Visualizing cityscapes of Classical antiquity : from early modern reconstruction drawings to digital 3D models

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2. Reconstructing past cityscapes before the digital age: A view on Greek and Roman towns

'The past remains integral to us all, individually and collectively. We must concede the ancients their place...But their place is not simply back there, in a separate and foreign country; it is assimilated in ourselves, and resurrected into an ever-changing present.' (Lowenthal 1985, 412)

2.1 Introduction*

Over the centuries, ancient buildings in ruin have excited the imagination of viewers. Their being fragmentary has triggered artists' creativity and often caused the fabrication of legends to explain their existence. Depending on the sentiment of the beholder, ruins have become a symbol of the transience of life or of the desperate attempt to survive from the oblivion of time.[19] Legends and histories connected with ancient buildings in ruin started to appear in medieval times, in the popular genre of *Mirabilia*. One of the most famous was the *Mirabilia Urbis Romae* (1143) that included a catalogue of monuments of Rome in Classical times, stories connected to the most important ancient buildings, and a suggested itinerary through the city. Despite containing many errors (such as the interpretation of the remains of Roman baths as ruins of palaces), this description, with later modifications and additions, remained a companion for the visitors that came to Rome until the 15th century when it was superseded by a broader knowledge of antiquities by contemporary humanists.[20]

Even more imbued with meanings that transcend their physical appearance has been the creation of reconstruction drawings of these past relics of architecture. Similar to digital 3D reconstructions, these visual restorations are the expressions of the mind-set and cultural milieu of their creators, thus offering us a vivid documentation of the way in which the past was understood, perceived and represented at the time of their realization. As much as the archaeological evidence that they depict, reconstruction drawings also are historical products, as they are the result of the combination of several factors that need to be contextualized to ensure their correct reception.[21] Such factors include the state of the knowledge on the evidence represented, the drawing and survey techniques available at the moment of their creation, and the background and cultural milieu of both the reconstruction maker and the viewer.[22]

As this chapter will show, this type of information is crucial to be able to appreciate reconstruction drawings, and plaster models, however incorrect they appear today, as important sources of documentation not only about the subjects they depict, but more importantly about who made them, and the historical period in which they were produced.[23] One may consider how naïve and fictitious some early reconstruction drawings appear nowadays since a deeper knowledge of the archaeological site under investigation has been acquired, or how outdated some of the first digital visualizations look

* An earlier version of this chapter has been published as Piccoli 2017.

[19] For an overview of the fascination for ruins and their use in literature see e.g. Woodward 2001. For the tension between old and new and the consideration of the past as an artefact of the present, see Lowenthal 1985.

[20] Stinger 1998, 67; Benson 2009, 147-182.

[21] Cf. Favro 1999, 366; Smiles and Moser 2005, 6.

[22] See in this respect also Favro 1999, 366.

[23] The decoding of such symbolic values as elements specific of a certain period and cultural milieu belongs to the field of perception studies and has been treated extensively in art history, starting with the pioneering works by Erwin Panofsky (Panofsky 1939). In this regard, see also the works by Pierre Bourdieu, who identifies art perception as a mediate deciphering operation (e.g. Bourdieu 1984, especially chapter 8 – Outline of a Sociological Theory of Art Perception).

to the eye of the present-day viewer whose expectations are high in terms of engagement, realism and interaction. Often, reconstruction drawings or images of plaster models are still being used in presentations and articles without citing the author and the correct period in which they were made, thus leading to the transmission of obsolete ideas, or to the underestimation of works that were instead ahead of their time. Little research has been done so far on this type of visual representations, although they are valuable sources of information for the history of archaeological research. Every drawing entails in fact a process of interpretation of reality, since, as well expressed by the art historian Sir Ernst Gombrich, a drawing 'is not a faithful record of a visual experience but the faithful construction of a relational model (...). The form of a representation cannot be divorced from its purpose and the requirements of the society in which the given visual language gains currency'.[24]

In the next sections, I shall present a selection of archaeological reconstructions depicting Roman and Greek cities and buildings in Europe from the 15th to the 20th century.[25] I will briefly sketch the historical framework in which such representations have been created to provide the contextual information to assess their aims and their novelty. The case studies presented will offer an insight into the variety of functions that reconstructions have fulfilled within the period taken into consideration, which provides the basis for a reflection on the use, purpose and legacy of computer-aided 3D models that have nowadays become ubiquitous in the archaeological domain. This chapter will in fact shed light on the purpose and use of reconstructions, showing the role of reconstruction drawings as functional aids to stir emotional responses, and to support political agendas before being used as a means to present historical information. Moreover, this overview will serve also to investigate the winding path towards the formation of a scientific method of archaeological inquiry, which includes the introduction of personal observations of the extant remains as an integral part of research and the development of a critical appraisal of earlier sources.

2.2 The 14th and 15th centuries

In this period, works describing antiquities rarely used visual representations to integrate or explain the text. One of the early examples of drawings included in a manuscript is to be found in the autograph copy of the *Historia Imperialis* by the antiquarian and historian from Verona, Giovanni de Matociis (or Mansionario), who started to work on it from about 1310. On the side of some pages, he drew a number of coins and a schematic representation of a Roman circus (Figure 2.1). Although Giovanni could have easily inspected directly the architecture of a Roman circus by looking at the specimen still standing in his hometown (the famous Arena of Verona), thus comparing and integrating the textual sources with his personal observations, he relied completely on the encyclopaedia of Isidore of Seville as the primary source for his historical account.[26] As will be discussed in the course of this chapter, the reverence for

[24] Cited in Piggott 1978, 7. Piggott was the first scholar who started to critically analyse the history of archaeological illustrations (1965; 1978). In more recent years, Moser has delved deeply into the subject of archaeological representations and their reflections of cultural conceptions and political or nationalistic agendas (Moser 1992; 1998; 2001; 2012; 2014; 2015); Perry has critically analysed the relationship between archaeologists and images (Perry 2009a; 2009b; 2013), stressing the deductive power of reconstructions for example for gaining information about the behaviour and habitat of prehistoric animals (Perry 2013, esp. 293).

[25] The scope of this chapter has been limited to Greek and Roman cities in Europe to provide a context for the case study presented in this work, the Graeco-Roman town of Koroneia in Greece. There are obviously several other instances that show how the past has been 're-constructed' over the centuries in different ways in compliance with the current cultural and political contexts. Examples include other cities (e.g. Babylon, to which the Louvre has dedicated an exhibition in 2008, see http://www.louvre.fr/en/expositions/babylon, last accessed February 2015), archaeological structures (e.g. Stonehenge, to which the travelling exhibition 'Stonehenge belongs to you and me' has been dedicated, see Bender 1998; Hodgson 2004, 140-74) and countries (e.g. Egypt, see Moser 2015).

[26] Weiss 1969, 23.

classical authors and the related general preference for textual documents as seen as more authoritative than knowledge gained by first-hand experience will be long time companions of antiquarian studies.

Most of the examples that I will mention in this section relate not surprisingly to Rome since this city has attracted many humanists that were fascinated by Roman ruins and were trying to preserve the memory of its still obscure ancient past. The humanists' engagement for architectural theory shaped a renewed interest for Roman buildings, which were studied to derive rules of construction, as exemplified by Leon Battista Alberti's De Re Aedificatoria.[27] During this period, the approaches of the antiquarians drawing and reconstructing ancient ruins greatly vary: some of them tried to critically look at earlier sources and treated sceptically the medieval Memorabilia and previous accounts that explained with mythical legends the origins of cities.[28] Generally, however, the interpretations and reconstruction drawings of this period are still mostly based on reproducing the content of earlier textual sources and on creating fantastic explanations and depictions arising from the fascination for these otherwise inexplicable monumental buildings. The Colosseum was for example thought to have been the biggest temple of Rome dedicated to Jupiter and its original shape was reconstructed as being surmounted by a golden dome with a golden statue on top.[29] A similar representation of the Colosseum is to be found in a depiction of the city of Rome that appears in an illuminated 15th century copy of the poem Dittamondo by the 14th century Florentine poet Fazio degli Uberti (1305?-1367) describing in its verses an imagined journey around the world (Figure 2.2).[30] In Rome, the poet imagined meeting the personification of the city, that tells him her story and shows him some of her ancient monuments in ruin, the description of which remains grounded in the traditional view of Rome and draws on the sources that were known by that time, such as the Mirabilia and the chronicle of the 13th century Dominican Martinus Polonus.[31]

Rome had severely declined during the ten years' exile of Pope Eugenius IV (1383-1447), who had been forced to leave his episcopal see to escape from the unfavourable political situation in the city. Any visitor coming to Rome in those years could witness a striking contrast between the monumental ancient ruins and the humble 15th century dwellings. In a letter dated March 1443 and addressed to Giovanni de' Medici, Alberto degli Alberti gives us a testimony of this situation, writing that contemporary masonry houses were many but in bad condition, while actually the nicest things to see in Rome were the ruins.[32] Among the scholars that lamented the deplorable state of the eternal city, the name of the Italian humanist Flavio Biondo (ca. 1388-1463) stands out for his innovative approach to antiquities. In his *Roma Instaurata* (1444-46), Biondo assembled his first-hand observations on the ancient topography of Rome with the information that he took from ancient texts such as Pliny, Tacitus, Livy and Suetonius. Although his account is not exempt from errors, Biondo treated ancient texts, medieval sources and hagiographical accounts with a critical approach.[33] Biondo's aim was to collect enough sources for an antiquarian reconstruction of Rome, in order to better inform his contemporaries, who were showing great ignorance about what the city had been like. As appears clear in the preface of the *Roma Instaurata*,[34]

[27] Stinger 1998, 66.

[28] See for example Elia Caprioli's *Chronica de rebus Brixianorum ad Senatum Populumque Brixianum (published in* 1505) where he refuses to explain the origins of his hometown Brescia with the tradition that connected them with the myths of Hercules.

[29] Günther 1997, 382.

[30] Fazio degli Uberti, *II Dittamondo, avec le commentaire d' Andrea Morena da Lodi*, 1447, [Paris, BnF, MSS italien 81], fol. 18r.

[31] Weiss 1969, 47.

[32] 'Le case moderne, cioè in muratura, sono molte ma guaste; il bello di Roma sono le rovine..', Günther 1997, 380.

[33] Günther 1997, 384.

[34] Excerpt from the preface of Roma Instaurata dedicated to Pope Eugenius IV, predecessor of Nicholas V (based on the translation in Warwick 2016, 94, modified by the author): 'Most holy Pope Eugenius, many things persuade me to renew as much as I could the fame of the ruins - more than of the buildings that still can be recognized - of the city of Rome, the mistress of things, but this one thing compelled me the most: there has been so much ignorance of the study of the humanities in previous generations that, since few of the structures of this very city which once existed are understood in their single parts not only by the inexperienced multitude but also by those who are more learned with respect to doctrine, we then see many,

Figure 2.1 Page (13r) from the autograph copy of the Historia Imperialis by the antiquarian and historian from Verona, Giovanni de Matociis. This volume represents an early example of text that is accompanied with drawings, in this case of coins and of a schematic Roman circus (top right corner). The manuscript is kept at the Vatican Library (Ms. Chig. I. VII. 259). [source: https://www.ibiblio.org/expo/vatican.exhibit/exhibit/b-archeology/images/arch01.jpg].

Figure 2.2 Drawing of Rome in a 15th century copy of Fazio degli Uberti's Dittamondo *(fol. 18r). [source: copy digitized by Bibliothèque National de France, http://gallica.bnf.fr/ark:/12148/btv1b8426808j/f41.image].*

the interest of Biondo was however not much focused on the ruins as historical artefacts, but rather on their contribution in a programme of renewing 15th century Rome, with Pope Eugenius IV playing the principal role as its initiator. As McCahill pointed out, through his texts Biondo was indeed 'determined to remind his readers, including Eugenius, that Rome's ancient grandeur is not an irrevocably distant reality but something that has been revived before and can be revived again'.[35]

nearly all things fouled, or rather defamed, by false and barbarous names. (...) The return of your pontificate onto its seat confirmed our resolution to write, a return so useful and necessary for its conservation that it is evident that, being already destroyed by calamity and decline, it would be completely lost if you had been absent another ten years. Not only do you nurture Romans with the presence of your accompanying curia, a thing which has always benefited the opulence of the city, but also in many locations you restore and remake fallen, misshapen buildings at the greatest cost. (...) As I owe everything I have to your holiness, why shouldn't I strive to renew Rome with the literary monuments of my small talent likewise you do with the labor of stone workers or carpenters. The renewed account of the works of the Roman Popes who came before you is added to this restoration of our city, which would suit the sanctity of your merit and especially increase your glory (...).'

[35] McCahill 2009, 191.

Figure 2.3 'Forum' from Giovanni Marcanova's Collectio Antiquitatum *(Estense Ms. Lat. 992, fol. 27R, 1465). [source: copy digitized by Princeton University library http://libweb5.princeton.edu/visual_materials/garrett/garrett_ms_158.final.pdf].*

The reconstruction of Rome that Biondo presents is textual, there being no maps or drawings that accompany the verbal descriptions. To find drawings of ancient Rome during the Quattrocento, one has to turn to the *Collectio Antiquitatum* by the Paduan doctor and antiquarian Giovanni Marcanova (1410/18-1467). Several manuscripts of the *Collectio* survive, the earliest being dated to 1465 and kept at the Estense library in Modena.[36] The text, which included copies of Latin and Greek inscriptions, was composed by Marcanova, while the visual representations of ancient monuments and places of ancient Rome have been identified as copies of the drawings of Cyriac of Ancona (1391-about 1455), which were reinterpreted by the painter Marco Zoppo. This manuscript, defined as 'the most lavishly illustrated antiquarian manuscript produced in the Renaissance',[37] contains in fact 18 drawings depicting reconstructed views of ancient Rome and everyday life scenes in the city. Such drawings include, for example, the city gate with towers guarded by armed soldiers, the Monte Testaccio with broken fragments of urns on the ground, the Forum crowded by sellers and buyers and with a circular temple in the centre (Figure 2.3), the Arch of Titus during a triumph, the Diocletian's Baths, and scenes of sacrifices and games, all populated by people in 15th century clothing.

