In recent decades, Carlo Scarpa’s relevance has been steadily on the rise. At a time when architects have to use existing city and building structures as a point of departure for their work, his œuvre remains a source of inspiration. Buildings such as the Castelvecchio in Verona show us that architecture is capable of communicating its own history, has meaning, and develops a contemporary dynamic of its own. Scarpa’s layered architecture makes visible the process of becoming and the time-related sedimentation of material and meanings. It is especially at points of transition and interface that layering becomes a narrative element that elucidates the tectonic qualities of the building. Overlaying includes leaving a record of how an object came into being – either by means of the sediments of its history or through the intervention of the architect.

In this book Anne-Catrin Schultz presents her research about the phenomenon of layering in Carlo Scarpa’s architecture. Layering describes the physical composition of layers defining space as well as the parallel presence of cultural referrals and formal associations imbedded in the physical layers.

Scarpa’s work is an embodiment of multidimensional layering and, at the same time, a focal point for architectural movements of his time that have stratification as their theme. In most buildings, the principle of layering may be regarded as something that is part of the nature of building. Functional conditions call for planes, elements, or «layers» to provide the supporting structure, and others to protect from rain, cold or the heat of the sun. However, architectural layering goes beyond merely fulfilling technical requirements – the principle of layering may be used as a formative method that allows elements of different origins to be combined into a nonhierarchical whole. Layering exists in a realm of complexity and implies a capacity of being interpreted that goes beyond itself and creates references to the world at large.

The first part of the book examines Scarpa’s fields of influence and intellectual roots and puts them in perspective with former theories and their interpretation of architecture as layered, for example Gottfried Semper’s theory of clothing. The second part displays an analysis of three major projects, Castelvecchio and Banca Popolare in Verona and the Querini Foundation in Venice.

Anne-Catrin Schultz studied architecture in Stuttgart and Florence, and earned a Ph.D. in architecture theory at the University of Stuttgart. Following post-doctoral research at the MIT, she relocated to the San Francisco Bay Area and worked for several years with Turnbull Griffin Haesloop and Skidmore Owings & Merrill. She has taught as a lecturer at the University of California in Berkeley and is currently teaching at the California College of the Arts and at the San Francisco City College.
In recent decades, Carlo Scarpa’s relevance has been steadily on the rise. At a time when architects have to use existing city and building structures as a point of departure for their work, his oeuvre remains a source of inspiration. Buildings such as the Castelvecchio in Verona show us that architecture is capable of communicating its own history, has meaning, and develops a contemporary dynamic of its own. Buildings are stones and stones become layers. A house is not just a house. It is a narrative element that dissolves the historic as it state of the building. Overlaying becomes a driving method of its evolution. By the means of the layers this history comes through the architecture of buildings.

In this book, Anne-Catrin Schultz presents her research about the phenomenon of layering in Carlo Scarpa’s architecture. Layering describes the physical composition of layers defining space as well as the parallel presence of cultural references and formal association embedded in the physical environment. Scarpa’s work is an embodiment of multidimensional layering as a method of building and as a historical movement. In his buildings, he uses layers of material and symbolic meanings to communicate the history of the buildings. The principle of layering goes beyond merely fulfilling functional requirements. It is a method of architecture that allows for the combination of different elements into a non-hierarchical whole. Layering exists in a realm of complexity and creates references to the world at large.

The first part of the book examines Scarpa’s intellectual roots and puts them in perspective with former theories and their interpretation of architecture as layered, for example Gottfried Semper’s theory of clothing. The second part displays an analysis of three projects, the Castelvecchio and the Banca Popolare in Verona and the Querini Foundation in Venice.

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Layering is a nonhierarchical principle that appears in various forms and has not only a physical but also a substantive component.

