Reviews

At first glance it looks like a book – another one!– on perspective restitution. But the contents –finally– are very different.

Before focusing on the merits of this new contribution, it is important to point out that the main topic, presented in the subtitle (perspective restitution and ensuing reconstructions) could in fact appear to have already been extensively exploited as well as prevalently didactic in nature. But anyone who leafs through this publication will immediately grasp the intense creativity of a truly innovative approach to an issue rooted in history, but tackled in an absolutely contemporary manner.

Actually, we shouldn't immediately read the subtitle, as I did, because in the first part of the title the initial words, "photographic memory", reflect most of the work performed by Fabrizio Agnello, teacher of Drawing at the Department of Architecture at the University of Palermo. Photography itself is 'memory', and as such should be protected, observed, studied, and used. Since the book examines the possibility of using old photographs to recreate architectural surfaces and volumes that no longer exist, this obviously raises a problem regarding not only the uniform quality of those images (that have often survived adversity and negligence, not unlike the adversity and negligence that led to the loss of the architecture

in question), but also the available data relating to the real condition of the artifact when the photograph was taken. The usable images are not always impeccable, high-quality technical photographs, but become splendid, moving images due to the irreplaceable data they contain, in other words that part of the unawareness that characterizes the moment the shot is taken compared to the future history of the artifact.

Photographic documentation is considered the custodian of an extensive part of collective memory, the memory of places, of the latter's architecture and the volumes that shape them. Every image conveys indications that refer to a story that deserves unrelenting examination if we wish to discover traces of the transformative process that triggered the current configurations and indicates the direction it will take in the future. So the objective catalyzed around the architecture, but also around the restitution of territorial and built contexts, is to explore, investigate and 'put flesh on the bone', flesh that history has vaporized over the years, either due to the inexorable action of time (just think of archaeology), voluntary demolition (transformations, wars), or even uncontrolled, devastating natural events (for example, in the book, the reconstruction of palazzo Grano in Messina, irremediably damaged by the earthquake in

1908 [pp. 154 et foll.]). This objective places photography at the very heart of any knowledge-gathering study. Now let's go back to the subtitle. It's impossible not to notice that 'perspective restitution' is not used in the singular, as often happens, but in an unusual plural form, because, as emphasized by the author, "if the available images and documentation are to be used successfully, every reconstruction project requires strategies suited to the task at hand, to its dimensions and morphological complexity" [p. 154]. As a result, the number of perspective restitutions that are worth tackling are equal to the number of lost architectures, but above all they differ from one another as regards the reconstruction process, depending on the materials that may be involved in the process, in other words they include: what has remained *in situ*; any reliable metric-dimensional data; the quality of the photographs; and what can be considered known data regarding these photographs (camera type, lens, focal length, and whether the whole frame is, or is not, available…). This process is, in a way, very similar to the work of a craftsman who uses old available tools, but reuses then depending on his new objectives, new paths of invention or adaptation. In my opinion this is a characteristic of the whole world of metric-dimensional acquisition and survey, even when the study object is not able to 'talk'. This is what it means to develop a survey, be the object simple or complex: start with the scope and objective, verify the accessibility and characteristics of the context, assess the availability of suitable tools, choose the proper procedures and methodologies, and verify the energies that may be involved.

Fig. 1. Top: application of parallelogram rule and positioning of the perspective scheme; bottom: control of perspective congruence between image and model (figs. 16a, 17, p. 129).
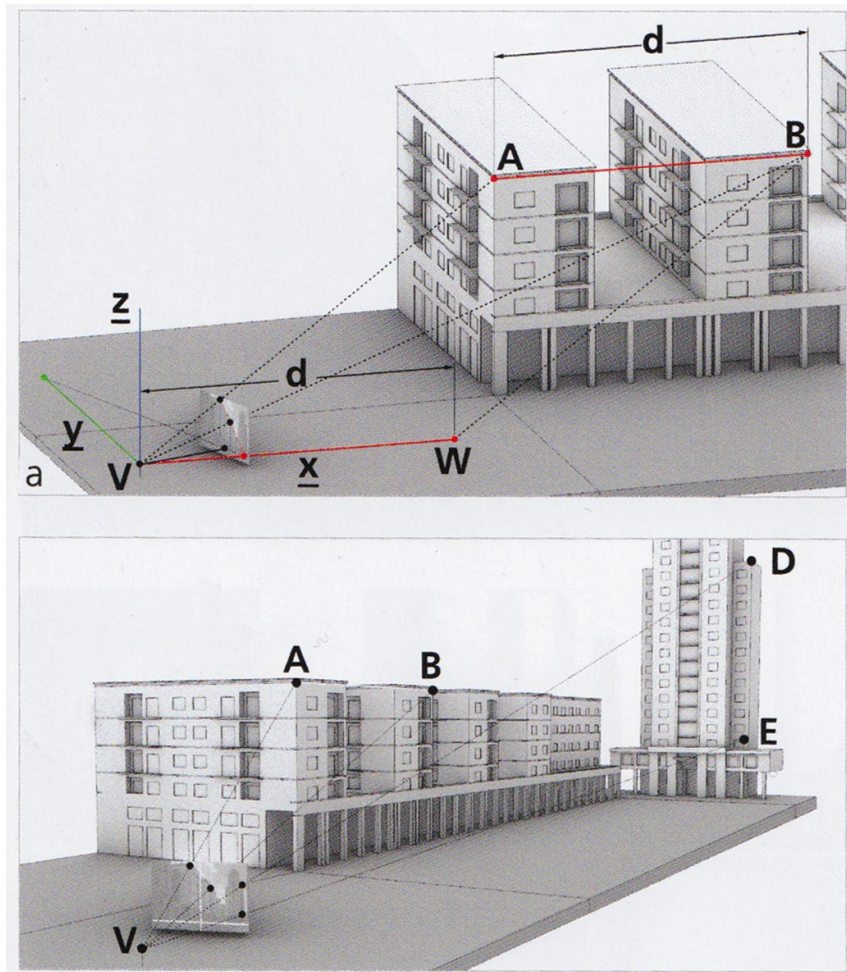
It means dealing with a series of facts in order to develop a strategy; this procedure always required a phase during which we need to operationally roll up our sleeves.

