

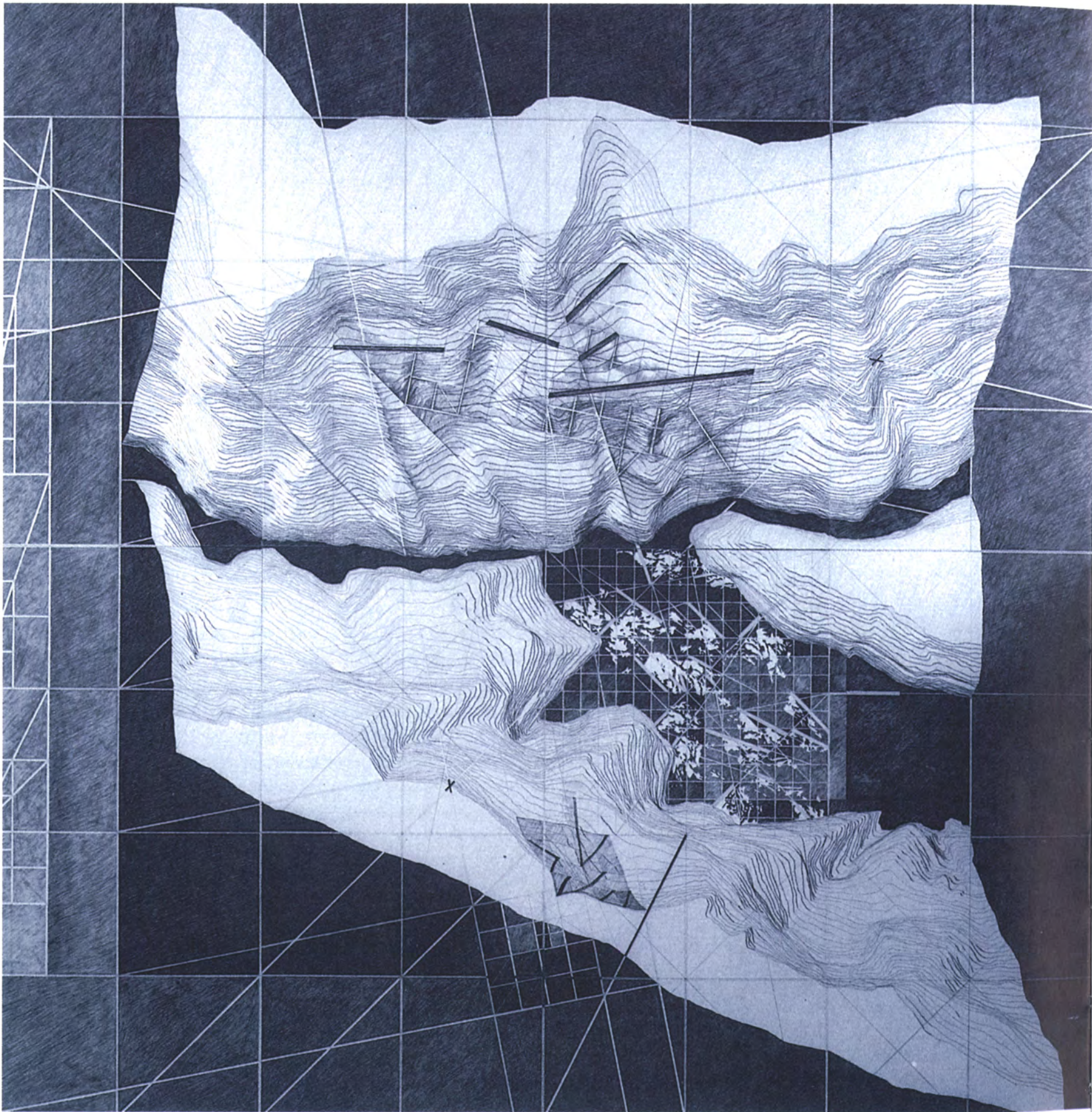
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Architecture and Landscape

The Design Experiment
of the Great European Gardens and Landscapes

Revised and expanded edition

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Jardin élémentaire. (Michel Desvignes)

*Gardens are the laboratories of the landscape...
These prototypes are reference points and the marks which
we establish in a contemporary landscape over which we
have no control.*

Desvigne & Dalnoky, *The Landscape*, 1995

In antiquity the 'holy way' through the landscape referred to Elysium and the dwelling place of the gods. In Christian tradition the garden was the metaphor par excellence for paradise, the origin of the human world. In addition, it represented an experimental architectonic tradition in which the *horror vacui* was overcome and space was mastered. The architectonic concept of the landscape has gradually been further opened up, enlarged and deepened. Architecture and landscape ultimately came together in the perspective of landscape architecture.