1. Diagram of influences.

2. Portrait of Carlo Scarpa.

Scarpa’s work in northern Italy is an embodiment of multidimensional stratification and is at the same time a focal point for architectural movements of his time that have stratification as their theme. I chose three projects to illustrate the physical and intangible appearance of layering: Castelvecchio in Verona, the Fondazione Querini Stampalia in Venice and Banca Popolare in Verona. The Castelvecchio Museum in Verona is an illustration of the stratified layering and reinterpretation of a historic and existing structure. The Fondazione Querini Stampalia in Venice represents an interpretative and thematic renovation within the historic city of Venice. The Banca Popolare in Verona shows how Carlo Scarpa builds anew layers he «reads» among the historical components, and supplements them with his own elements. Formal and narrative layers are illustrated analytically, while digressions into relevant subject areas provide information about Scarpa’s background and inspiration. Layering is a nonhierarchical principle that appears in various forms and has not only a physical but also a substantive component.

In recent decades, Scarpa’s relevance has been steadily on the rise. At a time when architects have to use existing city and building structures as a point of departure for their work, his oeuvre is a source of inspiration. Buildings such as the Castelvecchio in Verona show us that architecture is capable of communicating its own history, and meaning, and develops a contemporary dynamic of its own. Frank Lloyd Wright's books for complex systems, functioning as add-on elements, convey a multilayered complexity that allows narrative (memorative) or formal subject matter to become operative simultaneously. This principle of layering informs the aestheticisms of many 20th and 21st century architectures.

Layering is part of our day-to-day perception, based on the simultaneous existence of objects of different age and provenance. Added to this, there are the traditions, connections, and memories that give our daily existence an historical dimension. I, historical, personal roots, and thought patterns are overlaid with new impressions and learning processes that are constantly expanding what already there. In the same way, built configurations provide the framework for new construction. Interventions in the existing context are integrated as additional layers leaving the visible sign of their time and referring to the conceptual essence of their cultural belonging.

My interest in Scarpa’s work and the phenomenon of layering is deeply connected to my search for concrete reasons for design decisions. It is essential to me to work with a composition system that is able to accommodate flexible aesthetic expressions while being strongly connected to the building’s place and function. I am hoping that this research will contribute to my own capability of leaving a conscious architectural testimony of my time while preserving, celebrating and often altering the existing literal and phenomenal context as Carlo Scarpa was able to do.

Preface

• The experience and memory of humankind are laid down in layers in the physical environment, concretely and graphically. Every new part exploits ancient forms, materials and ways of making. Building is, at base, a sign of hope, a sign of society’s belief in future, a gesture forward in time.«

This book is intended as a contribution towards giving Carlo Scarpa’s work an adequate place in the context of 20th century architecture. It does not seek to define him stylistically, rather, it is an endeavor to uncover his multiple connections with his contemporaries and with historical models. I am using Scarpa’s architecture to examine the principle of stratification in architecture and its complexity while producing a definition that could be applied to other architectures as well.

Essays about the different fields of interests that influenced Scarpa in the first chapters will be complemented by a diary of photographs and analytical drawings about three of his projects. Stratification describes the arrangement of elements but is also a cultural attitude of parallel existence. Stratification is a constantly recurring theme in 20th century architecture criticism and architectural theory. My own observations in this book is a result of my Ph.D studies done as a second generation scholar. Having not met Carlo Scarpa personally, my conclusions were derived from his work and related publications. Guido Petrosoli who has worked with Carlo Scarpa extensively throughout his career, will enrich the content of this book by sharing more personal information also by addressing Scarpa’s way of drawing as well.

In most buildings, the principle of stratification may be regarded as something that is part of the nature of building. Functional conditions call for planes, elements, or “layers” to provide the supporting structure, and others to protect from rain, cold, or the heat of the sun. Here, stratification is a method of assigning a particular façade element to each individual function through technical specification. Design-related wishes in connection with a building may lead to additional, decorative layers, unless they can be combined with the elements of the technological requirements. These concepts have long been accepted when it comes to looking at a façade from a technical point of view and are commonly referred to as layered façades. However, architectural layering goes beyond merely fulfilling technical requirements – the principle of layering may be used as a formative method that allows elements of different origins to be combined into a non-hierarchical whole. Layering exists in a realm of complexity and the capacity of being interpreted that goes beyond itself and creates references to the world at large instead of narcissistically contemplating itself alone. A building becomes a cumulative composition made up of elements of varying materials and provenance. In contrast to the architectural monolith which demonstrates a sheer three-dimensional volume made from one material and negates the “hollowness” of architecture that is implied by its function, layered architecture celebrates the parts and the process of its genesis. Instead of the compositional unity of a monolith we have the compositional balance of elements and their referents.

