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EXPERIENTIAL ANALYSIS OF VERSAILLES: A METHODOLOGY TO TEACH SPATIAL THINKING

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Abstract
Landscape architects are designers of space. But while « space » as a global concept is omnipresent in the discourse on landscape architecture, few analytical tools exist to describe in a more detailed manner our perception of space and its importance in our appreciation of designed spaces.

In the present paper, I will look at „designed space“ such as a garden, not as a backdrop for our perception of spatial objects, but as a spatial object of its own kind, whose experience can be described following a phenomenological framework based on the work of Husserl, Straus and Merleau-Ponty. For Straus in particular, our ability to move defines the structures of the spatio-temporal modes of „here“ and „there“. Through the changes or continuity in specific sensory experiences that occur as we move through space, combined with distant views and memory of what we have already seen, we experience the garden as a succession of units combined into structured wholes. The garden invites motion through its spatial form, by offering the possibility for heightened experiences of „here“ – views, objects, spaces seen on axis.
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- and ‘there’ – views and objects in a distance, that we feel we can reach. But more subtly, the garden can accompany the transition from the fulfilment of being ‘here’ to the desire of going ‘there’ and enrich through such transitions our motion itself. Space is here conceived not as a backdrop that we see as we move, but as an invitation to motion, as a spatial dialogue taking the shape of a promenade.

By combining 17th century descriptions of promenades in the garden and a phenomenological description of spatial experience outlined above, I propose a graphical analysis of Louis XIV’s walk in the gardens that highlights the richness of the spatial experience that the garden proposes. Presented along a timeline like a musical score, the analysis juxtaposes the many sensory and perceptual elements that combine together through time to give the visitor a meaningful aesthetic experience of the garden.

The methodology developed for this study highlights the spatiality of the experience of the garden of Versailles. It offers tools to analyse spatial experience that can be useful for the study of all kinds of designed spaces. These tools can be used by students to analyse existing spaces. They help enhance their spatial awareness and sensitivity, which they can then exercise in their own designs.

<Başlık>
Landscape architects are designers of space. But while « space » as a global concept is omnipresent in the discourse on landscape architecture, it is often treated for its social and cultural aspects. Few theoretical writings on landscape deal specifically with the spatiality of space, and few analytical tools exists to describe in a more detailed manner our perception of space and its importance in our appreciation of designed spaces. Thus teaching students to perceive space, and to represent space, to understand what they draw in its spatial reality, is a real challenge faced by teachers.

In the present paper, I will look at the « spatiality » of designed spaces such as gardens whose experience can be described following a phenomenological framework based on the work of Husserl (Welton, 1999), Straus (1963) and Merleau-Ponty (1945) and on 20th century theories of perception, and the consequences for analysis and teaching.

Active perception : a new paradigm
In recent years, there has been an increased interest on human-environment relations – that is, on the way humans relate to their surroundings. Theoretical groundings for most of this research follow two distinct traditions. On the one hand, it is heir to a phenomenological approach based on work by Bachelor, Merleau-Ponty, and Norberg-Schultz’s interpretation of Heidegger; while insisting on corporeity, it looks for meaning in the metaphorical realm of individual and cultural memory. On the other hand, it follows the psychophysical approach of environmental psychology, which proposes a somewhat mechanical understanding of perception whose main working metaphor originates from cybernetics and is now drawn from computer science (we can often read comparisons of brain and computer). Without always stating it openly, this approach reflects a vision of perception in which the perceivers are passive receivers of independent sensory stimuli from which their mind construct inner « representations » of the world upon which they can then act.
There has been, however, a recent change of paradigm in research on perception. New theories try to bring together recent findings in neurophysiology and the phenomenological approach of Merleau-Ponty and Husserl. For the French neurophysiologist Berthoz, « perception is not only an interpretation of sensory messages: it is constrained by action, internal simulation of action, judgement and decision-making, anticipation of the consequences of action ». Thus perception is an active involvement of perceivers with their environment, shaped by their potential abilities to act that the environment affords. We perceive our environment the way we perceive it in so far as it is meaningful for us as living and motile beings. Perceiving is giving meaning, that is, using the word coined by the psychologist J. J. Gibson, bodily grasping the “affordances” of our environment, the potential actions the qualities of our environment allow (Gibson, 1979). Thus it does not make sense to talk of perception only in terms of independent sensory stimuli; Berthoz adds to the traditional list of five senses others, such as the sense of movement, of space, of equilibrium, of effort, of self, of decision, of responsibility, of initiative: for him, « sense » must be thought of as accompanying the meaning-giving sensing beings towards the meaningful goals they set themselves (Berthoz, 1997).