The design research of this book makes it possible to formulate the object, method and reach of landscape architecture more sharply. Landscape can be defined as a space in time, in which the fundamental concepts of time and place are processed. From the analysis we gain a coherent picture the specific design instruments and the layers involved in landscape architectonic design. We will denote this coherence as the landscape architectonic grammar.

From a comparison of designs, landscape architectonic transformation emerges as a key concept. The composition scheme of a villa makes it possible to penetrate to the core of the composition. This allows the designs to be placed in various series – respectively a typological and a conceptual series – which reveal the development of landscape architecture.

The composition scheme of a villa makes the design usable experimentally. By means of a transformation of the composition scheme of the villa, this knowledge can be applied to new design assignments. This presupposes a model of the contem-

porary landscape as a formal system, and a further differentiation of landscape architectonic research.

The villa also represents a quality of landscape that is captured in the landscape architectonic composition in a careful balance among the essential elements of the landscape. From this perspective, the designs from this book can be employed as qualitative models for the design of contemporary landscapes.

The landscape architectonic object

A number of conditions distinguish the landscape architectonic design from the merely architectonic. It is always contextual, connected with the spatial and temporal aspects of nature, with the physical environment, with the topography of the landscape as it has previously been formed, and with the scale of space in landscape. Each landscape architectonic design finds its origin in the morphological characteristics of the natural landscape, for instance in its location along the sea, on a hill, on a plain or along a river. The concept of nature therefore plays a central role in landscape architectonic design. Nature has been interpreted differently in successive cultural eras, depending on the state of the natural sciences and on social developments.

During the Renaissance the idea arose that an ideal system of proportions, a rational system of dimensions and ratios, could be derived from nature, a system within which the relation between man and nature could be perfected. The design of villas also reflected the spatial unity of the city and landscape with nature. In the Renaissance garden, virgin nature was an essential component of the *décor* of the villa, and thus of the experience of the aristocrat during his stay in the countryside. Humanistic poets like Petrarch wrote of Virgil's Arcadia and the mythic nature in the world of the gods.

In the formal French garden, nature was dissected into contrasting formal categories such as the *parterre*, *tapis vert* and woods, and rearranged as a symbolic system, ranked according to increasing degrees of naturalness. In this way nature 'from spring to ocean' was represented in the garden as though in a scientific system of classification, and was worked out in the garden as an image of the cycle of life (birth-life-death). The spatial hierarchy and the formal control of nature reflected an absolute understanding of space and time.

The Enlightenment brought a development from formal to functional thinking. That was to a certain degree a return to the Greek concept of nature as *cosmos*, now however not as a living being, but as a system. An insight developed, based on the natural sciences, into the processes that governed nature and society. The sciences were the rational measure of the world order; nature was the moral mirror of society. Art and culture were represented in the landscape garden through classical buildings; nature was treated as a living organism, which in its physical form and vigour was placed over against art. Conservation found its first expression in the 18th-century English landscape garden in the deer park.

These developments in the concept of nature, and the changes in thinking with regard to the landscape architectonic object that they caused, can be traced back to differing notions of time and place.

Time

The structure of time can be analysed into various time dimensions or time scales, which all in one way or another are represented in the design. The geological time scale (or that of natural evolution) reveals itself in the solidified forms of the natural landscape, for example in striking geological formations of various age, and in the results of erosion such as plateaus, ravines, river valleys cut into the landscape or, in low-lying country, river deltas and Holocene coastal plains.

The development of the man-made landscape and human habitations takes place in the time scale of human history and culture. This expresses itself in settlements, canals, roads, woods and parks, but also in monuments such as tombs, temples, memorial obelisks and triumphal arches, in open-air theatres, and galleries with art collections and rarities, and in a deeper sense too in ceremonies and processions.

The natural cycle of the seasons is expressed in barns and hunting pavilions, or can be read out of garden architectonic elements such as floral borders, solitary trees and works of art. The cycle of day and night, between the extremes of light and dark, can be followed in the gradual change in the way light falls on clumps of trees and water features; the hours can be measured with the aid of the shadows and a sun dial.

Place

The interrelation and articulation of two essentially different concepts of space and place, *topos* and *locus*, play a large role in this.

The classic origin of the concept of *topos* is anchored in Greek mythology and refers to the sacred landscape, the dwelling place of the gods. It is a magical/mythological understanding. The sacred or mythic landscape is labyrinthine, infinite and without scale. It has no geometric limits. Its time is that of creation. The *topos* is connected with the holy route.

