

VALERIO OLGIATI – English texts

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Laurent Stalder and Sandra

Bradvic Foreword To begin at the beginning: classical architectural theory puts the drawing at the beginning. Due to its abstractness and universality the drawing is the most obvious adjunct to the idea and is therefore laced at the beginning of the design process, whereas other forms of representation such as perspectives or models—anticipations of built reality—are intended as a means to examine a building and its components prior to their realization. The stages of a design project, from an idea to a realized building, are in this way hierarchically and chronologically fixed. The individual projects presented here may be read in this same sequence. Abstract graphic illustrations—ground plans, sections and elevations—are followed by the ‘illusionistic’ forms of representation—rendering or photography. And the same applies to the sequence of the accompanying texts. They lead from the analysis of the design process through that of the individual buildings, up to the theoretical classification of the work. This arrangement, which organizes the interrelationship between drawing and photography, illustrations and text, still represents only one possible approach. Yet to shift one’s perspective and regard the book, not as an illustration of a design process but as an independent object, is to open up a variety of approaches. Thus the illustrations—plans, renderings, but also photographs—are without exception newly created digital images that allow the supposedly imagined world of drawing to merge with the reproduced world of photography. The projects in turn do not follow an order based on chronology, typology or scale but are subordinate rather, to the argumentation in each individual text.

Finally the texts, which arise from the architectural work, are illustrated with small format pictures from the architect’s Iconographic Autobiography, which as a personal compilation of mental images in turn served as a basis for the projects. Each different viewpoint allows a different beginning: it is the text that stipulates the order of the projects; it is the illustrations from the Iconographic Autobiography that are updated in the projects; it is the plan that precedes the digital images; it is the renderings that call into question the visual reality of the photographs; and it is also the content that determines the book’s form, and the book’s form that organizes the content. Mental and real images; photographs and plans; illustration and model; text and image; support and medium; all of these constantly change sequence depending on the authors’ viewpoints, and force the reader to permanently redefine the beginning. This is therefore not a book that retrospectively summarizes the architect’s designs but first and foremost an independent object that invites exploration. If this is illustrative then only in that it demonstrates a method for precisely investigating the foundations of a project, and for re-imagining the latter’s structure. To find the beginning therefore means, also for the reader, to adopt a perspective from which to query a project. Insofar one never stands at its beginning nor at its end but always—as is the case right now—somewhere in the middle of it.

Laurent Stalder Fifty-five Images The term “iconographic autobiography” under which, in 2006, Valerio Olgiati published a collection of 55 small pictures—which accompanies the essays in this present volume—says more about what the collection is not than about what it is.¹ It is not a handy guide to iconography in the sense of a systematic encyclopaedia that might serve as a work of reference on architectural issues and motifs. On the contrary, the collection defies inclusion in any single category, be it on the basis of type, topic, medium, content or the place or period of origin: architectural plans (12), photographs (30), prints (2), oil paintings (6), watercolors (1) and film-clippings (1) alternate in a seemingly arbitrary sequence. The architectural images originating from Europe (14), Asia (11), America (10) and Africa (1) constitute by far the major part of the collection yet a number of landscapes (8), genre paintings (2), abstract compositions (2) and a single still life (1) also feature. Of the 36 illustrations of monumental and anonymous architecture, only eight buildings date from the 20th century. The captions that accompany the pictures at first seem equally cryptic: “Zevreila reservoir” is referred to as an “artificial lake” for example; an illumination by the Limbourg brothers as an “abstract and ideal” illustration; and the proportions of the Palazzo Strozzi are described as demonstrating an “extreme displacements of measures.” Elsewhere praise is given to architectural craftsmanship such as the “absolute” or “inconceivable precision” of an example of a Japanese dovetail joint or of the masonry of a wall in Cuzco. Yet nor is the collection an autobiography in the sense of an illustration of the author’s life. Certainly, alongside factual descriptions of

specific buildings, artworks and places—“very different hierarchies of space” (Column Palace in Mitla), for example, “non-modular” (Barnett Newman, *Onement 1*, 1948), “cultic projection of the universe” (Monte Albán), “infinite wealth of possibilities of interpretation” (Sigurd Lewerentz, Church in Klippan, 1962–1966), or “static calculations” (Eladio Dieste, Centro Comercial, 1985)—which scrutinize each picture’s subject matter, one also finds remarks with a personal touch such as “magic beauty” (Fatehpur Sikri), “happy man [with a] handsome mustache” (Indian miniature, c. 1760), or “apparition” (Taj Mahal). Other illustrations such as the stable “of the Olgiati family in Flims,” the small landscape painting of the Palazzo Odescalchi by Jean Dubois, which “hung near Valerio Olgiati’s cot,” or the five houses designed by Tadao Ando, Kazuo Shinohara, John Lautner, Villanova Artigas or Paolo Mendes da Rocha, which the author “would live in” also evidently have biographical connotations. Another part of the collection comprises photographs or mementos of the architect’s travels: pictures of the grounds of Crathes Castle or Fatehpur Sikri, for example, or the aforementioned Indian miniature. Nevertheless, the collection neither constitutes an autobiography in the sense of a pictorial recollection of the architect’s life nor is it to be valued simply as an attempt at inventory. Although the images reflect the author’s personal experience, their purpose by far exceeds any mere accumulation of personal souvenirs. Valerio Olgiati’s intent in collating the *Iconographic Autobiography* is more fundamentally to demonstrate an authoritative and hence superordinate order in architectural thought, which underpins his own work. To interpret the *Iconographic*

Autobiography merely as a design instrument means to decipher its signs,² of which the individual images already signify a multitude: the composition of the Ionic temple plans refers to those of organizational structure; the cross-section of Borthwick Castle to those of spatial hierarchy; the shaded color drawing of San Cataldo cemetery to those of metaphysical imagery; the detail of a terracotta façade to those of craftsmanship; the film still of Brigitte Bardot—presumably—to those of wishful thinking. The individual images can be endlessly rearranged to form innumerable new connections, which, given the enigmatic captions, can lead to ever new interpretations—and, in the absence of clear guidelines, also to misinterpretations. These signs, which account for the Iconographic Autobiography's coherence, refer—in a simplified manner and to an increasing degree of abstraction—to three possible levels of interpreting the collection: a transient one that encompasses the atmosphere of the images; a compositional one that concerns questions of geometry; and a conceptual one that relates to its inner structure. Originally, 'atmosphere' describes the gas surrounding a solid. In the three late 18th and early 19th century oil paintings reproduced in the Iconographic Autobiography it dissolves at dusk in a yellow-green or blue haze the silhouette of ships in the harbor of Sevastopol (Ivan Konstantinovich Aivasovsky, *Great View of the Harbor of Sevastopol*, 1852), the horizon line of the hills of Tahiti (William Hodges, *View of Point Venus and Matavai Bay*, 1773), or a vista of Venice (Francesco Guardi, *Gondola on the Lagoon*, 1765). In the photographs of Fatehpur Sikri (as well as in Valerio Olgiati's competition drawings based on them), the edges of buildings are obscured by

mist and merge with the surroundings as an atmospheric entity, dependent on weather and time. It is no coincidence that the cloud with its elusive, immaterial, indefinite shape—so ubiquitous in the Iconographic Autobiography—has in Western painting repeatedly represented the bounds of that which can be represented, the dissolution of form in favor of the enigmatic.³ In the Iconographic Autobiography, too, atmosphere describes that for which no terms of description exist. Beneath a travel sketch by William Hodges stands the caption, "This is what the world one did not know looked like." Similarly, the Iconographic Autobiography refers to the Taj Mahal as an "apparition" whilst the light-flooded space of Sigurd Lewerentz's St. Peter's church is praised for its "infinite wealth of precise possibilities of interpretation." Indeed, atmosphere in architecture begins where construction ends. It describes vibrancy in terms of the color, light, odor or humidity by which a building establishes its outward appearance.⁴ Being thus committed to a tradition that understands architecture as the art of illusion, it ranges from the trompe-l'œil of the Baroque to the unconscious alphabet of metaphysical architecture, or the meticulously documented moods of the Swiss Analogen. It is that which determines the surfaces confining a space, which mediate between a building and its surroundings by means of structure, texture, material, color and ornament. In Olgiati's built work it is the interior wall of the school in Paspels, shaped like a folding screen; the rosette façade of Linard Bardill's studio in Scharans; or the exterior stone wall of Das Gelbe Haus in Flims, stripped of its plaster coating. Signs of atmosphere thus describe what is ephemeral, particular or mutable in the world of

