Urban forest and landscape infrastructure: towards a landscape architecture of open-endedness

In this paper the concept of landscape infrastructure is broadened to point towards a landscape architecture of open-endedness. Urban forests seem relevant for this broadening and the forest of Sletten in Denmark is used as a case study through which a theoretical discussion in a practical context is introduced. The emergence of fragmented urban landscapes as a new urban condition has led to new forest being created in the image of the city. This calls for a paradigm shift in the way new forest is designed and managed. Through Sletten, the author shows how openness towards self-organization and change over time can lead to aesthetics becoming intertwined with an ethics of care towards fragmented urban landscapes as our everyday surroundings.

The forest, the city and the landscape

Since the first dwellings, the forest has played a key role in the development of Western civilization. It has been both a connection and demarcation to another, outer, domain (Harrison 1992: 3) (Fig. 1). Whereas many of the first dwelling places were just a cleared space in the forest, urban development of the last decades has led to the point that we are now creating the forest in the image of the city insulate as forestry is increasingly dominated by urban values, norms and demands (Konijnendijk 2008: 205). Since 1805, when a series of laws were implemented in Denmark to save the remaining forest from overcutting, forest cover in the country has risen from 10 to 25 per cent to approximately 12 per cent (Danish Nature Agency 2002: 5). Following government plans from 1893, afforestation will continue long into the twenty-first century to cover a total of one quarter of Denmark’s land surface with forest.

Until the mid-twentieth century a forest was essentially a productive landscape but there has been a pronounced change in its role in Danish and other Western societies over recent decades. Today, afforestation in Denmark is closely linked to an increasingly urban society and is also justified in terms of recreational amenity. This development is related to the emergence of a new urban condition in which the city can no longer be characterized as a demarcated domain surrounded by open countryside but is increasingly becoming part of growing urban regions comprising both city and countryside (Crenniston, Dauigard & Nielsen 2010: 20). According to Konijnendijk this means that forestry must engage with other disciplines including urbanism and landscape architecture (2008: 205). Sieverts promotes similar interdisciplinarity because city and landscape can no longer be characterized as opposites; the city is no longer constructed on a hierarchical order with a single centre from which develop-ment grows in radial phases but is rather a hybrid constellation of fragmented urban landscapes (Sieverts 2008: 213). A significant characteristic of fragmented urban landscapes is the dissolution of the former order and of the clear boundary between city and landscape. Instead of graduated boundaries and hierarchies, fragmented urban landscapes are complex functional systems, which are differentiated internally but outwardly collide without being able to communicate with each other or their surroundings.

This calls for a paradigm shift that redirects urbanism and landscape architecture towards those urbanization processes that take place at the urban peripheries where both technological and large-scale projects like afforestation need to be seen in relation to human practices. According to Sieverts, such projects should not only be based on intellectual-cognitive acknowledgements but also appeal to the senses and involve bodily experiences because fragmented urban landscapes only begin to speak within a design process that interlaces understanding and space (Sieverts 2011: 67).

In the following, how urban forest can be used in such interlacing will be shown, the concept of landscape infrastructure is used to formulate a landscape architecture of open-endedness which, rather than referring to a visibly based and object oriented aesthetics, is deeply grounded in an ethics of change over time and an ethics involving care of and engagement in one’s everyday urban landscape.

Urban landscapes as infrastructure

Following the ideas elucidated by Konijnendijk and Sieverts, most of the new forest in Denmark will be placed in fragmented urban landscapes. Rather than seeing the forest as a ‘Sunday landscape’, ideal for recreation but separated from the urban domain, we need to acknowledge it as a self-organized and change over time can lead to aesthetics becoming intertwined with an ethics of care towards fragmented urban landscapes as our everyday surroundings.

Urban forests as landscape infrastructure

Following the ideas elucidated by Konijnendijk and Sieverts, the concept of reconnecting society and nature indicates a fruitful direction for landscape architecture as a materially design discipline engaged with open-endedness and change over time. This calls for a paradigm shift that redirects urbanism and landscape architecture towards those urbanization processes that take place at the urban peripheries where both technological and large-scale projects like afforestation need to be seen in relation to human practices. According to Sieverts, such projects should not only be based on intellectual-cognitive acknowledgements but also appeal to the senses and involve bodily experiences because fragmented urban landscapes only begin to speak within a design process that interlaces understanding and space (Sieverts 2011: 67).

In the following, how urban forest can be used in such interlacing will be shown, the concept of landscape infrastructure is used to formulate a landscape architecture of open-endedness which, rather than referring to a visibly based and object oriented aesthetics, is deeply grounded in an ethics of change over time and an ethics involving care of and engagement in one’s everyday urban landscape.

When is landscape infrastructure?

Normally infrastructure is understood as something in or on which something else runs or moves, an inconspicuous underlying structure in the background of other activities. Using this interpretation, landscape can be characterized as the most basic infrastructure-literally the surface upon which all the objects and activities of nature and culture take place: “It is the play that is existence” (Huxley & Bland 2004: 10).

But according to sociologists Star and Ruhleder, who examine information infrastructures, the metaphor of infrastructure as background for other activities is neither usable nor precise when trying to establish an understanding of how infrastructure works (Star & Ruhleder 1996: 15). They show how ambiguity and multiplicity of forms usage mark any real functioning system, and they emphasize that an infrastructure occurs when the tension between local and global is resolved. That is, an infrastructure occurs when local practices are assisted by a large-scale technology, which can then be used in a natural and ready-to-hand fashion (1996: 144). According to Star and Ruhleder, landscape infrastructure is something that emerges for people in practice, connected to activities and structures. This is neither a physical nor a permanent location but a working relationship.

