strategic municipal master plan level as well as in place-based analyses on project level.

Data sources depends on availability

In addition to their own mapping, the interviewees employ data and information from publicly accessible sources or their contracting entity. As with methods, the kind of data they use depends on the context, but also on the project's scope, aim, and budget. The interviewees underline a fundamental lack of data on walking and walkability; this applies especially to the counting of pedestrians. Another problem is that if registrations are done, they are often not publicly available. Consequently, the urban designers depend on open access sources that provide limited data like Strava⁶ or other apps that map activity in order to get a picture of who walks where. This is problematic for several reasons, for example the reliability of such data. The use of inadequate data can, as for inadequate methods, lead to the wrong decisions and priorities being made when planning and designing for walkability. According to the interviewees, another frequent approach is to count and observe pedestrians, but in their experience, this is rapidly limited by available time and budget. These aspects are some of the reasons why the practitioner from Léva Design called for a more systematic registration and sharing of data. Building a larger database could potentially strengthen knowledge on walking in various contexts. However, an important point for further discussions then is how to ensure the reliability and validity of such data.

The three interviewees all value the perspective and place-based knowledge of inhabitants and other users as an important supplement to the practitioners, as the former often have more detailed insight in how a place functions or is used. This is generally maintained by interviews or other forms of participation, which again demands much time and resources in a project. Mapping done by citizens is less common, apart from mapping done by children⁷, which is sometimes used in Nordic settings. A possible approach is to use softGIS, for which Finland seems to be at the forefront among the Nordic countries [31, 32]. There are likely several reasons for the lack of use of softGIS (or GIS) among the interviewees, for example the often observed 'gap' between those who make the tools and the intended users (here practitioners). Previous research has uncovered that planners often think GIS-tools (and similar) are too technical, too expensive, too detailed or not contextual enough [33]. Moreover, they are often not seen as useful from the urban designer's perspective [20]. However, the interesting results so far, either it be as softGIS or other forms of participatory mapping, leads us to think this should be further explored for urban design practice. It could be particularly interesting to use inhabitants as data collectors as this is highly time consuming and expensive for cities and projects.

⁶ Strava is an app where you can register your movements especially made for athletes

⁷ Barnetråkk (Kids' Tracks), see <https://www.barnetrakk.no/en/> (visited 17.03.2019)

Walking must be made more visible in city planning and development – for practice as well as for research

In general, the impression among the interviewees is that walking continues to be quite invisible in planning compared to cycling, public transport, and especially car use. The interviewees underlined that walking is part of every trip, but also that how this might influence, for example, travel choices seem to be underexplored. Their perspectives resonates with conclusions by for example Rynning [12] who found that there is a strong but under-exploited and perhaps overlooked potential for promoting walking (as well as cycling and public transport) through urban planning and designing project. Making it an active design objective from the early stages of a project could significantly contribute to unlock this potential. Moreover, that there is a strong need for more knowledge and insight on the relationship between walking levels and urban planning and design. The research agenda has for a long time focused on car use and how to limit this, and this primarily at the city scale. Consequently, there is a lack of knowledge – evidence- and experience-based – on city planning and development for walking and walkability. There is a growing focus on walking, with demands for cities to make walking strategies, specific criteria set for integrated land use and transport, and more. However, these efforts must be intensified in order to reach local and global objectives of more walkable cities and environments. An interesting approach could be to follow the example of Finland who employs the European rules for SUMP's, stating that these must be made on municipal level. This has enabled the joining of mobility planning and master planning a seen in Lahti where, for the first time, the revision of the land use element of the municipal master plan has been combined with the effort of making a SUMP. This has led to a larger focus on mobility on the strategic level, and to a set of indicators measuring the effect of the strategic planning in tune with the SUMP rules and making walking more visible. Whether using SUMP's or similar, cities must find ways to give heightened attention to and priority to ensuring walkability of public spaces.

Conclusion

Walkability is important for developing climate friendly and attractive cities, as walking is an important aspect of the liveable and healthy city. The interviewed practitioners emphasised the importance of increasing the focus upon walking in planning and designing to ensure a walking-friendly and -promoting urban development. Moreover, a need to enhance awareness and knowledge about walking and walkability and why these are important parts of a city. Quite a lot has been written about walkability, but more is needed. Knowledge gaps remain within the scientific literature, and there is a lack of adequate tools and methods for practice. Through our explorations we found that practitioners use a wide range of methods and data depending on previous experiences, availability, time, and budget. Moreover, that adaptation of methods and approaches to local context is crucial. Based on this, and previous findings, we believe that in order to be used in planning and the urban design process, methods and tools must be easily available, simple to use, and adaptable to the context. Moreover, that they must be developed, tested, and frequently improved in close collaboration with practice. We also see the need for more research on walking and walkability to strengthen such processes. Designing for walkability necessities reliable walking data, and thus continuous data collection – and sharing. Here too, there are significant lacks that must be addressed by research. Developing sound approaches for a more participatory mapping and data production might be a promising approach to address these issues.

Finally, we asked the urban designers about knowledge needs. These can be summed up as i) the need for a better understanding of walking and walking patterns, ii) the need for better tools and evaluations of walking and walkability to inform future practice, iii) the need for better data (see Figure 1).

Knowledge gaps and needs for future research according to the interviewees	
Knowledge on walking and pedestrians	Improved understanding of pedestrians and walking patterns, especially in a Nordic context including: <ul style="list-style-type: none"> - Where pedestrians walk or do not walk - When and why they choose to walk - How many walks - What advocates walking as a mode How to prioritise and make visible walking
Tools and methods	Tools and methods should include: <ul style="list-style-type: none"> - How to count walking and walkability - Before studies - Measure the effect of actions to improve walkability ex-post (after studies) When possible use open platforms to be enable collection surveys and registered data to be shared for common use
Future data needs	Increased and more frequent mapping and counting Standardising of mapping Sharing data platform in open access solution

Figure 1. Future knowledge needs

Our observations align with previous findings regarding the need for a more systematic approach on how to collect data on walking, and how to assess the walkability of public space. This is important to for a better understanding on how to plan and design walking-friendly and -promoting cities. Developing knowledge and tools must be continued, for practice but also for research. It is important that knowledge and tools are accessible and useable for practice; likewise, that methods can be adapted to context regarding scale and place. To ensure this collaboration between research and practice is important, for example through explorations such as presented here. To this end, we will continue to our conversations and collaborations with practice.

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