The classic origin of the concept of *locus* is anchored in the *templum*, the mythic cross at the centre of the layout of Roman cities, oriented to the North Star (north/south) and the course of the sun (east/west). The *templum* was the holy place in the design matrix of Roman exploitation of new areas, which was oriented to the morphology of the landscape. The *locus* is defined geometrically; it is a spot in the rationally ordered, man-made landscape, to which distance and the measurement of time is related.

These two different concepts of space and place are set alongside and over against one another in villa architecture. Even more strongly, in a deeper sense they presuppose one another; control through measurement necessarily raises the question of chaos. This theme is worked out in the tension between the *amora bosco*, an older, labyrinthine park that was used for hunting, and the rational foundation of the ceremonial garden.

In the 17th-century French garden, this contrast was the basis for the plan. The central space was absolute and infinite; the garden was an unchanging stage. The visual conquest of space was expressed by the spatial flight of the mirror axis and the system of avenues. Space became architecture. Labyrinthine space was pushed out of the garden by the baroque violence of the mirror axis, but lived on in the magical tradition of the water works and the secretive games in the surrounding *bosquets*.

In the 18th-century landscape garden the *topos* came to life again. The mythic landscape was projected onto the natural morphology and once again confronted with the rational foundation of architecture. This confrontation can, for instance, be read in the use of a topographical design matrix by Bridgeman in the expansion of Stowe.

Topos and *locus* merged in the *genius loci*, the visual qualities of the place in the landscape. In *An Epistle to Lord Burlington*, Alexander Pope wrote in 1731, 'Consult the Genius of the Place in all / That tells the Waters or to rise, or fall... Calls in the country, catches opening Glades...' Nature was space.

The landscape as space in time

One can point to these notions of time and space explicitly in many of the designs discussed here; in others they remain implicit, interwoven as they are with the tradition of garden architecture. The control of space was a strong motive, and

expanded itself to a larger scale with the employment of increasing numbers of new tools. In the rediscovery of the *topos* in English landscape architecture, the control of the various time scales also became an explicit part of the designer's task.

This expression of time and place is a distinguishing characteristic. An awareness of process is fundamental for landscape architectonic design. This involves not only the design of the architectonic space, but also a formative process, for instance the erosion of the landscape or, on the contrary, the genesis of a landscape, the development and design of the man-made landscape and, at the same time, the colonisation of the urban landscape. Landscape architectonic design approaches the landscape as a space in time, as a space that is subject to natural cycles, and moreover that is in development.

Landscape architectonic grammar

The analysis also produces an image of the specific design instruments of landscape architecture and the composite nature of, or multiple layers in, the design. At various abstract levels it clarifies the theoretical and technical aspects of the landscape architectonic form. Moreover, it reveals the generative aspects of the design. One could therefore term this whole a landscape architectonic grammar.

The layeredness of the landscape architectonic design

The landscape architectonic design activates the elements of the landscape and brings them into a new balance. It reassesses the system of forms, references and meanings, and in this way gives new content to the landscape form. This aspect is fundamental to the question of whether a new landscape is created, in the proper meaning of the word.

In order to be able to distinguish the various processes of the landscape architectonic design from one another we will make use of a theoretical model that was developed by the German architectural theorist Paul Frankl. He distinguished four aspects or processes that determine architectonic form, and that can be 'read in reverse' by the observer (in this or a different order): purpose, spatial form, plasticity and external appearance. These four aspects lay out the relation between the architectonic design and its perception in a systematic way and afford insight into the spatial dynamic of the design.

According to Frankl the purpose (*Zweckgesinnung*) indicates if the design is functional (or actually, is intended to be functional), in the sense that the programme has its own expression and contributes to the form. The spatial form indicates whether there are combinations of space,

a sum of spaces (addition), or a division of a limitless space (subdivision), or either a static or dynamic arrangement of space. The plasticity or mass-form, the envelope covering the space, indicates to what extent there is a centre of force to be discovered in the design that holds it together, whether the lines of force in the construction of the design have an autonomous expression and represent the dynamic of a 'stream'. The appearance (colour, texture, incidence of light) can be simple or complex, one image or many images.

In a similar way the landscape architectonic design can be conceptually anatomised into various aspects. In general these can be denoted as the geometric basic form or basic plan, in which the topography of the natural landscape and the man-made landscape are rationalised and activated. The spatial form is the architectonic form and spatial effect of the three-dimensional landscape space, through which spatial dynamics are created. The metaphorical structure is the form in which the metaphorical images of the natural or man-made landscape are adapted and come together with elements of the urban programme and metaphorical-spatial references. The aspect of time is expressed here. The form of the programme brings the divisions in the landscape and the architectonic expression of the programme into relation with the pattern of movement in and through them.