1. Diagram of influences.
1. The principle of layering: precedents

1.1. Layering and stratification in architecture

The term for layering, »stratification«, is etymologically derived from the Latin words »stratum« (cover) and »ficere« (make). In the figurative sense, a layer needs a frame, a base material, or an additional layer in order to carry out the function of »cover«. Stratification involves the plurality of individual elements and the relations between them.

The concept of stratification in political science refers to the »vertical structuring of the members of a society on the basis of socially relevant characteristics that influence the behavior of people toward each other«. Geology uses the term stratification for the purpose of interpreting how material is arranged. »The type of stratification establishes the relative age of the rock strata. When the strata occur in a normal sequence, the understratum is older, while the roof is younger than the stratum.« The order and composition of the stratification contains information about the development of the geological formation. The chronological component of the succession of sedimentary deposits and the process of a mechanical change of this stratification is an essential component of the definition. In archeology, too, the position of individual strata contains information about where they fit chronologically. The study of archeological finds involves the analysis of largely horizontal strata created as cultures, peoples, or settlements declined and as human settlements were reorganized. In psychology there are various theories that are concerned with the stratification of the human personality and its repercussions. According to Ruttkowski, the existence of each layer is made possible by the layer that lies under it.

Writing about an »aesthetic of strata«, he also discusses connections with art, particularly painting: »It is the nature of art, after all, that it is layered, and that it appears to us layer by layer.«

Stratification in architectural discussion

»Long before the human spirit was moved to build, a movement to create structures existed in the universe, and thus layers and joints were formed. And so it has remained to this day. Just as we erect our walls, the earth, since time immemorial, has been creating layer by layer from the precipitation of the air and the sediments of the water.«

Applied to the objective components of architecture, stratification means the superposition and apposition of layers of material. Just as the position and order of geological strata says something about their age and their origin, the position and formulation of an architectural stratum may contain information about its function and provenance. The aesthetic effect of stratification is expressed in the details of how it is joined together and in the visualized superpositioning, which demonstrate the processlike nature and changeability of architecture. A purely sedimentative analysis of strata includes such nonphysical components as memory, metaphors, and references to other places or buildings. Architectonic volumes consist of elements that formulate a floor, wall, and ceiling, or combinations thereof. The joining of these individual elements into a whole may take place as a series of sediments and create strata that react to the various requirements of a building.

In European architectural theory there have been many different attempts to define »strata« or »layers« in architecture, and these were consulted particularly in a definition of modern architecture. In his Tectonics, Carl Gottlieb Boetticher describes an attempt to separate architecture into the core form as the »mechanically necessary« structure and the art form as the »explanatory«. Applied to the objective components of architecture, stratification means the superposition and apposition of layers of material. Just as the position and order of geological strata says something about their age and their origin, the position and formulation of an architectural stratum may contain information about its function and provenance. The aesthetic effect of stratification is expressed in the details of how it is joined together and in the visualized superpositioning, which demonstrate the processlike nature and changeability of architecture. A purely sedimentative analysis of strata includes such nonphysical components as memory, metaphors, and references to other places or buildings. Architectonic volumes consist of elements that formulate a floor, wall, and ceiling, or combinations thereof. The joining of these individual elements into a whole may take place as a series of sediments and create strata that react to the various requirements of a building.

