

Zeitschrift: Trans : Publikationsreihe des Fachvereins der Studierenden am
Departement Architektur der ETH Zürich

Herausgeber: Departement Architektur der ETH Zürich

Band: - (2016)

Heft: 28

Artikel: Eliminating arrow : a manual on Klee's art of hesitation

Autor: Mehling, Lara

DOI: <https://doi.org/10.5169/seals-918784>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 14.04.2026

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

Eliminating arrow: a manual on Klee's art of hesitation

Lara Mehling



Fig. 1

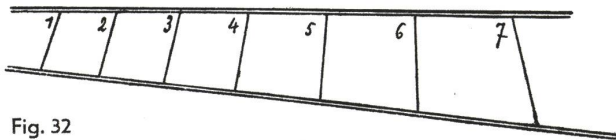


Fig. 32

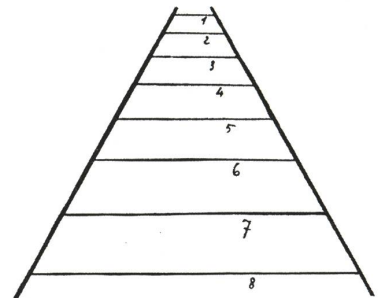


Fig. 33

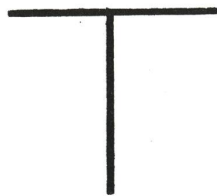


Fig. 45

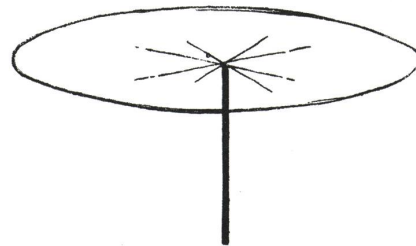


Fig. 46

I am willing to wager that a good design emerges in time, that the longer one can suspend realism, the sooner one will find the kindest kind of uncertainty: hesitation. Hesitation halts the decision-making process, postpones precision, and, in an extended moment of doubt, forces the designer to turn to intuition as a guide.

Paul Klee wanted to teach his students to work with intuition. His handwritten 1921–1931 lecture notes on visual form at the Staatliches Bauhaus document this intention. Some of these notes were collected and edited by Walter Gropius for a student manual on design theory: The first edition of *«Pedagogical Sketchbook»* (*«Pädagogisches Skizzenbuch»*), designed by László Moholy-Nagy, appeared in 1925. Guiding students step-by-step through an «adventure in seeing», Klee teaches modern art principles through a set of lessons in the form of notes and simple, diagrammatic sketches. Sibyl Moholy-Nagy's introduction to the English version, published in 1953, makes the 43 teaching concepts even more accessible by grouping them into four conceptual frameworks.

Almost a century later, design students are pushing rapidly through their conceptual sketches on trace—*«to realism!»*. Haste is the model. Modeling and rendering software aimed at simultaneous visualization and simulation are enabling precision close to the beginning of the design process. But there might yet be value in focusing on a single tool and task at a time, engaging not only high- but also low-precision processes for certain phases within a design's development. The sketchbook reveals one such understated crude instrument: In today's context, Klee's notes offer more than an insight into teaching art—the manual teaches the art of hesitation. Hesitation slows one down, encourages intuition, multiplies possibilities, and cultivates originality. Through an evolution of landscape typologies and an emphasis on walks and views, I will attempt to reveal in his lessons a step-by-step guide to practicing hesitation as an instrument of design.

I. Suspend the Goal—*«Proportionate Line and Structure»*

It begins with setting the pace, by slowing down. It begins with a single, non-directional dot. Filled with uncertainty, hesitation forces the student to pause. Unbiased, this static dot is not leaning, not tending toward any one direction. At the beginning

of a design project the student must remain open, not yet have a clear vision of the final product. The dot lacks dynamism, shows no movement. Klee introduces the vector not by pulling the dot across the page to create a line, but rather by telling his students to take the dot for a walk (fig. 1). A walk—this is the first thing we must pay attention to: How does a *«walk»* characterize a line? The unique characteristic of a walking line is its self-determined movement. In contrast to an orthogonal CAD vector, which projects toward a defined second point (a goal), it writes itself in the act of moving. To take a *«walk»* means to choose process. To hesitate means to suspend the goal.