Geometry and basic form

In the Renaissance villa the division of both the basic layout and of the vertical elements was determined by an architectonic matrix. The dimensions of the areas are derived from a measurement scheme of squares. The rational matrix is laid conceptually over the natural landscape. The components of the landscape which fell within the matrix were ordered geometrically.

In the French formal garden one line of the matrix was differentiated as the axis of symmetry. The given asymmetry of the terrain was brought into visual balance with the mirror symmetry of the garden by means of compositional corrections. The formal design rules were played out against the natural morphology. A balance was sought between the autonomy of the garden design and the irregularity of the landscape context.

The English landscape garden shows a relativisation of the geometry of the basic plan which goes still further. Ordering by means of a matrix changes into a linking of rational and formal compositional fragments, held together by the natural geomorphology. The geometry maintained itself as a 'hidden order'. The basic geometric plan of the garden 'dissolved' into the physical-geographic lines of force of the natural landscape and thereby formed an indissoluble unity.

The spatial form

The spatial construction of the Renaissance villa was that of a peep-show. The walls of the villa were breached, the horizon formed the visual boundary. The *integrazione scenica* with the surrounding landscape, which lay outside the reach of the matrix, was created by means of framing natural and urban panoramas. The most important spatial characteristic of the French baroque garden is a central mirror axis on which a new perspectively manipulated reality was conceived and controlled. The areas of the design matrix, linked successively to one another, were corrected by means of perspective in order to make the visual range as great as possible. The mirror axis became an independent element, creating an architectonically constructed panorama and a telescope directed to the horizon. The English landscape garden developed the idea of flowing space, the spatial dynamic that is inherent in landscape morphology. In the English landscape garden the surrounding man-made landscape was involved within the range of the plan by means of panoramic composition. The house was no longer the centre of the composition, but one of the ornamental elements. The spaces of the garden and the surrounding landscape were seen in motion; the route was an important connecting system in a pictorial landscape composition.

The metaphorical structure

'References backwards, allusions forwards,' wrote Gerrit Komrij in his essay on the art of the garden. Here he touches on the core of the metaphorical-spatial process in landscape architectural design. The metaphorical structure of the villa design must not be understood so much as iconographic, but rather as being referential and allusive. Both history and the future are imagined in the design, and connected with one another.

Elements of nature such as earth, water, plants and animals form the ornamentation of the Renaissance villa, which are coupled with paradise and classical mythology by means of mythic concepts such as the garden of Hesperides and the figure of Hercules. This process of evocation raised the enjoyment of nature to a higher intellectual and cultural plane. Garden elements such as the *bosco*, grotto, nymphaeum, cascade and reflecting pond form the mythological repertoire with which natural elements are anchored in the villa plan. The belvedere, terrace, pergola, stoa, portico and loggia refer to antique, urban architecture, with which cultural practice and the visual relation with the panorama were elaborated.

In the formal French garden contrasting formal categories such as the *parterre de broderie* and *tapis vert* were theatrically staged in a series according to precedence, which supported the flight of the mirror axis. Metaphorical representations are mounted into this as stage scenery. The rational water stair was transformed into a series of water forms that ended in a reflecting surface of water on the horizon.

Architectonic forms and art works, as part of a series of landscape elements which also included groves of trees, water courses, lakes and bridges, were introduced into the pictorial composition of the English landscape garden as 'set pieces'. These garden elements formed a new visual and metaphorical dialectic in which mythic, classic, social and natural motifs were included, including motifs from contemporary politics. The form of the terrain, the various natural formations of plants, trees, woods and natural water features replaced the formal *bosquet* and the formal water stair, and represented the natural morphology and the temporal order of nature.

The form of the programme

The Italian Renaissance villa made the Arcadian enjoyment of the landscape into a component of urban culture. The concepts of *otium* and *negotium* played an important role in this. Business (*negotium*) was done in the city in the winter; in the summer, when it was too hot, refreshment was sought in the countryside. The antique stoa, the shell for urban etiquette, debate and shaping opinions, was resurrected in the villa. Scientific and cultural occupations, hunting, agrarian production and the enjoyment of nature were connected with each other in the villa (*otium*).

The 17th-century French *résidence* was the setting for the widely ramified court culture by which the country was governed. The agrarian landscape was banished from sight; large-scale silviculture with avenues and radiating paths formed the ceremonial backdrop. The central zone of the garden was the stage on which ceremonies took place according to a fixed *itinéraire*. The programme of diversion was accommodated in the *bosquets* around it. The city and urban life were included in the *Grand Ensemble*.

