BUILT CITY, DESIGNED CITY
VIRTUAL CITY
THE MUSEUM OF THE CITY

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Some specific words, dealing with parts of the city, administrative or morpho-
logical references, or local expressions remained in Italian in the text.

andavino: small entrance
calle: street
campo: square
cantiere: building site (here used as "research working site")
cavana: water access
corte: courtyard
cimiterio: cemetry
fondamenta: embankment
insula: island (settlement surrounded by canals)
piscina: water basin
rione: urban district in Rome (administrative definition)
sala dellalbergo: big council hall in the assistential Schools of Venice
sestiere: urban district in Venice (administrative definition)
scoacera: dump
teso: warehouse (here in water)
veduta: bird's eye or perspective view

Elena Svalduz

RESEARCHING, INTERPRETING AND REPRESENTING
REFLECTIONS ON A FEW EXPERIENCES (M9, CARPI, VV
AND THE ACCADEMIA)

Looking at architecture, seeing through time

In his *Italian Journey*, written between 1786 and 1788, Wolfgang Goethe observes: "You have to see these buildings with your own eyes to realize how good they are. No reproductions of [them] give an adequate idea of the harmony of their dimensions; they must be seen in their actual perspective"[1]. In our permanently connected era, inducing curiosity, communicating the same passion Goethe expressed upon actually seeing architecture, has become a real challenge.

Without questioning the value and usefulness of direct experience, there is no doubt that today's technological revolution opens new horizons for displaying historical content, giving us multimedia tools that make it possible for a wider, more diversified audience to see (and to interpret) research findings. At times, however, as Richard Sennett has maintained, there is an inverse relation between quantity and quality[2]. To help us find our way through this complex landscape of possibilities, we need intermediary forms of presentation, support for research and for storytelling based on philologically accurate historical content that can ensure product quality. Architectural and urban historians have perceived this need for some time, but it has only recently begun to receive real attention[3].

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[1] J.W. Goethe, *Italienische Reise* (*Italian Journey* '1786–1788', W.H. Auden, Elizabeth Mayer, San Francisco, North Point Press, 1982, p. 47).

[2] R. Sennett, *L'uomo artigiano*, Milano, Feltrinelli, 2008 (*The Craftsman*, Allen Lane, 2008)

[3] See D. Calabi, *Memory, narrative and display – city museums in recent initiatives and debates*, "Planning Perspectives", 24, 2009, 3, pp. 385-390.

In 1960 Bruno Zevi had already begun to wonder how it might be possible to represent an 'extraordinarily articulated and contradictory continuum, in a perennial state of transformation'. It was a question that prompted him, for one, to reflect on the most appropriate tools for 'knowing how to see the city'. Despite Zevi's admiration for the large model of ancient Rome made by Paul Bigot between 1933 and 1942, he expressed dissatisfaction with a tool that, all things considered, was static and unable to provide 'the experience of living in the city […]'[4]. He went on to state that, in the field of urban representation 'everything had yet to be done' and that it was necessary to 'invent new means of communication and, in the meantime, to perfect those available by integrating them'[5].

More recently Giovanni Levi has been the one to question historical research practices. Historical research, he maintains, develops in three phases: the actual research itself, conducted according to the well-known hunter paradigm (introduced by Carlo Ginzburg)[6], the communication of the results (which must be both understandable and aesthetically persuasive), and the reception of these findings (readers or viewers are never neutral, they always use the filter of the cultural context to which they belong)[7]. It is necessary, therefore, to envisage a path that follows and includes these three 'moments' without neglecting one in favour of the others.

The general lack of debate that has characterised the field of social sciences over the last twenty years is now being rectified and – as new modes of writing and representing or recounting urban history emerge – methodological issues regarding research practices are once again becoming a topic of discussion. But how can we recount and represent the dynamism of built-up space and the dynamic relationships inside and between architectures? It is clear that a plan, a photograph and/or a model that captures a particular moment in the

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[4] B. Zevi, *Saper vedere la città. Ferrara di Biagio Rossetti, 'la prima città moderna europea'*, Torino, Einaudi, 1960, pp. 7-8.