In time, the walking line leaves behind a trodden ground, shaping planes of past movement that push outward in an expansive rather than limiting effort; Klee's manual teaches inductive thinking. The energetic power lines of ligaments and tendons, of plant fibers, build a larger structure, one which originates from a more basic element. Klee returns to this concept again and again: as artists or designers we are constructing the *«whole»* (the full composition) piece by piece. And while the line constructs vertical structure, it also serves to express something much more immaterial: the formation of an idea. An aimless path resembles a wandering mind.

Expanding on Klee's biological examples, the labyrinth, as one stemming from the realm of design, illustrates the conceptual consequences in a physical layout. With its circuit typology and a single pathway, the classical labyrinth, one of the oldest garden forms, features a unicursal structure. Its only element is path, path with no view. Even as labyrinths begin to grow limbs, introducing multiplicity, a clear trajectory or a sense of autonomy do not come to the fore. On the contrary, a multicursal maze structure defines the more contemporary garden of forking paths, aimed to perplex the visitor. But this game, played in the *«Labyrinthe»* planned by André Le Nôtre for Louis XIV at Versailles in 1665 (fig. a) and the hedge maze at Hampton Court, designed for William III of Orange by George London and Henry Wise in the late 17th century, still aimed to limit the visitor's long view, leading one to turn inward for direction and thereby gain a new sort of sight, namely an *«in-sight»*. With nowhere else to set one's attention, the visitor begins to reflect. And the student picks up the pencil and begins to move it across the page, knowing neither the doodle's object of representation nor its purpose, for a blind eye may free the mind.

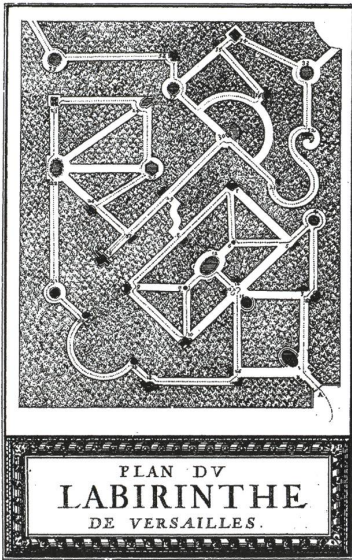


fig. a. Plan of the labyrinth at Versailles. *Plan du Labirinte de Versailles*, printed at the Royal Press, Paris and illustrated by Sebastien le Clerc, 1677.

II. Practice Intuition—Dimension and Balance

In an unusual sequence, the eye succeeds the foot, thus forcing one, as the labyrinth does, to move forward tentatively but also intuitively. Intuition is, admittedly, not a popular term in today's architectural discourse. There is nothing calculated, measured, or even formulaic about it. However, if we are to understand «doubt» in the form of hesitation as something productive, then the tentative, slow walk on which we have embarked might actually prove promising. In his essay «Exact Experiments in the Realm of Art», Klee insists: «We learn to dig deep and to lay bare. To explain, to analyse... All this is fine but it has its limits: intuition remains indispensable.»¹ If step one isolated the foot as the sole tool and the footstep as the designated unit toward «progress», step two introduces the eye. «The eye travels along the paths cut out for it in the work.»² However, in hesitant pace the two tools are not yet connected, the path not yet prepared, and thus operate in isolation.