architecture, such as light or weather conditions on a glazed wall, the desire for play with geometrical ornaments, the marks of time inscribed in an exposed wall. Atmosphere is fleeting and extrinsic also in the figurative sense. Its meaning is relative; one that ephemeral circumstance may only briefly fix in an image. Conversely, it can anticipate in the preliminary drawing an idealized world that has not yet begun to exist. It is no coincidence that the same hazy mood shrouds a shot of Fatehpur Sikri and the competition drawings for the Learning Center in Lausanne or the National Palace Museum in Taipei. In the desire to control even that which lies beyond the building, the “magic beauty” of the Indian site has there long since spread from the single structure to its entire surroundings. While the first realm of the *Iconographic Autobiography* is that of atmosphere, the second revolves around geometry. While the former manifests on the surface, the latter finds its expression within the object: in the building itself, in furniture, or even in the picture frame. It is their geometry that bonds the rigid, underlying grid of the *Iconographic Autobiography*, the rectangular or square picture frames and the individual images as a single entity, the legitimacy of which is constituted, beyond its specific visual content, by a variety of regular shapes—the triangle, square and circle—and variations thereof—expanded, doubled, added or divided, along their symmetrical axis, diagonally, or proportionally. It is geometry that links the most diverse illustrations: the square picture format of the miniature of the Limbourg brothers from *Les Très Riches Heures du Duc de Berry* (1412–1415) and Robert Ryman’s *Winsor 5* (1965); the “non-modular” division into three parts of Barnett Newman’s

Onement 1 (1948) and the floor plan of Parpan Castle; the central triangular figure of the Japanese dovetail joint of the Fujiyama and the drawing of Aldo Rossi’s cemetery in Modena (1971–1983); and the physicality of the central motif in the illustrations of the Palazzo Strozzi and the cliffs of the Strombollicchio. If there exists a development in the *Iconographic Autobiography*, then only that of variation on the geometric pattern, be this chronologically determined, as in the sequential development of Ionic temples between the 8th and the 4th century B.C.; syntactical, as in the variations of Donald Judd’s courtyard houses; or proportional, as in the synoptic chart of Doric columns in Delphi. The individual image thereby constitutes not a conclusion but rather one episode within the endless variations on a simple basic geometrical shape, which is described in the captions as “abstract and ideal,” “clear,” “absolutely precise” or “artificial.” Seen from this perspective, the ideal building types of the classical tradition—comprehensively featured in the *Iconographic Autobiography*, from the Greek temple (Erechtheion), the Renaissance palace (Benedetto da Maiano, Palazzo Strozzi, 1489–1539), the Neoclassical patrician house (Carl Friedrich Schinkel, Feilner House, 1828–1830) and the Modernist high-rise (Louis Sullivan & Dankmar Adler, Guaranty Building, 1894–1895), through to the rationalist infrastructure-complex of the 1970s (Aldo Rossi, San Cataldo Cemetery, 1971–1983) — can be easily linked by the criterion of simplicity to the great monuments of world architecture: the Temple of Dendera, the Mitla, the Izumo Taisha Shrine or the Taj Mahal. Removed from their historical or geographical context, these examples refer to

a self-referential formal debate within an architectural repertoire that is understood to be autonomous, the methodology of which is oriented toward its geometric coherence.⁵ To understand architecture as a problem of geometry means to understand architecture as an autonomous discipline, the grammar of which is aesthetic, regardless of any changes in the technical, social or economic world.⁶ In this respect the *Iconographic Autobiography* follows a phenomenological tradition that ascribes corresponding physiological and psychological laws of perception to the laws of form.⁷ It finds its correlation in architectural theory in E. L. Boullée's "effets des corps," Le Corbusier's "émotion supérieure," Minimal Art representatives' "gestalt sensations" or in the "forme forte" of the Swiss School of the 1990s, all of which connected the simplicity of geometrical shapes with the materialization of an ordering principle. In this tradition stand those signs of geometry expressed in Olgiati's collection of images and in the grammar of his entire oeuvre, with its countless variations on the square, rectangle or circle and, in certain cases, also on the triangle: the cube of House K+N in Wollerau, doubled in the National Park Center in Zernetz; the cylinder of the Medical Center in the United Arab Emirates or the elliptic roof aperture of the Studio Bardill in Scharans; the pyramid-shaped roof of Das Gelbe Haus in Flims or the triangular figures of the exhibition pavilion spaces at the Expo.02 in Biel. The third level of the autobiography is that of structure. Whilst the signs of atmosphere unify the individual images in terms of their color mood and the signs of geometry connect them in terms of their compositional regularities, the signs of

structure link them in terms of their inner coherence. Structure does not belong to the realms of surface or body (even though it does not exclude these), but rather to the realm of architectural conception. This is expressed in the captions to the picture collection in terms such as "spatial hierarchy," "static calculations," or "fantastic construction," which characterize the spatial sequence of the Column Palace in Mitla, the load-bearing structure of Eladio Dieste's department store in Montevideo or Aldo Rossi's analogue design method for the cemetery in Modena.⁸ As a static principle, a means of spatial organization or an access system, it brings together the diverse parts of a building in perpetually new meaningful units.⁹ Further sequences might be established in terms of constructive, typological or thematic relationships. The *Iconographic Autobiography* accordingly distinguishes itself by presenting a number of viewpoints or conceptual models that supersede the atmospheric or geometric ordering of things in favor of multi-layered abstract links and connections. The signs of structure belong thus to a world that builds on the conceptual coherence of its constantly changing relations. This ambiguity also characterizes the captions written beneath individual images in the collection. In several instances—including, significantly, some that epitomize classical architectural tradition—the architect's subversive regard challenges established systems of classification; the caption for Palazzo Strozzi, for example: "Invisible blind storeys oriented toward the inner court. Extreme displacements of measures on the exterior;" for Schinkel's Feilner House: "The sequence of rooms can only be understood on the plan;" or for Shinohara's

Tanikawa House: “This house appears unruly, although it is composed of three equal parts.” Here, a comprehensive and unifying reading of the architectural object has been abrogated in favor of a variety of divergent perspectives, which according to the viewer’s standpoint can continually disclose new rules.¹⁰ In this respect, the Iconographic Autobiography is also the expression of a more fundamental questioning of Modernism’s classification systems and their attributes—uniformity, simplicity, autonomy and elementary character, for example—in favor of a more mobile, individual view. This questioning also informs Ogiati’s designs: the slight distortion of the cube in Paspels; the increasing deformation of the regular ground grid by vertical and horizontal forces in the upper storeys of the projects in Lucerne, Lausanne or Taipei;¹¹ the symmetrically arranged windows of the National Park Center, the views from which are however rendered distinctly asymmetrical by the building’s spatial organization.¹² The viewer’s shifting vantage point, as revealed in the personal character of the collection, thereby not so much expresses desire for a subjective form but rather—against a background of fundamental distrust of any ideological precept—more comprehensively reflects a shift from the architectural object and its a priori order to the designer and his personal encounter with the entire context. Ogiati had explicitly stated this point in his brief introduction to the collection: the illustrations were about “images” stored in his head; these pictures were always somehow present during the process of “designing” or “inventing;” they form the basis of his projects because, for him, it has always been a matter of building something related to these images. However, this concession to the individuality of

