

Reviews

Graziano Mario Valenti

***Di segno e Modello.
Esplorazioni sulla forma
libera fra disegno analogico e
digitale***

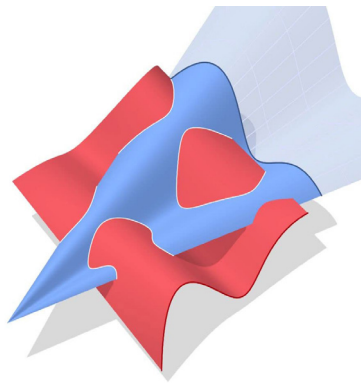
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Di segno e Modello
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FORME DEL DISEGNO
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Graziano Mario Valenti's book, entitled *Di segno e Modello. Esplorazioni sulla forma libera fra disegno analogico e digitale*, is undoubtedly an explicit example of experiences in research and didactics of representation. There is an air of experimentation in all the chapters of which the book is composed, since no unambiguous solutions are given to the many questions raised—an imperative present in the practice of every researcher—but at the same time an attempt is made to convey in the teaching experience—with the direct involvement of the students—the vocation to reflect on what is being done, beyond the simple technical application of established strategies of cognitive inquiry, so as to seek solutions that vary from time to time. The student, therefore, wears the clothes—often uncomfortable—of the careful experimenter who asks questions that, before him, few have asked.

The book proposes to reflect on a particular kind of drawing: one that the author calls 'useless' because it is produced without any figurative idea in mind, by freely running the hand with the pencil across the paper. The term—let it be said—may seem unbecoming, since every devotee of the discipline knows that every drawing has its own utility, especially if produced by hands that have been trained to transfer onto paper a thought aimed at knowledge: to put it in terms of what we might liken to what was expressed in a well-known essay by Massimo Scolari, in

which he observed that "in free drawing the skein of thought with its dislocations and accidentalities extracts from the line the hard form" [Scolari 1982, p. 82]. The author then questions what might lie behind this 'free' or 'spontaneous' drawing when probed through the advanced tools of a digital representation. Here then is that behind an abstract series of decomposed traces, Valenti identifies complex geometries, probed with the attentive eyes of one who knows geometric projections—parallel or central depending on the interpretation the user assigns to the free form—so as to detect morphologies of an extraordinary complexity, which allow the subject's interpretive abilities to emerge and at the same time also his own level of maturation as far as knowledge of descriptive geometry, solid modeling, and figuration with advanced algorithms of digital illumination are concerned.

Valenti seems to amplify to the nth degree the well-established principle that every architectural drawing is, in fact by its very nature, a projection. When, in fact, we are about to make any sketch, having in mind a real or imaginary object, we perform a projection operation: be it orthogonal, axonometric or perspective. In the case of the author's proposal this assumption is also associated with any sign produced in the absence of authorial intention. From this assumption, the research phase is initiated whereby the form reveals

a content, often unexpected, that can lead the spontaneous gesture back to a freeform, such that the underlying figurative equation is satisfied.

The book could not fail to begin with a reflection on traditional drawing in the first chapter entitled *Sul Segno e sul Modello* (On Sign and Pattern) [pp. 23-38]: here the conceptual sphere is sounded out, also through the analysis of Italo Calvino's well-known text in the second of the *American Lessons* [Calvino 1988], the one on *Rapidity*, which is taken as a reference, also in the light of the reflections conducted by Riccardo Migliari around the so-called Crab Theorem [Migliari 2004]. The account of the drawing of a crab, produced with extreme rapidity, but following a very slow reflexive investigation, allows us to investigate apparently controversial concepts, such as precisely quickness, meditation, awareness, with a careful reasoning about the concepts of Drawing and Model as expressed by Migliari in the cited book.

In the second chapter, titled *Dal Segno al Modello* (From Sign to Model) [pp. 39-86], the main core of the author's reflection manifests itself. 'Free drawing' comes to be analyzed from the projective perspective provided by the discipline of descriptive geometry. There takes place that leap-what we have defined to the nth degree-that transforms expressive freedom into a digital model congruent with the initial form. It is, perhaps, the most innovative, experimental contribution –and as such not yet subjected to the rigid rules provided by established procedures– that expands toward unexpected, and often unforeseen, results of what a 'useless' drawing may imply. That is, behind each sign lies a bounding box that encapsulates in stereometric form a distracted and disorganized ges-

ture, giving the user a three-dimensional geometry. How to realize the shape within a modeling software interface is made explicit in the next chapter –*Teoria per la rappresentazione del modello geometrico digitale* (Theory for Representing the Digital Geometric Model) [pp. 87-102]– where elementary and advanced graphical primitives enable the user to solve the equation required by the system. From two-dimensional curvilinear, we move on to the more reckless splines, which record daring complexities with stretching operations in digital space, through a timely analysis of the main algorithms that the history of numerical computation has made available to us over time.