The *Collectio* has received contrasting reviews from contemporary and modern scholars,[38] and although most have dismissed it as a production with low archaeological value, others have tried to contextualize this work within the spirit of the time in which it was produced. As Hülsen noted in his 1907 publication, which discussed the drawings in the *Collectio* for the first time, the reconstructed architecture is a mixture of ancient, Medieval, Renaissance and imaginary elements. Some drawings, in fact, seem to be derived from observations on the spot (such as the equestrian statue of the Emperor Marcus Aurelius, which is reproduced in accurate detail), while others are made by enlarging decorations on cinerary urns (such as in the depiction of the *Vivarium*), or inspired by the contemporary architecture of Bologna, the city in which the *Collectio* was written.[39] The temple in the Forum (Figure 2.3), which has a circular plan instead of the more common rectangular one, is indicative of the early state of the

[36] Estense Ms. Lat. 992. Other copies are known, such as the earlier Bern codex (MS. B42) held at the Stadt- und Universitätsbibliothek and the Garrett MS. 158 held at Princeton University Library. While the former has no illustrations, the latter begins with 15 full page drawings with the same representations as the Estense manuscript. A digitized copy of the Garrett manuscript is available at libweb5.princeton.edu/visual_materials/garrett/garrett_ms_158.final.pdf

[37] Trippe 2010, 767-799.

[38] Trippe 2010, 767.

[39] Hülsen 1907.

knowledge on Roman architecture, but also of the preference for circular shapes in sacred architecture during the Renaissance, as exemplified by the theories and works of Leon Battista Alberti.[40] As usual for any depiction of antiquity during this period, these drawings had no intention to reproduce an archaeologically accurate reality; their aim was instead evocative, according to the humanist spirit of 'recollection' that used images as a means to trigger the memories of the viewers, related to a specific place or experience.[41] As Mitchell observed, 'antiquity was in fact becoming an ideal of life, rather than an object of inquiry.'[42]

The contribution of Cyriac of Ancona (1391-about 1455) to the study of antiquities deserves to be explored further as his first-hand recording of Greek and Roman buildings earned him the title of father of modern classical archaeology.[43] Contrary to his contemporaries, who had gained acquaintance with the subject by consulting books in libraries, Cyriac travelled extensively in Greece and Italy, where he recorded and drew in his notes several ancient monuments that he had personally seen. Cyriac was in fact accustomed to travel since an early age, when he used to accompany his uncle, a merchant, in his trade; later on in his life, he became one of the diplomats of Pope Eugenius IV, which took him to several countries, thus allowing him to visit remote places and monuments. Cyriac's first encounter with ancient ruins had been the arch of Trajan in his home town, which, according to Weiss, 'made him realize more and more that what still remained of the ancient world was doomed to perish sooner or later, and that it was therefore his imperative duty to try to rescue, or at any rate record, its relics for posterity before it was too late.'[44] According to Ashmole, although the drawing style of Cyriac is not sophisticated, he paid great attention to reproducing the reliefs or monuments he saw with accurate detail.[45] Probably the most famous of Cyriac's drawings are those that document Hadrian's temple in Cyzicus, which represent an important documentation of this monument that he could visit in 1431 and that would have been almost completely destroyed by 1444 for its intensive use as a quarry.[46]

Besides drawing extant remains, Cyriac drew also reconstructions of the buildings that he recorded. While his documentation drawings are considered fairly accurate, his reconstructions were on the other hand imaginative, giving again confirmation of the fascination that surrounded ancient ruins and the commonly shared intention of reconstructing them 'not to deceive, but as a light-hearted fantasy'.[47] Unfortunately, Cyriac's autograph manuscripts have not survived, his Commentaries probably being lost in a fire that burned down the library of Alessandro and Costanzo Sforza in Pesaro where they were kept. Cyriac's notes and drawings have been transmitted in excerpts and copies in other manuscripts, thus leading to problems of their attribution to Cyriac or to some other draughtsmen.[48] In some cases, however, the copies still give us an idea about the type of reconstructions that Cyriac would have drawn, as in the case of the reconstruction of the Mausoleum of Hadrian (present-day Castel Sant'Angelo). The image of the reconstructed building appears on the folio 63r of the *Liber Monumentorum Romanae Urbis et Aliorum Locorum*[49] that was published at the end of the 15th century and compiled by Bartolomeus Fontius (1445-1513), an important Florentine humanist (Figure 2.4, left).[50]

[40] Hülsen 1907, 38.
[41] Trippe 2010, *passim*.
[42] Mitchell 1960, 478.
[43] Bodnar and Foss 2003, ix.
[44] Weiss 1969, 138.
[45] Ashmole 1959, 25-6.
[46] Burrel 2002/3, 36.
[47] Ashmole 1959, 27.
[48] Ashmole 1959, 28.
[49] Codex Ashmolensis, MS. Lat. misc. d. 85, kept at the Bodleian Library.
[50] On this text, see Saxl 1940-41, 19-46, who contextualized it within the role that Roman inscriptions played in the 15th century political panorama. For the contacts between Fontius and Cyriac of Ancona, see especially pp. 29-37.

In other cases, imaginative reconstructions were created on purpose, the lack of a critical approach in analysing texts in this and later periods ensuring their fortune for several centuries. One of the most famous fabricators of stories of this time is the Dominican Annius of Viterbo (1432?-1502), who claimed to publish in his *Antiquitatum* or *Commentaria* (1498) a collection of passages of ancient chronicles and documents, which had been considered previously lost, and that retraced the colonization of Europe to Noah and his grandchildren after the Flood. These texts, to which Annius added his erudite commentaries citing authoritative sources, were skilfully invented by him to reconstruct the history of the Etruscans and ultimately to prove the historical importance of his home town Viterbo as the oldest city in Europe.[51] This work will be published in several editions and will have a great influence on European historiography of the 15th and 16th century, as it provided suitable stories to legitimate the national monarchies that were growing in Spain, France and England.[52] The fortune of Annius' stories is due not only to the fact that they presented Europeans with 'what they wanted to hear about their past',[53] but also that they were convincingly written mimicking the techniques and format of historical scholarship and philology, which immediately evoked scholarly respect.[54]

Other texts that Annius forged are collected in the *Auctores Vetustissimi* printed in Rome in 1489. Among them, there is the *De Aureo Saeculo et de Origine Urbis Romae eiusque Descriptione* by Quintus Fabius Pictor, a 3rd century BC Roman historiographer whose works have not survived. The chronicle describes the early urban developments of Rome on its seven hills and highlights the Etruscan contribution to the early development of the city. Archaic Rome is said to have had the shape of a bow, with the Tiber river as its rope. In one of the editions, a large woodcut view was inserted which represents the city in this way, surrounded by walls in a typically medieval fashion, and features the 'Vicus Tuscus', Viterbo, in a prominent location closed to the city (Figure 2.4, right). This urban configuration of Rome was still taken as authentic into the 18th century.[55]

As the examples discussed in this section show, in this century illustrations of ancient ruins and reconstruction drawings were used sparsely and, when they were inserted, there was no intention or interest to create a historically accurate representation. Generally, antiquarians found satisfaction in an approach to the past based on describing, collecting and comparing ancient relics, where no analytical attempts were made to view the archaeological remains in an historical perspective.[56] Contributions such as Flavio Biondo's and Cyriac of Ancona's stand out for their innovative approach, which included a critical view of previous scholarship and personal surveys. However, this changing attitude does not translate into a different approach towards visual reconstructions. In fact, if present, these are generally an exercise of fantasy, expressing the fascination for the relicts of ancient buildings and a means of recollecting memories, in which contemporary elements are mixed together lacking any attempt at historical veracity. In some cases, as shown by Biondo's *Roma Instaurata*, and by Annius' forgeries, furthermore, antiquities and reconstructions become instruments for political propaganda, a metaphor of a past grandeur that could be revived, or threads to weave deceiving narratives of local pride.

[51] Weiss 1969, 125-6; Hiatt 2004, 10-1. One of the 16th century detractors of Annius, the Archbishop of Tarragona Antonio Augustín, reports a story according to which Annius, after the discovery of some inscriptions that he had forged and buried in a vineyard in the vicinity of Viterbo, claimed that they matched with a passage in one of his books, confirming that there lay the oldest temple in the world and were the proof that Viterbo had been founded by Isis and Osiris (Stephens 2004, S207).
[52] For the reception of Annius' *Antiquities* and its outreach among European scholars, see Stephens 2013, 277-89; Stephens 2004, S201–S223. The influence of Annius' work on Spanish historiography has been investigated in Caballero López 2002, 101-120.
[53] Allen 1949, 114 cited in Stephens 2004, S203.
[54] Stephens 2004, S216-7.
[55] Weiss 1969, 94.
[56] Stinger 1998, 69.

Figure 2.4 Left: Reconstruction of the Mausoleum of Hadrian, copy from a drawing by Cyriac of Ancona. Codex Ashmolensis, Bodleian Library, fol. 63r [source: http://bodley30.bodley.ox.ac.uk:8180/luna/servlet]. Right: The imaginary map of Rome in the forgery by Annius of Viterbo: De Aureo Saeculo et de Origine Urbis Romae eiusque Descriptione *(1498) [source: http://www.brynmawr.edu/library/exhibits/antiquity/use4c.htm].*

2.3 The 16th century

During the Renaissance, a new approach towards urban design and planning was developed. While until Medieval times there was the tendency to build a new construction by reusing an existing one,[57] Renaissance architects and commissioners were more prone to razing the old buildings to the ground and using the stones to construct new ones.[58] This situation had a great impact on the urban appearance of Rome, that started more and more to comply with the Popes' agenda of using architecture to create a visually strong impression of their power. Construction works caused accidental discoveries of ancient buildings and sculptures. Especially these latter excited Renaissance antiquarians and led to the production of copies or triggered their imagination in creating tentative restorations of the fragmentary sculptures to their original entirety.[59] This combination of factors prompted an increased interest for antiquities, along with growing complaints by antiquarians against the unscrupulous destruction of ancient buildings and the call for more efforts to document and reconstruct these quickly disappearing testimonies of the past. 'Roma quanta fuit ipsa ruina docet' (how great Rome was, its very ruins tell), a

[57] An early example of this practice is the Church of Santo Stefano Rotondo on the Celian Hill that was built on top of a section of the *Castra Peregrina*, on a Mithreaeum.

[58] Weiss 1969, 99.

[59] Barkan 1999, 119–69.

phrase that was written on a drawing depicting the ruins of the Septizodium attributed either to the Dutch painter Marteen van Heemskerck or to Herman Posthumous is the maxim that best summarizes the attitudes towards ancient ruins in this period.[60]

During the 16th century, the amount of visual representations that were used to integrate textual descriptions progressively increases. When antiquarians based their works on classical texts and earlier accounts, a verbal description would be the easiest and most suitable way to transmit this knowledge. However, as was evident already with works such as Cyriac of Ancona's, when a greater attention was paid to the extant remains and their documentation, the use of drawings became the most appropriate technique to record the material evidence that had been personally inspected. This trend of including more visual material in scientific publications as a reflection of an increased reliance on personal observations can be noticed also in other fields such as natural history and the hard sciences.[61] Telling examples are the richly illustrated *De Humani Corporis Fabrica* (1543) by the Belgian Andreas Vesalius (1514-1564) in the field of human anatomy, and the *De Historia Stirpium Commentarii Insignes* by Leonhart Fuchs (1501-1566) in the field of botany. This latter is especially interesting since it breaks with the traditional representations of plants that are found in earlier herbal books and presents instead drawings (made by Albrecht Meyer) based on first hand observations of the plants and seeds that Fuchs had acquired.

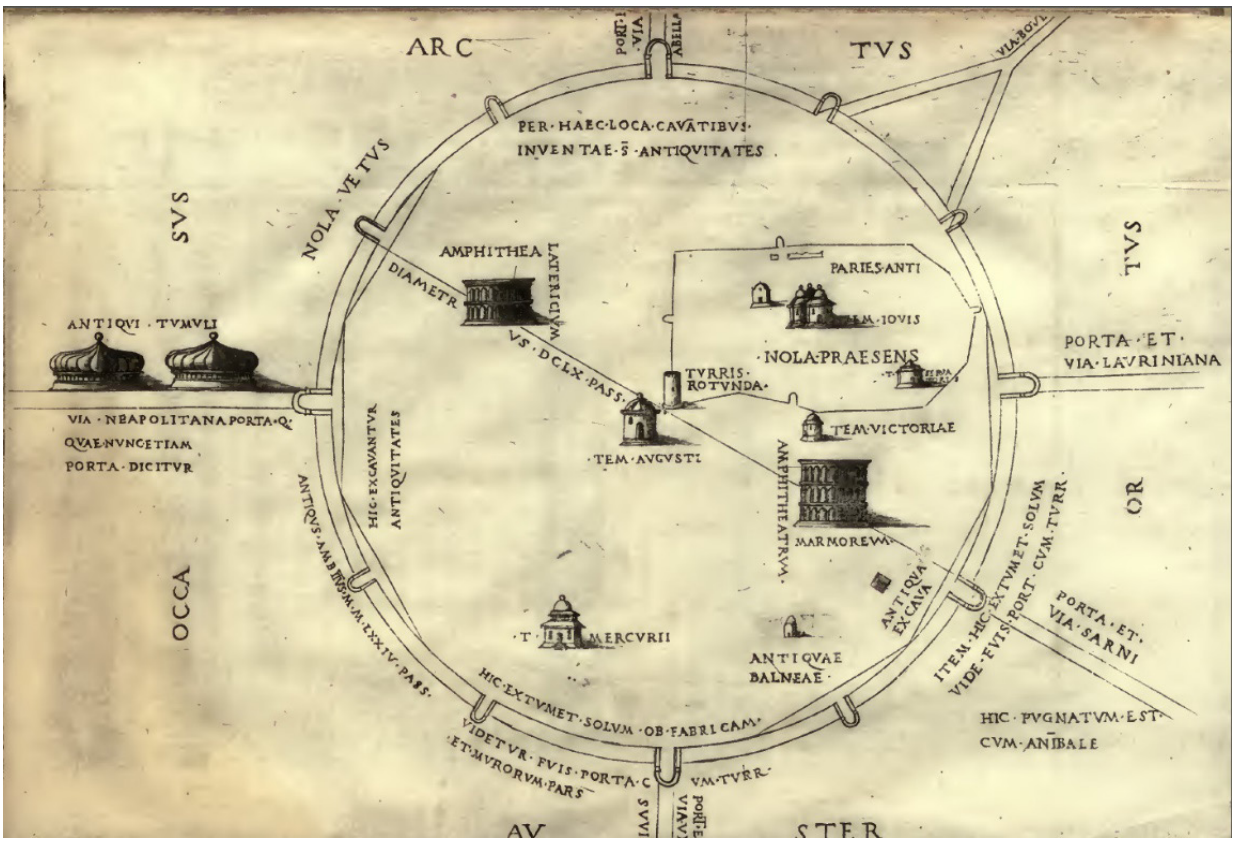

Figure 2.5 Map of ancient Nola (engraved by Girolamo Micetto) in the De Nola by Ambrogio Leone (copy from the John Adams Library at Boston Public Library digitised by Internet archive and available at https://archive.org/details/denolaopusculumd00leon).