In his Tectonics, Carl Gottlieb Boetticher describes an attempt to separate architecture into the core form as the »mechanically necessary« structure and the art form as the »explanatory«.
Spatial stratification, material stratification, and cladding

In analyzing space, the term stratification is used to describe the succession of planes or spatial sequences. Let me give a few illustrations. Here is how Eckehard Janofske describes Hans Scharoun’s Mohrmann House in Berlin-Lichtenrade (1939): “A sequence of layers is noticeable when we look through from the dining room in the direction of the window for flowers and houseplants. Apart from the doorlike opening of the room in the direction of the dining area, the buttress between the semicircular dining area and the straight wall of windows in the living-sitting area represents the first layer; the fireplace block is the second. The window behind it, or rather the flower window, is the third and last layer before our eyes are arrested by the landscaping in the garden. It is basically because of this sequence of layers that we have an impression of spatial complexity and distance. As a result of components such as the fireplace block, the parapet arch over the sofa, or the masonry pillars between the two spaces that move into our field of vision, the borders of this space are not immediately recognizable, as is the case in a room with four walls.”

Franco Fonatti applies the term layering not so much to the spatial disposition of a building, but rather to the façade. Separating the functions of construction, shell, openings, and shading elements, and shifting them horizontally means that construction is separate from weather protection and causes them to appear “layered” because of their additive arrangement. In his analysis of the Giuliani-Frigerio House by Giuseppe Terragni, Fonatti separates the façade into four layers. The metal frames of the balustrades form the first; the projecting parts, such as the balconies, the second; and perforated façade the third layer. The fourth, innermost layer is formed by interior parts such as windows and shutters. Fonatti analyzes the agglomeration of the elements, but without ascribing a function to them. The façade creates a transition between inside and outside that gains depth through vertical differentiation.

Pierre von Meiss associates the term with suggesting spatial depth, particularly in painting. He interprets the use of spatial layers as a phenomenon whose function, together with perspective, is to produce the effect of depth. What is of fundamental importance is that the layers overlap, since we recognize that an object which partially conceals another is located in front of the latter.”

From the Renaissance until well into the 19th century, painters do not conceal their preference for perspective and spatial depth. Medieval painters and those who paint in a different way, such as Gris, Braque, Le Corbusier, and later Slutzky, are masters of shallow-depth space, in which superposed planes appear crowded and close together. The architects, too, have tried to structure their buildings and spaces by these means. Some, in their work, use the parallel planes, with minimal and undefined intervals between them, not only shallow-depth space, but also the transparency created by fragmentary disappearance and reappearance of one plane behind the other. This is the principle of several shallow-depth spatial layers superposed, particularly in the area of the façade, favored by Terragni in the Frigerio House in Como, Le Corbusier in the Villa Stabin in Garches, or Carlo Scarpa in the articulation of the walls and windows of the Museo di Castelvecchio in Verona.

Material stratification, the gapless layering of material planes, corresponds with the geological meaning of the term explained above. Unlike spatial stratification, which is defined by the space between layers, material stratifying consists of material planes that lie immediately on top of each other and together form an element. Increasing functional demands made of components such as façades have led to the separation of the individual functions that are expressed in a multi-layered façade. “Resolution of the construction into individual layers, which was carried out intentionally, divided a particular building component – for instance, a two- or even three-layered masonry wall – into different elements for different functions. Only the totality of the layers makes the wall physically adaptable to divergent climatic conditions.”

Technical factors lead to a formal expression that influences the form of the architecture. This type of variability through layering helps to optimize the implementation of technical requirements. Modern standards for façades demand that
Aesthetic overlapping: the concept of transparency

The position of layers and their placement in relation to each other determine their effect. When planes overlap congruently, their material qualities become visible only at edges or cross sections. When examining stratification, it is primarily the spaces between layers that are relevant. In overlapping we get common or touching surfaces, which thus fuse into one system. The overlapping of elements makes it possible to experience and see what lies underneath. Gyorgy Kepes investigated the simultaneity of overlapping forms and the resulting spatial effect: "If one spatial form obstructs our view of another form, we do not assume that the second ceases to exist because it is hidden. We recognize, as we look at such overlapping figures, that the first or uppermost has two spatial meanings – itself and beneath itself. The figure which intercepts the visible surface of another figure is perceived as nearer. We experience spatial differences of depth. Representation of overlapping indicates depth. It creates a sense of space. Each figure appears parallel with the picture-plane and tends to establish a receding spatial relationship." He goes on to write about transparency and superposition: "Transparency, interpenetration: If one sees two or more figures partly overlapping one another, and each of them claims for itself the common overlapped part, then one is confronted with a contradiction of spatial dimensions. To resolve this contradiction, one must assume the presence of a new optical quality. The figures are endowed with transparency; that is, they are able to interpenetrate without an optical destruction of each other. Transparency however implies more than an optical characteristic; it implies a broader spatial or-cal meaning as one sees each figure now as the closer, now as the further one."