The further evolution cannot but be foreseen in the subsequent *Costruzione e controllo del modello geometrico digitale* (Construction and Control of the Digital Geometric Model) [pp. 103-132] in which the fulfillment of morphological synthesis takes place: the choice of lines, surfaces-whether NURBS, translation, revolution, roto-translation, interpolation or SubD-of solids, and the related development that allows the geometric genesis of the final form, comes to be explicated in a rigorous manner. Extreme synthesis cannot fail to be the reduction in parametric form of the procedure – see the chapter *Modelli per la rappresentazione generativa* (Models for Generative Representation) [pp. 133-146]– so as to bind to dynamic procedures the final choice on the concluding morphology which, as such, is susceptible to continuous movements, such as to register an extreme operational flexibility that now characterizes all manipulations available within the digital universe.

The next two chapters, *Modelli per la rappresentazione della luce* (Models for the Representation of Light) [pp. 147-158] and *Esplorazioni della for-*

ma libera (Explorations of Free Form) [pp. 159-206], authored respectively by Cristian Farinella and Michela Ceracchi, are in fact a useful appendix to the understanding of the entire expository record: on the one hand, in fact, we have some reflections on the figurative modalities of a virtual scene in the light of pragmatic considerations on the choice of the set to be subjected to illumination. On the other a specific case study comes to be proposed so as to allow an immediate practical evaluation of the theoretical input provided by the author in the preceding pages. An abstract drawing, devoid of any formal intention, comes to be traced by the author to a freeform of singular complexity, so much so that –in the eyes of the observer– it seems difficult to trace the former back to the latter. The extreme investigation could only associate the form with a physical prototype conducted with the techniques of rapid prototyping –in particular FDM filament printers are indicated as the technology used– proposing images of physical models of the complex geometry obtained, although it seems to us that these are actually rendering images, also due to the fact that the filament mentioned is an opaque material and in this case shiny dots are visible on the surfaces that are difficult to ascribe to the material described (unless a subsequent treatment with special paints, which, however, is not mentioned). By the way, this type of objects would rather require the use of printers using resin solidification stereolithography, which would undoubtedly succeed in solving the problem of making models of great formal complexity, also through the optimal management of supports that, as we know, are guaranteed to be better quality of processing, compared to FDM printers.

In addition to the rich bibliography, the volume closes with a chapter devoted to *Considerazioni e sviluppi* (Considerations and Developments) [pp. 207-210], in which the author articulates the synthesis by relying on the use of certain keywords to convey conclusions. In this way, terms such as 'expression', 'prototyping', 'process', 'light' and 'knowledge' summarize the *intentio auctoris* of the volume, indirectly referring back to what might be some subsequent developments in research activity, including in the transmission and dissemination of knowledge outside academia.

We also point out the two prefaces, by Andrea Casale—who pauses to reflect *ab*

origine on the semantics of free drawing, including in the declination of child drawing studied by Georges-Henri Luquet—and that of Edoardo Dotto—who reflects on the relationship between the various connotations of drawing, analog and digital, in light of the outcomes produced in the volume.

Finally, it must be acknowledged that Graziano Valenti's book stands out for its originality. His working method, in fact, does not seem to have direct references in the scientific literature, perhaps also due to the fact that, although the method is rigorous from the point of view of the tools used, the procedures that allow one to arrive at the result depend

very much on the subject who practices the operations. Considering a 'free drawing' as an axonometric projection or a perspective certainly influences the final result, so that anyone who approaches such an experiment will—in fact—produce a dissimilar work. The digital twin that is obtained in this case, in fact, has a very high margin of flexibility, which conveys at one and the same time the level of refinement reached by the one who stands in front of such an operational approach and, at the same time, also the knowledge gained by the same in the vast and varied field of digital modeling.

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