CHAPTER 18

‘There’s a Strong, Green Wind Blowing’

Drawing the Politics of Street Trees in Practice

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Introduction

Street trees are high on the urban greening agenda, and cities worldwide have set specific and ambitious goals for tree-planting and tree canopy cover, from Oslo’s one hundred thousand trees by 2030 to New York City’s one million trees (Oslo kommune n.d.; Campbell 2014). Trees are promoted and valued as part of nature-based solutions and for their many potential benefits, such as the provision of ecosystem services. Within such frameworks, they are often allocated roles in response to human needs and demands, including reduced costs and resource use, flood control, reduced air pollution, cooling, and improved human health and well-being (see, for example, European Commission 2015).

There may be broad agreement about goals for extensive tree-planting, but in practice, planting and coexisting with trees is not straightforward. Trees take up space above and below ground, interfere with views and cables, and contribute to gentrification (Donovan et al. 2021). They are alive, grow, need nourishment and die, all the while interacting with the world around them. In this chapter, we explore the politics of street trees drawing on research conducted in Norway as part of the project ‘Hug the Streets’. As part of an interdisciplinary team, we set out to investigate why plans for including trees in the streets are failing, and how trees can be starting points for exploring relations, conflicts and possible synergies between social, technical and ecological urban elements.

To understand how street trees are woven into urban environments and are part of the fight for urban space, and to learn where the power lies and how that affects outcomes, we zoom in on the work of urban design practitioners. We focus on how they see, understand and connect to street trees from their various perspectives, and we do this by drawing on social practice theory (Schatzki 2012; Shove, Pantzar and Watson 2012). This perspective emphasizes how practices are routinized everyday activities consisting of many different elements, and how they are organized around shared ideas about what is normal and expected in different situations. Such understandings, priorities and commitments vary across professional groups. Thus, different ways of understanding and relating to living matter such as trees can create tensions and conflict. Practices further relate to and influence each other. This can in turn affect the outcomes of urban design projects.

Even if it is all pervasive, the 'world of practice' needs to be uncovered, as it cannot be perceived directly (Schatzki 2012: 23). Relatedly, the literature on qualitative, 'more-than-human' and design research proposes sketching and drawing, combined with methods such as interviews and workshops, as ways of tapping into knowledge and experience. As part of qualitative interviews, sketching and diagramming (Crilly, Blackwell and Clarkson 2006; Bagnoli 2009) are seen as ways of moving beyond language to access other levels of experience. Wendy Steele, Ilan Wiesel and Cecily Maller (2019) suggest that sketching can help to decentre humans and to explore relational possibilities. In co-design, 'making' is seen as a way of giving shape to and making sense of the future (Sanders and Stappers 2014). Dan Lockton et al. (2020), for example, discuss how 'thinking with things' can be used in joint, interdisciplinary inquiries of experience and knowledge domains, and to imagine alternative realities.

This chapter presents and discusses what we have discovered – through interviews aided by sketching, and a workshop with urban design practitioners – about the politics of street trees, conflictual views, controversies and practices. The study further illustrates the potential of interdisciplinary, explorative drawing as a way of engaging stakeholders in negotiating conflicts and reimagining multispecies urban spaces.

Methods

This chapter builds on interviews and a workshop with urban practitioners in Oslo, Norway. In the interviews, we explored drawing as a method for capturing professional perspectives on street trees; in the

workshops, we used drawing as means for collective exploration of challenges and opportunities for integrating trees in urban streets. The interviews were conducted in November 2017 and January 2018 with five individuals from the public and private sector, who were selected to represent different perspectives and practices, including city planning, architecture, landscape architecture, technical infrastructure and cultural heritage management. The interviews addressed the challenges and opportunities of including street trees in urban streets. The interviewees were asked to draw and talk about a diagrammatic sketch, showing what an ideal street section with street trees would be like from their perspective.

The workshop 'Fremtidens grønne bygate' (Green urban street of the future) was held in May 2019, and involved actors key to the design, development and maintenance of Oslo's streets. The goal was to engage participants in exploring connections and conflicts between practices, as well as possible synergies between urban infrastructures, ecosystems and residents. In the next section, we use the sketches drawn in the interviews to show and discuss the different perspectives.