Gottfried Semper's architectonic principle of cladding be developed further in order to meet current requirements. Double façades fulfill present-day technical challenges with new aesthetic effects. Technical development does not stop with the separation of building elements according to their function: the goal is the automatic variability of building components that spontaneously adapt to changing conditions. The focal point of this architecture is the variable outer wall that adapts to indoor and outdoor climate, takes into account specific user demands, and at the same time permanently resists physical stress factors, such as weather conditions. The term outer wall, in this context, does not appear to be appropriate for describing such building elements. It actually consists of multilayered, thin strata or skins, sensitive and capable of lightning-speed reaction while their appearance changes continually.

Mike Davies developed the element of the polyvalent wall, which once more unites the separa-
tion of functions described above into a single element that consists of several micro-thin layers. These individual skins fulfill a number of different requirements and are capable of reacting to changing outdoor conditions. He developed the intelligent façade, which adapts to prevailing cir-
cumstances.

The genesis of layering mechanics is in the aesthetic realm of architectonic cladding. This may be defined as a layer applied to the structure. Independence from constructive factors offers the designer free play in terms of choice of material and implementation. Two different forms of clothing may be defined. One completely clothes the space provided by the structure, follows its contours and forms a type of "outer or inner lining". It shows this aspect of clothing space only in parts. The other type of clothing is independent of existing conditions, forms its own spatial con-
fugations – slabs and panels – and is visible in joints and side views, demonstrating its stratified character. Depending on the material, there are a number of different forms of clothing, which can take the shape of a coat of paint or plaster, and paneling or wainscoting. Paint or plaster as a "coating" is the thinnest form of clothing. Mark Wigley writes about the use and significance of white paint in the classic modern period: "What has to be concealed is the fact that the white is a "coating" is the thinnest form of clothing. "What has to be concealed is the fact that the white is a coating" is the thinnest form of clothing. Mark Wigley writes about the use and significance of white paint in the classic modern period: "What has to be concealed is the fact that the white is a coating."
go together, there is a bond because they reciprocally modify each other.” In order to make the layers perceptible, there need to be places of transition that function simultaneously as a link and separation. The frames and edges (should it be “the frames and edges?”) cause the form and material to stand out against surfaces that are meant to be differentiated. The process of layering separates individual planes, which are thus able to have their own meaning as an element and simultaneous part of a total complex.

Colin Rowe continues the examination of the concept of transparency with reference to Kepes. He uses the term layering in the context of a spatial analysis of Le Corbusier’s Palace of the League of Nations. By way of analyzing the “system of spatial stratifications,” he shows a relationship between Le Corbusier’s façade of the Villa Garches and one of his paintings. The façade consists of fragmentary planes, it is put together “with these parallel planes as a connected whole,” and the effect of all of them is a vertical stratification of the building’s interior. In the Bauhaus complex, too, he observes spatial layering “presented as a composition of slab-like buildings whose forms suggest the possibility of constructing space in layers.”

Transparency “can be a characteristic inherent in the material, as in a glass curtain wall, or transparency may imply an organizational priority. Consequently it is possible to distinguish between real or literal transparency and apparent transparency or transparency in the literal sense.” An examination of the texts of Kepes, Rowe, and Slutzky reveals how complex is a definition of stratification that in this case is taken from the analysis of paintings and, applied to the Villa Garches, is transformed into the concept of spatial stratification. “Stratification” as they see it may be used as the “tool of contemplation” that reveals the spatial interrelations of an architecture. Spatial layering in Le Corbusier is applied to spatial segments and is dependent on the use of architectonic elements that are homogeneous in form and have no direct narrative bearing on references or traditions. The examples that are examined in this book are to be understood in terms of a concept of layering that consists of material distinctions and nonphysical associative components.

