Pavilions

6

Exploring the relevance of a planted canopy as part of a pavilion structure

6.1 The pavilion: a testing vessel and curatorial object

This section explores the history of landscape structures in order to uncover its relevance in contemporary landscape architecture. During Phase 2, it was determined that textiles have the ability to contain plants in folded pockets as a canopy element. In addition, the application of such a planted canopy were mentioned: urban upliftment elements and 'parklets' are two such possibilities. What follows is a discussion on the current thinking behind the design of public space.

These ideas change as cities and lifestyles change. New ways in which to enjoy open space are required as these spaces become smaller and fewer in number due to urbanisation (Gaventa 2006:155). The result is that more imaginative, unusual types of public space are created. The instant results that some of these spaces can achieve have a large appeal, as master plans, public consultations, funding applications and appeals can be costly and time-consuming (Gaventa 2006:161). As important and relevant as conventional landscape architectural interventions are, there is a need for instant upliftment and regeneration of open space, not only in the public realm, but also in the corporate and private realm.

These spaces include the temporary, transient, mobile and flexible. They are reminders that the built environment is always dynamic and prone to be readapted and reimagined. To create a great variety of urban landscapes "we have to become more flexible in how we view and define public space" (Gaventa 2006:159). Moore (2013) states that "at their best they use temporary pleasures to make permanent changes to the way people can inhabit their neighbourhoods."

Can the planted textile canopy be part of this new realm of thinking behind public space and what landscape architecture could be?

6.2 Pavilions as garden art

Built structures have formed part of gardens since antiquity. They are as much part of designed landscapes as planting and paving. This section delves into the history of garden structures to remind one of the intrinsic relationship between landscape and enclosed elements within it. It also attempts to uncover the possibilities of applying a textile canopy to a built structure.

The earliest known gardens were constructed in Mesopotamia about 6000 years ago, providing functions such as food production, and, as economic stability increased, leisure provision and the physical manifestation of ideas concerning spirituality, the universe and power (Gharipour 2013). This tradition continued into the first Persian Empire (550-330 b.c.e.) in the form of isolated gardens and courtyards, taking on a variety of layouts with different functions and design elements. Intended as an independent retreat, these were usually based on a square or rectangular plan, and included elements conducive to a pleasant environment, such as shade trees, water features and pavilions (Gharipour 2013).

Gharipour (2013) states that Persian garden pavilions were designed in order to create a built structure (building, gazebo or tent) in a natural setting for social recreation such as gatherings, parties and official meetings. The size of the pavilions was based on the proportion of the garden. Temporary and moveable structures were often transformed into permanent dwellings; at other times fixed structures were replaced by temporary ones. The degrees of enclosure depended on the primary function of the pavilion: public structures were exposed, whereas private garden pavilions were enclosed to create a suitable environment for personal leisure and recreation (Gharipour 2013). Ibn Luyun, a 14th century agronomist and poet, described the layout of pavilions in his treatise on villas, agriculture and gardening as follows:

Figure 21: Examples of gazebos and garden buildings (Author 2016)

In the centre of the garden let there be a pavilion in which to sit,

and with vistas on all sides… (it) should be longer than it is wide in

order that the beholder's gaze might expand in its contemplation (in Hunt 2012:66).

The use of pavilions in garden design expanded from the Middle East to North Africa, subcontinental India, Western Europe and the East Asia. Pavilion structures include gazebos, buildings and tents.

6.2.1 Gazebos

Gazebos are small garden pavilions that are open on all sides, and include kiosks, alhambras, belvederes, follies, pergolas, and rotundas (see figure 21). Kiosks were popular in Persian garden design, often being the starting point of water channels that divided quadrilateral gardens into smaller parts, based on the Charbagh arrangement of Mughal Empire era gardens (1526-857) (Plumptre 1989:7). Gazebos in China served the simple purpose of allowing observation of the surrounding landscape, especially popular during the Tang Dynasty (618-907). Pavilions were placed in parks such that "a great variety of scenes" may be experienced (Samson 2015:34).