[5] B. Zevi, *Saper vedere*, cit., p. 8.

[6] C. Ginzburg, *Miti, emblemi spie*, Torino, Einaudi, 2000[3]: the historian is likened to a hunter searching for clues to capture his prey.

[7] G. Levi, *La storia come campo di battaglia. Gli storici, la psicanalisi, la verità*, in F. Cigni, V. Tomasi (eds.), *Tante storie. Storici delle idee, delle istituzioni, dell'arte e dell'architettura*, Milano, Bruno Mondadori, 2004, pp. 82-99.

history of a space or a building without reflecting on its changes over time is no longer enough. Yet moving from a static to a dynamic form of representation means changing the traditional tools of architectural history.

Within the scope of a broader reflection on the history of architecture and its possible developments, Howard Burns has underlined how the standardisation of presentation formats and strategies runs the risk of creating a vacuum of ideas and a lack of 'fresh' questions[8]. It is a matter of finding new narrative forms that can avoid simplicity and recount the full complexity of history: history that has a high philological quotient, that goes beyond the documents, that knows how to interpret and cross-reference sources, that is not a simple summation of events and that can emphasise moments of rupture instead of the continuity of events[9]. Without the complexity of history, without the philological interpretation of transformations, the analysis of any space or any architecture is an exercise in pure form.

We often forget, for example, that the building we are studying has not always been as we see it, in its present-day configuration, because it has undergone a series of sometimes slow and imperceptible transformations. Reviving interest in the life of buildings from the time they were built, and understanding why it is important to reconstruct the history of these transformations in space and in time, is one of the goals of various research projects that, in the past few years, have aimed at organising new or existing museum spaces in three different cities: Mestre, Carpi and Venice. On the basis of these three case studies, I would like to draw attention to a fundamental aspect inside the scope of this operation (the research), by verifying how these cases were explored and how the forms of storytelling and of representing history they produced were perceived by the public, which, in all three cases, was broadly based.

Tracing the history of a site for the city: towards the M9 (Museum of 20th Century Venice-Mestre)

One of the initiatives the Fondazione di Venezia has undertaken for the new museum in Mestre (M9: a documentation centre on the major urban

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[8] H. BURNS, *La storia come sperimentazione. Quante storie*, in *Tante storie*, cit., p. 95.

[9] Donatella Calabi has followed this approach to history in many of her studies (see, for example, *Storia della città contemporanea*, Marsilio, Venice, 2005) and transmitted it to an entire generation of scholars, many of whom have contributed essays to this book.

and infrastructural transformations of the twentieth century)[10] is historical research aimed at reconstructing the transformations of the area allocated to the new structure. The goal of this operation is to strengthen the role of the museum as a 'gateway' to the city and as a place where scholars and institutions can jointly study the city and its transformations[11]. It is to be a place, in short, in the words of Richard Serra, where people can 'keep their fingers in the cultural pie'[12].

The research project, conducted jointly with Donatella Calabi, took a traditional approach. It aimed at reconstructing the site's history by interpreting the sources that were collected and by creating an equally traditional communication tool: a small book ('libretto')[13]. From the very first 'plunges' into the archives, it became crucial to reconstruct the role of the monastery of Santa Maria delle Grazie, which, from the early sixteenth century on, had grown to the extent of occupying nearly one hectare.

The research was based on an idea that might seem trivial, on the assumption that any building generates relationships within the urban context in which it is set. It was developed from several different points of view, from the building to the urban complex to the city as a whole and vice versa. This made it possible to verify how little by little as the convent grew and took shape, enveloping new spaces and new buildings, like any other structure it became an active agent in shaping urban space. What is set off is a real evolutionary cycle, as Joseph Connors pointed out in a series of studies devoted to the history of major buildings and their role in transformative processes. At the beginning, there is a moment of hesitation, a phase in which the context has a deforming influence on the building. But as the project gradually progresses, this decreases until a balance is reached. It is only at this point that growth stops. This balance, however, is often only apparent while the transforma-

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[10] www.m9museum.it/doc_files/Presentazione%20pubblica_2008.pdf.