1.2. Carlo Scarpa – stratified architecture

Carlo Scarpa’s career began in the glassworks of Murano, where he acquired his aesthetic and cultural knowledge. His work as a consultant for the Biennale (1948–72) gave him the opportunity for the international exchange of information about art and architecture and direct contact with international artists and architects from all over the world. In 1953 Scarpa began teaching architecture as a lecturer in decoration at the Istituto Universitario di Architettura di Venezia. In 1951 he became a freelance lecturer in interior design. His architectural works include, among other things, apartments and houses, exhibitions and museums, stores and designs for public spaces,
Stratification denotes both — isolating and identifying individual elements and at the same time combining them in a stratified configuration. Scarpa’s details speak of interlaying and didactically exposing architectural detail on the most varying scales. The fitting together of elements begins with abstracting the individual parts; at the end of the process a system of references is created that is not only limited to material and form, but communicates as an inseparable whole and may include reminiscences of artistic or architectural themes.

Scarpa himself writes: “To achieve anything, we have to invent relationships.” Using a pas sageway in Castelvecchio as an illustration, Karljosef Schattner points out how Scarpa avoids “in- termixture,” so that each part is assigned its own identity. Spatial stratification or stratification of material serve not only to create space but also to formulate a certain atmosphere that links traditional and the past with the present. Scarpa’s use of forms has “symbolic depth,” whose interpretation is tied to a knowledge of his cultural sphere and range of interests. “Like the physical, psychic, and intellectual reality of a human being, the artistic reality of architecture, too, has symbolic dimensions.” The concept of stratification is given an added dimension by an immaterial component. Otto Friedrich Bollnow distinguishes mathematical space from “lived-space,” which flexibly reacts to lived relationships and meanings. This is what Scarpa adds to his “strata” by elevating them from a simple arrangement of materials and filling them with communicative significance.

In order for the architect to be able to form volumes by means of the principles described above, these volumes must be understand as compositions consisting of planes. The basis of the language of a stratified architecture is the fact that the architectural elements are organized as floor, wall, and ceiling. In creating space, Scarpa’s use of spatial strata serves to form individual zones or to provide a transition from one area to the next. His strata of material serve to define space and transport narrative components involving the locale, history, or material. In his building modifications, his intervention is one stage among many in the sedimentative process by which the building was created. He uses the mechanics of stratification to make visible levels that chronologically follow each other, and formal given. At the same time, the design process does not stop with implementation and continues to be a reaction to existing conditions. What was there earlier remains in existence like a kind of palimpsest and begins a communication with the newly added elements. The way layers applied at different periods of time are made visible illustrates the development of the buildings. Different epochs and different ways of using forms can exist side by side with their content legible.

Hermann Czech speaks of the “historical multilayering” and of the “overlapping of different ideas of space that coincide (or else are simulated),” or the “ambiguity of colors that on the one hand play an abstract role in the color wheel and on the other hand have a concrete role in certain associations” and thus alludes to both components of stratification, the combined effect of different concepts of space and the transport of associations. The process of overlapping planes makes possible the simultaneity of forms whose nonvisible parts can be supplied by the per ceiver. In the case of individual elements, not only the mechanics of how they are installed but of their manufacture as well are made visible. Traces of how they were toiled and used become an additional component of the design. Scarpa refers to the thickness of the material by creating a visible cross section. The placement of material has didactic components, it makes reference to the material, its context, its processing, and its surroundings. Form and choice of material can carry memories of contexts that create mental connections between buildings and cultures.

Working method

If we extend the investigation of Scarpa’s architecture to include his working method and manner of representation, we find that his procedure is also characterized by the overlapping of various...