Among these many « senses », the « sense of movement » is particularly important. It involves several sensory channels (sight, hearing, muscular sensors, equilibrium sensor) working together to allow one to perceive one’s body and one’s body movements in a coherent manner. The spatial reality of the world as we perceive it is actively constructed by us as mobile animal. In other words, the spatiality of the space we inhabit is a perceptual construction inherently connected to our capacity of movement, dependent both on our physical abilities and on the possibilities of movement our environment affords.

This is not a new idea, but it has recently come to the fore, in part due to the (re)discovery and (re)reading of phenomenology, and in particular (for landscape architects) of Merleau-Ponty, Merleau-Ponty, and Husserl before him, insisted on the essentially bodily character of perception. For these philosophers, we perceive – or using a philosophical term, we constitute – our “lived-in world” as corporeal beings, whose relation to our environment is shaped by our ability to move in it. They insisted on the active, purposive nature of one’s own body, its practical orientation towards various tasks and goals, its “attitude” towards the world. Relationships in the lived world are not causal, but ‘meaningful’ and ‘expressive’. Space as experienced is experienced as a multiplicity of behavioural possibilities at a given time. Going further, they state that the original consciousness – the original “I am” – is not as Descartes would have it, an “I think”, but an “I can”.

These ideas were developed by the psychiatrist and phenomenologist Erwin Straus. Straus distinguishes two modes of being in the world, which he calls sensing and perceiving. [Generally the word ‘perception’ is used to cover what Straus calls ‘sensing’ or both ‘sensing’ and ‘perceiving’. What Straus calls “perceiving” is generally called “cognition” - although these two words don’t cover exactly the same meaning] In sensing, we are immersed in the world, here and now; we are directed to the world in the two basic modes of uniting and separating, insofar as we approach and flee. Our ability to move and the limits of our scope of action fundamentally determine our total relationship to the world; our senses are its partial realization, each experienced with a different spatio-temporal form. In contrast, the world of perception is world with fixed properties in objective space and time. In perceiving, we distance ourselves
from the Now of sensing. We look at the world as if from outside of ourselves, to reach beyond ourselves. This echoes the expressions proposed by Merleau-Ponty, when he opposes “spatiality of position” and “spatiality of situation”.

Straus illustrates this distinction by the example of the space of the landscape – in which one is constantly in the centre, surrounded by the landscape delimited by its horizon – and the abstract and homogeneous space of geography. While the later is described in terms of coordinates, the former is understood in terms of the relationships of the objects making it and located within it. These relationships are a function or the sensing being’s possibilities of movement. Thus the duality here / there is a relationship between where one is now and where one can go then. The twofold nature of directedness – now and then - is a fundamental characteristics of movement, which is both taking place within the present moment and directed toward the future. This duality is an essential feature of the framework I propose to describe the spatial experience offered by a garden, specifically the garden of Versailles.

Walking in the gardens of Versailles
Promenade – a leisurely walk with no other end than itself – is thus a privileged activity to study spatial experience.

Despite what is often said, Versailles, since its inception, was intended as a place for deambulation. Visitors could come and tour the garden. In the letters and memoirs of the courtiers, there exist many mentions of walks in the garden. But there exist also some descriptions of more or less complete itineraries through the garden (Scudéry, 1669; La Fontaine, 1669; Félibien, 1674; Tessin, 1687; Pignaniel de la Force, 1701; and others). The most famous one is a walk by Louis XIV himself (figure 1). He liked to show his own gardens, and when he couldn’t, he dictated the itinerary to a secretary, who would then transmit it to the guide in charge of guiding the group of visitors (Louis XIV, 1982).

Reading these descriptions not for the political message they carry, but for what they have to say about the experience of walking in the garden, one can discover in them description of spatial experience that corroborates that of 20th century philosophers and scientists.