[11] D. Calabi-E. Svalduz, *Dalla storia al museo: memoria e rappresentazione della città*, in *La città nel museo il museo nella città documentare il presente tra identità civiche e nuove relazioni urbane*, Atti della XII Conferenza Regionale dei Musei del Veneto, Regione del Veneto, 2009, pp. 80-90.

[12] R. Serra, *Architetti e musei*, "Casabella", 785, 2010, p. 4.

[13] D. Calabi-E. Svalduz, *Il borgo delle Muneghe a Mestre. Storia di un sito per la città*, Venezia, Marsilio, 2010.
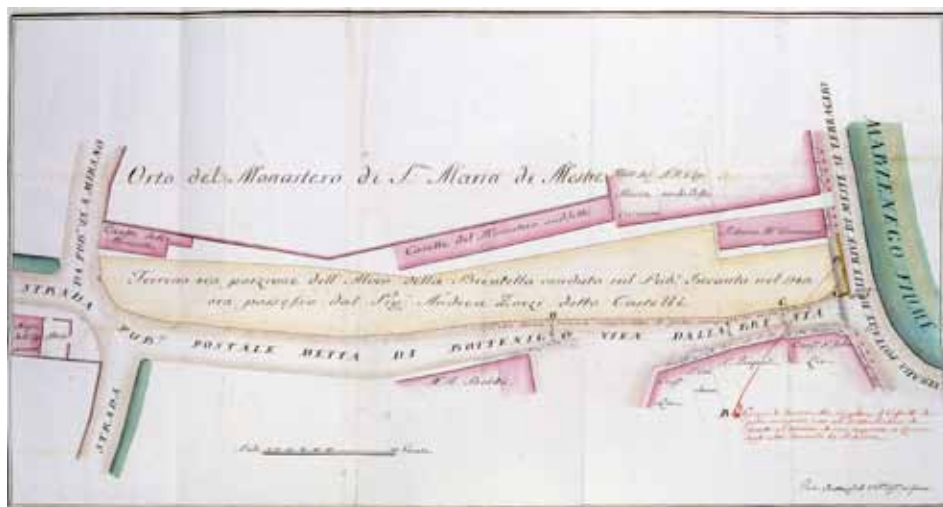
Fig. 1 - Pietro Battaglioli, survey of the area between the church of the Cappuccini and the Marzenego river, the vegetable garden and the small houses of the convent of Santa Maria delle Grazie in Mestre, drawing attached to the report dated 29 September 1784 (ASVe, SEA, Relazioni, b. 46, dis. 18).

tions that have been generated continue. This can be understood by changing the point of view, by analysing the small-scale dynamics and the continuous minute changes[14] (Fig. 1).

The English word 'buildings' seems better suited to expressing this concept: buildings are not built by just someone, but by 'builders', that is to say, people who are themselves, capable of bringing about a series of changes[15]. It is probably no coincidence that this kind of thinking has been well received outside of Italy, where the history of architecture does not always question the urban surroundings. In this regard, in studying certain cases of 'mendicant architecture', Caroline Bruzelius has shown that they are 'the result of an additive and incremental process of additions and extensions' that responds

[14] J. CONNORS, *La storia nel costruito. Licenza di fare storia*, in *Tante storie*, cit., pp. 131-146, with the preceding bibliography on the same topic (cf. J. Connors, *Alleanze e inimicizie: l'urbanistica di Roma barocca*, Roma-Bari, Laterza, 2005).

[15] J. HILLMAN, *L'anima dei luoghi. Conversazioni con Carlo Truppi*, Milano, Rizzoli, 2004.

to different needs, not just those of the religious community but also those of the patrons and confraternities. This continuous interaction between different subjects gives rise, on the one hand, to the dynamism of the structure in continuous growth, effectively defined by the scholar as an 'amoeba-like' character, and, on the other, to a 'culture of incompletion' that we can understand in many churches and convents of the Mendicant orders[16].