The English country house accommodated the country life as an aristocratic alternative for life in the city. Less formal manners, the 'house party', permitted circulation through the various rooms of the country house. That also had its effect on the ordering of the landscape garden. The circuit walk was a direct counterpart to the circuit through the house. In time various circuits arose, coupled with the various zones in the landscape garden: on foot through the 'Pleasure Grounds', on horseback or by coach through the meadows of the estate and the wilderness outside it.

The landscape garden was an experimental economic system for agriculture, silviculture and nature conservation. Forestry was initially adjudged to be of economic importance, often from speculative considerations. New forms of hunting, such as fox hunting, arose, in combination with sport and recreation, which were to influence the design of the man-made landscape. In the course of the 18th century a scientific approach to horticulture and agriculture developed, contributing to the economy of the estate, and in part defining its design.

The landscape architectonic composition

Thus the landscape architectonic design can be understood as a design with multiple design layers and multiple layers of significance. It is therefore not just functional or technical in nature. The expressiveness of the design lies in the articulation of the various design themes or layers, in the way in which they work together to create a meaningful whole in which a balance is achieved among the different forces that determine the design. This balance does not need to be harmonious; the condition is that all the layers of the design are touched upon and have received their own expression, a 'character'. We have termed this internal coherence of the design a landscape architectonic composition.

Nature, technology and art, *otium* and *negotium*, are inseparably connected with one another in the landscape architectonic composition. The play of geometry and geomorphology, measurement and infinity, regularity and irregularity, pattern and process, art and nature, *otium* and *negotium*, monumentality and complexity against one another determines the character, the strength and the wealth of the possibilities for interpreting the composition.

The landscape architectonic transformation

From a comparison of the designs analysed, transformation emerges as an important methodological concept. In general, there are three phases distinguishable in the transformation, which are – successively – decomposition, in which the historical material is investigated and the usable elements isolated; processing, in which they are confronted anew with a given situation and a new programme; and synthesis, in which a new functional and metaphorical-spatial coherence comes into being. One can place landscape architectonic designs from various periods within this rough model of the transformation in various transformation series, each of which will illuminate a different aspect of landscape architecture. For this purpose, one must not regard these series as being arranged chronologically, but as developmental series.

Both general and specific characteristics can be distinguished in each design. For example, in the Renaissance the geometric grid of the ground plan is normative; in the English garden on the other hand it continues to exist only as a hidden order. This could be called a general characteristic. As a result of comparison of the examples with one another, both a typological and a conceptual series can be derived on the basis of these general characteristics. Nevertheless, within these general characteristics each composition differs, and specific design tools can be distinguished, from which a unique coherence of the design instruments emerges for each villa. They constitute the transferable core of the composition.

The composition scheme

We have termed the architectonic elements of the composition that play an active role in the interplay between the villa and the landscape active composition elements. The concrete form and materialisation of these elements is variable, but they can be reduced to a limited repertoire of formal abstractions. Garden elements such as the nymphaeum, grotto, spring, cascade, reflecting pond, parterre, bowling green and pergola, and architectonic elements such as the souterrain, *piano nobile*, loggia, hall, *salon*, balcony, stair, cornice or pediment, and arcade are part of this canon. They derive their special meaning from their place in the composition.

We have termed this characteristic coherence of the design instruments the composition scheme of the villa. This comprises the system of active composition elements in their specific mutual interrelationships, which is determined by the design. The composition scheme can be regarded as a reduction of an individualised architectonic system with its own 'character', in which a unique synthesis of the *genius loci*, design conventions, spatial motifs and a programme is brought into being. In this sense it represents the composition as a coherent system of unique internal rules, and thereby exposes the internal logic of the design.

The composition scheme of the villa affords an opportunity to illuminate the composition in two ways. The first is retrospective, as a manner of being able to understand the composition of the villa as a stylistic development. The second is prospective, permitting connections to be made with experimental design and research by design.

The typological series

The compositions discussed in this book can be placed in an ongoing series in which the evolution of the landscape architectonic form and the differentiation of the design instrumentarium can take shape. This series, which we are calling a typological series, offers insight into the development of the villa as a landscape architectonic type.

Within each historical period in the typological series there are four phases which can roughly be distinguished. The first phase consists of groping experiments in which a new staging is prepared. An example of this is the English landscape garden at Bramham, where experiments are made with the transformation of the grid plan. The second phase is that of the prototype, in which the mutual relationships among the composition elements become normative for a new stage design of the landscape. An example of this is Castle Howard. The third phase is that of the differentiation of the type, in which both geographic variations and the differences in the various tensions among the layers of the design are expressed. Examples of this are Blenheim Castle and Rousham. The final phase is that of mannerism, a use of the design instruments directed

toward special effects, which overstrains the elementary character of the composition until the form breaks down. Examples of this are Hawkstone and the Victorian garden at Chatsworth, in which Picturesque elements stretch the form of the landscape garden. This phase marks the end point in the development of the type.