Seeing with all the senses
For these visitors to the garden, walking in the garden provided pleasure to “the mind and the senses”. While the senses most frequently mentioned by name are sight, hearing and smell, they are generally mentioned together, such as for instance fragrant flowers that please both sight and smell, fountains that please both sight and hearing. These parallel expressions reflect scientists’ contention that we don’t see independently of what we smell or hear. In our perception of a fountain, we don’t just see a fountain and hear a fountain: we see the fountain that we hear (or vice versa). The sight of a fountain is inherently linked to the sound of that fountain, as well as other sensory characteristics of that fountain, such as its refreshing effect, etc. Our perception of the fountain - the fountain as we experience it - is always and necessarily multisensory perception.

For most of us, sight is felt to be our dominant sense, and in our descriptions of the experience of seeing, we often obliterate the multifarious characteristics of seeing. We just need
to thing about the fundamental difference in the experience of seeing the same landscape through a closed window (when we only see it with our eyes) and an open window, where we actually see a landscape that resounds and breezes.

But other elements are mentioned as well, which, according to the new definition of perception mentioned above, are to be considered as senses as well: the sense of light and shade, which is perceived by both our eyes and our skin; the kinaesthetic sense, with a variety of kinaesthetic experiences, such as going and stopping, walking upward and downward, going straight or turning right or left, etc. By listing all the different sensory experiences mentioned in the different descriptions, we can get a full sensory representation of a walk in the garden: we could then represent on a time-line the succession of each sensory experience (for instance the rhythm of the succession of light and shade): we can also represent all of the different sensory experiences one below the other, creating a graphical representation of the walk, which could be called, in analogy with a musical score, a “sensory score” (figure 2).
Seeing with a motile body

The dynamic character of seeing has been much studied by psychologists. It appears also in the descriptions; reading Scudéry’s description of what she sees looking down the main axis, we can never again thing of it as a passive static view (figure 3). She looks at the whole space, then at an object close by, then at a space again, then at another object farther away... Her eyes already walk across the garden before she does. We also find such expressions in a contemporary treatise on garden design, which recommend a spatial composition that invites the promenade of the eyes before that of the feet. Seeing thus involves more than the movement of the eye: it implies the imagined movement of the body.
Indeed, as we have discussed above, our experience of seeing is intimately linked to our ability to move: our environment is perceived as spatial if it invites movement. Our spatial understanding of what we see is function of our potential bodily relationship to it, of the type of movement it allows, in other word, of its “affordances”. It is interesting to notice that this appears clearly in the descriptions of walks in Versailles: when reading the texts, we find that the authors describe differently the experience of seeing an object (such as a statue or a fountain), a space, and a panoramic view. While they all involve “seeing”, they are different experience, involving different ways of looking, because our physical, bodily relationship to what we see is potentially different.

The “object” is seen as a delimited material “thing”. It stands at a specific spatial location, at a certain distance from our own position; we can come closer to it, or walk away from it, as described by Straus. We can look at it from one side or walk around it to look at it from all sides. It remains independent from us, facing us, standing over there against us, preventing us to occupy the portion of space it occupies.

“Spaces”, on the other hand, surround us or potentially surround us: we arive inside a space, or if we are outside a space, we can enter it. Here we find again Straus’s duality, but taking on a different experiential quality: a space is something we can enter or exit.

Different again is the experience of “seeing a panoramic view”. The panoramic view is felt as being “beyond space”, it cannot be approached, it cannot be entered. It hovers over and beyond objects and spaces, separated from them by some sort of a frame: the frame can be the mass of woods in the foreground, woods that can be approached and entered; or it can be the edge of a terrace (whether steps or balustrade), which create a kinaesthetic limit to our experience of seeing the view. The promise of seeing a panoramic view has a particularly strong appeal: suddenly facing it is a powerful experience, never losing its character of first-time discovery. Being a spaceless experience, it takes us out of our everyday experienced lived-world; it is akin to the mystical experience of belonging to a whole, or to the aesthetic experience as described for instance by the French philosopher Maldiney (1973).