These considerations made it possible to show that the convent of the Augustinian, then Benedictine, nuns acted as a factor for the densification and aggregation of a series of buildings attracted by the potential of an area that had initially been marginal with respect to the institutional and commercial core of the city of Mestre and that would establish itself over the long term as a new focal point for an entire urban whole. The question that arises is whether the history of a site can summarise the history of an entire city. This question provided the basis for the research, which aimed at reconstructing the history of the area, motivated by the awareness that the study could ideally reweave the broken threads of the urban relationships. The case study was, in fact, part of a much larger environment, part of a regional network of relationships (with the lagoon and with Venice, with the reclamation of the land occupied by the nuns, with the canal and road network, with the movement and exchange of goods, with the new railway and with the bridge across the lagoon) (Fig. 2), to the extent of becoming a litmus test for the entire history of the city.

Reconstructing the history of the Borgo delle Muneghe ultimately helps to understand, to see in perspective and, in short, to put the entire chronology and overall history of the Venetian hinterland back on the table for discussion. The studies make it possible to understand, for example, that the eighteenth century represents a particularly dynamic period, marked by major changes, by a growth in services and infrastructure, before what – for the Venetian mainland – has always been considered 'the short century' (the twentieth century), in terms of population growth and the occupation of rural land. It was at this time that the convent was organised around a double cloister (only the first one of which still remains), with the church adjoining (Fig. 3). An analysis of the historical maps made it possible to reconstruct the successive transformations,

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[16] C. Bruzelius, *The Dead Come to Town: Preaching, Burying, and Building in the Mendicant Orders*, in A. Gajewski, Z. Opačić (eds.), *The year 1300 and the Creation of a New European Architecture*, Turnhout, Brepols, 2008, pp. 203-224.

Fig. 2 - Detail of a map of the lagoon hinterland with Mestre and the Borgo delle Muneghe ("C"), waterways evidenced, late 16th century (ASVe, Beni Inculti Padova-Polesine, rotolo 374, mazzo 34c, dis. 2).

marked by a series of more or less aggressive interventions in the space, which had previously been enclosed and protected as a cloister (Fig. 4).

When the project for the new museum is implemented, the attention that has been given to the history of the so-called Borgo delle Muneghe (nuns) will be able to contribute to defining a modern information device that is not necessarily fixed to the heritage site itself through traditional exhibition means, but can still produce and transmit knowledge. From this perspective, the book, together with the other means of communication that will soon be defined,

Fig. 3 - Mestre, Napoleonic cadastral map, 1809 (ASVe, Censo stabile cosiddetto catasto napoleonico, mappe, dis. 13) superimposed on the photoplan of the area (Marsilio 1986), graphic work by Kostas Syrtariotis (Studio KDSGN).

Fig. 4 - The M9 area, seen from above(© Fondazione di Venezia, foto di ORCH/orseni-go_chemollo, 2009).

contributes to 'urbanising' the museum's function (as opposed to turning the city into a museum) by attributing it the function of representing its identity and its history in the space of daily experience. What remains, in this case, is a vast area formerly occupied first by the Benedictine nuns and then by soldiers (military use) and finally abandoned and rehabilitated into a museum structure.

From print to digital: an exhibition for the city (Carpi)

The chance to organise the exhibition 'In mezzo a un dialogo. La piazza di Carpi dal Cinquecento ad oggi' (Carpi, Musei di Palazzo dei Pio, from 31 March 2012) in the early stages of the exhibition programme was welcomed by the research group as an opportunity to reflect on the theme of the narration (storytelling) and representation of urban history through multimedia tools[17]. The exhibition was initially conceived as a traditional presentation of drawings, paintings and objects that could recount, in relation to other similar urban cases, the history of a part of the city that had become a square in the early sixteenth century. Its structure, however, was subsequently revised and expanded to include a section devoted to representing urban transformation[18]. The idea of adding a multimedia itinerary was received enthusiastically by the museum's director, Manuela Rossi[19]. Building upon a long collaboration, which included the organisation of the Carpi museum of the city[20], a discussion was launched and grew through the series of experiments gradually brought to the table by an interdisciplinary work group that was expanded to include the field of drawing and representation.