Clarity remains precariously positioned at the farthest point, a mere speck on the horizon where two parallel lines appear to meet. To discuss perspective, Klee sketches railroad tracks (figs. 32–33) seen from a deflected angle of vision to illustrate principle II.15: «the third dimension added as optical illusion». That is, we must take the horizon «as supposition» (figs. 45–46) and not as fact, for this reflects on our subjective perspective and unique position in the landscape. Our environments rarely resemble Brunelleschi's one-point linear perspective grid plane, which managed to achieve «realism» by feigning three-dimensional space on a two-dimensional surface—in other words, through an optical illusion. Perhaps realism, even factual reality, matters less than what we can and will perceive. The eye would rather be convinced than confused. An etching by the English writer, painter, and pictorial satirist William Hogarth makes this clear: His 1753 satire on false perspective entitled «The importance of knowing perspective» manages to express the challenge of reversing the perspective principle and projecting the pictorial space of a drawing back onto the ground. The work's inscription reads: «Whoever makes a Design without the knowledge of Perspective will be liable to such absurdities as are shewn in this Frontispiece». In the same year, Hogarth also published his well-known book «The Analysis of Beauty», which incidentally introduced the term «the line of beauty» into landscape design vocabulary. In fact, this line, also referred to as the

S-shaped curve in aesthetic theory, influenced Lancelot «Capability» Brown's iconic serpentine paths.

Taking a closer look at Brown's familiar English style of gardening, one can already discern the element of surprise and the concept of perambulation used to generate peripatetic views, characteristic of the picturesque tradition. While «true» perspective is lost without a central axis, an embodied sense of space emerges in its place. Even before Brown's term as head gardener at Stowe (fig. b), the poet Alexander Pope described the garden's new and distinguished mode of disguise in his «Epistle to Burlington»: «Nor over-dress, nor leave her [Nature] wholly bare; / Let not each beauty ev'ry where be spy'd, / Where half the skill is decently to hide. / He gains all points who pleasingly confounds / Surprises, varies, and conceals the Bounds.»³ In a rupture with the past, the landscape architect now not only reveals but also hides the landscape's intention. While the classical approach sought to make a central scheme immediately intelligible, the picturesque tradition strove to trick the eye⁴: «Avoid a straight avenue directed upon a dwelling-house; better for an oblique approach is a waving line... In an oblique approach, the interposed objects put the house seemingly in motion... seen successively in different directions, [it] assumes at each step a new figure.»⁵ While «The foot should never travel to [the object] by the same path which the eye has travelled over before»,⁶ the visitor is no longer moving forward «blindly» but rather with purpose and curiosity. Navigating the line between self-direction and self-abandonment, the student following this oblique approach carefully cultivates an instinctive feeling into an informed intention. In this way, hesitation encourages intuition. With no clear goal in mind, the student must trust the results of experimentation. Iterations respond to successive discoveries. Catching only glimpses of a good idea and then losing sight of it, making enough models for some to hold potential and others to lead nowhere—this is the winding path of hesitation.

III. Invite Complexity—Gravitational Curve

The dot progressed; both line and plane advanced. Vertical planes intersected the horizontal plane to create the third dimension. Klee does not for a moment consider stopping here. He reminds us that it takes time for a point to turn into a line and a line to be displaced to form a plane, and that «the same is true of movement of planes into spaces»⁷. In the resultant space energies perform, both visible and invisible, to complete the

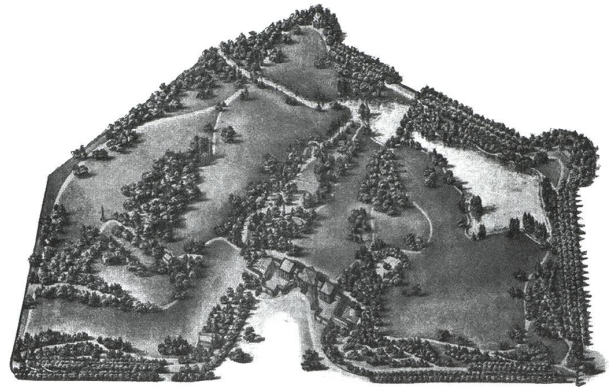


fig. b. Plan of the Stowe gardens, 1910.

formal elements: «A spatial element, for example, is a misty, cloud-like spot made by a full brush, usually uneven in its intensity», Klee notes.⁸ In contrast to material-bound structures, «there are regions with different laws and new symbols, signifying freer movement and dynamic position» (III.26). Step four takes «Gravitational Curve», a lesson on freer or simply «free» movement, to teach consideration and preliminary choice by urging the student to first invite complexity, for only with «multiple eyes» can the visitor see alternate paths.