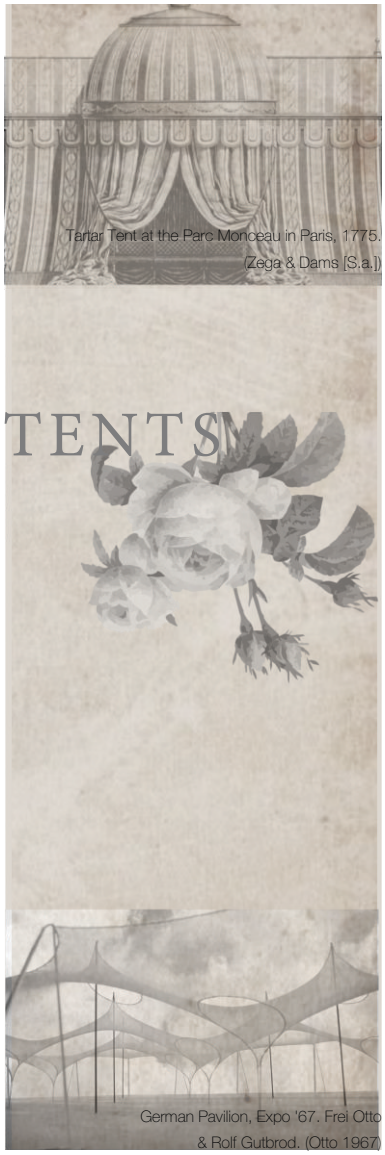

Figure 22: Examples of tent structures (Author 2016)

6.2.2 Buildings

Garden buildings provide shelter from the elements, act as focal points in garden layouts, and are destinations to walk to from the main residence at country estates. Dovecots and temples featured in English Picturesque gardens, often occupying key positions and directing the eye to vistas (Plumptre 1989:45) (see figure 21). The Japanese *chashitsu* (tea house) were free-standing structures dedicated to tea ceremonies. They first appeared during the early Edo period (*ca.* 1600), and were found in the gardens of private homes, temples, museums or parks (Plumptre 1989:34).

6.2.3 Tents

Fabric structures are some of the oldest forms of architecture. The traditional tent consists of a frame and a cover, allowing a user to quickly construct a protective covering against the elements (Krüger 2009:142). Tents have evolved since 28 000 b.c.e.. from being a basic sheltering element of Nomadic peoples to serving military purposes (as seen in a relief showing an Assyrian tent from the army camp of Sennacherib (705-681 b.c.e.) and housing festive gatherings (such as the audience and marriage

tent of Alexander the Great (256-323 b.c.e.) (Krüger 2009:143).

Persian tent construction methods, developed after the onset of the Ottoman Empire (1290-1923) reached Greece during the Persian Wars, influencing Greek theatre construction and Roman festival tent typologies (Krüger 2009:143). In the late eighteenth century, garden tents became a staple in European folly gardens. Extant examples of these include the Tartar Tent at the Parc Monceau in Paris, France (1775) (see figure 22), and the Vakttältet at Drottningholm Palace in Stockholm, Sweden (1781).

The beginning of the nineteenth century saw an increase in middle-class leisurely activities in Europe and the USA, the traveling circus being one of them (Krüger 2009:143). During the 1950s, Frei Otto's ground-breaking research on tensile structures made possible the transfer of membrane construction concepts to large structures (Krüger 2009:144).

Some may question the validity of free-standing structures and their place in typical landscape architecture. However, the typology is still relevant, and can be found in the phenomenon of the contemporary pavilion.

6.3 Contemporary pavilions

6.3.1 Emergence and functions

At the beginning of the 21st century, pioneering architectural design ideas and concepts were presented at world design fairs, intended to be temporary structures. Contemporary European pavilions are still designed as mostly temporary structures, but have since the 21st century expanded into public space, such as in urban squares and parks, as well as semi-private spaces like art galleries and museums (Stern 2015).

Etymologically the word pavilion derives from the old French *papillon* or *papilio* in Latin which both translate to butterfly. This implies "lightness, random movement and temporality" (Stern 2015).

Pavilions are generally commissioned to be a program-less space. They are an "art exhibit and a curatorial object" that make architecture approachable and communicative (Stern 2015). The pavilion as typology suggests interaction, communality and participation, and as such it inevitably offers a high degree of experimentation and innovation. It fluctuates between a building and an experiment, between the speculative and the pragmatic (Stern 2015).

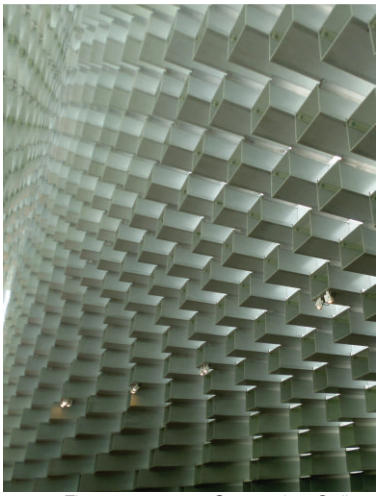

Figure 23: 2016 Serpentine Gallery Pavilion, by BIG. London, England (Author 2016)

Placing pavilions in the public realm is more relevant for cultural advancement, as it appears as a temporary agent in the city, and as such, suggests "establishing a new order within the surrounding built environment" (Stern 2015). These objects in the urban realm act as a 1:1 scale prototype, allowing designers to test their ideas on an actual human scale and receive the user's feedback instantaneously. It offers constant accessibility and a continuous discourse with its users, who are invited to capitalise the space, inhabit it or pass through. The users, who are typically the city explorers (the *flâneur*), occupy the space randomly and by their diverse arbitrary movements, reorder the space, as a self-organising system, and create unpredictable spatial configuration as well as multiple social interactions (Stern 2015).