With the aim of linking together the complex content of memory on a digital platform, we created virtual/graphic elements and short animations that

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[17] D. CALABI, *Introduzione*, in A. Giordano, M. Rossi, E. Svalduz (eds), *In mezzo a un dialogo. La piazza di Carpi dal Rinascimento a oggi*, Carpi, APM, 2012, pp. 12-15; A. GIORDANO, *Rappresentare la conoscenza, Ibidem*, pp. 81-85.

[18] E. SVALDUZ, '*Ex arce in forum*': *la piazza di Carpi nel Rinascimento, Ibidem*, pp. 43-54.

[19] The entities involved were: The Comune di Carpi, the Musei di Palazzo dei Pio and the Università degli studi di Padova. The section on digital representation and modelling was curated by Andrea Giordano, Isabella Friso and Cosimo Monteleone in collaboration with Manuela Rossi, Elena Svalduz and Emanuela Faresin. The steering committee was made up of Donatella Calabi, Andrea Giordano, Manuela Rossi, Elena Svalduz and Stefano Zaggia.

[20] I collaborated on the definition of the Carpi museum of the city (one of the first museums in Italy that can actually be defined as a museum of the city (along with Perugia and Rome), as a member of the steering committee.

became supports for the historical research. This material was collected in a video that made it possible to share interpretations, communication and knowledge about the urban complex, highlighting the different phases of historical stratification and working backwards from today through a subtractive process[21].

If the exhibition in the square in Carpi suggests, on the one hand, a new way of representing and communicating the research undertaken by individuals and groups over the past few decades, on the other, it also strongly confirms the centrality of the traditional tools used in 'making history': from archival research to analyses of literary and iconography texts and from cartography to analyses of buildings in space and time. From this perspective, even the 3D models (Fig. 5), conceived to reproduce a single prototyped object, and used here on an urban scale for the first time[22], became the testing grounds for a series of hypotheses formulated on the basis of the documents (Fig. 6).

As far as the research experience is concerned, it was a real team effort based on shared choices and a continuous flow of information from one discipline to the other, from history to representation (and vice versa). It was a comparative process that was not merely theoretical, but delved deeply into concrete issues as they arose, attempting to resolve specific problems (how to reconstruct the cathedral's 1515 façade?) or, where necessary, left them unsolved using a soft abstraction in the areas where the documentation was uncertain.

As far as the third 'moment' in making history is concerned, that is, its reception, the experience was valuable in several ways. Beyond the interest captured by the digital reconstruction, telling the story of a part of the city prompted an important opportunity for discussion and mobilised interest in the protection and rehabilitation of the urban area (a highly topical issue after the earthquake of 2012)[23].

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[21] C. MONTELEONE, *Verso una delle verità: rappresentare Carpi e le sue trasformazioni nel tempo*, *Ibidem*, pp. 87-91; I. FRISO, *Dal digitale al prototipo: modelli per Carpi*, *Ibidem*, pp. 93-95.

[22] Rapid Prototyping (RP) technologies are systems that can recreate an object, irrespective of its constructional complexity. The prototyping was done on a ZPrinter 450 at the DICEA of the Università degli studi di Padova.

[23] The exhibition was dismantled earlier than planned: see *Carpi, 'In mezzo a un dialogo: La piazza di Carpi dal Rinascimento a oggi*, reviewed by Giulia Ceriani Sebregondi: www.eahn.org/wpcontent/uploads/2012/05/Newsletter_212_lowres.pdf.