architectural thinking is followed a few lines later by the demand for a more universally valid order: he wished to move beyond these images, sufficiently far beyond them for his architecture to become non-referential. Yet, already in the next sentence he had to concede that this wasn’t possible, and therefore concluded: “This contradiction forces me to think, to select, and ultimately to design an architecture that in the end is ‘merely’ abstract and therefore, if possible, dense and rich.” The confrontation with the past here described is an individualistic one, in which an architectural design—understood as a creative act—can ultimately ensue solely and exclusively from the juxtaposition of images stored in the mind and the concrete building task at hand. Alone this approach makes it possible to overcome a priori judgements of a historical, social, or technical nature and to use the singular structural order of every new project to attain the essential difference: namely, to transcend mere repetition of a certain atmosphere or form and radically reconstruct its every aspect. Such confrontation may indeed be a subjective, individualized affair yet it is simultaneously a universal one, in that such an undertaking fosters essential reflection on the rules of the discipline, above and beyond the concrete conditions of any individual building task.¹³ Thus, if the picture collection can be spoken of as an Iconographic Autobiography, then only because it illustrates a path to cognizance, which was followed individually.¹⁴ “For about a year I’ve tried, in conversations with my staff, to choose only images that had a distinct and determining significance for our, my work.” Even if these images belong to the architect’s personal trove of unique experience, they are—as the basis of a design—directed at the

present, not fixed on the past: “They’re present when I’m sitting in front of a blank sheet of paper, so to speak.” The collection strives to be the opposite of an historical narrative. It is much more an expression of the author’s reflecting, selective and hence, observational—in its etymological sense of ‘theorizing’—gaze.¹⁵ Liberated from their historical and geographical contexts, the pictures follow a systematic course that is perpetually being newly defined: “I always want to build something that is somehow related to these images.” The *Iconographic Autobiography* testifies to this path to understanding, in the course of which the structural composition of individual images is actualized in every building: the static structure of the Izumo Taisha Shrine in the Office Valerio Olgiati in Flims; the spatial organization of the Column Palace in Mitla in the house in Corsica; the geometric order of Donald Judd’s courtyard houses in the elevation of Das Gelbe Haus; the archaic character of Fatehpur Sikri in the concrete façade of Studio Bardill; the motif of the floor covering of the Taj Mahal in that of the Medical Center. What is interesting in such correlations is not so much the personal relationship to individual images but rather how personal memory is dealt with generally in architectural design, between repetition and difference, model and type as well as image and concept. Thus, beyond its particularity, the *Iconographic Autobiography* also specifically addresses the value of the image in architectural design—between a suspicion of and dependency on images. Given the growing significance of visual media over the last century, this debate pervades the entire history of modern architecture. In the light of varying methodological approaches—formalistic (1930s), semiological

(1970s) or economical (1990s)—it revolves around demands that architecture and its rules and regulations be reliably codified and institutionalized.¹⁶ However, in parallel to the history of modern architecture as the history of architecture as a medium can be traced an equally continuous history that refers to a fundamental “rational” (1930s), “indexical” (1970s) or “diagrammatical” (1990s) architecture, beyond the image and its cultural conventions. In the juxtaposition of Robert Ryman’s white, horizontally striped Winsor 5 (1965) and Helmut Federle’s golden monochrome *Untitled* (1990) with the corresponding picture captions, “it represents ‘nothing’” and “it represents ‘everything,’” the two poles in this debate on the role of the image have been aptly described in the *Iconographic Autobiography* and also reconciled. Indeed, the polemic nature of debates has tended to push into the background endeavors to establish how significant images may be for architectural design—whether these are drawings or photographs, real or envisioned. Yet it was precisely this highly nuanced confrontation with the image that took center stage in Modernist texts: in Schultze-Naumburg’s *Kulturarbeiten*, for example, Le Corbusier’s travel journals and writings, Robert Venturi’s studies of Rome, Las Vegas or Levittown, Aldo Rossi’s *Scientific Autobiography*, Oswald Mathias Ungers’ *Morphology: City Metaphors* or, in Switzerland, in Miroslav Sik’s *Analoge Architektur*.¹⁷ It is also in this traditional (and here updated) context of architectural theorizing—one that seeks to comprehend visual sequences as the result of cognizance and not merely as portrayals—that Valerio Olgiati’s *Iconographic Autobiography* must be understood.

Notes 1 Valerio Olgiati, "Iconographic Autobiography," 2G, 37 (2006): 134–141. The collection has to date been published in English and Spanish only. All quotations are taken from the unpublished German version of the Iconographic Autobiography, which is held in the architect's archive. 2 Regarding the relationship between "Recherche du temps perdu" and "Recherche de la vérité," see: Gilles Deleuze, *Proust et les signes* (Paris: Presses universitaires de France, 1970), 7–10. 3 Hubert Damisch, *A Theory of Cloud: Toward a History of Painting* (Stanford: Stanford University Press, 2002), 189 / 190. 4 Cf. Mark Wigley, "The Architecture of Atmosphere," in *Daidalos*, 68 (1988): 18. 5 Ignasi de Solà-Morales Rubió, "From Autonomy to Untimeliness," in *Anyone*, ed. Cynthia C. Davidson (New York: Rizzoli, 1991), 185. Cf. also: Peter Eisenman, "The End of the Classical: the End of the Beginning, the End of the End," *Perspecta*, 21 (1984): 154–173, here specifically 167–169. 6 Cf. among others: *The Harvard Architectural Review*, 3 (1984) [Special Issue: Autonomous Architecture], as well as Michael K. Hays, "Critical Architecture. Between Culture and Form," *Perspecta*, 21 (1984): 14–29. 7 Martin Steinmann, "La forme forte. En deça des signes," *Faces*, 19 (1991): 4–13. Cf. the corresponding reply by Bruno Reichlin, "Réponse à Martin Steinmann," *Matières*, 6 (2003): 32–43. 8 These three examples interestingly refer to a triple-spatial, constructive and analogue—tradition that has decisively influenced Swiss architecture in the last thirty years. 9 Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (London: Thames & Hudson, 2004), 276. 10 de Solà-Morales Rubió, op. cit., 182. Also: Rosalind Krauss, "Minimalism: The Grid, the /Cloud/, and the Detail," in Detlef Mertins, *The Presence of Mies* (New York: Princeton Architectural Press, 1994), 133; Hal Foster, "The Crux of Minimalism," in *Individuals: A Selected History of Contemporary Art, 1945–1986*, ed. Howard Singerman (Los Angeles: Museum of Contemporary Art / New York: Abbeville Press, 1986), 162–183. 11 Patrick Gartmann, "Structural Report: University of Lucerne," 2G, 37 (2006): 96–99. 12 On the informal, cf. Cecil Balmond, "New Structure und das Informelle," *Archplus*, 139 / 140 (December 1997 / January 1998): 129, 133 / 134. Jürg Conzett, "Technik und Kunst. Notizen zu einigen Stichworten,"

Archithese, 32, 6 (2002): 34–37. Conzett speaks about "custom-designed solutions." 13 Cf.: Ignasi de Solà-Morales Rubió, "Difference and Limit," in *Differences: Topographies of Contemporary Architecture*, ed. Sarah Whiting (Cambridge, Mass.: MIT Press, 1997), 106–115, here, 110. 14 Cf. Cornelia Zumbusch, *Wissenschaft in Bildern. Symbol und dialektisches Bild in Aby Warburgs Menmosyne Atlas und Walter Benjamins Passagen-Werk* (Berlin: Akademie Verlag, 2004), 98–120. 15 On the discriminating look of the traveling architect: Joan Ockman, "Bestride the World Like a Colossus: The Architect as Tourist," in *Architourism*, ed. Joan Ockman (Munich / Berlin / London: Prestel, 2005), 160 / 161. 16 Cf. for instance: Werner Oechslin, "Kulturgeschichte der Modernen Architektur," in *Oechslin, Moderne Entwerfen. Architektur und Kulturgeschichte* (Cologne: Dumont, 1999), 11–43, here specifically, 35–43; Philip Ursprung, "Build Images Performing the City," in *Images: A Picture Book of Architecture*, eds. Ilka & Andreas Ruby, Philip Ursprung (Munich: Prestel, 2004), 4–11. 17 Valerio Olgiati studied from 1984 to 1986 and graduated in 1986 from the class of Fabio Reinhard and Miroslav Sik, whose assistant he was between 1986 and 1987.