Pavilions have had many different functions since their origins during the Persian Empire. They can be spaces for contemplation or gathering. They can provide shade, shelter or seating. Pavilions can also be places where refreshments are served, where goods are sold, items displayed or ideas tested.

The Serpentine Gallery, situated in Kensington Gardens in London, has been commissioning the building of temporary summer pavilions on the lawn in front of the gallery since 2000 (Gaventa 2006:169). Each year (except 2004) a different leading international architect has designed a structure that acts as a café and space for events, as well as a piece of sculpture and a visitor attraction (see figure 23). The pavilions stay in place for three months, each year attracting an additional 200 000 visitors to the Serpentine within six weeks of their opening (Gaventa 2006:169).

6.3.2. Typology

The predominant contemporary pavilion typology is one of ephemerality and a high degree of permeability; therefore the articulation and the tectonics of the envelope are defining features of the space's experiential effects, as well as of the object's uniqueness. Perforations, as an integral component of the enclosure, are essential for light penetration, but even more so, for communication amongst users, which allow a continuous flow

between internal and external spaces (Stern 2015).

Rotundas, certain kiosks and bandstands, which were popular in Victorian parks, are point elements, projected vertically into a linear form, such as a cylinder (see figure 24). Belvederes are generally situated at higher points in the landscape in order to provide ideal viewing opportunities. In this case, the route to the top informs the spatial layout. Some gazebos are linear elements with strong horizontal defining planes, punctuated with columns that allow permeability for optimal views to the landscape (see figure 25). Thus, pavilions range in form from enclosed buildings to simple overhead elements.

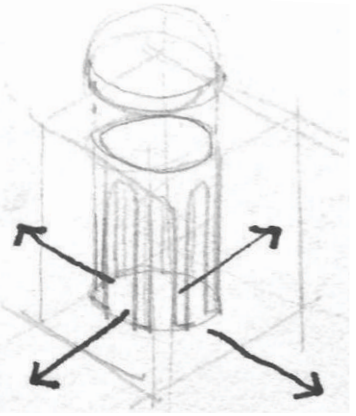

Figure 24:Vertical linear spatial layout of typical rotundas (Author 2016)

6.4 Pavilion structures in Pretoria

Pavilion structures in Pretoria are uncommon, despite the potential benefits that they would provide to the capital city inhabitants and visitors alike, such as shade and seating. Prominent pavilions in Pretoria include the rotundas in Burgers Park and West Park, the latter being a band-stand structure surrounded by an amphitheatre. In the center of the park is a small pavilion with a refreshment kiosk, which was a typical feature of parks about a century ago.

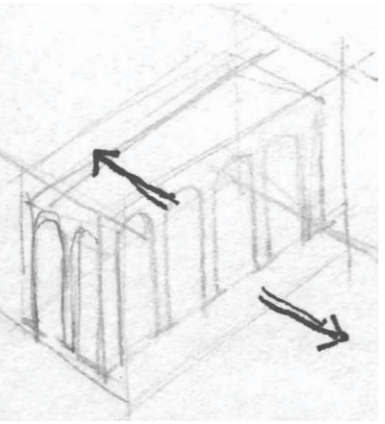

Figure 25: Vertical configuration of gazebos that require permeability (Author 2016)

The Venning Rose Park has formal post-modern entrance pergolas offering shaded walkways to a tea garden, which was closed in 2006. Clientele were lost to restaurants at the adjacent Eastwood Shopping Centre, and lack of parking facilities leads to the park being under-utilised by visitors traveling by car. The park was left in poor condition due to theft, vandalism and the vacant tea garden structure. Vacant structures is a key concern for the Department of Parks and Horticulture as this allows for illegal occupation, damage, theft and other criminal activity.