There are three compositions which can be pointed to within the series of examples in this book, in which a new landscape architectonic principle of order is crystallised. They are characterised by their elementary and experimental character. We have therefore labelled these designs as prototypes. The composition evolved to a new theatrical form in these prototypes.

One could term the Villa Medici in Fiesole a rational prototype, in which the *villeggiatura* for the first time took form in the *villa urbana* in the hills around Florence. Vaux-le-Vicomte, Le Nôtre's first great design, can be regarded as the formal prototype, in which the ensemble architecture of the house, garden and estate fuse together into a new unity. Castle Howard, the experimental design by Vanbrugh and Hawksmoor, can be pointed to in this series as the pictorial prototype in which the panoramic scale of the landscape is brought under architectonic control.

One can say that in these prototypes there is for the first time a fully worked out composition scheme in which all the elements of the staging that are characteristic for their period have been given their place. (In the case of Castle Howard this process would take 70 years.)

Looking over the examples in this book, there are two evolutions within the composition scheme that are of importance for the development of the typological series. The structure and the distribution of the active composition elements in the composition scheme differ considerably in the successive periods. In the Villa Rotunda, for instance, they coincide to a great extent with the intersecting axes of the house, creating a point-symmetrical, 'condensed' structure. In the Villa Medici they are placed in an orthogonal context, divided over the terraces. In Vaux-le-Vicomte, too, they are arranged orthogonally and divided over the whole estate. At Castle Howard they are placed in the morphology of the landscape in a configuration that extends far out over the landscape.

First, there emerges here the formation and dissolving of a centre, which can be read from the position of the house in the composition. In the development of the Renaissance villa the house shifted steadily from a co-ordinate to a central place, until in the French *résidence* it became the pivot of the whole composition. In the development of the English landscape garden we see the counter-movement; here the central place of the house is increasingly relativised, and it was included in the series of elements which ornamented the landscape. Finally, in the 19th century it even disappeared completely from the composition, as the landscape garden became the landscape park.

Second, the scale of the composition changes. In the Renaissance villa all the active composition elements were focused on the scale of the house, in principle within the reach of one glance. In the French *résidence* the mirror axis was stretched by means of perspectival correction, resulting in the active composition elements becoming larger (and more capable of manipulation) to the extent that they lay further from the house. Moreover, some elements were lifted out of the context of the garden, and accommodated separately in the *bosquets*. Others were transformed and employed in order to bring the scale of the much larger estate under architectonic control. As it were, they were moved to another visual domain. In this a second scale became apparent in the composition, for instance in the relation between the main axis, a *patte d'oie* and a system of avenues. In the English landscape garden there are even three levels of scale to be distinguished in which the active composition elements are employed. First, there is that of the house and its immediate surroundings. Second, there is that of the estate or middle plan. Third there is the panoramic scale of the landscape outside of the estate. The elements are thereby transformed both in terms of size and place. There is no longer any immediate architectonic relation among (or even possible among) these elements; visual coherence is brought about by the morphology of the landscape or by movement, for example by a river valley or by an avenue or drive. Through this the composition scheme differentiates itself into a number of separate composition schemes that in their mutual dialectic bring the panoramic scale of the natural landscape into relation with the scale of the house.

The conceptual series

One can also place the examples into the development of the spatial design, as it has extended over five centuries. This series, which we have termed a conceptual series, gives insight into the architectonic conquest of the space in time.

The stage-managing of the 15th- and 16th-century Italian villa marked a crucial phase in the development of Western European landscape architecture. On the basis of an explicitly formulated idea of nature, the surrounding landscape began to play an essential role in garden design. In this, the villa garden represented an expansion of the tradition of the medieval court or *hortus conclusus*. The relation between house, city and landscape here received its expression for the first time.

The landscape architecture of the Italian Renaissance villa displays a number of preparations for French garden design and for English landscape art. The relation of the villa with the French baroque garden would seem obvious. French garden design did make use of all the architectonic tools that were developed in the villa plans, but for all this one must not see the latter as a continuous development from the former. For the Renaissance architect the design matrix, the coherent

system of dimensions and relationships, formed a design model in which the landscape could be included in the architectonic composition of the villa through the co-ordination of elements. Even when the axis was awarded a certain degree of independence, in the Renaissance villa it remained only one of the elements whereby the plan was ordered.