Bruno Reichlin This is not Das Gelbe Haus In early 1996 I found myself, equipped with a drafting T-square (with magnetic guides!), set squares, a double-sided ruler, a huge number of French curves, a “6B” pencil, and drawing pens, bent over a drafting table and designing my way through a furniture collection: designs destined, as it turned out, to remain in a drawer. At the same time Valerio Olgiati sat in his Studio near the Zürichberg and clicked. His eyes glued to the screen, he gripped the mouse with which he traced indecipherable flourishes on a DIN A4-sized, probably grey mouse pad. Now and again he typed something on his keyboard, certainly similar in some respects to the Olympia Carina 2000 on which I usually type my papers. Valerio Olgiati was completing the competition project for the school in Paspels, which he subsequently won. The proposed building was compact, but featured sizeable covered recreation areas, as is advisable in mountainous regions, and had a particularly refined layout. On the ground floor a large, bright entrance hall extended to its entire depth to receive pupils. It could ideally be connected to the existing schoolhouse by an underground passage. On each of the two upper storeys were three classrooms, a preparation room, and a spacious hall with a view on the Piz Beverin mountain. The rationality of the layout nevertheless allowed variations. From the ground floor, stairs led upwards from the center of the hall. Thanks to the well-conceived layout, the hall opened to the left in the first upper storey, while to the right on the next floor up. The corridors leading to the classrooms provided light and views on all four sides. Valerio Olgiati would later confess that this project was “straitlaced.” While reworking his plans—

although the architect is intentionally vague about this design stage—he was tempted to manipulate the school’s layout, until then based on precise orthogonal lines, by tugging and dragging these very gently on the computer. The modifications seemed minimal, but the results were remarkable. In the built version the effective deviation from right angles amounts to only a few degrees, yet it affects the entire plan and layout of the rooms, particularly in the transit zones. Each of the four corridors which lead to the classrooms is now deformed into a funnel shape, and displaced in relation to the others. Depending on the observer’s location and direction of movement, the building’s space is shortened or extended, made broader or narrower, higher or lower. It seems as if it has given up its objective and stable geometric properties to become living plastic matter, ambiguously influenced by the subjective perceptions of viewers. Observers are obliged to realize that they are no longer merely spectators, but are part of what they are seeing or think they are seeing. And all this because of an infinitesimal mechanical manipulation! New Swiss architecture, as has been asserted with more or less convincing arguments, has finally freed itself from referentiality. Olgiati goes beyond this in Paspels: he exorcizes it, makes a fool of it. The crown of the building follows exactly the mountain slope, giving the schoolhouse a rhombus-like abstract shape. So abstract that one forgets that the roof is nothing but a normal sloping one. Does this subtle strategy, which uses provocative methods to confuse the senses and the intellect, betray an artistically sublimated form of mental cruelty? In a neighborhood of villas and single-family houses in Wollerau there are

many people living on small plots of land that enjoy an unrestricted view of the section of Lake Zurich between the “Goldküste” and Seedamm. Buildings stand to their right, left, and down the hill, and the street runs behind them, yet the view remains undisturbed because the slope drops sharply down towards the lake. Despite this enviable situation there are clearly not many alternatives: how should the living quarters be laid out? Should they be on the upper floors, where the view is less obstructed, or below to ensure direct access to the garden? How can privacy be preserved to the right and left? It is no surprise that Valerio Olgiati carefully weighed the alternatives. In his first draft the living room was located upstairs, a square prism resting on a type of stylobate (the ground floor with the bedrooms)—a Miesian project reminiscent of the minimal house designs based on a 50 x 50 cm grid. One month later the square space featured four blind corners and four centrally placed windows, all of equal size and arranged opposite one another. Out of consideration for their neighbors, the customers declined the architect’s suggestion of a two-meter-tall concrete perimeter wall, yet the vegetation on all four sides of the building testifies to their desire for privacy. This quest for solitude within one’s own four walls gradually reveals itself through other choices. The living spaces were shifted to the ground floor and Valerio Olgiati then planned the greatest spatial and psychological distance between the public space, entryway, and the sleeping areas. The plans, completed at the end of September 2001, show that the entrance from the street leads into a vestibule. This is followed by an extended transit zone with a long staircase leading straight down and

stretching across the building’s entire length. Another transition room is found on the left-hand side and finally, after a long and snaking pathway, one reaches the living room “from the front.” The customers were thrilled with this solution. An unusual, and for this project fundamental, architectural arrangement had been achieved. In the final version the vestibule is no longer an independent room placed in front of the stairwell, but instead is integrated into it, lengthening and complicating it with a bend to the left before continuing straight ahead and diagonally to the right (which seems inexplicable for visitors who still have the building’s cubic exterior form in mind), and then winding downwards around the stairs ending on the landing, which offers a side access to the living room. At this point the visitor has changed direction by 360 degrees. The lack of any visual link to the outdoors, the unity of the material (the ceiling, floor, and walls of the hall are made of smooth white cement) and—in my opinion even more misleading—the rounded corners, combine to disorient the visitors. Usually, right angles and the difference between floors, walls and ceiling help the observer to understand architecture on the basis of construction, with slabs extending from one wall to another. Rounded corners instead suggest the subtraction of material, or the method of burrowing and excavating. Thus the hallway with its skylights feels like an underground room. The stairs, furthermore, appear to lead down into a mass of grey, compact cement. This turns the visitor’s path into a “peripeteia,” the goal of which is a sheltered “elsewhere,” a microcosm. The living room, located on the ground floor, gives the impression of being dug into the hill

slope and is the second unusual feature of House K+N. Against all expectations four large windows, each placed across from another, allow views in all four directions. This layout follows the traditional architectural doctrine for sites dominated by landscape—just as Palladio devised the four loggias of the Villa Capra “La Rotonda” to enjoy all-around beautiful views. This solution had already been adopted in the first version of the design, where the living room had been planned on the upper level. The brightest opening looks onto the broad panorama of the lake. On the opposite side an almost vertical texture fills the room, somewhat like Monet’s *Water Lilies*, in green. To the left and right one gazes out across a few meters of lawn, with bamboos growing on one side, and perennials on the other. The blind corners of the living room and the proportions and dimensions of the openings avoid the “panorama effect,” which would disperse the observer’s view and attention. The surroundings are thus controlled, reassure, and vary according to the ever-repeating rhythm of the days and seasons. The impression of a centrally symmetrical room suggested by the arrangement of the windows is so strong that the living room seems square in one’s memory, while in reality the clean geometric shape has been disturbed in various ways. Only three of the living room’s corners are concave, while the fourth (where the kitchen and bathroom are located) is convex. Because of this protruding corner, one cannot see the entire room from the bottom of the stairs. Only when one moves beyond this protrusion and into the middle of the room, it no longer interferes with the sightlines: it is neutralized because the crossways arrangement of the