This 'looking around' in order to decide on a methodology is what has allowed Agnello to turn an old issue such as perspective construction, which is behind photographic and perspective decoding (also an ancient tradition) and the more recent digital tools, into a single issue that can be used to obtain the reconstruction of the volume. Knowledge of the history of these disciplines and tools is what allows creativity to be used to choose the most suitable approach, from amongst the many that are implementable (sometimes it is the only usable method), in order to achieve the desired goal. However, since we are talking about architecture and built contexts, there is only one goal: a spatial model.

Ever since the dawn of perspective deconstruction and later photogrammetry, we know that the process changes radically if we use one image, or two images knowingly connected to each other, or the many images that characterize the multiple image process of Structure from Motion (SfM). Nevertheless, it always involves recreating a spatial model (sometimes using a concatenation of planes or sometimes directly repositioning the points in an immediately available three-dimensional space); this model is the only one that can be associated with the concept of an architecture, a building, and a contextualized and perceptively effective restitution.

The author fully understands the precise field of accuracy in which these reconstructions appear. Controlling the proximity between what is proposed after the reconstruction process and the actual configuration of architectures that no longer exist is a crucial piece of data; it is far more crucial than the accuracy of the reconstruction within the operation. Formal data prevails over metric-dimensional data, especially if the goal is the perceptive impact of the representation of ancient artifacts within current contexts. If the goal involves lost heritage and its repositioning based on cornerstones still present on site, then this operation is enhanced by its historical importance and the perceptive component of the reconstruction compared to what it can presume from accurate metric-dimensional details and specific features. In the *Introduction* to the book, Agnello writes: "The reconstruction process is obviously influenced by the number of photographic images, but even when high resolution photographs are available it cannot achieve the level of accuracy typical of photogrammetric survey and laser scanning processes" [*Introduction*, p. 14]. Nevertheless, "the limits of the accuracy of the process do not diminish its potential when linked to the objective of understanding and disseminating lost cultural heritage". This is the logic behind Agnello's work. In his *Preface* to the book (*Preface*, p. 11), Fabrizio Gay writes that Agnello succeeds in maintaining "a balance between the topographical and photogrammetric point of view".

From an editorial point of view, the book has five chapters. After the *Introduction*, Agnello first defines the photographic technique and then presents an historical *excursus* (chap. 1). He goes on to illustrate the fundamentals of perspective found in the photographic images (chap. 2), presents the mechanics of the shot, and then uses spatial models to illustrate the perspective decoding procedure. He then moves on to present restitution obtained either using images taken with 'standard' cameras (chap. 3), which primarily use an inclined plane, or with 'studio' cameras which due to their technical characteristics, make it possible to work on vertical frame perspectives (chap. 4). Finally, chapter 5 provides detailed examples of the procedure to reconstruct buildings (palazzo Grano in Messina or the Mother Church in Salemi) and built areas (e.g., the 'Cala' in Palermo); these procedures require a mix of photographic images and a suitably scaled and managed map. The concept that runs through Agnello's approach is fascinating; he relates it in a specific paragraph in the chapter dedicated to reconstructions: thanks to the digital medium it is possible to move directly in space, to draw in space, but above all to directly use its potential [*Disegnare nello spazio*, pp. 139-149]. This makes perspective restitution from a photograph a process of 'manipulation' of virtual space in which to insert different kinds of data (the photograph, the map, the centre nodal point of the lens, the luminous straight lines that have generated the photograph, the projecting straight lines that run through them, and the elements that are known and still present either in the surroundings or architectural artifact, …); these elements are then managed as if it involved a sort of 'setting' of a game. This is the most important operation, the contribution Fabrizio Agnello provides to the history of perspective restitution.

The book ends with an interesting bibliography that is not extensive, but comprehensive; it includes

all the technical texts and literature on the subject of the use of photographic images in reconstruction. Although no further proof is needed, it does indeed illustrate Fabrizio Agnello's broad vision regarding the three-dimensional revival of digital models of lost architectures or contexts which, over the years, have taken on different configurations. It is a precious bibliography that extends from the 'sacred texts' of Survey to others concerning the heritage of Descriptive Geometry, from the dawn of the history of perspective restitution and photogrammetry to more recent contributions on this issue.

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