In our deviation from the central perspective and axial view we find a looser structure, which expresses no clear hierarchy. Spatially, it resembles the architectural free plan. Klee uses an image to explain the third framework: «Planes produced by lines entering into relations with one another (e.g. as one sees stormy watercourses) or spatial structures produced by energies related to the third dimension (swarming fishes)»⁹. Dan Kiley pioneered the landscape architectural free plan in the modernist Miller Garden. Suddenly, effect, function, and—to borrow a term from Klee, «atmosphere» (as a transitional region)—supplanted style as compositional determinants. Landscape historian Marc Treib sums it up best: «Space, rather than style, is the true province of landscape architecture.»¹⁰ In the work of Kiley, as in that of his contemporaries James Rose and Garrett Eckbo, «continuous space—space without the restrictive coercion of the singular axis», dominated.¹¹ While taking a villa's floorplan as the basis for a garden was nothing new, Kiley's composition of «pinwheeling spaces», as he liked to refer to them, at the Miller Garden represent a playful reinterpretation of historical tropes. Tied to an axle instead of an axis, a pinwheel makes the perfect analogy for this rearrangement of outdoor rooms with spatial relations demonstrating loose continuity. Paths retreat into the background to form fragmented spaces that follow an invisible grid, guiding the visitors through the garden.

Like any grid, multi-directional and systematic, Kiley's designs, including his public plazas, reflect Klee's spatial energies. A dot draws its own line as it progresses; the gravitational curve yields to the swarm, the point cloud, if you will, of «constant movement» (III.28). In his «Creative Credo», Klee speaks of brickworks and fish-scales to describe the dynamics of «network and weaving» in which individual steps build toward a collective effort. So as not to lose faith, Klee reassures us: «Nothing can be rushed. Things must grow, they must grow upward, and if the time should ever come for the great work [of vast scope, span-

ning all the way across element, object, content, and style], so much the better. We must go on looking for it. We have found parts, but not the whole».¹² Finding the parts captures the spirit of step three: developing and testing variations on compositional schemes to «find» rather than pre-emptively select the most suitable direction. Hesitation is ambivalence. It means practicing the capacity for simultaneous contradictory feelings, weighing the options before settling—in short, multiplying possibilities. With the freedom to wander off the beaten track, leave no corner of the garden uninspected.

IV. Select a Direction—Kinetic and Chromatic Energy»

We are hurtling forward with ever-increasing speed, yet remain utterly directionless. What finally propels us forward is some resistance. At last we reach a finite point of convergence where all lines meet and from which every road emanates, for we stand at the very center, rather like the pinwheel tethered to a static point, gaining speed near the tip of its curls. With the visual obstacles and restrictive paths eliminated, we gain full view and full movement. Klee uses the image of a spinning top (fig. 61) to illustrate how forms in motion achieve stability: «Horizontal gyration will save this toy from falling» (III.22). Likewise, in principle III.34 Klee explains that the pendulum attains equilibrium through a fine balance of motion and counter-motion. While the multi-directionality of the Miller Garden allowed for some counter-motion, the fourth framework leads the visitor to a place with the potential for simultaneous directional movements. Indeed, in plan view these movements appear as vectors, intersecting pathlines: Keeping one's eye on the back-and-forth swing of a pendulum (figs. 64-65) for long enough, one discovers that «the observable significance of such a form continuity, originating at the guidance point, is transposed into larger mobile forms» (fig. 66). This «is imagined as occurring while the pendulum is in full swing. It will circumscribe a circle which is the purest of mobile forms» (III.34). Many vectors form a plane; all paths converge to construct a plaza.