windows then begins to dominate. A difference, however, remains: the three concave corners remain in shadow, while the walls of the convex corner reflect the incoming light. One gradually notices further irregularities: the bulk of the stairs hinders the view towards the lake; the kitchen wall extends outwards at the height of the left window jamb. At a second glance one notices that the wall with the fireplace is slightly askew, and that its window jambs are irregular and thicker than the others. One also becomes aware that one’s eye subconsciously views the wall as being in the place where it should stand—as happens with certain cubist paintings by Picasso which, as Leo Steinberg perceptively remarked, force one’s mental levers to push a rising “reclining figure” back into place. Coexisting in the living room of the house in Wollerau are various types of rooms that alternately reveal themselves according to one’s position and perspective. Furthermore, if one opens the large sliding windows, the living room changes into a large garden house. Das Gelbe Haus was a three-storey master builder’s house built in the second half of the 19th century. The main entrance, located in the center of the street side façade, was approached by way of two short converging ramps, and protected by a small balcony supported by two columns. The house was located in the center of Flims and surrounded by recently renovated buildings, new buildings in a discrete traditional style, a few still-preserved stables, and another similar building preserved more or less in its original condition. Today Das Gelbe Haus is still very visible, especially since the hedges, small gardens, and perennials have given way to the asphalt of the parking areas. Valerio Olgiati’s father, the architect Rudolf Olgiati,

had bequeathed the building to the municipality of Flims together with a collection of local cultural artefacts. In the deed of donation he stipulated that the building's conversion into a museum had to be carried out in accordance with the principles of his own architecture. In particular, the façades were to be painted white. The radical renovation carried out by his son deserves to be defined as "brutal." The plaster has been completely removed; the windows, reduced in size, resemble small, black, deep holes, and all look the same; the entryway and gable on the street side façade have disappeared. Viewed up close, the building has neither roof nor rain gutters, and at the top it appears to be enclosed by a continuous ribbon, like a bandaged forehead. This band is a cornice of reinforced concrete which holds the exterior walls together, the only elements still remaining from the old building after it was completely hollowed out to create space for the new museum. In this state the building does not give the impression of being unfinished, but rather of having suffered violence, and this impression is increased by the contrast with the smooth, finely finished window jambs. Removal of the plaster allowed a rudimentary masonry structure to emerge, testifying to thrift and looking as irregular as the patched and repaired Riegelfachwerk (lath and plaster work) of the second upper storey. The plaster had once lent it the dignity and stature of an urban building, as had also the entryway and gable in the center of the street façade. Perhaps it is the sacrifice of these traces of skilled labor which allow us to see the building as a martyred body, like the cruelly flayed figure of Marsyas, as recently very aptly evoked by a commentator. The white

is blinding in the blazing sun, cold and pale when thunderstorms threaten. Yet the building would be inconceivable in the public space of Flims without the magical power of this white, which transforms the spare walls into a rich, vibrating, and glowing fabric that encompasses the object's gigantic mass more than covering it. Here one experiences the extremely reifying, wonderfully misleading, and immensely effective power of color in architecture: all it takes is a small amount of material—no more than a millimeter—applied (or sprayed on) by a house painter. The most modest of the building trades can here claim to belong to the Areopagus of modern architecture. The strength and weakness of color in architecture is presented here in the building's very name: Das Gelbe Haus [the yellow house] is white! One could ask oneself whether knowledge of this name, which the local population had originally given the building, changes anything in one's perception of the white. We know that the smooth and sometimes only nominally white plasterwork of many incunabula of avant-garde architecture of the first half of the 20th century are better viewed as forerunners of future improvements. In reality, plasterwork and color stretched a fragile veil over the "bricolage" of materials, and over the technical inexperience of builders, craftsmen, and architects, whose ambitious technological ideas exceeded their means. Das Gelbe Haus, in contrast, is a palimpsest—in white. The fact that it caused a sensation is understandable, for it is one of the rare, truly iconoclastic pieces of architecture of the late 20th century. To quote Calvino: "Gli ha messo una pietra sopra"—it put the matter to rest. With Studio Bardill in Scharans, Valerio Olgiati once again explored the

alluring power of color. This time red is the color that emanates from the mass of reinforced concrete, coloring the entire building inside and out. In accordance with building regulations, the studio and its extensions had to recreate the exact volumes of the former stable, regardless of the intended extension of the living space. This at least partially explains the pleasant complementary relationship between the floor plan and elevations of studio and courtyard. The boundary between the two spaces was determined by the price per constructed square meter and the total cost stipulated by the customer, which wasn't to be exceeded. Valerio Olgiati explained that the brick-red color had been a diplomatic decision, to increase the acceptability of the architecturally exposed concrete. But there are other reasons for which this red can also be found in accurate renderings of more recent competition projects. It is the red that one encounters in the fascinating royal capital Fatehpur Sikri, built under the Grand Mughal Akbar. Under the alpine sun the red, washed-out, slightly uneven concrete, with the imprint of the wooden forms, creates a complementary relationship with the green of forests and meadows, a relationship that has been explored and treasured by painters for many generations. It also marries with the browns of chalets and stables, as well as with the stone greys of walls and houses. In the half shadows of the courtyard and studio this red takes on the warm tones of a velvety fabric, blunting sharp edges and angles. The space is no longer outlined and defined by the clear lines that subdivide the walled enclosure, but instead transforms itself in mood, in colored depth, as occurs in old sepia photographs. But there is more. A decorative element in

three different sizes can be found on all of the interior and exterior walls: a geometrically exact star with six petals or rays, inscribed in a circle and formed by the crossing of arcs of equal radius with their pivot point on the circle's circumference. This is a frequently found motif: as a pattern on butter, or as a carving on the implements of alpine shepherds, on chests, chairs, and ceiling beams. In Studio Bardill it is in relief, because it was carved with hammer and chisel into the boards used for the concrete form. The raised height of the pattern is minimal but effective. Depending on which side of the relief is lit, or whether a ray of light creates shadows and animates the irregularities of the figures' hand-carved profile, the motif becomes more or less recognizable. In the past great emphasis was placed on the expressive ambiguity of concrete surfaces, which bear the marks of wood and take on its appearance. A few "purists" actually came up with smooth forms without this side effect. In Scharans one feels this material ambiguity is part of the concept. The six-pointed motif can be found, for example, on the wooden walls of the stables, and the red of the concrete is reminiscent of the paint made with ox blood which once protected the wood from parasites. Yet geometric ornamentation on wood can only appear as a carving, as a negative form, while a relief entails a casting technique, and thus explicitly refers to the concrete. This rhetorical figure, sustained by the conflict between perception and cognition, is typically modernist, at least in the sense of Clement Greenberg who viewed discipline-inherent criticism as the essence of modernism. In Scharans this is not the only instance in which trompe-l'œil illusionism is revealed by cognitive rationality.

Depending on their size, light affects the flower ornaments in different ways and allows one to see unsuspected depth in the red concrete wall. Closer observation again breaks up the wall's material flatness and leads to a spatial visualization reminiscent, for example, of Joseph Albers' windows (1929), where the same schematic window shape was repeatedly rendered in various dimensions and colors, thereby producing an odd levitation effect against a dark background. A third optical device is due to the elliptical opening in the horizontal concrete slab above the courtyard, sheltering the pathway that leads along the exterior wall to the studio entrance. The courtyard was conceived as a slightly irregular trapezium (a little longer than wide). The covered spaces in the courtyard are balanced because the ellipse, the foci of which lie relatively close together, has a rounded shape. The sharp, bright shape created by the ellipse also draws the viewer's attention. This ambiguous shape negates any unified, central viewpoint, and its dynamic nature dominates the perception of any viewer strolling along the exterior walls. It is difficult to say whether, and at which point, the rounded ellipse becomes a circle. It is easy to understand how this motif has attracted the interest of those who since the Renaissance questioned classical thought and whose investigations lead to multiperspective Baroque space, and, from there, to the paradoxes of Caramuel y Lobkowitz' *Architectura obliqua*. One would like to assert that sooner or later Valerio Olgiati would have to come to terms with this classic example of distortion and of *trompe-l'œil*, which was the origin of many experiments. Luigi Moretti (who had always attempted to be a step ahead and was a great