Fig. 5 - Carpi, Piazza Martiri, Rapid Prototyping model made by Isabella Friso and Cosimo Monteleone with Emanuela Faresin (displayed in the exhibition 'In mezzo a un dialogo', photo by Veronica Croce).

From the archives to team work: VV and the Accademia

If the Carpi exhibition was born 'from a rib' of Visualizing Venice and, as a result of experimenting with a methodology, stands as the first potential example of a series of interconnected episodes on visualizing cities, the Accademia is, instead, one of the *cantieri* of the research conducted by VV[24]. I would like to present a few specific considerations about the Accademia case study, leaving Isabella di Lenardo the task of illustrating how the research was carried out[25]. What then, can be said of the Accademia research with respect to the other research and case studies that are part of VV[26]?

[24] See http://visualizingvenice.org; the Accademia team includes Elena Svalduz (team co-ordinator), Isabella di Lenardo, Ludovica Galeazzo and Marco Pedron, with Iara Dundas, Elisabeth Narkin and Joseph Williams.

[25] See Isabella di Lenardo's essay in this book.

[26] See Isabella di Lenardo's essay in this book.

The first point is that it is a coordinated effort that goes from an urban scale to the way in which the works of art have actually been mounted inside the vast building complex that is now an integral part of the Gallerie dell'Accademia (Fig. 7).

A second given is that it uses different forms of storytelling at the same time in an attempt to experiment with various scales of visualisation: from that of the individual building to that of the *insula*, which, for the Accademia, is improperly defined in that it is actually composed of three *insulae,* each one of which refers to one of the major churches – Santa Maria della Carità, Sant'Agnese and the Gesuati. The choice is not at all random but rather the result of careful planning in the first of the three moments of history, the research itself which, among other things, took advantage of a method of analysis based on the known criteria described above. The starting point was the assumption that a building complex now enclosed within a common denominator (Accademia) generates a series of long-term transformations and, as such, becomes a test for demonstrating the validity of some of the abstract concepts outlined above, such as Connors' idea of institutional urbanism or Bruzelius's notion of an 'amoeba-like' character.

The preliminary issues discussed by the research group were: the interaction between different organisms (churches, schools, convents and so on), the importance of viability and urban traffic flows, and the adoption of 'lenses' on different scales. From the very outset, the issues regarding urban relationships, which had proved crucial in the case of M9, did not appear to have been particularly well-explored in the studies previously devoted to the Accademia: even in the most up-to-date books, not one piece of the city emerges[27]. The complex, however, actually occupies 12-thousand square metres of surface area (almost equal to that of the Gallerie degli Uffizi, which have received particular attention in recent years).

The philological reconstruction of the site's transformations, which we think can provide visitors – who are often somewhat lost – with support

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[27] I will limit myself to citing the most important contributions: E. Bassi, *Il convento della Carità*, Vicenza, CISA, 1971; P. Modesti, *Il convento della Carità e Andrea Palladio. Storie, progetti, immagini*, Cierre edizioni, Sommacampagna (Verona) 2005; and by the same author, *Le trasformazioni storico-costruttive de complesso della Carità*, in R. Codello (ed.), *Progettare un museo: le nuove gallerie dell'Accademia di Venezia*, Milano, Electa, 2005, pp. 20-69.

Fig. 6 - Carpi, Piazza Martiri, the Cathedral, Rapid Prototyping model, comparison between the phases of the 19th and 16th centuries (displayed in the exhibition 'In mezzo a un dialogo').