In the French *résidence* the relations between the buildings, gardens and landscape were formalised with the aid of geometry and proportion, and dealt with within a perspectival concept of space, as had been done in the Renaissance villa. In the French baroque garden, however, the basic plan was subordinated to the central mirror axis on which the perspectival illusion of a harmonious landscape was conceived, and by which it was controlled. Unlike the case of the Renaissance villa, the garden was not included in a panoramic landscape; Vaux-le-Vicomte, for example, is situated in a valley. The unordered man-made landscape was excluded; nature was reordered anew as a system in the garden, and the horizon was artificially placed within the bounds of the viewing apparatus. An elaborate system of avenues linked the garden with the estate, and estates with one another and with the city, creating an architectonic *Grand Ensemble*. The urban ensemble of buildings and landscape that was normative for the spatial typology of the 18th-century city was derived from the form of the formal garden.

The links between the Renaissance villa and the development of the English landscape garden are of a different nature. The break between landscape art and the classic design system is generally explained with reference to a sentimental concept of nature and the orientation to Romantic literature and painting. But if we permit ourselves to focus on the garden as a natural tableau in which the building is one of the decorative elements, then it is precisely the similarity with villa architecture that becomes evident.

The most important change in the English landscape garden over against the villa and the French garden was the breaking up of the unity of the architectonic composition, so that the references back and forth between architecture and landscape were no longer complete within one formal model, but were brought to the level of individual experience. In the French garden the perception of the landscape was perhaps objectified in a formal model, but this remained the prerogative of the king, who as it were mediated between the individual and the landscape. In the English landscape garden, perception was individualised. Each individual looked with his or her own eyes, and with his or her own impressionability. The landscape became a projection screen for many subjective realities.

The landscape garden was the model for the design of the suburban residential environment and the landscape park, which became elements of the 19th-century industrial city. The avenue, boulevard and urban traffic pattern, even the park sys-

tems of Olmsted and others, are directly derived from historical garden concepts. Scenic drives pointed forward to the traffic systems of the modern city. This development represented the rise of a modern conception of time and space.

In a deeper sense, the classic garden was representative of the changelessness of the cosmos, a way of dealing with an eternity that repeated itself in the present. In the formal garden this order developed into an absolute concept of space and time, an invariable architectonic space over against eternally continuing, linear time. On the other hand, the projection of a future without finality, the world as a chain of changes, was reflected in the broken classical order of the landscape garden. If the Renaissance villa was still a microcosm in which the individual knew himself as sheltered within the divine governance of nature, the landscape garden already has an unsettled, proto-metropolitan character, the forerunner of a dynamic landscape in which the individual moves over great distances and lives, works and engages in recreation in different places and at different times.

Experimental landscape architectonic design

A new series of experimental compositions can be created through the transformation of the compositional scheme in confrontation with another situation. Knowledge of the villa design therefore is not only significant for landscape architectonic research, but also for contemporary landscape design, because of the light which can be thrown on the landscape architectonic dimensions of an assignment. Three aspects can be distinguished in this.

First, not every landscape design is a landscape architectonic design; one can only speak of the latter if the various layers of the design are dealt with in their mutual relationship. Second, the composition scheme of the villa has experimental significance because it offers the possibility for confronting a developed architectonic system with a landscape that is still to take on a coherent architectonic form. Finally, the villa is a qualitative model for contemporary landscape design, which permits the characteristics of the landscape architectonic composition to be used as a standard for the quality of the designed landscape.

The application of the compositional scheme presupposes a model of the contemporary landscape as a formal system. A further differentiation of the landscape architectonic research into various domains, which each will make a specific application of the knowledge possible.

The landscape as form system

The contemporary landscape is in principle to be regarded as a dynamic system that is constantly being transformed under the influence of social forces. The natural landscape was

shaped by geological processes, without the intervention of man. The man-made landscape arose from human occupation and man's cultural and technical control of the natural landscape. The urban landscape is in turn shaped by manipulation of the natural and man-made landscape by civil engineering, but has its own pattern. In this sense one could consider the landscape as an interaction between the geomorphological system of nature, the cultural/technical development and exploitation patterns of the man-made landscape, and the architectural and traffic systems of the city.

This being the case, in its form the contemporary landscape exhibits a series of strata which one, by analogy with the foregoing, can consider as a layering of various form systems. The natural landscape has an organic form which reflects its geological origins. The technological form of the man-made landscape arose from the confrontation between the natural form and the development grid, which in itself is neutral. The urban landscape has a functional form, with as its foundation a pattern of urban functions in relation to the traffic network. These form systems include both implicit metaphorical and formal elements and explicit architectonic provisions of lines, points and areas, spaces and sight lines. One could call this the architectonic form system. The point of departure for landscape transformation lies in this architectonic form system (latent or otherwise), which is perhaps more complex in nature but nevertheless is in principle comparable to that of the villa.