admirer of Michelangelo and Borromini) had viewed this as "une architecture autre," as a prophecy of his own spatial experiments, which he viewed as being in harmony with contemporary informal painting and its gestural and material provocations. Valerio Olgiati is one of those architects who wholeheartedly approve of computers being used in all phases of a project. He therefore makes use of some of their most relevant advantages, such as the ability to deform three-dimensional, hollow objects (like architectural ones) without distorting topological relationships. Until recently, orthogonality in architecture was actually viewed as a part of human destiny, as described by Le Corbusier in his *Poème de l'angle droit*, for example. This point of view could also be explained by the design and construction tools available at the time. Computers swept away this dogma and its associated constraints. We architects now view those forms, which once used to require a great deal of time and effort and were drawn using a pair of compasses at a drafting table, as child's play. Some have taken advantage of this "manna" to discover unusual, skewed, slanted, and oblique forms, bent in the most unthinkable ways. When *doxa* and norms were thrown out the window, a bestiary of unclassifiable and incomparable objects was created. Whether one day, when the exhilaration of novelty has passed, these creations shall seem unrecognizable and therefore also completely unimportant, is still an open question. Others such as Valerio Olgiati have not forgotten that architecture builds upon the habits and the perceptual and cognitive constraints of visual culture. It seems to me that the originality of Olgiati's architectural research lies in the exploration

of the conditions under which one views an architectural object, the materiality, the color, the elementary geometric arrangements, the minimal deviations from supposed rules, and the viewer's disorientation. An indication of this is his fascination with Alberto Giacometti's figures and busts. Circling slowly around these fleshless, flat, and brittle forms allows human countenances, appearances, and expressions to suddenly and surprisingly coalesce—and it is uncertain whether this takes place in the objects themselves, between us and them, immediately before our eyes, or simply within our heads. They last just as long as our attention holds. Olgiati's architecture can also best be savored while strolling; casually turning one's attention here and there, until something forceful arises. This is often a cinematic experience, in which we ourselves are the impetus.

Mario Carpo **On Both Sides of the Fence** Authorship, Precision, and Other Anomalies in an Age of Variable Objects It is a celebrated hallmark of Valerio Olgiati's buildings that as soon as you step into them you feel that something is not quite right. You may get the same feeling from outside, from a distance, or even from a computer rendering. The anomalies may be more or less conspicuous; most of them—but not all—are subdued, allusive, or indexical. One is induced to be curious, to investigate, and to probe or ferret out the problem, whatever or wherever it may be. The delicate geometrical distortions in the plans of Olgiati's famous school of Paspels have already sparked much scholarly discussion. As they are experienced from the interior of the building, they are only part of a larger scheme, which includes the double bending of an underground corridor (almost an initiatic journey) and some misleading proportioning both inside and outside the building, where again a number of perceptual tricks (such as the scale and position of the main central stairway and of the sparse, monumental openings in the façades) deliberately confound any attempts at sizing up the overall dimensions. Here the eye and the body are meant to run counter to one another, as what you see (from a distance) is not what you get (when you get there)—or, as William Ivins might have said, what you see is not what you touch.¹ At times the quirks are more showy: in the Studio Bardill at Scharans, the external size and profile of a traditional Alpine barn (which already existed on the site) conceals an internal cylinder of contextualized emptiness, a stripped-down peristyle halfway between French revolutionary classicism and a Matta-Clarkian cut (had Matta-Clark

been more conversant with Platonic geometries, which he was not). Olgiati's buildings also challenge other sets of tectonic, visual, and haptic expectations. Through thousands of years of architectural history, we have grown used to the notion that vertical loads are best discharged along vertical lines. Various scientific theories (from Galileo and Newton onwards) appear to corroborate the daily experience that buildings, as well as the human body, may best stand up in the erect position. But in Olgiati's high-rise designs (none built to date) vertical lines are few and far between. Some of these buildings actually lean, like the tower of Pisa, notoriously not an example of successful structural design. Consequently, the plans and elevations of Olgiati's high rises are discordant and dissonant, and so are the variances in their structural components (some pillars taper weirdly as they rise, as floor slabs become thinner). The slanting strut on the top floor of Das Gelbe Haus is perhaps all too easily noticed, as a statement of sorts, or a declaration of principles, but in Olgiati's own new office building in Flims, the discreet indentations at the extremities of the slab of the main floor will reveal only to an alert observer that the floor is in fact cantilevering from a system of pillars, the main one at the core and one on each side of the building. Once again, what you see is not what you get, and the building stands up in a way that belies the evidence. Historically speaking, the three-dimensional grid underlying the structure of many traditional high-rise buildings has found its aesthetic equivalent in a tectonic logic of structural repetition. Even though reinforced concrete, for example, works better in continuous forms, rather than in discrete modules, for most of the last

two centuries big structures have often been designed and built as assemblies of bi-dimensional, standardized units. Much of nineteenth-century and twentieth-century structural engineering was made of (or was conceived as) sequences of trilith elements; and post-and-lintel structures, as the name indicates, are based on simple parts, junctions, and iteration. On the contrary, Olgiati's buildings are marked by a relentless pursuit of structural and visual continuity. At a smaller, almost demonstrative scale this is most evident in the House K+N in Wollerau, where all the detailing (from the frameless doors and windows to the curving walls of the corridor to the steps of the internal stairway) is designed, with painstaking accuracy, in order to emphasize the monolithic nature of the building. The feat of actually building the house as a monolith of reinforced concrete cast on site is already legendary, and it has entered the annals of building technology. Olgiati's treatment of surfaces and materials is an integral part of the game, and in the case of the iconic Das Gelbe Haus, the foremost and most visible one. But even when Olgiati does not intentionally transmogrify his materials, some lesser degree of deceitfulness is always latent. The concrete of some of Olgiati's high rises has deep chthonian colors, and the first time I saw a picture of the Studio Bardill in Scharans, with its decorative patterns of traditional Alpine rosettes, I thought the whole brown building was in timber. It is in concrete, of course, and the rosettes are reliefs, not intaglios. Their original mold was cut in wood, but their imprint now protrudes from cast concrete walls. What does this varied panoply of tricks portend? Perspectival anomalies in art, as in architecture, tend to

emphasize the conflict between visual representations and physical experience. This rift is inherent in all technologies of representation: by definition, all images are meant to represent something that is not there. But the perspectival grid bears an even heavier responsibility in the history of Western architecture and of Western architectural thought. By its Renaissance pedigree, the rise of geometrical perspective is tied to the history of early-modern quantification. Perspectival or otherwise, the grid—from Alberti’s “window” to contemporary digital rasters—is essentially a measuring device, and as it was put to use by early-modern artists and architects, it was meant to partition and to measure space. Alberti may have stopped short of including infinity in his pantometric project,² but his successors were less cautious, and infinity would become a usable mathematical tool soon thereafter, in projective geometry as well as in calculus. According to contemporary Heideggerians, and to some extent to Heidegger himself, this scientific ambition was the beginning of the fall from grace of humankind, and one notorious aspect of this fall was epitomized by the shift from a traditional (Aristotelian) notion of places to the modern mathematical definition of space. As architecture deals with both places and space, this argument still is a fertile source of inspiration for many of today’s architectural phenomenologists.³ Olgiati’s anomalies and incidents (perspectival or otherwise) invite an additional Heideggerian reference. As a part of his celebrated tool analysis (first outlined in 1927) Heidegger famously argued that many technical objects come to life, so to speak, only when they break down.⁴ Heidegger’s original term for this sort of revivifying failure