Figure 1. Map of the town of Rye in central Jutland, Denmark. Peder Hansen Resen, Atlas Danicus, 1677.
Thus, a broadening of the notion of landscape infrastructure is proposed. Instead of seeing landscape infrastructure only as a substrate or background for other things it is foregrounded as a substance with its own experiential and performative qualities based on time and engagement. Therefore I do not ask ‘What is landscape infrastructure?’ but instead: ‘When is landscape infrastructure?’

Sletten — a landscape infrastructure in the making

The urban forest of Sletten can be seen as a landscape infrastructure in the making. The Danish municipality of Holstebro established Sletten in 1990, with landscape architects Roland Gustavsson and Carl Aage Rasmussen as two of the key initiators. Instead of seeing landscape infrastructure only as a substrate or background for other things it is foregrounded as a substance with its own experiential and performative qualities based on time and engagement. As such Sletten can be seen as a further development of utilizing forest as infrastructure. Fairbrother (1970) advocated a similar structural use of urban forest and subsequently a number of British ‘New Town’ planning projects incorporating usable woodland infrastructure also took shape. The suburb of Birchwood, in Warrington New Town (in which Roland Gustavsson was also involved), exemplified this approach.

Sletten has an overall forest structure with eight integrated villages placed in close relation to the forest (Fig. 2). The area covers 166 hectares, which includes the overall structure of the forest as well as green wedges, village greens and local gardens between the individual houses and the forest. Sletten was established in three phases and is based on three different afforestation models. The first phase comprises thirty-six smaller forest lots, each of 3,500 m². It is based on the ‘collective zone’, where the inhabitants are free to use the forest as they see fit. In several cases this zone has expanded right across the forest and a large number of temporary and self-organized gardens have emerged (Fig. 3). These gardens show Sletten as a space of potential, open to change over time, evolving into a mosaic of forest and garden typologies in continuous development and decline, with intentional and coincidental spaces of interaction in an increasing number of spatially open, half-open and closed areas.

In Sletten, temporality and change can be seen as an expression of the relationship between natural and cultural processes. Whilst the forest itself is more permanent, the integrated self-organized gardens function as individual ‘experimental spaces’ for the inhabitants and have a more temporary character. In spite of the forest’s planned structure, it is also open for self-organization.

Boundary objects and passage points

Sletten is remarkable for two related reasons: firstly the overall structure of the forest which, following Star and Griesemer, can be characterized as a boundary object, a term applied to objects that exist in more than one community of practice and are used as interfaces between them, and secondly the different garden practices that emerge as self-organized ‘passage points’ in relation to the forest (Star & Griesemer 1989: 354). The ‘passage points’ emerge locally as a collection of gardens of various forms, shapes and sizes and show how the forest as a boundary object is plastic enough to adapt to local needs and the requirements of the communities using it; yet robust enough to maintain a common identity across the site. By being an open framework for the entire site, it is weakly structured in common use but becomes strongly structured in individual site use (Fig. 4).

The ‘passage points’ in Sletten show how, through use, the forest is constantly ‘becoming’. Here the act of ‘passage’ does not denote movement in quantitative terms, but instead movement as a qualitative change in the physical state of the forest. According to Connolly, to really move is not to go through a measurable trajectory, when a thing really moves it becomes other than itself, in a sense that makes movement a qualitative change. Movement affects both space and the bodies moving through it (Connolly 2004: 20).

Because of this movement Sletten appears to be systemic. New forms constantly emerge and change in a working and experiential relationship between the urban forest and its users. This is creative production that leads to passage points inside boundary objects becoming narrative, which ‘even if it is multiformal and no longer unitary, thus continues to develop where frontiers and relations in space […] are concerned. Fragmented and disseminated, it is continually concerned with marking out boundaries’ (De Certeau 1984: 125).

In the forest gardens of Sletten it is the users of the forest who mark our boundaries, create openings and engage in dialogue with natural processes. This illustrates how our experience of fragmented urban landscapes can be predetermined towards static experience if temporality and engagement are omitted from our physical perceptions. As such the forest gardens represent a mode of production of subjectivity and space, where subjectivity is produced through different ways of inhabiting given sur-
Towards a landscape architecture of open-endedness

The broadening of landscape infrastructure, here briefly presented through the Sletten example, makes visible the past, present and future connections between individual human behaviour, collective identity, small-scale complex systems and ecological processes. Foregrounding landscape infrastructure shows how a landscape architecture of open-endedness can (re)connect society and nature. Urban forests like Sletten seem to be extremely relevant in this foregrounding: “In the depths of culture, memory forests remain the correlate of human transcendence. We call it the loss of nature, or the loss of wildlife habitat, or the loss of biodiversity, but underlying the ecological concern is perhaps a much deeper apprehension about the disappearance of boundaries, without which the human abode loses its grounding” (Bateson quoted in Spirn 2000: 25).

Open-ended gardens

Whereas the concept of the garden usually refers to an enclosed space, the precise forms of ecologies past, then an attachment to landscape, to the more original situation of an ecosystem where the nature of the substratum becomes substance. Sletten shows how openness towards self-organization and change over time can lead to aesthetics becoming intertwined with an ethics of care towards fragmented urban landscapes as our everyday surroundings.