[60] The coinage of this sentence has been attributed to Francesco Albertini, who wrote it in his *Opusculum de Mirabilibus Novae et Veteris Urbis Romae* (Rome, 1510); after its use for the Septizodium's drawing, the sentence appears again on the frontispiece of Sebastiano Serlio's *Third Book on Architecture* (1544). See Curran 2012, 37. For a contextualization of the first generation of Dutch artists who travelled to Rome in the 1630s such as Herman Posthumous, Lambert Sustris and Maarten van Heemskerck, see Dacos 2004.

[61] Stenhouse 2012, 248.

Fuchs' attitude matches a change of approach in an increasing number of contemporary historians and antiquarians, who dedicated their efforts to survey ancient architectural remains and to provide related documentation based on their personal examination. In Britain, the contribution of William Camden (1551-1623) stands out as a milestone in European antiquarian studies.[62] His *Britannia*, which was published for the first time in 1586 and would be revised and enlarged in the following editions until the 19th century, contained his observations on the places he visited and his study of the material he inspected (such as inscriptions and coins) during his journeys. This topographic work is well situated within the late 16th century and 17th century English Renaissance, in which the study of history underwent a revolution in methodology and scope and contributed significantly to the formation of the 'Englishness' typical of the Elizabethan age.[63] This autoptic approach to antiquities will become more widespread in the course of the 17th century, promoted by the development of a new scientific method that encouraged empirical research over reliance on the authority of Classical authors.

Regarding Roman antiquities, a noteworthy work of the early decades of this century is the *De Nola*, compiled by the physician Ambrogio Leone (1458-1525), friend to the publisher Aldo Manuzio and to Erasmus of Rotterdam. In this work, published in 1514 in Venice, Leone combines the themes of the *descriptio Urbis* and the *laudatio Urbis*, which are typical of humanistic culture, aiming to praise his hometown Nola, near Naples, that he had to leave. Among the engravings that Leone included in the text, we find a reconstruction of Nola in Classical times, which represents the first archaeological plan of a city outside Rome that is known to us (Figure 2.5).[64] In line with the cartographic tradition that depicted Rome as a circular town,[65] the drawing represents Roman Nola as having a circular plan, extending much beyond the town in Leone's time and surrounded by a fortification with twelve regularly spaced gates. A temple of Augustus stands in the middle of the circle, on the same axis as two amphitheatres, one of marble and one of brick. Leone describes the buildings of which the ruins were still visible at his time ('gli avanzi dell'antica città che tuttora si vedono'), providing fanciful reconstructions for the extant remains, again in line with the traditional way of depicting Roman monuments at that time.[66] Noteworthy, moreover, is the effort to contextualize Nola in its territory ('De Agro Nolano' is discussed in the first chapter of the book and presented with an engraving), although the fact that this work is mainly based on inscriptions and ancient texts led Leone to suggest various wrong identifications in attempting to relate ancient names with modern topography.

Around the same years, a project of a much larger scale was designed by the painter and architect Raphael (1483-1520). Pope Leo X (1475-1521), son of Lorenzo the Magnificent, had in fact commissioned him to prepare the first visual reconstruction of Rome in antiquity, which had to be created from measuring and recording the ancient buildings. Although Raphael died before having completed his plan, a surviving letter that he and his friend, the humanist Baldassarre Castiglione, wrote to the Pope in 1519 gives an insight about his view on antiquities, on their destruction and on the method that he was applying to complete the project.[67] In this letter, Raphael blames the time, the Vandals, the Goths, but more than these, he holds the predecessors of Pope Leo X accountable for the destruction of the ancient buildings in Rome, since they allowed the pillage of ancient temples and sculptures to produce mortar for the construction of new buildings.[68] He says that he has been measuring with great

[62] See chapter III 'William Camden and the *Britannia*' in Piggott 1978, 33-55.
[63] Richardson 2004, 108-23, esp. 112 and 120.
[64] Weiss 1969, 129.
[65] For the fashion of depicting Rome with a circular or ellipsoidal plan, see Cesarano 2011, 69.
[66] Cf. below Fabio Calvo's plans of Rome. For an analysis of the *De Nola* and its legacy, see Cesarano 2011.
[67] A transcription of the letter is published in Golzio 1936, 78-92. For the surviving manuscripts and a translation of the letter in English, see Hart and Hicks 2006, 177-92.
[68] 'Ma perchè ci doleremo noi de' Gotti, de' Vandalli et d'altri perfidi inimici del nome latino, se quelli che, come padri et tutori dovevano difendere queste povere reliquie di Roma, essi medesimi hanno atteso con ogni studio lungamente a distrugerle et

care the ancient buildings, reading 'good writers' (Vitruvius among others) and comparing the ancient texts with the structures, which gave him a good knowledge of ancient architecture.[69] Moreover, he is convinced that he can unerringly relate the ruins to their original shape, by integrating the missing information with the knowledge of the still standing examples.[70] A long section of the letter is filled with the description of the instruments that he intended to use in order to precisely measure and draw sections and perspective views of the buildings, and gives specific indications on how to operate them.[71] Raphael's attitude is characteristic of this period in which scholars never doubted their capability of reconstructing ancient remains without making mistakes ('infallibilmente', unerringly, to use Raphael's words). Until this period, the reliance on ancient authoritative authors, the collection of several sources, and personal surveys among the ruins were deemed enough to provide an accurate reconstruction of ancient ruins. This approach will start to be put into question in the 17th century, when the scientific methods of Galileo and Descartes spread a new awareness that started to influence also the study of antiquities, and scholars became more conscious of all the unknowns that had to be catered for through conjectures.

Some of the artists that were part of Raphael's circle attempted to finish his project, but the results were not comparable to the extent of Raphael's vision. Among the works that were published with this intention, there were the *Antiquitates Urbis* (1527) by Andrea Fulvio, who used to accompany Raphael in his surveys and showed him the buildings in ruins that were worthy to be documented, and the *Antiquae Urbis Romae cum Regionibus Simulachrum* (1527) by Marco Fabio Calvo, who had translated Vitruvius' *De Architectura* for him. Calvo's book contains a brief text and a series of woodcuts depicting, among others, views of Rome's ancient plan, regions and landmarks, which are randomly mapped and imaginatively reconstructed. The drawings show the urban development of the city, changing its plan in different geometric shapes: a square with four gates when it was founded by Romulus, an octagon under Servius Tullius, a circle divided in sixteen regions with a matching number of portals under Augustus, and a larger urban fabric cut by the Tiber in Pliny's time (Figure 2.6).[72] Calvo was inspired by the descriptions of classical authors, such as Livy, Dionysius of Halicarnassus, Pliny the Elder, and Vitruvius, and by the images of buildings appearing on Imperial coins, but he drew also on Late Antique land-survey treatises such as the 6th century *Codex Arcerianus*, depicting Roman military colonies as geometrically planned settlements.[73]

Later scholarship has judged negatively Calvo's imaginative reconstructions, which were labelled 'une barbarie incroyable!' at the end of the 19th century,[74] and more recently 'so naive as to be little more valuable than the plan invented by Annius of Viterbo'.[75] Similarly to the reconstructions in Marcanova's *Collectio*, these drawings are surely not historically accurate representations of Roman architecture and city planning, but as Jacks showed they offer instead a great testimony of both the attitude towards Classical antiquities that permeated the Renaissance, and of the state of the knowledge in this

a spegnerle?', Golzio 1936, 82-3.

[69] 'Onde essendo io stato assai studioso di queste tali antiquitati, et havendo posto non piccola cura in cercarle minutamente et in misurarle con diligentia, e leggendo di continuo di buoni auctori et conferendo l'opere con le loro scripture, penso aver conseguito qualche notitia di quell'antiqua architettura.', Golzio 1936, 82.

[70] '(...) Havendomi Vostra Santità comandato che io ponessi in disegno Roma anticha, quanto cognoscier si può per quello, che oggi dì si vede, con gli edificii, che di sè dimostrano tali reliquie, che per vero argumento si possono infallibilmente ridurre nel termine proprio come stavano, facendo quelli membri, che sono in tutto ruinati nè si veggono punto, corrispondenti a quelli che restano in piedi e che si veggono.', Golzio 1936, 84.

[71] Golzio 1936, 87-92.

[72] For a detailed discussion about each of Calvo's drawings see Jacks 1990, 453-81.

[73] Jacks 1990, 459.

[74] Muentz 1880, 306-7, cited in Jacks 1990, 463.

[75] Weiss 1969, 96-7.

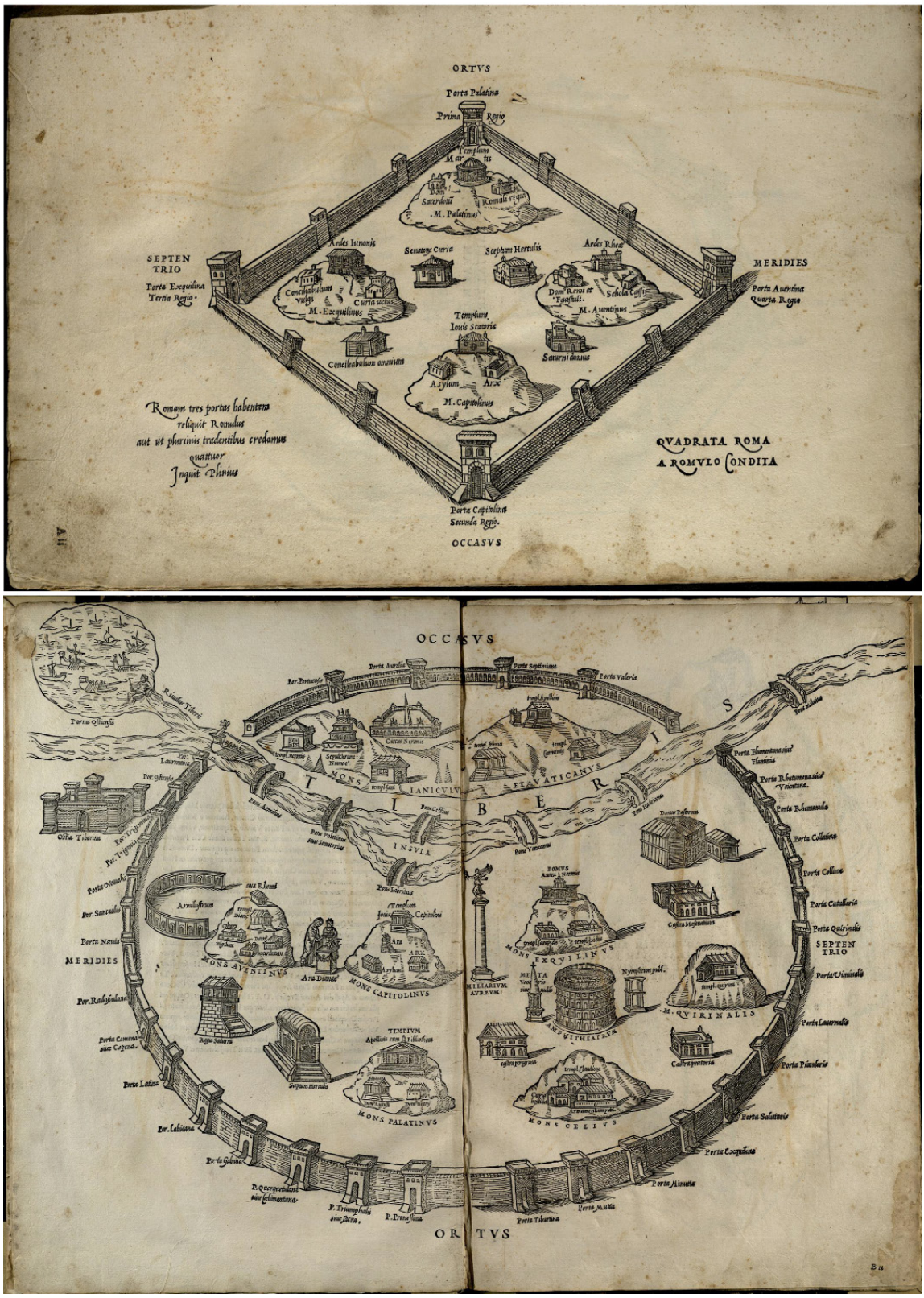

Figure 2.6 Reconstruction drawings of Rome in Fabio Calvo's Antiquae Urbis Romae cum Regionibus Simulachrum. *Top: Romulus' square city, bottom: Rome in Pliny's time (from the digitised copy available at http://arachne.uni-koeln.de/books/FabioCalvo1532).*

domain by scholars of the time.[76] Calvo's reconstructions are indeed a blend of his interpretations of both archaeological evidence and the current architecture 'all'antica', which had found new forms of expression reinterpreting classical authors and monuments.[77]

In 1527, the same year in which Calvo's and Fulvio's works were published, Rome was attacked by Charles V and suffered the pillage and ravages of his troops. Many people lost their lives, among them also Calvo.[78] The sack of Rome and the consequent plague inflicted a grievous blow to the life of the city, in such a way that this year traditionally signs the end of the Roman Renaissance.[79] In a couple of years political stability in Rome recovered and antiquarians and men of letters could continue to reconstruct the city's topography. Among the works that were given to print in the following years was the *Urbis Romae Topographia* by Bartolomeo Marliani (1488-1566),[80] who well embodies the spirit of the antiquarians of this period. The *Topographia*'s second edition, which was published in 1544 and supplied with engravings of monuments in ruins and reconstructions, obtained great success both in Italy and abroad and was reprinted in several editions and translated in other languages. In the preface of the 1588 edition printed in Venice, the editor Geronimo Francino tells us that Marliani had engraved on his sarcophagus the epitaph 'Urbis instaurator', so as to underline his role in the renovation of Rome and in its restoration to its past glories.[81]

In this period, a critical appraisal of earlier and contemporary works starts to be more common in the antiquarians' publications. Inconsistencies and inaccuracies in epigraphic transcriptions and monuments' identifications were found in the works written by Fulvio, Flavio and Marliani himself and denounced by a number of scholars. Among them was the architect Pirro Ligorio, who was born in Naples in about 1513 and moved to Rome some twenty years later. He was in charge of several construction works in Rome and, after the death of Michelangelo, was appointed supervisor of the works at St. Peter's for a short period. In 1549, cardinal Ippolito d'Este gave him the responsibility to carry out some excavations at Hadrian's villa at Tivoli.[82] His interest in antiquities led to the publication in 1553 of his *Libro delle Antichità di Roma*,[83] which was composed of two treatises, one where he described the chief antiquities of Rome focusing on circuses, theatres and amphitheatres, and the other (the *Paradosse*) where he contradicted some of the identifications that previous scholars had suggested.[84] Ligorio, who was also trained as a painter, drew several reconstruction drawings of the structures that he had included in the book.