Theoretically, contemporary landscape design can therefore be separated into various manipulations of the landscape which are similar to those in the villa design. The topography of the natural and man-made landscape is rationalised and activated in the geometric basic form or basic plan. The spatial form activates the spatial effect of the three-dimensional landscape space. The metaphorical structure recalibrates the metaphorical-spatial effect of the natural and man-made landscape in relation to elements of the urban programme. The form of the programme creates zones in the landscape and gives an architectonic expression to the programme in relation to the traffic pattern.

Research by design

In his *Jardins élémentaires* Michel Desvigne envisaged hypothetical transformations of the Villa Medici in Rome. The natural morphology, which was dramatised into a dynamic river valley with striking slopes, was his point of departure.

The drawings observe the landscape design at a critical moment in its existence. Through the confrontation of systems cast onto one another (termed 'transgression' or 'superposition') unsuspected combinations arise that lead to a new composition. The new is not yet nameable, which means the composition, as a reflection of the various elements in

their relation to one another, has the nature of a theoretical proposition.

Desvigne's study shows that there are various research domains distinguishable within landscape architectonic research. The variability of the object to be designed or investigated plays an important role in this, as do the differences in context. The object could be, for instance, a building, a programme or an ensemble, but could also be the composition scheme of a villa. The context could be the location, for example, or a particular floor plan or a part of the city, but it could also be the landscape.

Worked out on the basis of the villa design, the following scheme of landscape architectonic research is created:

		OBJECT (villa)	
		Fixed	Variable
CONTEXT (landscape)	Fixed	Design Research	Identifying Research
	Variable	Typological Research	Research by Design

The research in this book includes design research (a particular villa in a particular context) and typological research (comparison of villas in different contexts). These are the basis for two other important forms of research, respectively identifying study and research by design. The composition schemes that are uncovered in design research and typological research can be used in these.

In the identifying study, a composition scheme, whether transformed or not, can be projected onto a new landscape to be organised in order to 'test' it in landscape architectonic terms. The objective of this is to detect the hidden formal qualities of the situation or the landscape.

In research by design both the composition schemes and the landscape are transformed step by step. The purpose of this is the critical development of the internal logic of an experimental composition. Michel Desvigne's *Jardins élémentaires* is an example of this.

The villa as qualitative model for landscape design

The contemporary landscape is the result of human intervention, and in that does not differ fundamentally from an architectonic or urban planning design. It therefore must also be understood – and function – in that way. This involves the 'veracity' and 'character' of the landscape design. The model of the villa provides a creative and critical system for being able to investigate, define and develop the quality of the future landscape.

The quality of a landscape can be reduced to the classic Vitruvian standards for the quality of architectonic composi-

tion, *utilitas*, *firmitas* and *venustas*, or utility, solidity and beauty. Both the 'truth', the universal, classic condition, and the 'character', the peculiarity, the expressive content of the landscape design, are important in this. When is a design in such a state of balance that a useful, sound and beautiful landscape can come out of it? The analyses in this book teach us that this is only the case when the various processes of the landscape reinforce one another to create a new, coherent landscape architectonic composition. This touches upon all the layers of the design and they each receive their own expression or 'character'. This multiplicity of voices determines the wealth of possibilities for interpretation in the composition, and thereby the quality of the design.

Utilitas refers to the relation between *otium* and *negotium*.

Otium is the measure for the manner in which room is made in the programme form for cultural reflection and a meaningful encounter with nature, and individual and collective forms of being outdoors, and how these relate to the *negotium*, economic utility. The definition of the public domain affords an insight into the manner in which the spatial form is balanced and geared to public functions.

Firmitas refers to the relation between stability and the openness to incorporate change. The functional stability of the programme form and the ecological stability of the spatial form are standards for sustainability. The compositional stability affords insight into the sturdiness of the composition, the degree to which it can accept spatial dynamics without breaking up.

Venustas refers to the relation between the architectonic form and the content of the landscape. The *genius loci* affords insight into the manner in which the design anchors the basic plan in the topography and connects it with the natural substratum. This is a measure of the local specificity or originality of the design. The metaphorical structure expresses the various interpretations and materialisations of nature, and is the measure for 'readability' and the degree to which the designed landscape can be experienced and understood. The spatial dynamic affords insight into the spatial effect of the architectonic composition.

The model of the villa represents an infinite reservoir of landscape architectonic concepts for anchoring these qualities in the contemporary landscape. It contains the design keys for dealing with different landscapes and placing them distinctly over against the new urban topology, through this time and place can again receive an original meaning. Thus Arcadia and metropolis could become interchangeable concepts, in a certain sense the apotheosis of the ideal of the *villeggiatura*.