Exploring the Politics of Street Trees

In his book about drawing as an ethnographic method, Andrew Causey (2017) reflects on how drawing is a way of seeing. Drawings are not merely representations of what is seen, but products of choices about what to represent and omit, in contrast to photographs which are 'visual stews of competing specificities, all weighted the same, visually and semantically' (ibid.: 8). Drawing requires us to concentrate on the elements that represent our experience of the setting or the situation. Asking our informants to draw sketches of streets with trees gave us an opportunity to see their perspective, literally, and to discuss it with them. In the drawings below, there is a great difference between which street elements are represented and which are omitted.

Drawn by a city council environment and transport advisor, this first sketch (Illustration 18.1) depicts three underground infrastructural layers for electricity, drinking water and wastewater, arranged separately to not interfere with each other. This is mirrored aboveground, with separate lanes for pedestrians, cars and bicycles. With its own space apart from the mobility zone, the tree is depicted as a passive element in a streetscape characterized by flow. Processual aspects such as an evolving root structure that might compete for space with underground infrastructure are not incorporated.

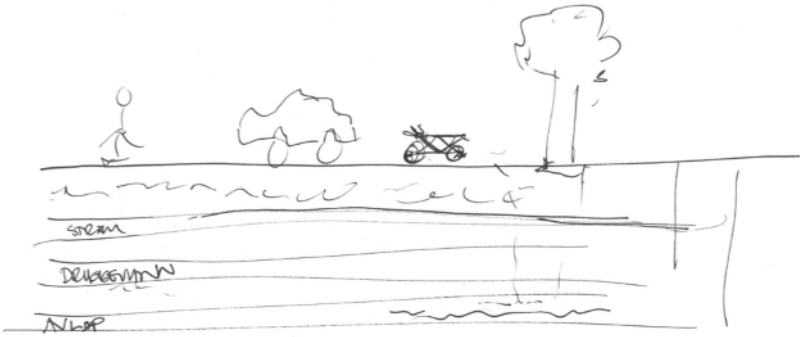

Illustration 18.1. Trees within urban flows. Photograph by the authors, used with permission from interviewee.

The sketch below (Illustration 18.2), drawn by an arborist working for the municipality, emphasizes how trees are an active, evolving element in street infrastructure. The designated space underground for trees (marked by shaded fields), consisting of a mix of soil and stone, is optimized for tree roots, whereas the technical infrastructure, including water, sewage and internet cables, is located below the traffic lane, and so is apart from the trees. The roots can thus evolve freely without getting in conflict with pipes or cables, and infrastructure maintenance will not disturb the trees.

The arborist sees street trees as part of the technical infrastructure, as providers of ecosystem services. With appropriate planning, they can contribute to stormwater management, reduce the amount of water that

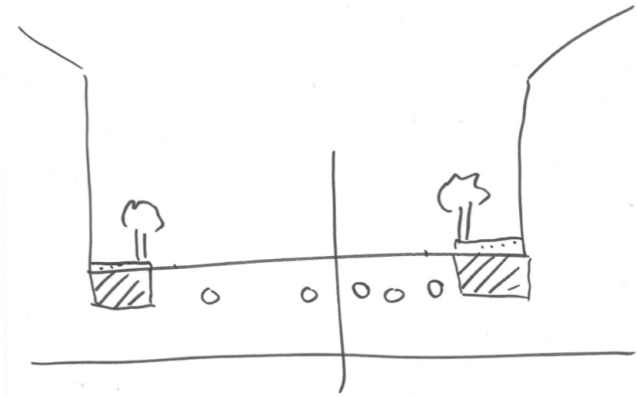

Illustration 18.2. Trees as ecosystem service providers. Photograph by the authors, used with permission from interviewee.

ends up in the sewage system, bind dust and reduce pollution, and be habitats to a variety of other species, promoting urban biodiversity.

An Aesthetic and Sensory Perspective on Street Trees

Illustration 18.3. Trees as aesthetic elements. Photograph by the authors, used with permission from interviewee.