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[76] Jacks 1990.

[77] Jacks 1990, 474.

[78] Gualdo 1993, 723-7.

[79] Traditionally, the beginning of the Roman Renaissance corresponds to the election of Pope Nicholas V (1397-1455). The Holy Year of 1450, which fell during his pontificate, brought in fact to Rome an immense number of pilgrims and consequently major earnings for the papal treasury, which the Pope partly invested to restore some churches and to fortify the city for the benefit and protection of himself and his successors (Pade 2007, 318; Miglio 2000, 644-58). For the description and the interpretation of the Sack of Rome by humanists and men of letters, see e.g. Corabi 2005, 81-96.

[80] Among other contributions, Marliani is remembered for the first publication of the *Fasti Consulares* that had been discovered in the Roman Forum in 1546. His description of the *Fasti* was published in the *Consulum, Dictatorum Censorumque Romanorum Series una cum Ipsorum Triumphis, quae Marmoribus Scalpta in Foro Reperta est, atque in Capitolium Translata* (Rome, 1549). As Enenkel noted, this discovery gave impetus to the fast development of the study of antiquity since for the first time a relation could be established between the ancient monuments and the organization of the calendar according to Roman historiography (Enenkel 2008, 36).

[81] Bartholomeus Marliani, *Urbis Romae Topographia*, Venice 1588, fol. 4r.

[82] For a biography of Pirro Ligorio see Coffin 2004.

[83] Full title: *Libro di M. Pyrrho Ligori Napolitano, delle Antichità di Roma, nel quale si tratta de' Circi, Theatri, & Anfitheatri, con le Paradosse del medesimo auttore, quai confutano la commune opinione sopra varii luoghi della città di Roma, Venezia: Per Michele Tramezino, 1553.*

[84] This work, as we learn from the preface that was written by the editor Michele Tramezzino, was dedicated to Ippolito d'Este and was meant to be just an extract of a much greater undertaking that Ligorio was carrying out, namely a treatise in 40 volumes on the antiquities of Rome. Tramezzino and Ligorio hoped that the cardinal was willing to sponsor and finance the work, but this ambitious project was never accomplished, see Daly Davis 2008, 5-6.

In the *Paradosse*, he points out that his predecessors have made many mistakes in their interpretations and identifications, like people who walk blindly and stumble into false impressions because they have not spent sufficient time in making acquaintance with the words of the ancient authors.[85] Particularly interesting for our purposes is Ligorio's exposition of his method of investigation. His conclusions were largely based on his surveys in which he carefully observed and measured the remains, integrated them with what he knew from classical authors, and compared them with similar structures that were still standing. The section describing the Circus Flaminius is particularly telling about Ligorio's purpose and methods: his aims were to keep the memory of antiquities alive and to satisfy those that were interested in them; to do so, he says to have tried 'with every possible care' to show the original shape of the circus by studying and measuring each portion of the surviving structure and comparing them with what other authors have written about Roman circuses. Later on, Ligorio explained that often he had to make use of 'conjectures' to integrate the parts that were missing, in order to visually reconstruct the building in its original shape. These integrations, however, were always based on comparisons with other structures, and on the opinions that he exchanged with other scholars.[86] For this reason, Ligorio hopes for the good disposition of his readers, since he underlines that he has been the first person who has undertaken such a cumbersome work.[87]

Ligorio's studies led him to complete Raphael's project forty years after its conception: in 1561 he drew a map of Rome that the brothers Michele e Francesco Tramezzino published in six sheets in 1561 with the name *Antiquae Urbis Imago Accuratissime ex Vetusteis Monumenteis Formata*.[88] This map served as the example for many other 16th century antiquarians that followed Ligorio in his representations and reconstructions of ancient monuments. One of the architects that collaborated with Ligorio and was inspired by his drawings, was the French architect Étienne Dupérac (Stephanus Duperac Parisiensis in its Latin version). Dupérac created many drawings and plans of Rome, such as a map that was published in 1574 with the title *Urbis Romae Sciographia ex Antiquis Monumentis Accuratissime Delineata*,[89] and probably also the *Disegni de le Ruine di Roma e Come Anticamente Erono* ('drawings of the ruins of Rome and their past appearance'), of which only the drawings and a small part of the accompanying text survive. The drawings depict views of Rome in his time and the reconstruction drawings of the same section of the city as it used to be in antiquity.[90] The importance of Dupérac's drawings lies in his effort

[85] *Paradosse*, 25v: '(...) ne con la diligenza, che si ricerca leggendo & essaminado le parole, e i sentimenti de gli antichi scrittori , ne' quali si conserva anchor viva in buona parte la memoria di Roma; ma andando à guisa di ciechi, & quando in una, & quando in un'altra falsa apparenza inciampando, sono caduti infiniti, & grandissimi errori'.

[86] *Libro di M. Pyrrho Ligori Napolitano, delle Antichità di Roma*, 18r: 'Desiderando io à tutto mio potere di rinfrescare, & di conservare la memoria delle cose antiche, & insieme di sodisfare à quelli, che d'esse si dilettano, mi sono con ogni possibile cura, & diligentia sforzato, & ingegnato, tra gli altri nobili edificij di dimostare anco la pianta intiera di questo Circo; & per ciò fare sono andato non senza grandissima fatica ricercando minutamente ogni luogo, & parte di esso; non lasciando pezzo alcuno di muro, per minimo che fusse, senza vederlo, & considerarlo sottilissimamente, accompagnandovi sempre la lettione di quelli auttori, che hanno scritto de i Circi alcuna cosa piu particolare; & valendomi bene spesso della coniettura, dove le ruine, che poche sono, mancavano; & pigliando l'essempio de gli altri Circi, che sono più intieri in quelle parti, che in questo erano affatto ruinate; & in somma il tutto di parte in parte conferendo, & communicando con huomini non meno per dottrina, che per giudicio rari, & eccellenti. Tanto che tra per li vestigij, & per l'auttorità, & per le coniette, & per gli essempij, & per le consulte, ne habbiamo alla fine ritratta la presente forma.'

[87] *Libro di M. Pyrrho Ligori Napolitano, delle Antichità di Roma*, 18v: 'Se però alla bontà loro parerà, che io lo meriti, essendo stato il primo che mi sono messo à tanto pericolo, accertandoli che ne havrò loro obligo grande, & che non mi sarà mai discaro l'imparare da chi ne sa più di me.'

[88] A reprint of the 1561 original can be viewed online in the digital collections of the British School at Rome http://www.bsrdigitalcollections.it/details.aspx?ID=3&ST=BS.

[89] A 1661 edition is available online on the digital collections of the Bibliothèque Nationale de France (http://gallica.bnf.fr/ark:/12148/btv1b85290368).

[90] For a re-contextualization of this work and the authorship of the drawings, see Zerner 1965, 507-12.

to be archaeologically accurate, unlike other Northern European artists (such as the Flemish painter Hieronimus Cock), who depicted the ruins of Rome from an artistic point of view.[91]

Another antiquarian that would leave his mark on this century was the Augustinian Onofrio Panvinio (1529-1568), who become librarian of Cardinal Alessandro Farnese and had at his disposal the vast collection of books of the Vatican Library for consultation. Cardinal Farnese had involved Panvinio in his plans to decorate his Villa Caprarola, near Viterbo with iconographic motifs, which triggered his interest in visual representations of ancient monuments and scenes.[92] In fact, Panvinio became very famous for his knowledge of antiquities and published in 1571 the *De Triumpho Commentarius*, a description of how triumphs were celebrated in ancient Rome, with illustrations that depicted reconstruction drawings of the processions. Panvinio underlined the accuracy of his work ('monumentis accuratissima descriptio') and clearly cited the sources that he used, namely the extant remains, coins and ancient authors ('ex vetustis lapidum, nummorum et librorum').[93] Another work of Panvinio which provides insights in his methods and in his aims is the *De Ludis Circensibus Libri II*, which was printed posthumously in Venice in 1600. In these volumes, Panvinio inserted a number of drawings (made by Dupérac) of coins, reliefs, and several reconstructions depicting, among others, the Circus Maximus, a scene of a sacrifice and a *naumachia* (Figure 2.7), which he drew based on ancient stones and coins ('ex vetusteis lapidum, nummorum monumenteis graphica deformatio'). Moreover, Panvinio included what he defined a 'very accurate' map of ancient Rome,[94] which was largely based on Ligorio's.[95] The chapter of the first book, which relates to the Circus of St. Sebastianus on the Via Appia, gives us a glimpse of Panvinio's target audience and purpose for including visual representations in his text: he writes in fact that he included the topography of the circus, a reconstruction and a drawing of the current state of the ruins in the two plates depicting the circus, in order to increase the understanding of the building and to follow his habit of satisfying the interest of eager scholars, who are passionate about Roman antiquities.[96]

As one might expect, antiquarians, architects and artists looked at the ruins and created reconstructions with different purposes in mind. While antiquarians were progressively sharpening their intellectual tools of scientific inquiry, artists were more engaged in creating powerful and appealing scenes that responded to the current fascination for the past, paying little attention to the archaeological documentation. This perception of the past is visible in the set of imaginative drawings depicting the Seven Wonders of the World plus the Colosseum in ruin made by the already mentioned Dutch painter Maarten van Heemskerck and printed by the Dutch publisher and engraver Philip Galle in 1572. These drawings show the artistic intention to create an imaginative interpretation of ancient monuments. The reconstruction of the temple of Artemis in Ephesos, for example, far from being an archaeologically accurate attempt, is inspired by the canon of Renaissance architecture (Figure 2.8). Architects, on the other hand, were interested in studying ancient architecture for the knowledge that they could gain about ancient construction techniques and proportions, which they could then apply to their contemporary projects. During the Renaissance, in fact, ancient architecture was seen as a source of inspiration and comparison for the creation of modern pieces.[97] This last purpose is well expressed in the preface of the *Livre des Edifices Antiques Romains* (1584), a collection of reconstruction drawings of

[91] Grafica Antica, Catalogo 46, Antiquarius, 40, available online at www.antiquarius-sb.com/Files/Catalogo%2046.pdf.
[92] Stenhouse 2012, 244.
[93] Stenhouse 2012, 241.
[94] Titled: 'Antiquae Urbis Imago / accuratissime, ex vetusteis monumenteis, et heis quae supersunt reliquieis et parietineis / delineata Onuphri Panvinii Veronensis fratris Eremitae Augustiniani / autoris impensa et aeneis formeis (...).'
[95] Bajard 1992, 579. Panvinio and Ligorio shared in fact a publisher (which made the engravings that Ligorio had used for his work accessible also to Panvinio) and also the collaboration with Dupérac (Stenhouse 2012, 246-7).
[96] 'Haec ut facilius intellegantur , & morem meum sequar in satisfaciendo avidis antiquitatum studiosis Romanarum rerum, duabus tabellis huius Circi topographiam, delineationem, & post ruinam quomodo nunc cernitur adiunxi.' *De Ludis Circensibus Libri II*, 55-6.
[97] Curran 2012, 37.

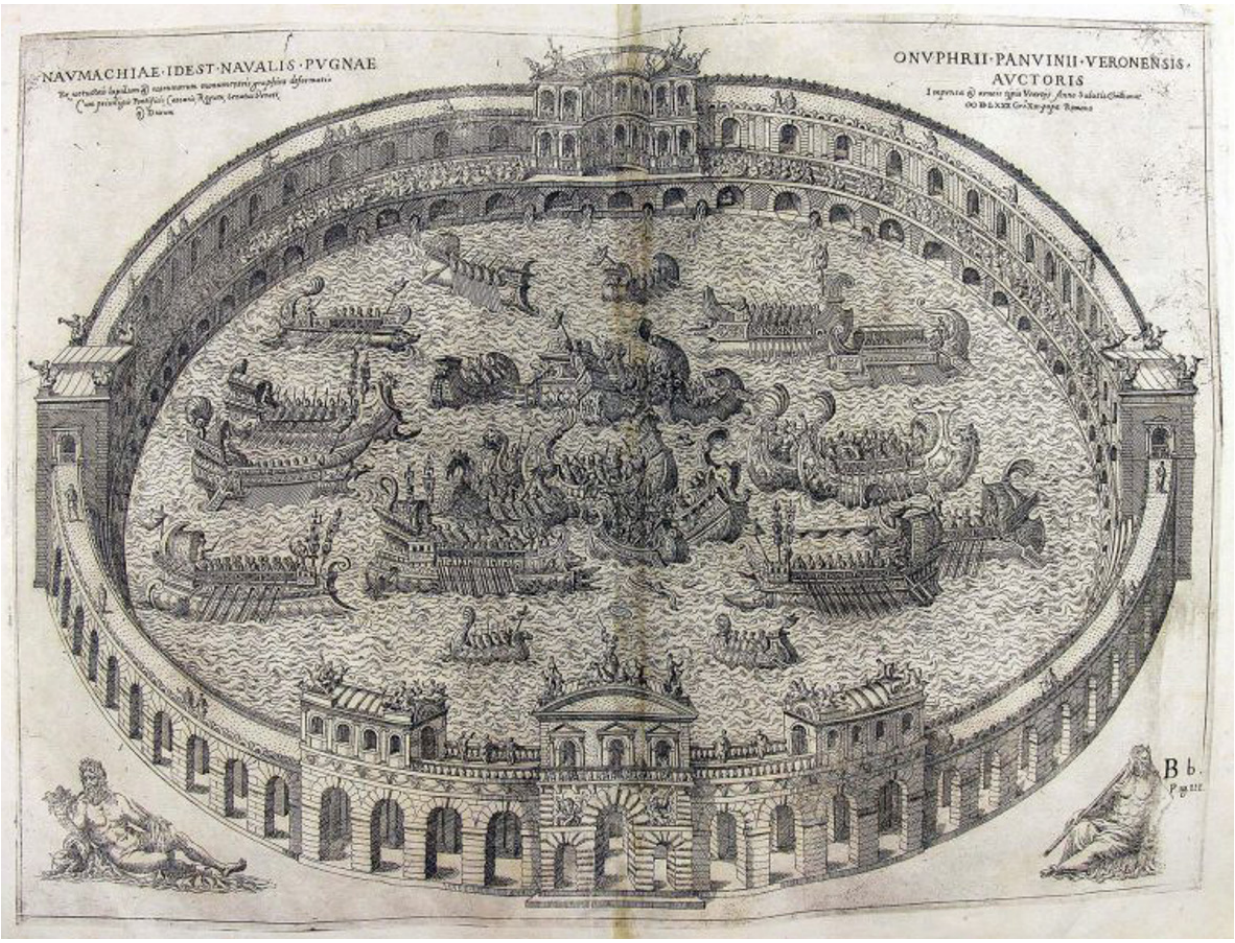

Figure 2.7 Reconstruction drawing of a Naumachia from Panvinio's De Ludis Circensibus *(1600) [source: http://movio.beniculturali.it/bupd/lemusetrailibri/it/159/lapparato-iconografico].*

several buildings in Rome written by the French architect Jacques Androuet du Cerceau, the founder of an important family of artists.[98] In Cerceau's intention, the book could be useful to those that are curious about antiquities and even more to the architects that could be inspired by them.[99]

Over this period, illustrations start progressively to be seen as pleasant additions to texts and publishers pushed for their insertion in books to embellish them and make them more appealing to buyers. Some scholars were however very cautious about which illustrations they wanted to insert in their books, such as the Dutch philologist and antiquarian Justus Lipsius (1547-1606), who applied the same philological approach he used to interpret and reconstruct texts to the study of ancient ruins. Lipsius stayed in Rome from 1568 to 1570 where he worked as secretary to Cardinal Antoine Perrenot de Granvelle and 'diligently sought out many libraries, statues, inscriptions, coins, and whatever was relevant to the understanding of antiquity'.[100] He walked in Rome, admiring and making notes of the ruins with the

[98] For a contextualization of the Du Cerceau family see Blomfield 1911, 140-156.