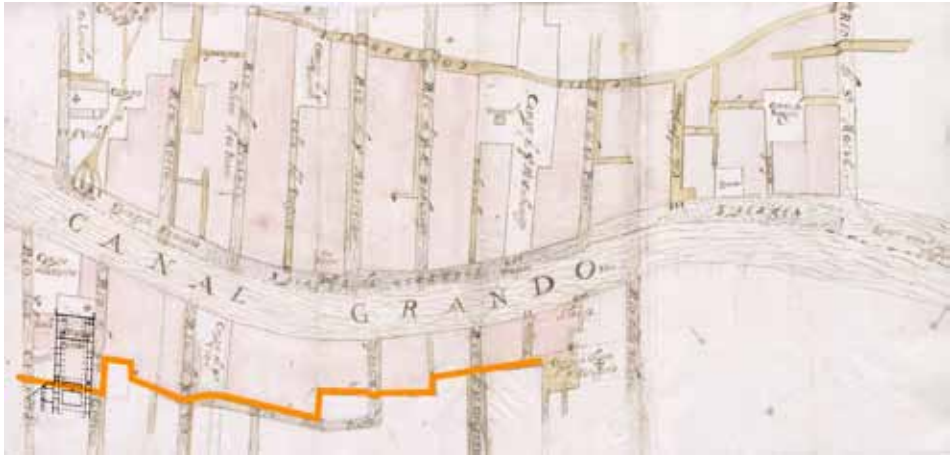Fig. 7 - The area of the Accademia with its *insulae*, aerial view.

Fig. 8 - Domenico Margutti, *Tratto del Canal Grande da San Vidal al rio di San Moisè*, *nel lato sinistro, e dal campo della Carità al rio della Carità al rio della Salute nel lato destro*, attached to the report of 8 July 1721, overlaid by Palladio's project for the Carità and with long *calle* in evidence (SEA, Relazioni, b. 54, dis. 33).

for understanding the actual spaces, was based on the collection of historical sources and the identification of certain phases of the area's transformation. 'Exterior' aspects of the complex were deliberately emphasised, relying on documents produced through the expertise of the ancien régime's technical magistrates. With the support of the historical cartography for this part of the city, it was possible to reconstruct the dynamics of the traffic system and the network of canals. These were then correlated with the interpretations needed, first to visualise the maps and later to rework the digital re-elaborations in plans and 3D models.

As part of the overall assessment of the area's viability, Andrea Palladio's project for the new convent of the Carità was also included. The new approach to the subject, supported by the digital visualisations, made it possible to understand why Palladio's project had failed. According to Goethe, Palladio 'had assumed, not only that the existing convent would be torn down, but also that some adjoining houses would be bought up. […]'[28] developing 'oltra

[28] *Italian Journey* '1786–1788', cit., pp. 65-66.

la calle' [beyond the *calle*] as *The Four Books* states[29], in one of those rare moments in which the architect lingers on urban issues. In the system of urban relationships in which the area of the Carità is set, it appears as if it was actually part of a fundamental connection axis that channelled the secondary viability from west to east running parallel to the main 'road' or waterway (the Grand Canal) (Fig. 8).

There is no doubt, as Guido Beltramini has recently pointed out, that the partial destruction of the convent and its transformation into a museum make us forget that the building was originally designed as a residence[30]. Equally important to the perception of the complex are the transformations induced by external factors, such as the filling of the canals, the redesigning of the *campo*, and the construction of the bridge, first in iron and then in wood.

In this respect it becomes important to retrieve the relationship between the real routes and the virtual reconstructions together with the value of the projects that were never built. Here, too, different points of view were brought to the table (the history of art and architecture and drawing). The commitment required of each member of the team is different from what it once was. Just think of how much the historian's role has changed, of how far it has come from that of the scholar immersed amidst shelves of dusty papers. The work of historical reconstruction and of the interpretation and visualisation of data requires the exchange of many ideas and opinions. It has become a social skill[31], to be sure and a truly broad base of understanding is required to overcome the gap between ICT and historical-philological knowledge.

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[29] ANDREA PALLADIO, *I Quattri Libri dell'Architettura* (*The Four Books on Architecture*, Robert Tavernor and Richard Schofield., Cambridge, Massachusetts–London, The MIT Press, 2002).

[30] H. Burns, G. Beltramini (eds.), *Andrea Palladio*, Venezia, Marsilio, 2008, p. 158.

[31] R. SENNETT, *Insieme. Rituali, piaceri, politiche della collaborazione*, Milano, Feltrinelli, 2012.

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