The third sketch (Illustration 18.3) is drawn by a landscape architect in an administrative unit under the city council. He has made space for a car, drawn at half the size of the cyclist to the right, stressing that the car has a necessary errand, such as a delivery to a shop. The sketch also shows a pedestrian, benches and two trees with large crowns, but not what is underground. Discussing the sketch, the landscape architect argued that trees are the street elements that contain the most meaning. They are storytellers and sources of experiences. Their age tells stories about the street's history. Their seasonal changes connect humans to trees, and remind us that we too are part of nature. Ideal street trees bloom in the spring, get vivid colours in the autumn and have branch structures suitable for Christmas decorations. The landscape architect referred to research that found that access to trees can improve the well-being and health of urban residents.

A Historical Perspective on Street Trees

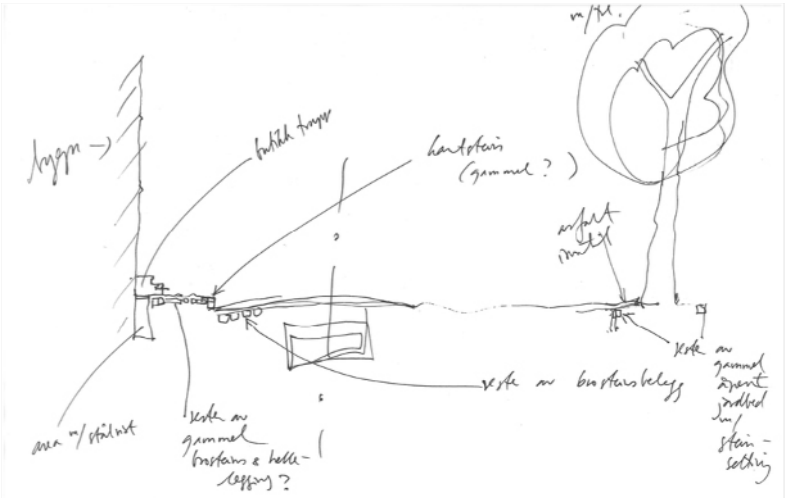

Illustration 18.4. Trees from a historical perspective. Photograph by the authors, used with permission from interviewee.

The sketch drawn by an architect at the Cultural Heritage Management Office (Illustration 18.4) represents the street as historical site. It does not depict mobility or utility infrastructure, but architecture, such as the building to the very left, and historical remains, such as old curb stones and the remains of paving, indicated by a row of small squares in front of the building. For her, the ideal city street is historically recoverable; retaining underground layers enables later generations to find remains of the street's form and function intact. This can also have practical value. In a street mainly used for transportation, asphalt may be the most practical road surface; however, if the street use or the means of transportation were to change, old paving may become attractive again.

The Cultural Heritage Management Office is concerned with the historical dimension of individual trees as well as the greater picture – for example, how they relate to other street elements, and where they are placed. Historically, Oslo has not had broad avenues designed for street trees. It is characterized by rather narrow streets, flanked by low-rise brick buildings. Architecture, rather than trees and other vegetation, defines the streetscape. Still, Oslo is remarkably green, with a high number of parks of varying sizes. As expressed by the architect:

> In a way, it's like magic. You have all the buildings, which are very visible, so it becomes an architectural space in an entirely different way than a

> street with trees, where the trees are dominating. And then you have all these grand spaces with very large trees . . . This becomes something that you glimpse somewhere up there, where a lot of greenery spills into the streetscape. That's the kind of cultural-historical values that we are promoting. We find that it's important to keep this characteristic, because this is the historical point of departure for Oslo.

Planting trees in streets where there have not been trees before will disrupt this rhythm of facades and lavish greenery, and large tree crowns obstruct the view of the beautiful, historic buildings that can connect citizens with the past. To protect these historical characteristics, the Cultural Heritage Management Office is frequently among the actors that oppose street tree-planting.