**Fluctuating perception**

As we have previously discussed, our experience of seeing something and our potential movement in relation to it define the way we perceive that thing. We perceive something as “panoramic view” if it is beyond what is accessible space; we perceive something as “space” if we can potentially enter it; we perceive something as “object” if we can potentially approach it. Thus the same thing can be perceived differently, according to the potential motor affordances it appears to offer us. A distant statue in the landscape is part of a panoramic view: when we notice a path leading to it, our way of seeing it changes, we see it as an object that we can reach. As with the famous optical illusion of Rubin’s vase, seen either as a vase or as two profiles, we can play with our perception of that statue, seeing/perceiving it as part of a panoramic view or goal to be reached. The same “thing” can be perceived in two different ways, thus enriching our perceptual experience of the garden. When we look at the spatial composition of the garden of Versailles, we find a constant play with such perceptual ambiguity with different formal means and at a variety of scales. The most grandiose example is that of the Orangerie (figure 4). When we look at it from the balustrade of the upper parterre, the
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Parterre of the Orangerie appears as the foreground of a panoramic view, framed on both sides by two retaining walls and continuing beyond to the hillside. But then we might notice that the retaining walls carry steps leading down: the Parterre de l’Orangerie then becomes for us a space that can be entered. We “see” the same view, but yet our perception of it has been changed in a fundamental way. From being a “panoramic view” that can only been looked at, it becomes a “space” that provides a new incentive to continue our promenade.

Approaching / entering : the appeal of the garden

The garden, to be explored, has to awaken the visitors’ curiosity toward what they see in the distance, or what they cannot see but whose presence they guess. It has to keep awake, or constantly reawaken, their desire to continue their promenade. The spatial composition of the garden must offer distant reachable goals there; goals that, upon being reached, can offer the aesthetic experience of here.

While the role of “objects” and of “panoramic views” as reachable goals is easy to understand, the role of “spaces” in our perception of the spatial composition of the garden is a more complex affair.

Space is seen/perceived as surrounding us, or potentially surrounding us: we thus “know” whether we are “inside” a space (and able to leave it and to exit) or “outside” a space (and able to enter it). Thus a space, perceived as a space, is understood as a distinct unit, distinguished from what it is not, delimited, delineated, and separated from its surrounding. The descriptions of walks show that the garden of Versailles is perceived as a series of distinct spatial units. Its different parts are given specific names, and the walks are described as going from one named unit to the next one, as exiting one spatial unit and entering another.

Even though they are not surrounded by walls, spatial units are perceived as distinct units because they are perceived as having some sort of limits that distinguish them from their surrounding. Units are understood as such through continuities and discontinuities in particular experiential modalities. The discontinuities define their boundaries as one enters or exits them and the continuities give them internal coherence as one remains within them. The passage from one unit to the next can be made perceptible by the presence of a distinct gateway, such as an archway in an arbor or a couple of dominant vertical element (topiary, vases, statues) on either side of the path, that physically narrows our accessible space as we cross it. But in a more subtle way, it can be made perceptible by a definite change in at least one character, such as a change in the dimensions and proportions of the spatial void (passing
from a wide and open environment to a narrow alley; from a broader allée to a narrower one; from an open space with views on several sides to one with no views); in the qualities of the spatial void (the texture and structure of the delimitations; the soil; the presence, the rhythm, or the level of refinement of the ornamentation); the passing from light to shade; the texture of the soil on which one walks; a change in fragrance; a change in sound, its level, quality, characteristics, direction; a kinaesthetic change, such as turning or walking up or down steps. Several sensory discontinuities can happen simultaneously; going from an open allée to a covered one is felt simultaneously as a change in the proportions of the spatial void, in which the view or lack of view of the sky plays an important role; a change in the level of light; but also a change in the temperature felt on the skin; and maybe also a change in the quality of sound. This redundancy reinforces the sense of passage from one realm to another. Thus a sensory discontinuity is not just a change in sensory experience, but perceived as a spatially meaningful “entering” experience.