[99] '(...) qui pourra servir à ceux qui sont curieux de l'antiquité, & encore plus (à mon jugement) à ceux qui sont maistres en l'Architecture, lesquels y pourront trouver plusieurs beaux traits & enrichissements pour aider leurs inventions.' *Livre des Edifices Antiques Romains* (1584), letter of dedication.

[100] Papy 2004, 103.

Figure 2.8 The imaginative reconstruction drawing of the temple of Artemis in Ephesos by the Dutch painter Maarten van Heemskerck (1572) [source: https://commons.wikimedia.org/wiki/File:Temple_of_Artemis.jpg].

company and guide of the historian and antiquarian Fulvio Orsini, who had built up a vast knowledge of Roman history together with a collection of antiquities and a well-furnished library.[101]

A passage of Lipsius' second edition of the *Poliorceticωn sive de Machinis, Tormentis, Telis Libri Quinque* (1599), in which reconstruction drawings of *ballistae* were inserted to better convey the textual explanation on the functioning and appearance of this Roman weapon, is particularly interesting for our purpose to investigate the role and development of reconstruction drawings over the centuries. The reason why visual representations are important in Lipsius's view is clearly expressed in a dialogue with his friend, the Flemish humanist, poet and painter Dominicus Lampsonius that he reports in the *Poliorceticωn*: 'Lamps.: Forgive me, Lipsius, but we shall accomplish little, if you present information about these machines to the ears only. Lips.: What can we do further? Lamps.: You should present it to the eyes as well. These can understand and judge more quickly at a single glance, than the ears can after much listening.'[102] Lipsius, however, was a severe judge of the accuracy of the illustrations that he included in his texts, to the point that in the opening of the second edition of his *Saturnalium Sermonum Libri Duo* (1585) he alerts the reader that he did not agree with the insertion of the illustrations that were included by the publisher. Likewise, in another passage of the second book, he notes that the drawing of the gladiatorial games contained some invented elements that are the product of artistic license and not historical truth.[103] However, one has to keep in mind that the 'veritas' that Lipsius advocates in his illustrations corresponds to the state of knowledge of his time, with the result that anachronisms can be

[101] Papy 2004, 104-5.

[102] Lipsius, *Poliorceticωn*, I, cap. 6 (p. 37) in the translation by J. Papy (Papy 2004, 116).

[103] 'Insere figuram in qua tu, Lector, scito quaedam à pictore esse ad rem subiiciendam oculis, non à veritate. ut ostiolum ante Editorem, gradus in arenam: quia revera per alios interiores aditus delati gladij & arma in Orchestram.', Lipsius 1585. *Saturnalium Sermonum Libri Duo* II, cap. XIX (p. 150).

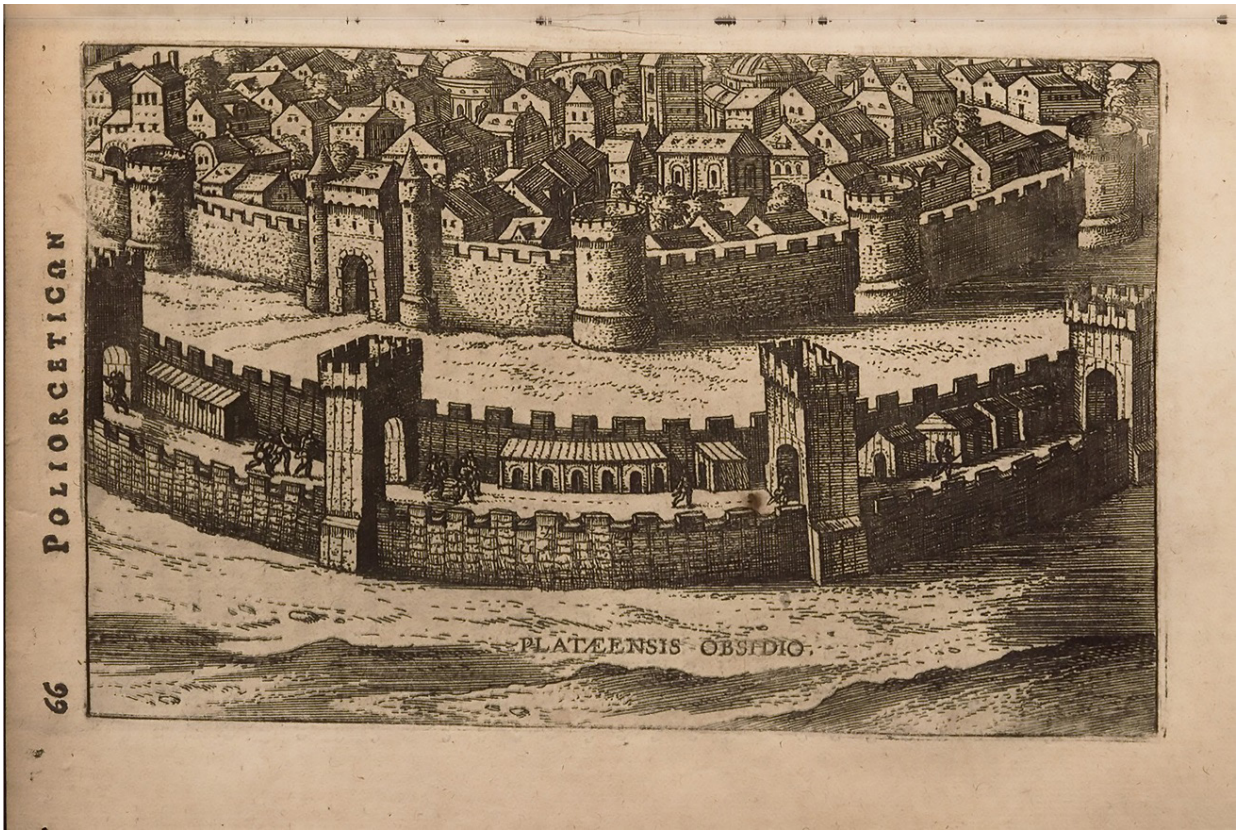

Figure 2.9 Reconstruction drawing of the siege of Plataea in Justus Lipsius' Poliorceticωn *(1596), 66 [digitized by ECHO – Cultural Heritage Online].*

found, such as the presence of typically Medieval walls protecting the Boeotian city of Plataea depicted under siege in the *Poliorceticωn* (Figure 2.9).

As this overview has showed, in this period scholars had not yet developed what could be called a scientific method in modern terms and their approaches towards the study of antiquities and the making of reconstruction drawings of ruins greatly vary in relation to their personality, interests and background. There are however some elements that emerge as common shared values among scholars, which include a more marked reliance on personal surveys, and hence on primary sources, a more critical approach towards previous scholarship, a conscious use of conjectural integrations based on comparisons and exchange with peers, and a more defined idea about the role of reconstruction drawings in explaining and clarifying concepts otherwise difficult to grasp. These considerations contribute to a reassessment of the antiquarians' approaches to antiquities in line with recent scholarship which has aimed to re-contextualize them in their historical and cultural period.[104]

[104] The first work that positioned antiquarians in their historical and cultural context is the essay 'Ancient History and the Antiquarian' by A. Momigliano, which was presented as a paper at the Warburg Institute in 1949 and reprinted twice (in 1955 and 1966) after its first publication in the *Journal of the Warburg and Courtauld Institutes* in 1950. This essay has been influential in setting the framework for the understanding of the relationship between antiquarians and ancient history, and of the development of a historical method. A recent re-contextualization of Momigliano's work is given in Miller 2007. Another important contribution to the field has been given by Piggott 1976, which focusses on the history of antiquarian studies in England and Scotland from the 16th to the 17th centuries. Recent re-assessments of the antiquarian contributions are given by Sweet 2004, Murray 2007, 14-21, and Murray 2014, 189-201.

The traditional rendering of antiquarian endeavours as amateurish and unscientific has been in large part overemphasized and generalized to underline the contrast with the scientific and modern approach of the developing discipline of archaeology in the 19th century.[105] In this view, antiquarianism was therefore dismissed as a 'wrong-turning on the pathway to archaeological enlightenment'.[106] As the next section will further confirm, the reinterpretation of antiquarian production of the 16th and 17th century means that it should not be discarded as naïve, as it in fact sets the basis for the revolution of the historical method that will impact modern day archaeology, and ultimately its analysis enriches the discussion about the roots and methodologies of this discipline.

2.4 The 17th century

In the 17th century wars, pestilences and famine invested Europe. Especially devastating was the Thirty Years' War (1618-1648) which ended with the peace of Westphalia, but had long term repercussions on the social and political balance of the European powers. Against this background, the cultural panorama was very dynamic and the conceptual and practical developments, which were maturing in the last decades of the previous century, consolidated. Philosophers such as Francis Bacon (1561-1626), Thomas Hobbes (1588-1679), René Descartes (1596-1650), and Benedict Spinoza (1632-77) all contributed to create a vibrant intellectual scene; science made important advances thanks to the observations and theories by Galileo Galilei (1564-1642), Johannes Kepler (1571-1630), Blaise Pascal (1623-1662), and Isaac Newton (1642-1727); art and architecture flourished in the Baroque style with the achievements of artists and architects such as Caravaggio (1571-1610), Gian Lorenzo Bernini (1598-1680), and Francesco Borromini (1599-1667).

During this period, a new way of researching is conceived, which originated primarily from relying on empirical observation and on the use of reason, as expressed in the ideas and writings of Bacon, Galileo and Descartes. In 1637, Descartes published his *Discours de la Méthode* where he explained his view on the method that he thought necessary to be applied to study and research. The key elements were a rational and critical approach towards traditionally accepted knowledge: everything had to be doubted, while the only certainty was the existence of the being who conceives the doubt, which is summarized in his famous proposition 'cogito ergo sum': I think, therefore I am. These principles and the broader philosophical view of Descartes inspired philosophers such as Spinoza and Leibniz and found opposition and criticism from others, such as Hobbes.[107] Empiricism and rationalism promoted the development of a scientific method based on original observations and first-hand experience, and on a deductive reasoning to reach knowledge. Especially towards the end of the century, these principles would start to impact more profoundly also the study of antiquities, by reinforcing the emphasis on the self-inspection of ruins and on a critical approach towards tradition, both in the form of Classical authors and of previous generations of scholars.

The interest in antiquities and the collection of small finds, coins and inscriptions continued to rise in the course of this century. The antiquary became a figure which was enough defined to be satirised in 1628 in the collection of characters by the British bishop John Earle as a man 'that hath that unnaturall disease to bee enamour'd of old age, and wrinckles, and loves all things, (as Dutchmen doe cheese) the better for being mouldy and worme–eatern'.[108] In his caricature, Earle presents the antiquarian as a

[105] Marchand 2007, 248-85.

[106] Murray 2007, 14. Murray focuses in particular on the construction of British prehistory during the 16th and 17th centuries, discussing what he defines the 'interactionist methodology' that antiquarians adopted to reconcile new sources of information, such as ruins, coins and inscriptions with 'authorities' such as the Bible and the histories of Classical authors such as Tacitus (Murray 2014, 189-201; Murray 2007, 14-9).

[107] For an overview and placement of Descartes in respect to his contemporaries, see Abbagnano 1993, *passim*.

[108] Excerpt from section n. 7 ('The Antiquary') of John Earle's *Microsmographie* (1628).

great admirer of past relics, which he seeks, inspects and collects with much passion, to the point that he disdains all his contemporary products, even printed books which 'he contemnes, as a novelty of this latter age'. This tension between those who sustained the supremacy of the ancients and those who instead considered the inventions of modern times as the proof of the cultural superiority of their age is a recurrent theme in the Renaissance thought, starting with Petrarca.[109] In 17th century France, this debate peaked with the so called 'Querelle des Anciens et des Modernes', a dispute initiated within the Académie française among scholars sustaining opposing views of artistic inspiration and models. The 'casus belli' was the reading of the poem *Le Siècle de Louis le Grand* that Charles Perrault had composed in 1698 for the King, in which the French author compared the 'siècle de Louis' with that of the Emperor Augustus, stating that the ancients are 'men like us'.[110] This view represents the feelings of the 'Modernes', who praised the accomplishments of their contemporary artists under Louis XIV, as opposed to the 'Classiques', who instead considered Greek and Roman achievements as unparalleled and therefore promoted imitation as the only way to replicate the artistic perfection of the Classical works.[111]

In Italy, the fascination for Rome continued to inspire antiquarian works, one of the most famous being the *Antiquae Urbis Splendor* by Giacomo Lauro. Lauro, born most likely in Rome at an unknown date in the second half of the 16th century, started to work on the *Antiquae Urbis Splendor* probably around 1586. The four volumes came out between 1610 and 1628, after which they were reprinted in several editions until the very end of the 17th century. As the title promises, Lauro's aim was not to create an accurate reconstruction of Rome; instead, he wanted to represent the glory and splendour of the ancient city, which he conveys through a series of reconstruction drawings of monuments and views of ancient Rome and nearby places of interest, such as Portus, the ancient harbour of Ostia. These representations were appreciated by artists such as Bernini and Borromini as models and source of inspiration,[112] and were popular among travellers and visitors that came to Rome, serving as a sort of tourist guide. In the 1625 edition, in fact, descriptions of the represented buildings in Italian, German and French were added to the original Latin text to make this work more appealing for a broader audience.[113] The editions published in 1637 and 1641, moreover, were sponsored by the Swiss Guard Hans Gross (under the pseudonym of Giovanni Alto), who was working in his spare time as a tourist guide in Rome.