Pavilions serve to activate landscapes by having open programming. This supports the relevance of pavilions in current-day Pretoria. The ever-changing nature of cities with their variety of users can be responded to by means of pavilions that can be customised based on the context: through a kit-of-parts.

kit-of-parts pavilion

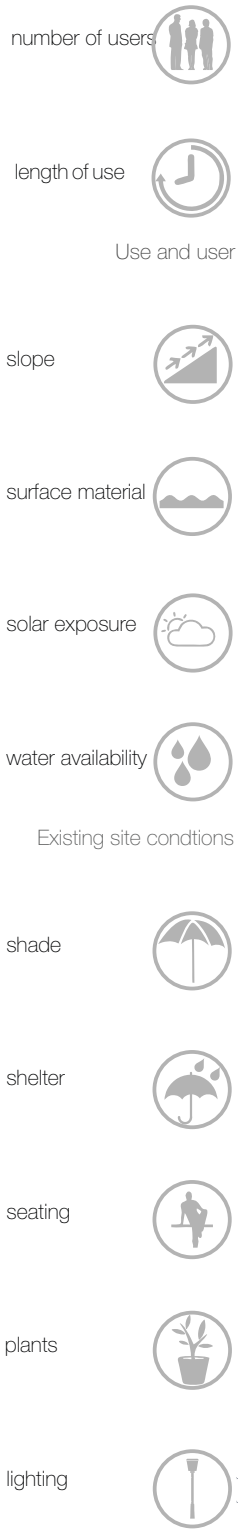

Figure 24: Determining the kit-of-parts (Author 2016)

6.5 Programming the pavilion

If the textile plant-containing canopy is applied in the landscape by means of a kit-of-parts pavilion structure, different combinations of the canopy can result in a variety of site-specific conformations, supporting and further strengthening its relevance.

The programming of the kit-of-parts pavilion in Pretoria will depend on the user and the type of site where it will be assembled. Informal trade and small enterprises are estimated to contribute around 28% of South Africa's gross domestic product (South African LED Network [S.a]). The pavilion can act as a stall with a counter and shade canopy where informal trade occurs (see figure 25). In areas where instant urban upliftment is needed, the pavilion can act as a gathering space, a vertical linear element that makes it "visible in space" (Ching 2007:126), or a linear street element that acts as threshold between public streetscape and private shop front. Both of these can provide seating opportunity. The planted canopy will provide a unique and immersive experience for city dwellers where greenery is lacking (see figure 26).

6.6 Reflection and revised plan of action

Pavilions as garden structures have formed part of landscape design since the Persian Empire. They range from simple overhead membranes such as tents to structural members supporting an overhead element, open to the landscape. Traditionally, their functions were to create shade or provide a place to rest and observe the landscape. Structures are thus as important an element in landscape design as other built features like ponds and walls. Their typology is still relevant, as can be seen in the phenomenon of the contemporary pavilion.

In addition to the traditional function, contemporary pavilions are also designed and constructed to test ideas and new technology. Importantly, they are often placed in public spaces, and are an essential part of the ongoing development of, and innovation in, the field of landscape architecture.

Figure 25: Informal trade in Pretoria (Author 2012)

Figure 26: Instant landscapes installed by communities or private individuals (Author 2016)

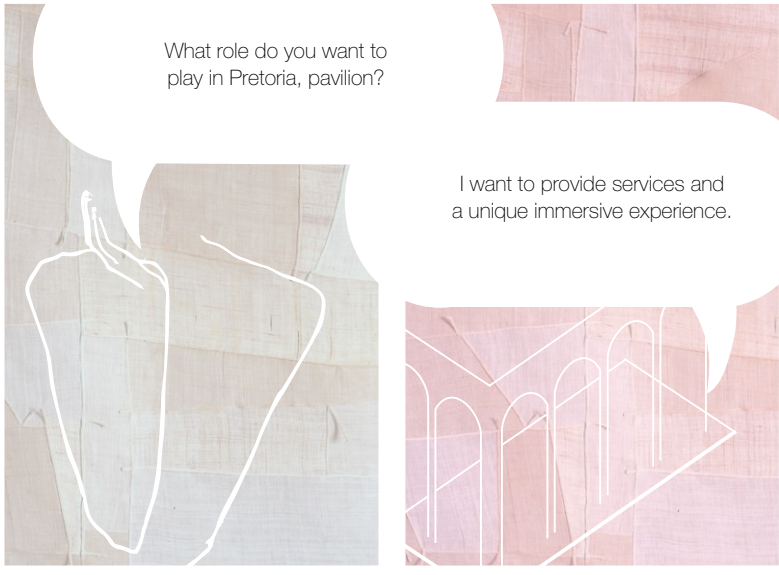

Figure 27: Types of intervention sites (Author 2016)