Such sensory discontinuities occur in the garden at different scales. Within the garden, we perceive clearly when we leave a wide open parterre with views to the countryside beyond the garden, to enter a narrow allée, delimited on the side by walls of greenery and only open at the far end; or when we leave an allée to enter a bosquet, one of the wooded squares of the garden, where we are completely surrounded by tall vegetation without any view beyond. But we find this also at the scale of each of the inner green rooms inside the bosquets: upon leaving a main allée, we follow a narrow path in a different direction; the path might be subdivided into two entities by a change in direction. At the end of the path, we reach the inner garden; we are still completely surrounded by tall vegetation – showing us that we are still within the same bosquet – but the dimensions, proportions and characteristics of the space we are about to enter are different. Each of these inner gardens is itself structured into subspaces, which we successively enter by having to change direction, go down steps, etc. One example of a centrally organized space is the bosquet of Enceladus, named after the central statue representing the Greek mythological giant Enceladus (figure 5a). The space is organized with several concentric layers, each offering a distinct sensory experience. First the outer space is a pergola, with several openings (windows or doorways) towards the centre. Then, inside the pergola is a terrace, limited on one side by the pergola itself, and on the other by steps marked at the angles by fountains, creating a distinctive sound environment. To enter the innermost area surrounding the basin of Enceladus, we need to go down these steps, and we find ourselves in a different sound environment, being surrounded by fountains on all sides. Entering the bosquet of Enceladus is thus made up of a succession of entering spaces. This experience can be represented along a time-line (figures 5b) and an experiential score, (figure 5c), graphically similar to the sensory score presented above.

Figure 5a. View of the Enceladus (summer 2009).
Thus the experience of walking in the garden is a succession of experiences of entering and exiting spaces, setting oneself reachable goals - distant objects and panoramic views, spaces to be entered - and eventually reaching them. We find here that the duality here / there mentioned by Straus: each spatial “thing” (object, spatial unit or panoramic view) offers a right point of view, from which it can be seen / perceived and understood for what it is better than from any other location. The right point of view is a function of both the physical characteristics of that thing and the possibilities of movement its environment affords us. We feel we have reached the thing when we have reached the right point of view: we experience a sense of having reached our goal, of having fulfilled our desire - a sense of “Here”. If we feel attracted by a panoramic view beyond a terrace delimited by a balustrade, as in the case of
As one moves through the garden, the memory of what was already perceived, the corporeal memory of the path, the expectations of what remains to be seen, combine to create the experiences that occur as we move through space, combined with distant views and memory of what we have already seen, we experience the garden as a succession of units combined into structured wholes. The garden invites motion through its spatial form, by offering the possibility for heightened experiences of ‘here’ – views, objects, spaces seen on axis - and ‘there’ – views and objects in a distance, that we feel we can reach. But more subtly, the garden can accompany the transition from the fulfilment of being ‘here’ to the renewed desire of going ‘there’ and enrich through such transitions our motion itself.

**Conclusion: implications for teaching**

Spatial experience offered by a composed space such as a garden is a time succession of a rich variety of simultaneous sensory experiences. The experience is meaningful insofar at it is understood as a spatial composition of objects, spatial units and panoramic views, perceived as such according to our possible bodily involvement with them. The meaning of a space is fundamentally spatial before being social or conceptual.

Following post-modernity’s insistence on conceptual meaning and narrative, this inherently spatial meaning of space has often been forgotten - either as self-evident, or as secondary - leading to designs that had no spatial narrative to offer to the visitor’s experience, or as a support for its conceptual narrative, which then needed verbal (written) explanation.

While often design exercises are inspired by the “space vs place” debate and ask students to imagine a project based on some superimposed and originally not spatial narrative to create “meaningful” spaces, in my research I looked rather at the specifically “spatial meaning” of spaces, that is, a meaning that appears in grasping a space as a coherent unit in relation to our potential motile involvement with it. The examples of analysis shown in this paper are presented as tools to understand already built spaces. But, by helping students to develop their sensitivity of spatiality, they can also become tools of design. A sensory analysis such as that shown on figure 1 proposes to go back to our primary non-verbal experience of space. This type of representation has, to my mind, several pedagogical values: it allows one to forget the plan, and it gives another understanding of what a “good design” can be: not primarily a “good looking plan”, but a space that allows for rich and varied sensory experience. It helps awaken students’ sensitivity to the potential experiential richness of the spaces they encounter and enhance their ability to create spatially rich and meaningful designs unfolding in time. Analysis of existing spaces looking for the succession of spatial experiences such as those mentioned above (approaching / reaching a goal; entering a space) or others, can lead students to design gardens as a succession of experiential moments - as a form of spatial narrative. For if our spatial experience is to be understood as a narrative, this should be first
of all a spatial narrative, to which, eventually (but not necessarily) a conceptual narrative can be added. Space should not be conceived as a backdrop that we see as we move, but as an invitation to a spatial dialogue taking the shape of a promenade.

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