As we can gather from Alto's dedication to the reader, 17th century tourists, especially German and French, wanted to better understand the buildings in ruins and to have some visual souvenirs to take home. Lauro's reconstruction drawings were therefore meant to serve this very purpose by providing those visiting Rome with a visual memory of the monuments they saw, that they could show to relatives and friends at home. Gross is himself portrayed in one of the drawings, while he is showing the reconstruction of the *Meta Sudans* between the Colosseum and the Arch of Constantine to a group of German nobles (Figure 2.10). The explanatory text under this drawing well illustrates the idea that these encounters with the distant past held an educational value. They were perceived not only as an honest and recreational way to spend the time, but also as an opportunity to reflect upon the 'vicissitudes of all things, on how now lies what previously had flourished.'[114]

[109] Boruchoff 2012, 133-164; Fumaroli 2001, 7-220.

[110] 'La belle Antiquité fut toujours vénérable,/ Mais je ne crus jamais qu'elle fut adorable./ Je vois les Anciens, sans plier les genoux./ Ils sont grands, il est vrai, mais hommes comme nous;/ Et l'on peut comparer, sans craindre d'être injuste,/ Le siècle de Louis au beau siècle d'Auguste (...)' cited in Mortier 1982, 51.

[111] This opposition was however not only limited to literature, but was the expression of different political orientations as discussed in Fumaroli 2001, 167-8.

[112] Del Pesco 1984, 418-9; Di Calisto 2005.

[113] For an analysis of this work, its context and its dedications, see Del Pesco 1984.

[114] *Antiquae Urbis Splendor* (1641), pl. 90: 'Vides hic praeterea Ioannem Grossum Heluetium pro more suo nobilibus Germanis antiquitates ostendentem Romanas, cuius ipsi ut etiam nobiles Galli, sunt inspectores curiosissimi et merito quidem, nam praeter quam quod decet honestos uiros huiusmodi honesta occupatio ad ponendum tempus utiliter et cum voluptate

The dedication to the reader at the beginning of the volume and the explanations of the drawings give us also an indication of the method and sources that had been used to create such representations: accurate recording of the extant remains that were compared to the buildings engraved in medals, marbles and metals, ancient writers (most notably Vitruvius, Varro, Livy, Suetonius), and modern authors such as Ligorio, Dupérac,[115] Biondo, Marliani, Fulvio, Panvinio and Lipsius.[116] It must be noted, however, that Lauro was mainly an engraver and had little knowledge of architecture. He therefore relied much on the visual models that were known at the time, supplying with coherent fantastic elements the missing pieces in his reconstructions.[117] As previously noted, the expertise of the drawing-maker has a great influence on the drawing method, the choices about which elements to draw and the final aim of the work.

This difference is clearly visible when comparing the reconstructions included in Lauro's work, which were mainly aimed at tourists visiting Rome, with the drawings made by the French architect Antoine Babuty Desgodetz (1653–1728) and published in *Les Edifices Antiques de Rome: Dessinés et Mesurés Très Exactement* (1682), which were meant instead to create a reliable documentation of the buildings for French architects interested in Roman architecture. Desgodetz's treatise, which remained a reference work on Roman antiquities in the following century, is organized in chapters, each one describing one monument (mainly temples, arches, and theatres) that was illustrated with plans, sections, details, and reconstruction drawings. The reconstruction drawings are purely geometric and report accurately the measurements of each part of the structures. Buildings are drawn either from the front or from one

interim dum alij illud impendunt pecuniasque profundunt in res cum honestate pugnantes et in plurima mala quae secum solet afferre otium malorum omnium origo, proficiunt etiam hac cognitione ad cognoscendam rerum omnium uicissitudinem quomodo plurima nunc iaceant quae olim floruerunt, adde quod multum facit haec cognitio antiquitatis ad intelligendos et interpretandos profanos auctores.'

[115] In the explanation related to the reconstruction drawing of Portus, the ancient harbour of Ostia (pl. 119), Lauro in fact stated that the depiction was taken from the description of Ligorio, from antiquities, medals and from ancient and modern authors: '(...) come in questa descrizione si vede, cavata da quella di Pirro Ligorio, delle antichità, e medaglie, e da gl'Autori antichi, e moderni.'

[116] Transcription of the dedication to the reader opening the 1641 edition: 'Gio. Ridolfo Alto / Svizzero a chi leggerà / La città di Roma, si come, per la vastità dell'Imperio non ebbe mai altro popolo, o Natione, che l'agguagliasse, così ha lanciato nelle sue Rovine sì alti vestigi dell'antica maestà, e grandezza, che è forza, da' soli avanzi, che se ne veggono, (tutto che le reliquie miserabili del tempo, e dell'hostilità de' Barbari) ammirarla per Capo del Mondo, e trionfatrice dell Universo, E perchè essendo questi monumenti, non solamente venerati; ma con estraordinaria curiosità, e diligenza da tutte le genti continuamente ricercati; poichè (spinte dal rimbombo della Fama) sin da gli ultimi confini della Terra, qua si trasferiscono a posta per vederli, e contemplarli dappresso: nè essendo poi lor possibile descriverne, ritornati alle lor case, così esattamente le maraviglie, che, & essi, e gli ascoltanti ne restino pienamente sodisfatti.; ho voluto servire in quella parte al godimento universale, rappresentandole nuovamente in queste carte delineate al naturale dalla dotta mano di Giacomo Lauro; e da penne sublimi vivamente descritte in varie lingue; Opera veramente di grandissima spesa, e fatica; già che per darle la perfettione, che si poteva maggiore, oltre all'essersi esattissimamente ricercate le piante delle Antichità nelle macerie stesse; & investigate le forme vere delle fabbriche, nelle Medaglie, Bassi rilievi, Marmi, Metalli, & altre cose tali de' secoli passati, si sono anche rivoltati con sommo studio gli Autori più celebri, e rinomati, come Pollione Vitruvio, M. Varrone, Tito Livio, Svetonio, Tacito, l'uno, e l'altro Plinio, Plutarco, Dione, Appiano Alessandrino, Diodoro Siciliano, Herodiano, Dionisio Alicarnaseo, Ammiano Marcellino, Sesto Rufo, Giulio Capitolino, Elio, Lampridio, Flavio Vopisco, Elio Spartiano, Flavio Eutropio, Flavio Gioseffo: & oltre a questi Giovanni Zonara, Gio. Boemo, Fenestella, Pomponio Leto, Andrea Alciato, il Biondo, l'Albertino, il Boccaccio, Guido Pancirolo, Alessandro de Alessandri, Gugiielmo di Choul, il Marliano, & il Fauno, e L. Mauro, Andrea Fulvio, Carlo Sigonio, Honofrio Panvinio, il Lipsio, e tutti gli altri finalmente, da' quali si poteva aver notitia, sì degli edificij notabili publici, e privati, come delle Attioni Sacre, Civili, e Militari de' Romani, più degne di memoria; che sono state per colmo aggiunte, parimenti delineate al vivo in questo Libro. Ricevi (amico Lettore) queste fatiche, qualunque sieno: e pascendo in esse la tua virtuosa curiosità, gradisci l'animo di coloro, e mio, che per servire in uno stesso tempo all'utilità, e dilettatione commune, ci siamo volentieri adoperati in metterle insieme e pubblicarle; riputandoci non indegni della tua affettione, se non per altro, per havere impiegato le nostre industrie nel rappresentarti, quasi in maestosissimo Teatro, quelle cose, che sono state sempre l'oggetto della maraviglia, lo stupor de' secoli, e 'l miracolo del mondo: E vivi contento.'

[117] Del Pesco 1984, 426.

Figure 2.10 Hans Gross and a group of German tourists depicted next to the reconstruction of the Meta Sudans *in Lauro's* Antiquae Urbis Splendor*, pl. 90. [source: http://www.harvardartmuseums.org/collections/object/176002].*

side, without a perspective view or any attempt to insert vegetation or people, to make them more engaging to the viewers as Lauro had done in his drawings.

The predominance of works on Roman antiquities in the previous paragraphs is a reflection not only of the prevalent interest of antiquarians and tourists in the 17th century, but also of the options of travellers in that period. Greek antiquities were in fact more challenging to visit, as the Ottoman conquest of Greece in the 15th century had closed the frontiers of the empire, making Greece difficult to enter from this period onwards. Cyriac of Ancona was indeed one of the last travellers that could freely move in Greece, at least until 1687 when the Venetians invaded Greece and took possession of Athens even if only for a short period. In the meantime, sparse information over Greek antiquities was coming from diplomats, traders or missionaries who came back also with some ancient artefacts.[118]

The political situation in Greece has had an impact also on the state of the scholarship on Greek antiquities. The isolation of Greece and the reduced accessibility of its monuments made the books on this subject an appealing reading for both scholars and non-specialists. Given the difficulty to reach the

[118] Sánchez Hernández 2010, 11.

country, publications on Greek antiquities were mainly based on descriptions offered in ancient sources, such as the 2nd century AD Greek traveller Pausanias. For example, the Dutch Johannes Meursius (1579-1639), professor of Greek and History in Leiden in the second decade of the 17th century, wrote his *Athenae Atticae* (1624) without having ever visited Athens, but by relying on the material he found in the well-furnished Leiden University library.[119] The inaccessibility of Greek antiquities made moreover possible the circulations of unverified information and allowed publications such as Guillet de la Gulletière's book *Athènes Ancienne et Nouvelle* (Paris, 1674), that were not substantiated by any personal encounter with the ruins described and reconstructed. Although the frontispiece of the second edition of this book (1675) promises that the treatise was 'augmentée en plusieurs endroits, sur les memoires de l'auteur', de la Gulletière, historiographer of the Royal Academy at Paris, had never been to Greece himself and had based his work on Meursius' and on the information that he could access because of his appointment at the Royal Academy. The book contained a map of ancient Athens that was completely fanciful. De la Gulletière's forgery was disproved some years later when the French doctor Jacob Spon wrote the accounts of his journeys in his *Voyage de l'Italie, de Dalmatie, de Grèce et du Levant* (1678) and was able to prove the unreliability of Guillet's map and correct also some of the inaccuracies and errors in Meursius' text.[120]

At the turn of the century, the signs of a changing approach towards the study of antiquities can be seen in the work of the Florentine antiquarian Filippo Buonarroti (1661-1733). In 1698 Buonarroti published his *Osservazioni Istoriche Sopra Alcuni Medaglioni Antichi* ('historical observations over some ancient medallions'), a treatise on the coins and medals from the collection of cardinal Gasparo di Carpegna, which he illustrated with several drawings of his study material. Although this iconographic work does not contain any reconstructions, it is worth mentioning since it is quite telling on a changed perception towards the study of antiquities that will become more marked in the 18th century.[121] In the preface of his work, Buonarroti confesses the many doubts that he felt in studying this material, insomuch as to define his treatise a 'stodgy collection of doubts, instead of one of certain and digested observations'.[122] Casting doubt on his observations is quite remarkable and stands out from the prevalent approach of antiquarians claiming to present 'accuratissimae descriptiones' of the documented and reconstructed antiquities. Buonarroti explains the reasons for his doubts, saying that the study of antiquities greatly differs from any other, and requires a more complex method of investigation. Its premise was a sincere confession that one does not know what ancient painters and sculptors have had in their minds ('il confessar sinceramente di non sapere tuttociò che ha potuto venir' in capo a tanti pittori e scultori antichi'),[123] and the acknowledgment of the challenging task that is set out for a scholar studying

[119] For Meursius' scholarship and his contacts with several scholars who sent him materials, see Sánchez Hernández 2010, 9-11.

[120] Sánchez Hernández 2010, 11.

[121] Gallo defines this treatise as the 'manifesto of a new antiquarianism' that was influenced by the establishment in 1657 of the Accademia del Cimento, a Florentine scientific society that followed Galileo and his experimental method, and by the Newtonian approach (Gallo 1999, 828). In Buonarroti's reasoning one can also recognize the influence of 'Cartesian doubt', Descartes' method of investigating the truth by starting with the assumption that the only certainty is uncertainty.

[122] '(...) Indigesta collezione di dubbi, che d'osservazioni certe, ben digerite, & esaminate.'