was “Unzuhandenheit”—a term which, in the digital age, we could perhaps more adequately translate as “denial of service.” Seen from this vantage point, Olgiati’s buildings provide plenty of breakdowns; and they deny plenty of services. The disruption of the perspectival feed-back loop (between object, vision, and experience) brings to life the nuts and bolts of the perspectival machinery, often taken for granted when the machine runs smoothly. On the contrary, a technical hiccup will draw our attention even more than a complete breakdown would, as in the former case we are left to deal with a machine that may or may not work, or that appears to work capriciously, and asks for repairs. To fix a machine one needs to learn something about it, and so it goes with the experience of places and space. Some architectural devices engage the observer in a learning experience, and in the process they turn the observer into a participant, and the architectural object into a catalyst, or “gatherer” of events. The same pattern may be applied to other, non-perspectival sets of visual and tectonic conventions, and in this sense, some of Olgiati’s buildings may be described in phenomenological terms, and indeed they often have been.⁵ For the record, Valerio Olgiati himself is not a reader of Heidegger (or so he told me). This may of course be irrelevant, as Heidegger’s critique of technology is ubiquitous—particularly in architectural circles—and it is, generally speaking, in the spirit of our time. Moreover, there is no need to read Heidegger to realize that a machine—any machine, in the broadest possible sense—may call for our attention when it doesn’t work, more so than when it does. Indeed, the practical and cultural awareness of a machine we are using probably climaxes right when

that machine stops working, or when it sends signals of an imminent breakdown. Many of Olgiati's works post similar warning signs, and architectural history offers plenty of illustrious antecedents, perfectly unrelated to twentieth-century phenomenology. However, all processes of change can be observed from two opposite vantage points, and many events that appear to be anomalies in one system can be perfectly regular when seen within another one. Indeed, some degree of creative destruction is inevitable in times of change, and contemporary architectural objects—in so far as they are dependent on the technicity of some design and production tools—are bound to embody, and at the same time to represent and interpret, the shifting status of today's technical objects. This transformation is as drastic as it is profound, and it is too early to grasp the many implications of this revolution in the making. For example, albeit evidently unrelated to tectonic or perspectival issues, a similar critique of the neotechnical object underpins the work of one of today's most acclaimed haberdashers, Belgian fashion designer Martin Margiela—a most enigmatic global icon, whose spectacular rise to stardom no cultural critic has so far managed to explain. The analogies between Margiela's and Olgiati's games of skin-deep legerdemain and indexical anomalies are probably deeper than the visual distance between the two would suggest—textiles are bound to be somewhat more supple than concrete—but they fall outside the scope of this brief essay. However, as Olgiati has referred, at least indirectly, to some aspects of the ongoing shift in architectural technologies, his stance on the matter must be taken into account.⁶ If we do, we may come to the almost inevitable conclu-

sion, apparently warranted by the architect himself, that some of Olgiati's celebrated freaks are in fact perfectly rational operations. They are rational if they are seen from the vantage point of another logic, which is the logic of a new technical object. The three-dimensional grid mentioned above, traditionally the standard pattern for the design and the construction of big structures, until recently was less a choice than a necessity. Structural calculations outside the confines of two-dimensional diagrams used to be exceedingly complicated and time-consuming; consequently, the almost inevitable shortcut for several generations of structural engineers was to convert a three-dimensional structure into a set of many two-dimensional ones, and then calculate the interactions between them—somehow. Under these conditions, a regular three-dimensional grid of posts and lintels and flat slabs is more easily resolved than the structure of Brunelleschi's dome, for example. This approach further presupposes that building materials should have standard and uniform mechanical behaviors. This holds true for industrial products, such as steel, but not for natural materials, such as wood, nor for artisanal constructions, such as brick-and-mortar walls.⁷ Likewise, the mass-production of identical structural components generated economies of scale (both in the production and in the assembly of the parts) that more than made up for the inevitable waste of material inherent in the standardizing process. By definition, if the cross section of an I-beam is constant for the entire length of the beam, its resistance will match the stress in only one section, and all other sections will be oversized, i.e. they will use more stuff than needed. Mies van der Rohe may not have

liked to acknowledge it, but a uniform grid of standardized I-beams, either vertical or horizontal, stands for dumb engineering, building on the cheap, and waste. Stresses resulting from the forces to which a building must stand up are neither regular nor uniform nor constant in a three-dimensional space. In Mies's time, given the computational and manufacturing tools that were available to him, the grid, standardized components, and oversizing were in many cases inevitable. This is no longer the case. Three-dimensional digital modeling now enables structural engineers to work on much closer approximations of actual spatial objects, thus making unnecessary the brutal simplifications (and planar reductions) that engineers of the slide-rule generations had come to accept as inevitable. Admittedly, gravity still is a vertical force (except in the case of earthquakes). But it appears that in many cases, the best structures to resist non-vertical forces may, not surprisingly, feature a variety of non-vertical lines. Irregular plans and sites, site-specific or unique constraints, and variable or non-symmetrical loads (such as natural loads, snow, and winds) can now be precisely factored in, and in many cases the most economical structural solution (the one that uses the least material) may likewise turn out to be a unique, irregular, site-specific, and asymmetrical structure. Moreover, as digital file-to-factory technologies are seamlessly applied to the entire design and manufacturing cycle, different items in the same mass-produced series may increasingly be obtained at little or no additional cost—a process often called “mass customization.” As the costs of designing and producing variations diminishes, structural components may be made precisely to the shape and form

and size that are required, even when specifications are unique to each component, or may vary for each individual item in a series. This way of making things was common when objects were individually crafted, because economies of scale have a limited effect on traditional handicraft: a cobbler can make one hundred different pairs of shoes, or one hundred pairs of identical ones (if he manages without getting too bored) more or less at the same unit cost. Within limits, this may become true again in the new world of digital manufacturing, fostering a new generation of technical objects that are smarter and cheaper, industrially mass-produced yet made to measure, all similar yet each one of a kind. The grid, a paleotechnological standard, was a one-size-fits-all technology. The new standard is an elastic one, and it allows every structural case to be studied on its own merits. When skewed lines and irregular geometries are the best answer, nothing more stands in their way. Complex three-dimensional structures can now be designed, calculated, and built. After all, nature offers plenty of examples of irregular structural design, at all scales. Tree growth follows no modular logic nor simple geometry, yet trees stand up against the wind, in structural terms, more economically than a Greek temple, or than the Seagram Building. Likewise, the digital turn is fast replacing perspectival image-making technologies (such as photography) with new, immersive and interactive environments, where both the vantage point and the represented object can seamlessly morph and change—another instance of the ongoing demotion of the once ubiquitous modern grid. And digitally controlled manufacturing machines are at their best (in the present state of the art) in

rolling out monoliths, either milled or molded, and obtained by diminution or by accretion, but always coming from, or resulting in, a single block of material. Junctions must still be laboriously hand-crafted, as a close-up examination of some of the most celebrated buildings of the digital age does not fail to prove, sometimes painfully. Unlike the structural arguments mentioned above, neither the visual nor the manufacturing issues inherent in the present technological change are mentioned, nor explicitly endorsed in Olgiati's oeuvre, yet the circumstantial evidence is meaningful. In many ways, Olgiati's buildings appear to comment upon a new class—and possibly a new ontology—of post-mechanical objects, industrially made and individually crafted at the same time. New technical objects merge aspects of the post-industrial and of the pre-industrial age. Digital manufacture is closer to handicraft than to the logic of the assembly line, and digital makers revive aspects of pre-industrial craftsmanship. Like medieval artisans, they can conceive and make at the same time.⁸ Olgiati's high-tech buildings are exceedingly individualized, each proudly exhibiting its nature as a *pièce unique*, specific to one place, one program, and one technology. Their standoffish, monolithic nature corroborates their status as one-off, unrepeatable events. Their coloring (but other details as well) singularly emphasize their hybrid, high-tech and archaic look. For the last fifteen years or so, digital technologies have mostly spawned various generations of folds, blobs, and single-surface, pliant structures. Moving from a similar critique of contemporary technology (more or less similarly conceptualized) some contemporary architects are experimenting