The image is so strong it hardly requires a landscape analog. However, the logical progression from multiple paths and variable views would be all path and all view: the public square. The plaza of pedestrian vectors represents a pure intersection—a non-directional space. While many successful squares, such as Piazza del Campo in Siena, have variegated or complex surfaces, many more contemporary examples, such as the City Hall Plaza

in Boston, designed by I.M. Pei as an interpretation of the Piazza in Siena, are considered failures. In a 20th-century mode which favored program over style, the most basic ‘non-form’, an empty surface, was supposed to allow for flexible and abundant programming. Extra-large hardscapes, while perhaps useful for markets or fairs, do not generally produce the most inviting spaces. For our manual, this non-directional space alone gives no instruction; it appears to have abandoned the student.

Klee writes of this place: «Motion here is no longer finite; and the question of direction regains new importance. This direction determines either a gradual liberation from the center through freer and freer motions, or an increasing dependence on an eventually destructive center» (III.34). This new type of direction demands the student to take the first step toward clarity.¹³ Having pushed far and erred some, the student must now begin to rein the idea and ambitions in again. For clarity does not reside in the center; the center marks the pinnacle of hesitation. Here, on the final page of the Sketchbook, Klee takes his first decisive action: «Passing on to infinite movement, where the actual direction of movement becomes irrelevant, I first eliminate the arrow» (III.43). Abandoning the pedestrian signpost, the prescribed path, «we have arrived at the spectral color circle where all the arrows are superfluous. Because the question is no longer: ‘to move there’ but to be ‘everywhere’ and consequently also ‘There!’» (III.43). That is, in utter doubt we are liberated; hesitation guides by leading astray. When all preconceptions, all assumptions are broken down and we are left to trust ourselves, we become creative in our way of moving forward. The paradox, as illustrated by Klee: In this infinite field of motion (fig. 87) all colors floating between white and black collide: «At first, movement and counter-movement: so → or ← so... in this way a center is prepared—the central grey». At the convergence of all chromatic arrows (red-green, yellow-purple, and orange-blue), grey is the empty plaza; it is pure gradient and it is disappointingly nondynamic and dull. But the manual reflects the mechanics of an idea; the step-by-step instructions teach the student to see the color (recognize the potential) even in the duller of greys. It is at this full spectrum point that one begins to distinguish and hone a finer hue: The student steps out from the grey center in any chosen direction toward an individual design. Rather than simply understanding design as a series of choices, an early definition describes the act of designing as one of «marking out»¹⁴—a very physical act. In the end, it is a bit of both, for how many forks in the road can a single path contain?

We must explore a vast field of options before marking out our own paths. A truly creative vision thus emerges not only from a series of choices, but from a rich spectrum of self-constructed options. The trick is harnessing hesitation as a crude yet useful tool. Lost at the center of the labyrinth we have two choices: we can forever give up and hide or we can seek. After substantial and even «simultaneous destruction and construction [of the elements] toward the whole, pictorial polyphony», Klee reminds us that, still, these «lofty aspects of the question of form... are not yet art in the highest sphere. A final secret stands behind all our shifting views, and the light of intellect gutters and goes out».¹⁵ To keep a useful dose of uncertainty alive, he draws and redraws the bounds of the idea: The last view shall always remain hidden.