[123] '(...)Benchè io sappia, che per contentare il gusto presente, ci volevano altre cose che queste, messe giù senz'ordine e alla rinfusa, e con tal' incertezza e dubbio della mia opinione e sentimento, che meriteranno forse d'esser'avute piuttosto per un'indigesta raccolta di dubbi, che d'osservazioni certe, ben digerite, & esaminate. Egli è ben vero però, che in quanto a questa seconda parte, io ci sono caduto volontariamente, sperandone anche l'approvazione di tutti coloro, i quali faranno riflessione, che lo studio dell'antichità e dell'erudizioni è differente da molti altri, ne' quali non pare che in rigor di metodo si ricerchi, che l'adattare le conclusioni a quel solo principio, da cui dependono; dovecchè in questo non si può sperare di seguitare un metodo così semplice; posciachè vi sono, per così dire, infiniti principii, e le conietture dipendono da favole, istorie, riti, & altre cose divise e disparate fra di loro: e conseguentemente dovrà giudicarli per effetto d'una certa cognizione delle forze dell'arte, il confessar sinceramente di non sapere (per pigliare un esempio da una sola parte, che potrebbe sembrare la più facile) tuttociò che ha potuto venir'in capo a tanti pittori e scultori antichi, i quali ci hanno lasciato i monumenti dell'opere loro, circa l'aggiungere, & ancora mutar'affatto i simboli, & i suggetti delle favole e delle Deità: poichè per regolati che si fossero nel seguitare la pubblica erudizione, più di quello che sieno adesso i nostri, gli artefici antichi; potevano nondimeno essere

antiquities, facing the difficulty to identify the correct information in the many previous works on this topic instead of simply reporting what others had written before, thus behaving 'like sheep that leave a closed space, one following the others'.[124]

2.5 The 18th century

The beginning of the systematic excavations at Herculaneum in 1738 is traditionally taken as the starting date of the discipline of Classical archaeology. In previous years, excavations had been carried out on the Aventine (1705), on the Domus Flavia on the Palatine (1720) and on the graves along the Via Appia (1726) directed by the antiquarian from Verona Francesco Bianchini.[125] These, and the excavations that started in 1748 in Pompeii,[126] gave a great impetus to a widespread interest in Roman antiquities in the 18th century that was nourished by young savants visiting the ruins during their *Grand Tour*.[127] Even the models and vocabulary of the French Revolution came from the classics, and Rome, Greece and Egypt were seen as the cradle of civilisation.[128] Illustrations were by now seen as an integral part in the study of antiquities, as confirmed by the words of the British antiquarian William Stukeley, who stated that 'without drawing or designing the Study of Antiquities or any other Science is lame and imperfect'.[129] The new discoveries created an even more pronounced need to document and represent the monuments and their decorations in their context, with a visual language that was appropriate for presenting them to the public.[130] The first musea of antiquities started to be established growing out the antiquarians' private collections and opened to visitors, the first being the Capitoline Museums in Rome (1733) that was followed by other similar initiatives all over Europe, such as the British Museum (1759) and the Louvre (1793).[131] After the mid-18th century, an interest for landscape started to increase, encouraged by the ideas on nature by Jean-Jacques Rousseau.[132] This new way of looking at landscape was of great importance for the contextualization of ancient buildings, that started to be seen not in isolation any more, but as part of their surroundings.

Works on antiquities started to be systematically collected in larger publications such as the *Thesaurus Antiquitatum*. At the turn of the 17th century, the famous *Thesaurus Antiquitatum Romanarum* (Utrecht/ Leiden, 1694-1699) edited by the German scholar Johannes Georgius Graevius in twelve volumes and the *Thesaurus Antiquitatum Graecarum* (Leiden, 1697-1702) by the Dutch Jacobus Gronovius appeared in print in The Netherlands.[133] The aim of these collections was to reprint and make available to a wider

costretti per fatti e favole particolari delle Città (che ora per la scarsezza degli Scrittori, i quali sogliono per lo più parlare delle generali e ricevute da tutti) sovente ancora per servire a' privati sentimenti di coloro, che facevano ad essi fare i simulacri, di dare agli Dei figure e simboli differentissimi da quelli, dava a' medesimi il comune dell'altre nazioni (...)', Buonarroti 1698, ii-iii.

[124] 'E se veruna scienza ha bisogno d'un sì fatto preparamento d'intelletto e cautela, lo studio dell'erudizione e dell'antichità è quello che ne ha una necessità particolare, non solo per le cagioni addotte, ma ancora per il gran numero degli scrittori, e per la varietà delle opinioni che ci sono; onde è molto difficile in una strada tanto frequentata da ogni sorta di ingegni seguitare le vestigie, che conducono alla verità, e non piuttosto, a guisa delle pecorelle che escon dal chiuso, E ciò che fa la prima e l'altre fanno, quelle che vanno a finire in falsità e menzogne (...).', Buonarroti 1698, v.

[125] Bianchini is remembered as an important name in the dawn of archaeology as a scientific discipline for his scrupulous method that he applied during the excavation and in the process of publication of the results (Gallo 1999, 833).

[126] See e.g. the published excavations diaries by Francesco and Pietro La Vega in Pagano 1997.

[127] The *Grand Tour* started to include also sites in South of Italy, such as Paestum, which was properly 'rediscovered' only during this century (Villani 2011, 85-98).

[128] Díaz-Andreu 2007, 67-78.

[129] From the first minute-book of the Society of Antiquaries of London in 1717, of which William Stukeley was first Secretary, cited in Piggott 1978, 7.

[130] Barbanera 2010, 33-4.

[131] Díaz-Andreu 2007, 46-7; Halbertsma 2003, 22.

[132] Dubbini 2002.

[133] For the third, less successful, *Thesaurus* on Italian antiquities published by the Leiden publisher Pieter van der Aa between 1704 and 1725 see Piccoli 2013, 61-82.

audience works that had been previously published or that were difficult to access. However, the works that were published or republished in these years varied greatly in terms of the accuracy and reliability of the material presented. In one of the 1712 issues of the *Giornale de' Letterati d'Italia*, an important literary journal founded in 1710, an article by the intellectuals Pietro Caterino Zeno, Scipione Maffei and Giusto Fontanini criticized the fact that many histories of Italian cities were still being published even though they were not based on historical documentation but on myths and legends.[134]

In the second half of the century, in Germany Johann Winckelmann published his *Geschichte der Kunst des Alterthums* (1764) where he considered ancient artistic productions from the point of view of their style to establish their chronology and not only from the point of view of their iconographic motifs, as was the prevalent approach in the circles of antiquarians.[135] Winckelmann is considered the founding father of art history and had a great impact on the development of German Hellenism with his studies on Greek art. The German scholar, in fact, sustained the superiority of Greek art over Roman, which he saw as always attempted at imitating the Greek original,[136] and was one of the leading intellectuals who saw the roots of European identity in Greece.[137] The influence of Winkelmann's writings impacted in various degrees on the study of antiquities in the other European countries. In Italy, for example, his contribution was not absorbed much by Italian antiquarians, not only because of the linguistic barrier posed by reading the German text, but also for the diffidence of erudite circles towards a foreigner's opinion.[138]

In France, the Comte de Caylus (1692-1765) stands out among his contemporary antiquarians.[139] The mutual antipathy with Diderot and with the 'Encyclopédistes', caused not least by Caylus' aristocratic lineage, resulted in a sort of *damnatio memoriae* of Caylus in France.[140] From the 19th century onwards, however, several studies have reassessed his contribution to the development of a scientific method, to the point that he has been paired with Winkelmann as a founder of Classical archaeology.[141] His most important work, the *Recueil d'Antiquités Égyptiennes, Étrusques, Grecques et Romaines*, was published in six volumes and a supplement between 1752 and 1767, and contained explanations and drawings of the materials that he personally owned and inspected. De Caylus' reliance on the comparative method allowed him to go beyond the taxonomies that had been established by Classical authors (e.g. Varro), thus contributing to the elaboration of the typological method based on his observations and comparisons between the artefacts that were part of his large collection.[142] On the other side of the English Channel, the comprehensive *History of the Decline and Fall of the Roman Empire*, written by the historian Edward Gibbon (1737-1794) and published in six volumes between 1776 and 1788, will influence the historical method of the 19th century for its reliance on primary sources and will become a reference work on the subject for the following generations.[143]

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[134] Gallo 2007, 111-2. In this regard, it must be noted that the lack of a firm criterion of selection for the works to be inserted in these *Thesauri* depended in some cases purely on the publishers' wish to create huge collections to attract more buyers. This situation is documented for the compilation of the *Thesaurus Antiquitatum et Historiarum Italiae* (Leiden, 1704-1723), which caused disagreements between the publisher Pieter van der Aa and the editor Pieter Burmann (see Piccoli 2013, 6).

[135] For Roman antiquarians, see Gallo 1999, 840.

[136] As he stated: 'A statue by an ancient Roman hand will always stand in the same relationship to a Greek original in the way that Virgil's Dido with her retinue, compared with Diana among the Oreiades, relates to Homer's Nausicaa, which the former attempted to imitate' (cited in Carter 2013, 32).

[137] Morris 2006, 258.

[138] Gallo 1999, 841.

[139] For a discussion of his contributions see Fumaroli 2007, 154-83; Cronk and Peeters 2004.

[140] Fumaroli 2007, 168. For an analysis on Caylus' relationship with Diderot see Massau 2004, 45-57.

[141] Gran-Aymerich 2001, 40. Miller actually sustains that in fact de Caylus was a 'much better historian' than Winckelmann (Miller 2007, 35).

[142] Warin 2011.

[143] Momigliano 1954, 450-63.

In Italy, one of the most controversial figures of this period, not least for his reconstruction drawings, is Giovanni Battista Piranesi (1720-1778), a troubled and restless architect who was fascinated by Roman architecture. Like the architects of the previous century, he was convinced that ancient buildings should be the starting point for the modern architect to 'reshape the good taste in architecture, which was twisted by the barbarian coarse and ill-fated way of construction'.[144] Some of the publications of the archaeologist Bianchini were the starting point for the composition of Piranesi's *Antichità Romane*, a treatise on Roman antiquities that he published in 1756. In the preface of this work in four volumes, he stated clearly the purpose of this publication in trying to preserve the memory of the ancient buildings of Rome with his prints: 'And since I've seen that the remains of the ancient buildings of Rome, that are scattered in gardens and other cultivated fields, are decreasing in number day after day, either because of the harm committed by time, or for the greed of their owners who are surreptitiously digging them up to sell their parts to construct new buildings, I decided to preserve them by means of my prints.'[145] In the same preface, Piranesi complained that he could not rely much on modern works on Roman antiquities since they contained many mistakes, to be attributed either to the fact that their authors did not carefully inspect the ruins, or to their ignorance of architecture, or to the fact that they did not have a complete plan of Rome (such as the famous one that Giovan Battista Nolli had worked on between 1741 and 1743 and was published in 1748).[146] For this reason, Piranesi had to turn to ancient authors, analysing them and comparing them with the extant remains that he carefully recorded.

Piranesi has received much attention with publications and exhibitions devoted to him and to his unusual approach to architecture and antiquities. His style of drawing is characteristic and his interest for ancient building techniques is clear in his publications, in which he supplied etchings representing sections and details of buildings that aimed to illustrate ancient construction methods (Figure 2.11). The composition style that he adopted in many of his drawings was meant to collate all the different sources that he drew on to create the reconstructions, resulting in what Nixon has called 'multi-dimensional images'.[147] In these drawings, Piranesi took into consideration all the elements that compose a structure, such as its foundation, the elevation and its construction technique, contrary to the traditional view which focussed primarily on decoration.[148]

His reconstructions, however, have puzzled contemporary and modern scholars for their mixture of archaeology and invention, their purpose being difficult to grasp. Piranesi possessed in fact a great knowledge of Roman architecture, that he acquired with personal observations of the buildings and by reading modern and ancient authors that he combined with his skills in architectural design; yet, he introduced many elements from his own imagination that made his reconstruction drawings to be discarded by many as mere imaginative depictions. An example of his approach is his reconstruction of the Campus Martius in Rome, titled *Ichnographia Campi Martii* which he published in 1762. In the dedication to the Scottish architect Robert Adam, Piranesi explains his concerns about the reception of this work, especially the fact that his work could be seen as imaginative and false, while he had taken some creative license, likewise, he observed, had ancient architects.[149] This plan seems therefore

[144] 'E la semplice esteriore osservazione degli avanzi delle antiche magnificenze di Roma è bastata a riformare negli ultimi tempi l'idea del buon gusto dell'Architettura, depravato per l'innanzi dalle rozze e infelici maniere de' Barbari (...).' Preface of the *Antichità Romane* (Rome, 1756).

[145] '(...) E vedendo io, che gli avanzi delle antiche fabbriche di Roma, sparsi in gran parte per gli orti ed altri luoghi coltivati, vengono a diminuirsi di giorno in giorno o per l'ingiuria de' tempi, o per l'avarizia de' possessori, che con barbara licenza gli vanno clandestinamente atterrando, per venderne i frantumi all'uso degli edifizi modeni; mi sono avvisato di conservarli col mezzo delle stampe (...).'

[146] Leto 2013.

[147] Nixon 2002, 476.

[148] Barbanera 2010, 35.

[149] G. B. Piranesi, preface of *Ichnographia Campus Martius*, Rome, 1762: 'I am rather afraid that some parts of the Campus which I describe should seem figments of the imagination and not based on any evidence: certainly if anyone compares them with the

Figure 2.11 Piranesi's drawing on the construction technique adopted for the funerary monument of Caecilia Metella, in Le Antichità Romane: Divisa in Quattro Tomi: Contenente gli Avanzi de' Monvmenti Sepolcrali di Roma e dell'Agro Romano*, vol. III, pl. LIII.*

a conscious attempt to break the rules of architecture and therefore should not be considered as a mere visionary reconstruction; instead, according to Aureli, it needs to be contextualized within the as already noted recurrent theme of the 'instauratio Urbis', the ruins of ancient Rome being used as symbols to convey a message of renovation, as 'attempts to restore the latent vocation of the city: Rome as the capital not only of the ancient world but also of the modern world'.[150]

In the late 18th century, a Greek revival movement started to grow out of the interest in ancient Greek architecture. In Britain, The Society of Dilettanti, which was founded in London around 1734, contributed to make known the deplorable state of ancient monuments in Greece and financed studies and publications on the subject. Notable outcomes of the Society were the surveys of Athenian

architectural theory of the ancients, he will see that they differ greatly from it and are actually closer to the usage of our own times. But before anyone accuses me of falsehood, he should, I beg, examine the ancient [Marble] plan of the city (...), he should examine the villas of Latium and that of Hadrian at Tivoli, the baths, the tombs and other ruins outside the Porta Capena and he will find that the ancients transgressed the strict rules of architecture just as much as the moderns. Perhaps it is inevitable and a general rule that the arts on reaching a peak should decline, or perhaps it is part of human nature to demand some license in creative expression as in other things which we sometimes criticise in buildings of our times.'