with interactivity in its various forms, and with responsive environments; others have been investigating organicist metaphors, or developing a post-deconstructivist style of “contested” geometries,⁹ some more cerebral, some more garish and vastly more popular. Olgiati has built a few exquisitely detailed buildings—monuments to an almost obsessive pursuit of precision—but buildings where one always feels that something, here or there or all around, is not quite right. And one reason for this relative *Unzuhandenheit*, and the uncanniness it inspires, may be that there is one major point where Olgiati and the contemporary technology he is using are drastically at odds. In his recently published *Conversation with Students*, Olgiati describes his design process in vivid terms.¹⁰ Olgiati does not sketch; discussion takes place on and around a design (mostly represented by line drawings or computer renderings), and decisions can be made or changed in talks among the architect's staff or between the architect and the client, and, presumably, between the designer's team and engineers and contractors.¹¹ But, as Olgiati emphasizes, there comes a point in time when a line must be drawn in the sand, and from that point on, what was designed must be built without change. This ideal cut-off line, or point of no return, was first theoretically defined by Leon Battista Alberti in his treatise *On Building* (circa 1452) and, since then, it has been the principal notional instrument used in the West to determine the authorial status of the architect, and to establish the architect's authority upon the final act of building. The architect is the intellectual owner of a building not because he or she has physically made it, as a craftsman would, but because the architect's design of that building

has been executed without any change. The building belongs intellectually to the architect because the architect has authorized it (in the etymological sense of the term)—having authorized its translation into a three-dimensional object from the design he had first “conceived in the mind,” then “expressed through drawings and models,” in Alberti’s words.¹² In Nelson Goodman’s terms, this is what marks architecture’s transition from autographic to allographic, or notational art.¹³ But this is also where the classical tradition and the neotechnical object (and, accordingly, the neotechnical object and Olgiati’s work) must part company. A new class of variable technical objects will also inevitably prompt new kinds of more generic, and less authorial, objects of design. Interactivity implies some degree of participation in the design and construction processes, and interaction, negotiation, and open-ended variability will inevitably diminish the extent of the author’s control over the end product. This goes counter to the Albertian paradigm—the authorial principle upon which most of early-modern, then modern architecture in the West has been predicated. In an algorithmic environment, design does not bear upon an individual event, but on a generic form (in the Aristotelian sense). This generic form—an open-ended, generative, algorithmic matrix—can be declined and instantiated in endless versions, possibly without and outside its author’s control. In a different technical context, this is what Alberti, fighting against the medieval tradition, tried to avert (history proved his attempts successful); and this is what Olgiati’s work today emphatically negates. Olgiati’s monoliths most evidently cannot admit of any adjustment—let alone variations.

Once their design is completed, they may not be built if not verbatim, as it were: as in a digital print-out, bi-dimensional or three-dimensional, once the “print” key has been pushed, the game is over. Of course, buildings cannot be printed out this way (not yet, at least, and not for some time to come), and this is, I suggest, the real meaning of Olgiati’s monolithic monuments to precision in building. In the classical and Albertian tradition, the mechanic of construction is ideally a non-event. In practice, fabrication may still represent a titanic endeavor (it certainly does in Olgiati’s work); but in Olgiati’s theory, it carries no intellectual added value. Its only purpose is the faithful translation of an idea into a three-dimensional object. Precision is its only *raison d’être*, and its only possible representational value—the only thing it stands for. Hence it would appear that what Olgiati may be up to is a recapitulation, and a final recast of one of the most essential cultural acquisitions of the architecture of humanism, and of the classical tradition in the West: the autonomy of the architect’s authorial stance. He is doing so by using some of the technical and conceptual tools that may in time bring about the demise of that same socio-technical authorial status. The rift inherent in this predicament is at times apparent in his work, and more often deliberately and pointedly shown. The classical tradition has a long history of speaking against itself (visually, conceptually, or both). This is one reason for its longevity.

Notes 1 See in particular the definitions of tactility and
visuality in William M. Ivins, *Art and Geometry: A Study in
Space Intuitions* (Cambridge, Mass.: Harvard University
Press, 1946). 2 Alberti's definition of the recession in
space of the vanishing point (which he actually calls "punto
centrico") is famously "only almost to infinity," "quasi
persino in infinito" (and in the Latin version, also Alberti's,
"quemadmodum paene usque ad infinitam distantiam"). Leon
Battista Alberti, *De Pictura*, I, 19, in Alberti, *Opere Volgari*,
ed. Cecil Grayson (Bari: Laterza, 1973), 36–
37. 3 Heidegger's stance on the mathematization of
modern space is best epitomized in his "Modern Science,
Metaphysics, and Mathematics" (1962). The source of much
of contemporary architectural Heideggerianism can be
traced to that essay and to two equally famous pieces,
"Building Dwelling and Thinking" and "The Question
Concerning Technology," which were originally published as
parts of Heidegger's *Einblick in das, was ist* (1949) and
Vorträge und Aufsätze (1954). 4 First published in *Being
and Time* (1927). For a contemporary recast of Heidegger's
tool analysis see the recent work of Bruno Latour, in
particular "Why Has Critique Run Out of Steam? From
Matters of Fact to Matters of Concern," *Critical Enquiry*, 30
(Winter 2004): 225–248; see also Graham Harman,
"Heidegger on Objects and Things," in *Making Things Public:
Atmospheres of Democracy*, eds. Bruno Latour and Peter
Weibel (Karlsruhe, Germany: Center for Art and Media;
Cambridge, Mass.: The MIT Press, 2005), 268–273. 5 See
in particular Jacques Lucan, "Textured Spatiality and Frozen
Chaos," *2G*, 37 (2006): 4–11, and Kenneth Frampton,
"Olgiati's Almost Nothing," *A+U, Architecture and
Urbanism*, 4 (2002): 64–69. 6 See Patrick Gartmann,
"Structural Report, University of Lucerne," *2G*, 37 (2006):
96–100. 7 See Manuel DeLanda, "Material Complexity," in
Digital Tectonics, eds. Neil Leach, David Turnbull, and Chris
Williams (London: Wiley-Academy, 2004), 14–22. 8 See
Mario Carpo, "Pattern Recognition," in *Metamorph:
Catalogue of the 9th International Biennale d'Architettura*,
Venice 2004, vol. 3, *Focus*, ed. Kurt W. Forster (Venice:
Marsilio; New York: Rizzoli International, 2004), 44–58; and
"Non Standard Morality: Digital Technology and its
Discontents," in *Architecture Between Spectacle and Use*,

ed. Anthony Vidler (Williamstown, Mass.: The Clark Art
Institute; New Haven, Conn.: Yale University Press, 2008),
127–143. 9 The term is borrowed from Preston Scott
Cohen, *Contested Symmetries and Other Predicaments in
Architecture* (New York: Princeton Architectural Press,
2001). 10 Valerio Olgiati, *Conversation with Students*, ed.
Markus Breitschmid (Blacksburg, Virg.: Virginia Tech
Architecture Publications, 2007), 47–54. 11 According to
an uncertified oral tradition, some structural decisions are
also made on the phone, in talks between Olgiati and his
engineering consultants. Under this respect, it appears that
the most advanced "interactive" software for building
information modeling can only hope, at best, to recapture
the performativity of the gesture and of the word (use of the
telephone would exclude the former,
evidently). 12 Alberti, *De Re Aedificatoria*, I,1,3; see
Alberti, *L'architettura (De re aedificatoria)*, ed. and trans.
Giovanni Orlandi (Milan: Il Polifilo, 1966), 20–21. On
Alberti's quest for the identical replication of the author's
archetypes (in building, and in all kinds of media objects and
technologies) see Mario Carpo, "Alberti's Media Lab," in
Perspective, Projections and Design, eds. Mario Carpo and
Frédérique Lemerle (London and New York: Routledge,
2007), 47–63, and Mario Carpo, "Monstrous Objects,
Morphing Things," in *Perspecta*, 40, *Monster*, ed. Jacob
Reidel et al. (Cambridge, Mass.: The MIT Press, forthcoming
2008). 13 Nelson Goodman, *Languages of Art: An
Approach to a Theory of Symbols* (Indianapolis: Bobbs-
Merrill, 1968; 2nd ed., 1976).