Hierarchies of Concern

Aided by sketches, we found different professional perspectives on street trees, reflecting different professional practices. The technical perspective demonstrated by the environment and transport advisor and the arborist guides practices where street trees are seen as ecosystem service providers on the one hand, but as a threat to the smooth workings of technical infrastructure on the other. The aesthetic and sensory perspective held by the landscape architect approaches trees as everyday life companions, and fosters practices through which street trees complement the built environment in the design of good urban spaces. The historical perspective held by the architect at the Cultural Heritage Management Office frames trees as statements of identity and connectors to the past. This perspective is part of practices that cultivate the ability of trees to express the appropriate cultural and historical statements and connections. While there may be a mutual understanding between professional groups that different perspectives on street trees are valid and valuable, friction appears when they materialize in practice. Thus, when priorities need to be decided, the 'hierarchies of concerns' become apparent.

A Hierarchical Relation between Technical Concerns and Sensory and Aesthetic Concerns

The landscape architect working in the unit under the city council said that he often finds that collaborating with engineers in matters regarding trees is a struggle. While the younger generation of engineers seem to have been exposed to more interdisciplinary perspectives in their education, he argued that older engineers tend to be rather oblivious to

other perspectives than the street being a technical place. What matters to them is getting there and getting through, not being there and sensing the street as a complete human being. Further, he argued that 'old school' engineers are not used to considering how the result of their work constitutes other people's everyday life. Moreover, as their work concerns safety, they often come across as hard-nosed in interactions with other professional groups. As an example, he mentioned a discussion about including street trees in the plans for a major junction that comprised tram lines. Most of the year, the trees and the trams coexist in harmony, but for a few weeks every autumn there is trouble: leaves fall into the tram tracks, and if they are not removed before they heap up, they become a safety hazard. Rather than focusing on the aesthetic and sensory value that trees will add to an otherwise gloomy junction, the few weeks where the falling leaves represent a potential safety hazard are given priority. 'The technical guys always win', the landscape architect stated. Although this is a recurring source of frustration, he also understands why it is so hard for the technical professions to prioritize aesthetics over minor safety concerns. They are under pressure to succeed with many technical aspects, 'and if the technical [part] doesn't work, they get in trouble'.

If technical concerns are placed above the aesthetic and sensory concerns connected to the well-being of urban dwellers, then a seasonal and manageable risk such as leaves in the tram tracks will trump a permanent sensory and aesthetic value when balancing the technical and natural elements of an urban space. The landscape architect argued that it is difficult to challenge this hierarchy because discussions often include a safety aspect. Safety arguments, he stated, often function as an emergency brake, ending the discussion. He exemplified this with a response from the fire and rescue agency regarding street trees. The agency requires seven metres of free space in front of buildings, so there will be room for a fire truck if needed. His proposal to plant trees generated this response: 'Are you willing to take responsibility for people being trapped in a fire?' This led to an abrupt end to the discussion, and prevented a potentially productive exploration of how street trees might be considered in safety procedures.

The landscape architect described his experiences of a hierarchy of concerns prioritizing functionality and safety above pleasure and well-being. The representative of the Cultural Management Heritage Office also described her experience of certain concerns being valued more than others, starting her discussion by clarifying her position in a debate about whether to include street trees in Stortorvet, a central square in Oslo:

> I am very fond of trees and find that trees contribute tremendously [to] colour as well as light and bird life. But I think it is wrong to have trees in Stortorvet, because it's in direct conflict with the place's original spirit and heritage – and readability. You lose an architectural space that is one of the most important squares in Oslo.

Her need to emphasize that she is fond of trees before arguing against planting trees in this particular square indicates that being in opposition to street trees is an uncomfortable position. She elaborated on this:

> There's a strong, green wind blowing. The green kind of trumps everything. It is hard to be against, in a way, when you have children, and you want the air to be clean and the insects to live, and bees and bumblebees [to] have a short distance to fly so they survive on the way to [the park]. Nevertheless, there are concrete, indisputable cultural heritage values, which are lost when changing [spaces] and filling [them] with trees, for example.

This quote outlines a moral hierarchy, where welcoming trees and other vegetation in the streetscape is generally understood as the right thing to do, and opposing it is morally suspect. The strong, green wind she describes is an external judgement, but her elaboration of the position reveals that the moral perspective is also internalized. It is hard for her to oppose street trees, not only because this is contrary to a generalized idea of what is good and valuable, but also because she shares the goals that the street trees are seen as fulfilling: biodiversity and clean air.