- 1 Paul Klee, ‘Exact Experiments in the Realm of Art’ 1928, in: ‘Creative Confession - Volume 5 of Artists’ Writings’, London 2013, p. 70.
- 2 Ibid.
- 3 Alexander Pope, ‘An Epistle to the Right Honourable Richard Earl of Burlington, Occasion’d by his Publishing Palladio’s Designs of the Baths, Arches, Theatres, &c. of Ancient Rome’, in: ‘Of false taste’, London 1731, lines 52–56.
- 4 Peter Collins, ‘Changing Ideals in Modern Architecture’, Montreal 1965, p. 53, in: Yve-Alain Bois, ‘A Picturesque Stroll around Clara Clara’, p. 43.
- 5 Henry Home, Lord Kames, ‘Elements of Criticism’, 1762, quoted and translated in the anthology entitled ‘Art et Nature en Grande-Bretagne au XVIIIe siècle’ by Marie-Madeleine Martinet, Paris/Aubier, 1980, p. 171, in: Yve-Alain Bois, ‘A Picturesque Stroll around Clara Clara’, p. 43.
- 6 William Shenstone, ‘Unconnected Thoughts on Gardening’, 1764, quoted in Martinet, p. 12, in: Yve-Alain Bois, ‘A Picturesque Stroll around Clara Clara’, p. 43.
- 7 Paul Klee, ‘Creative Credo’, in: Jürg Spiller (Ed.), Ralph Manheim (Trans.), ‘Paul Klee Notebooks’ (originally 1961), Volume 1 ‘The Thinking Eye’, New York 1992, p. 78.
- 8 Ibid, p. 78.
- 9 Ibid, p. 78.
- 10 Marc Treib, ‘Modern Landscape Architecture: A Critical Review’, Cambridge 1994, p. 40.
- 11 Ibid.
- 12 Paul Klee, ‘Survey and orientation in regard to pictorial elements and their spatial arrangement’, in: Jürg Spiller (Ed.), Ralph Manheim (Trans.), ‘Paul Klee Notebooks’ (originally 1961), Volume 1: ‘The Thinking Eye’, New York 1992, p. 95.
- 13 Paul Klee, ‘Creative Credo’, in: Jürg Spiller (Ed.), Ralph Manheim (Trans.), ‘Paul Klee Notebooks’ (originally 1961), Volume 1: ‘The Thinking Eye’, New York 1992, p. 78.
- 14 ‘Design’, Merriam-Webster.com, 2015. <http://www.merriam-webster.com>. Retrieved: 15 January 2016.
- 15 Paul Klee, ‘Creative Credo’, in: Jürg Spiller (Ed.), Ralph Manheim (Trans.), ‘Paul Klee Notebooks’ (originally 1961), Volume 1: ‘The Thinking Eye’, New York 1992, p. 78.

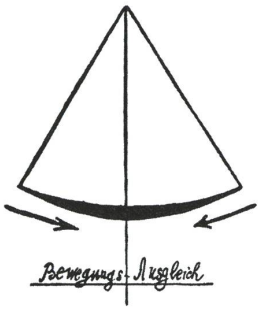


Fig. 64



Fig. 65

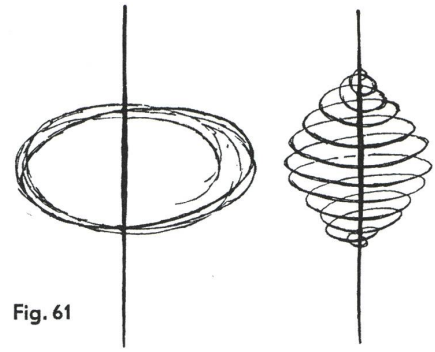


Fig. 61



Fig. 66

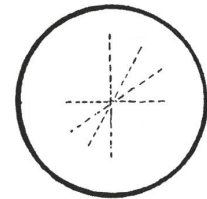


Fig. 66a

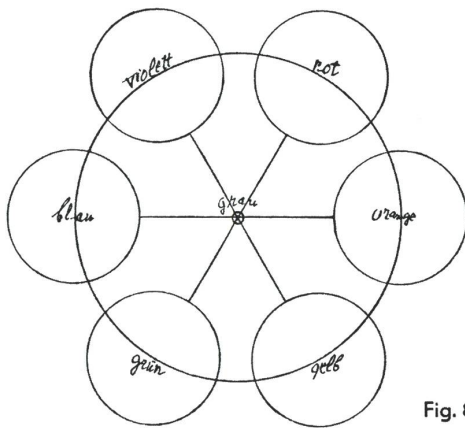


Fig. 87

All numbered figures (1, 32-33, 45-46, 61, 64-65, 66, 87) are Paul Klee's exercise sketches, in: Sibyl Moholy-Nagy (Trans.), *Pedagogical Sketchbook*, New York 1953.

Lara Mehling, born 1988, received her Master of Landscape Architecture from Harvard University Graduate School of Design in 2015 where she co-founded and edited 'Open Letters' and 'backpocket projects'. With a previous degree in Environmental Humanities, her interests in the history and theory of landscape led her to her current position as research associate in the TheoryLab at the Chair of Professor Christophe Girot within the Institute of Landscape Architecture.