A Hierarchy of Urban Nature

A topic that emerged in the interview was the relation between trees and other urban natures. Oslo is located between a fjord to the south and great forests that flank the city to the west, north and east. During a defining growth period in the first half of the twentieth century, the prominent urban planner Harald Hals launched the idea that the fjord and the forests should remain linked by green corridors (Hals 1929). These five 'green fingers' were to ensure that the city dwellers could reach the fjord and the forest by foot or on skis, and that they had access to parks in their neighbourhoods. The green corridors are still a characteristic of Oslo, but bits and pieces of them have been sacrificed for densification, and the Cultural Management Heritage Office is concerned about this erosion: 'For all these years we have said that these green corridors are worthy of protection and should be kept completely open. It is a great resource that people can go skiing from the forest and all the way down to the fjord, and that people can go hiking [in the city]'. Our informant

pointed out the irony in how the 'green fingers' are treated compared to street trees: 'It is kind of messed up when you nibble [at] pieces of these green corridors at the same time as you insist on having trees in the important urban spaces'.

This account draws attention to a hierarchy between different kinds of urban nature. While street trees tend to lose when in competition with technical concerns, they seem to have the upper hand when competing for attention with other urban natures such as grass, shrubs and bushes. Why is that? Irus Braverman (2008) argues that street trees are assigned a privileged position in the dominant discourse about urban nature. Romanticist views of urban nature promote a normative discourse in which street trees are represented as inherently good and desired by everyone. Their privileged position can be traced back to European history, when *allees* or avenues and parks were signifiers of wealth and class. Further, in contrast to transient urban nature such as birds, trees can easily be fitted into legal categories such as private or public ownership (ibid.). Because of this, street trees lend themselves to frameworks of urban management. Trees might also have a competitive advantage in relation to other urban nature because they span the boundaries between many fields of human interest, such as biology, architecture, history and culture. This gives street trees a capability to attract a wide range of allies. Campaigns where citizens 'adopt' or email a tree (see Campbell 2014; Phillips and Atchison 2020) show that humans find it easy to identify and bond with trees.

Explorative Drawing as a Method in Negotiating Conflicts about Urban Spaces

Seeing streets and street trees from the perspectives of different urban practitioners gave us insight into interdisciplinary tensions and the difficulties of finding room for exploring compromises and novel solutions when there is a lot at stake. Drawing as a way of seeing can be helpful for articulating such tensions; but could it also clear a pathway through which new urban opportunities can emerge (Steele, Wiesel and Maller 2019)? Triggered by this question, we decided to arrange a workshop for selected professionals.

The workshop comprised nineteen participants from different municipal departments, utility companies and consulting companies that all encounter street trees in their professional practice. The participants were divided into interdisciplinary groups seated around a table. There was a pile of papers the size of the table, and each paper had a print of

lines, figures and text to aid participatory notetaking and drawing. There was also a choice of cut-out figures of street elements, such as trees, trams and pedestrians, and symbols of underground infrastructure, such as sewage and electricity. These figures and symbols could be used instead of or in addition to drawing.

The workshop had several stages. The groups first explored how street trees were seen through the participants' own perspectives; they then identified and categorized the measures that could be taken to ensure that there would be space for trees in a street; and lastly they sketched how a street section might be designed to better accommodate trees. The last step also included a discussion of where compromises could be made, and how new solutions might be found and implemented. Each table had a member of the research project as a facilitator. Notes written by the facilitators have formed the basis for the following reflections.

In the sketch (Illustration 18.5) there is a large tree with '100 years' scribbled above. This refers to a discussion that the group had about conflicting timelines in street infrastructure. Trees can have long lives, growing and evolving throughout their lifespan. Technical infrastructure has a shorter lifespan, and repair and replacement often require digging in the root zone. To the left of the tree the word 'salt' is written, with one

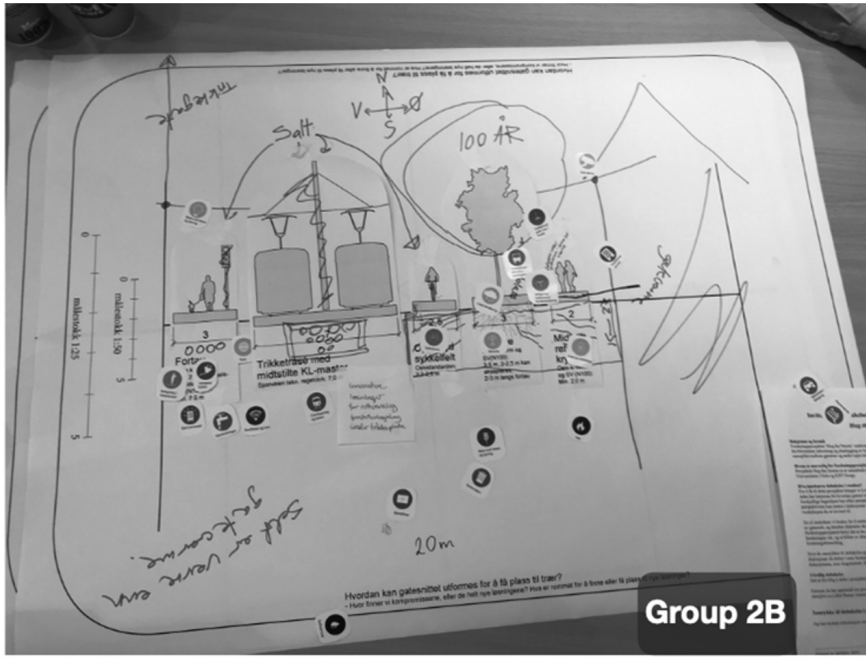

Illustration 18.5. Drawing from group discussion. © Hug the Streets.

arrow that points to the pavement and another that points to a bicycle lane. This is a trace of the group's discussion about trade-offs in street design. Reduction of car traffic is on the political agenda in Oslo, and one measure to achieve this is to encourage winter cycling. A barrier to widespread winter cycling is ice and snow, and to mitigate this the municipality is doing extensive salting of streets and bicycle lanes. Salt, however, is harmful to the street trees, and so a measure intended to reduce pollution in the city in winter threatens the capacity of street trees to improve the environment of the city during the summer. At the very end of the sketch there is an upside-down sentence that reads, 'Salt is worse than street heating'. This points to a possible way of solving this conflict: investing in street heating in main thoroughfares.

One of the participants' tables reported: 'When we get all the disciplines together things come up so that we can take them into consideration – we don't do that when we sit separately'. Organizational silos and strictly delineated areas of responsibility make it difficult to get the transdisciplinary overview that is necessary to identify the risks to the integration of street trees at a stage when major changes can still be made. At one of the tables, 3D-modelling including root zones among the infrastructural components was suggested as a practical solution to achieve interdisciplinary overview and to detect potential conflicts at an early stage in a project.

There were also discussions that addressed conceptual aspects of street design. One discussion challenged the convention of symmetry in street design. Instead of planting trees on both sides of a street, space for trees could be allocated on the side where they would have the best conditions, such as sunshine, with technical infrastructure placed on the other side. As written in the upper left corner and represented by the figures glued onto the left lane, the sketch (Illustration 18.5) represents a 'tram street'. The participants discussed the benefits of allocating different functions to different streets instead of trying to integrate a multitude of functions in the same street. This sparked a discussion of whether street functions should only be interpreted as technical functions, such as transport. If we have 'tram streets' and 'bus streets' and 'car streets', can we also have 'tree streets', where the functions and needs of trees are allowed to dominate?

Discussion

In this chapter we have used drawing to explore the politics of street trees. We have explored how drawing can uncover ways of relating to

trees and streetscapes in practice, with all its tensions between different perspectives and practices, and how it can be a way of negotiating any conflicts and reimagining streetscapes as multispecies urban environments. We have done this by seeing practices as routinized everyday activities, guided by, and reproducing, shared know-how and ways of understanding and relating to matters such as street trees.

Trees are met with quite specific expectations and requirements by different professionals, and they are put to work in different ways, connected to their practices. We have seen how trees are understood to have 'infrastructural relations' to practices (cf. Shove 2017), through provision of ecosystem services and as nature-based solutions where they can take part in stormwater or air quality management, and in the implementation of urban plans. Moreover, they can be devices that are mobilized directly, for example as part of Christmas decorations. While acknowledging their general value and contribution to sustainable urban futures, some see them as conflicting with efforts to implement city plans, or as hindrances to keeping infrastructure intact or to accessing buildings. As physical urban elements, trees are pruned and disciplined so that their roots and crowns do not interfere with infrastructure such as cables, pipes and tram lines.

Hierarchies of concern exist where conflicts occur between technical and safety-related perspectives and 'soft' concerns such as atmospheric and sensory qualities. Urban infrastructure can be seen as expressions of the modernist worldview where there is a sharp distinction between the manufactured and the 'natural'. The view of nature as a provider of 'ecosystem services' or 'nature-based solutions' is furthering this worldview, enrolling urban natures in processes of neoliberalization (see Kotsila et al. 2021). Nature then becomes a technical element and economic instrument. By contrast, the aesthetic and sensory views of trees connect people to changing urban nature environments, serving as reminders that humans too are nature, dependent on other-than-human beings and ecosystems. Such perspectives and practices seem to lose out to the hard and short-term concerns, however, when autumn leaves obstruct the tram tracks or trees block emergency response vehicles' access to buildings.

The question is whether it is necessary to adopt techno-economic frameworks to level the debate and allow for exploration of new ways of designing and doing, or whether 'conversation-stoppers', which may prevent the inclusion of trees, can be avoided by categorizing and representing trees in new ways. How can representations of the urban be more inclusive of non-human nature, and the urban be integrated in understandings of street trees (and other urban nature)? The feedback

we got from workshop participants was that it had been useful to explore the politics of street trees through interdisciplinary sketching. The discussions centred on interdisciplinarity in design processes, representations of street designs, technical solutions to reduce or avoid conflicts and conceptual explorations of different principles for planning and designing urban streets inclusive of trees.

To realize targets of more street trees it would be useful to create arenas where practitioners can reconsider and further develop understandings by meeting across disciplines and organizations to share perspectives on street trees, discuss the tensions and conflicts and explore possible solutions. However, arranging such events and setting aside time for them within the resource constraints that govern the working days of these practitioners might not be realistic. Integrating interdisciplinary meeting points earlier on in urban design processes may be one way of making this happen in practice.

Further, including street trees in representations that provide an interdisciplinary overview can be a way of challenging the hierarchy of concerns in the everyday practices of street planners and developers. As suggested by workshop participants, one possibility is to make sure that the 3D models used in planning represent street trees and not only the technical infrastructure. This would help to place street trees on a more equal footing, and as such would be an expression of the technical perspective on street trees. A topic for further research is whether other perspectives on street trees, such as the aesthetic, sensory and historical perspectives, can be integrated in a model used for practical planning of street construction.

Representations matter, as do the dimensions they are based on and the characteristics they include. Questions for future research include: Do street trees and other urban natures have to participate on the premises set by the technical and human scale? And what representations are able to capture other aspects and temporalities, such as sensory qualities, relations to ecosystems, seasonal variation and changes over the lifespan of trees and other nature?

Conclusion

In this chapter we set out to explore the politics of street trees. We have done this by using drawing as a way of seeing and uncovering practitioner perspectives, exploring relations between conflictual views and practices, and reimagining multispecies streetscapes. We have shown how different ways of seeing and knowing street trees across different

practices can be a source of conflict that inhibits the realization of plans aimed at including more trees in the urban space. In addition to using drawing to get these different ways of seeing and knowing into view, we have explored and discussed how collaborative drawing can be used as a method for dwelling in interdisciplinary tension, so that ideas for solving these conflicts can emerge. As ways of reconsidering what is currently taken for granted, and exploring opportunities for change, we propose to establish arenas for interdisciplinary and generative exploration. They can be part of and go beyond urban design processes. Moreover, we encourage explorations of new ways of representing natures in the principles, tools and methods guiding the work of urban practitioners.

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