[150] Aureli 2011, 93; see Aureli 2011, 85-140 for an in-depth contextualization of Piranesi's Campo Marzio within the previous attempts at mapping ancient Rome and the tradition of the *instauratio Urbis*. On 'Il Campo Marzio', see also Dixon 2005, 115-132.

architecture by the artist James Stuart and the architect Nicholas Revett between 1751 and 1754, who produced accurate drawings of monuments that are now lost. The four volumes resulting from their work were published between 1762 and 1816 under the title of *The Antiquities of Athens* and will influence the taste for architectural classicism during the late 18th and 19th centuries.[151]

Greece had become the subject of romantic and idealised writings by many scholars and men of letters, as testified by works such as the *Voyage Pittoresque de la Grèce* (1782) by the French ambassador to the Ottoman Empire and scholar of Greek antiquities Marie-Gabriel-Florent-Auguste de Choiseul-Gouffier (1752-1817).[152] In this collection of his impressions of Greece gathered during his travels, he included numerous reconstruction drawings of the monuments he had seen, such as a reconstructed view of the ancient town of Assos on the coast of Asia Minor (Figure 2.12, left), aiming at conveying 'a faint idea' of the original cityscape. Interestingly, he legitimates his attempts at reconstructions of architecture by making a parallel between the visual reconstruction of ancient monuments and the philologist's restoration of a corrupted ancient text,[153] an analogy that will be used again in recent years to call indeed for a 'new philology' of 3D digital reconstructions, a requirement to ensure the correct assessment of computer-based reconstructions by the academic community.[154]

The arguments among scholars aiming to establish which between Romans and Greeks had the most sophisticated methods of construction continued, as testified to by the dispute between Piranesi, supporter of Roman architecture and the French architect Julien David Le Roy, an exponent of the Greek revival movement. Le Roy published in 1758 his praise to ancient Greek architecture in his *Les Ruines des Plus Beaux Monuments de la Grèce*, where he affirmed the supremacy of Greek monuments over the Roman. This publication was supplied with plans, sections and reconstruction drawings of some of the monuments, which were meant to express his fascination and reverence for Greek antiquities. In the case of the reconstruction of the Propylaea of the temple of Athena (Figure 2.12, right), for example, Le Roy admits that these drawings were meant to give just an 'inadequate idea' about the superb sight that they must have created in antiquity.[155] In reply to Le Roy's publication, Piranesi published in 1761 *Della Magnificenza ed Architettura dei Romani*, in which he ridiculed Le Roy's position, whilst reaffirming the highest achievements of Roman architecture in respect to Greek.[156]

In this period, the separation between the rigorous and archaeologically accurate documentation and a more visionary and artistic way of depicting antiquities starts to become increasingly evident and will become more pronounced from the second half of the 19th century. Piranesi's style of creating composite images remained quite unique and was followed up only for the illustrations of the 'voyages pittoresques', a genre that became popular at the end of the 18th century to describe journeys in thus far unknown destinations.[157] The archaeological documentation, on the other hand, became more and more specialized,

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[151] Stiebing 1993, 121.

[152] For de Choiseul's biography see Barbier 2010.

[153] 'J'ai osé (...) relever ces belles ruines, recomposer ces édifices, et essayer d'en donner une faible idée. Qu'on daigne juger avec indulgence ce travail, ou, si l'on veut, ce jeu d'une imagination qui, rétrogradant de quelques siècles, se plaît à voir ce qui n'est plus, et admet la fiction à se présenter à la place de la réalité que l'on regrette. C'est la première fois que je me suis permis de montrer ainsi de simples souvenirs, de restaurer des édifices, ainsi qu'on se hasarde à restaurer des statues, ou à rétablir le texte des manuscrits. Ce n'est que tenter pour l'architecture, ce que d'autres ont fait pour Quinte-Curce, et pour Salluste: et pourquoi m'interdirait-on de redresser les colonnes d'un temple abattu, lorsqu'on pardonne aux efforts du savant qui n'a pas tremblé de se mesurer avec Tacite?' (de Choiseul 1809, 87).

[154] Frischer *et al.* 2002, 7-18; see chapter 3, 68.

[155] Le Roy 1758, second part, 13: 'Tous ces choses réunies devoient produire, dis-je, un spectacle superb, digne des éloges des Athéniens, & dont le dessein que j'ai fait, ne donne sans doute qu'une foible idée'.

[156] Nixon 2002, 474.

[157] See for example the illustrations by Jean-Laurent-Pierre Hoüel in his *Voyage Pittoresque des Isles de Sicile, de Malte et de Lipari, ou l'on Traite des Antiquites qui s'y Trouvent Encore; des Principaux Phenomenes que la Nature y Offre; du Costume des Habitans, & de Quelques Usages* (2 vols., 1782 and 1784) that Nixon considers 'the most bold of Piranesi's imitators' (Nixon 2002, 476). Hoüel

Figure 2.12 Left: Restored view of Assos, in de Choiseul 1809, pl. 10; Right: Le Roy's reconstruction of the Temple of Athena in Les Ruines des Plus Beaux Monuments de la Grèce *(plate XIII).*

in a drawing style that aimed to accurately record the evidence and to establish some standard methods to distinguish between documentation and interpretation, and this will become more evident in the course of the 19th century. The gradual increase in knowledge of the subjects depicted resulted in an increased capacity of the draughtsmen to capture the significant details of the archaeological evidence, which helped in the development of typologies to which these drawings gave a critical contribution.

2.6 The 19th and 20th centuries

In the 19th century, archaeology started to gain the status of an academic discipline and was introduced into universities. By the mid-19th century, ten chairs of archaeology existed in Germany and one in France, while in 1851 the first chair was established in Great Britain by John Disney at the University of Cambridge.[158] France and Germany were also the first countries to establish their schools in Athens: the École française in 1846 and the Deutsches Archäologisches Institut in 1874. Italy was struggling to become a truly united country after 1861 and, despite individual bright examples such as Giuseppe Fiorelli, Italian archaeology was lacking experienced personnel able to be in charge of the developing institutions for the new born state.[159] The first professor of 'archaeology and art history' in this country was the Austrian archaeologist Emanuel Löwy, who was appointed in Rome in 1891.[160]

In the first decades of this century, the stratigraphic principle established in geology was introduced to archaeology. Although stratigraphic excavation would still be far from being the standard field methodology, a considerable change is noticeable in excavation practise in the closing decades of the 19th century. In the 1870s, the German scholar Alexander Conze started the large scale and meticulous excavations at Samothrace, which were published in a report that for the first time included photographs;[161] the German Archaeological Institute commenced the excavations at Olympia, under the

shares the same attitude towards illustrations as Piranesi and he synthesizes it by stating in the preface of his work: 'J'affirme mes dessins par mes écrits, et je confirme mes écrits par mes dessins' (cited in Nixon 2002, 478).

158 Leach 2007, 35-39. The world's first professor of archaeology was Caspar Reuvens, appointed at Leiden University in 1818. Reuvens was also appointed director of the university's archaeological cabinet, a rather neglected collection of artefacts that became the first core of the now internationally known Leiden's National Museum of Antiquities, thanks to his crucial contribution (see Halbertsma 2003).

159 For the Italian situation after unification and the methodological debate between a philological/academic and a more practical approach to archaeology, see Barbanera 2000, *passim*.

160 Chairs of archaeology had existed in Italian university before the unification, such as the one in Naples where Giuseppe Fiorelli was professor from 1861 (Barbanera 2000, 47).

161 For an account of the intertwined histories of photography and archaeology, see Bohrer 2011.

directorship of Ernst Curtius, paying great attention to small finds and stratigraphic information.[162] In Britain, Pitt Rivers' careful excavations at his Cranborne Chase estate in Dorset between 1880 and 1900 set the methodological standard for the following generations.[163] Outside the academic environment, local antiquities societies, museums and journals grew exponentially, mirroring the increased participation of the middle class in the study of antiquities.[164]

The fascination for classical literature and Greek and Roman antiquities inspired and promoted narratives of national identity.[165] In Greece, the revolts that had begun in 1821 against the Ottomans fuelled sentiments of Romantic Nationalism in the other European countries. These feelings and calls for action are well embodied by the poem 'Hellas' composed by Percy Bysshe Shelley in 1821, in which he urges the British to support the Greek War of Independence writing that 'We are all Greeks'.[166] The independence obtained led to the formation of the new state, which was rooted in the ancient Greek past, and measures were taken (such as the creation of the Greek Archaeological Society in 1837) to protect the Greek heritage that had already been looted and appropriated by other European countries.[167] As Hamilakis and Yialouri have shown, Greek classical antiquity played a crucial role in the formation of the new state and has been used throughout Greek history as symbolic capital that could be exchanged in the negotiation for power and as an authoritative source that has been used to legitimate or resist a regime.[168]

In Victorian Britain (1837-1901), Latin and Greek held a predominant role in the curriculum at elite schools and universities,[169] with Homer being considered an inspirational and relaxing reading,[170] and the study of Roman Empire being seen in the light of the politics of colonial consolidation of the British Empire. Mythological and historical scenes and atmospheric views of ancient Rome and Greek landscapes appear in the works of several painters, such as William Turner's 'Ancient Rome' exhibited in 1839,[171] and in the many paintings by the Dutch-born artist Sir Lawrence Alma Tadema (1836-1912).[172] In this context, illustrations of ancient monumental architecture took a different route than the drawings of finds, the latter being increasingly employed by archaeologists to create artefacts' typologies.[173]

Roman and Greek architecture continued to be used as training material for young European architects. During the 19th century, numerous French architects came to Rome and visited Greece leaving many drawings of ruins and reconstructions of the monuments. The 'Prix de Rome', a scholarship established in the 17th century and opened to architects in the early 18th, gave in fact the possibility for many

[162] Stiebing 1993, 138; Fagan 2016, 92.

[163] Regarding Pitt Rivers and his legacy, Mortimer Wheeler stated: 'Between 1880 and 1900 General Pitt Rivers in Cranborne Chase had brought archaeological digging and recording to a remarkable degree of perfection, and had presented his methods and results meticulously in several imposing volumes. Then what? Nothing. Nobody paid the slightest attention to the old man. One of his assistants had even proceed to dig up a lake-village much as Schliemann had dug up Troy or St. John Hope Silchester: like potatoes' (Wheeler 1958, 55 cited by Lucas 2001, 36). The reality of the facts seems more nuanced than what appears from Wheeler's strong statement as recently pointed out by G. Lucas, as Rivers' methodology was received and applied in other contexts (see Lucas 2001, 36ff).

[164] Marchand 2007, 255.

[165] Murray 2002, 238. Italy for its historical developments represents a different case as elucidated by Barbanera 2000, 42-4.

[166] For a contextualization of this work, see Findlay 1993, 281-6.

[167] However, it must be noted that Greek intellectual circles in Greece started to react against the pillages of Greek antiquities already before independence, founding for example the Society of the Friends of the Muses in Athens in 1813, but stronger reactions took place only after 1821, see Díaz-Andreu 2007, 46 and 82-6.

[168] Hamilakis and Yialouri 1996, 117-129.

[169] See Goldhill 2011.

[170] Wood 1999, 178.

[171] Thomas 2008, 89-90.

[172] For a discussion on the classicizing painters of this period, see Wood 1999, esp. chapter 14 and 15 (176-221).

[173] Lewuillon 2002, 226.

French students to spend some years in Rome, applying their skills to study ancient sculptures and monuments.[174] One of these architects was Augustin-Nicolas Caristie (1783-1862), who won the prize in 1813. After he came back to France he was in charge of the restoration of the Roman arch at Orange which he published in his *Notice sur l'État Actuel de l'Arc d'Orange et des Théâtres Antiques d'Orange et d'Arles* (1839) and his *Monuments Antiques à Orange: Arc de Triomphe et Théâtre* (1856).[175] Later on, others won the prize such as Constant Moyaux (1835-1911) in 1861, Julien Guadet in 1864 and Louise Noguet in 1865, all of them engaging in creating reconstruction watercolours of monuments in Rome, especially in the Forum. To Greece, instead, went Albert Tournaire (1862-1958), who participated in the excavations at Delphi and in 1894 created a restored drawing of the complex of the sanctuary of Apollo, by merging the extant remains that he had surveyed with the information from ancient texts.[176]

Among the British scholars who travelled in Greece and Italy in this period, one of the most famous is the London architect Charles Robert Cockerell (1788-1863), who spent over seven years in his *Grand Tour* around Greece and then Italy studying ancient architecture and participating in excavations. He then applied his taste for classical architecture to design buildings such as the offices of the Bank of England in different cities. Moreover, he expressed his interest for Greek and Roman buildings in several reconstruction drawings, such as of the city of Athens, the Parthenon, the Roman fora and the

Figure 2.13 Restored view of Athens by C. R. Cockerell in Williams 1829.

[174] See Cassanelli *et al.* 2002.
[175] Sturgis 1905, 455.
[176] Ragon 1995, 57.

houses at Pompeii.[177] His restored views were used in other publications, such as his view of Athens (Figure 2.13) which is included in the second volume of H. W. Williams, *Selected Views in Greece* (1829).

In this period, archaeologically informed reconstructions and art productions depicting imaginative scenes of the past developed in increasingly different directions. Scholars in fact started to pay more attention to the choices they made in the reconstruction drawings to be inserted in their publications, thus offering more elements to the reader to assess the reliability of their illustrations, a topic which still generates discussion nowadays among scholars dealing with reconstructions in the digital age. An early example of an attempt to make the reconstruction drawings 'intellectually transparent' comes from the British scholar Sir William Gell (1777-1836). In his *De Pompeiana* (1819) that he wrote in collaboration with the British architect John Peter Gandy (1787-1850), several reconstruction drawings are presented, that were accompanied by explanations to facilitate the reader in understanding the choices made in the restorations. In the preface, the method that was used to create the drawings is elucidated, which consisted of using the 'camera lucida', a device which helped in rendering the correct perspective in the drawings. Each plate is preceded by an introduction that discusses the drawings and the accuracy of the elements that were inserted. For example, for plate XIX (Figure 2.14), the authors state that 'The gateway is restored in the simplest manner possible, but the biga over it is imaginary. Of the walls there can be no question. The pedestal supporting a statue on the left undoubtedly was built for that purpose; but it possibly might have been an equestrian or other group since the plan of the pedestal is not square. The statue is from one found in the city. (...) As a general observation, it may be marked that in this view everything beneath the horizontal line is certain; above it, only partly so'.[178]

In some cases, the drawing of the reconstruction was juxtaposed to the one of the extant remains, as in the case of plate XXIX representing the restored atrium of the house of Sallust, since by comparing the two 'it will be seen how far the restoration is authorised.'[179] Moreover, the text updates the reconstructions when some new discovery would shed new light on the section of the city that was drawn. This is for example the case of the restored view of the temple of Jupiter, where the textual explanation specifies that 'The part to the right had perhaps a second order, as two sizes of columns are found upon the spot; but this restoration was imagined before the excavation had fully laid open the part beyond the building marked 3.'[180]

During the 19th and 20th century, illustrations depicting reconstructions of ancient buildings and sites started to be increasingly made either by archaeologists themselves, or by draughtsmen and architect participating in excavations and being actively engaged in discussions with the archaeologists, in order to visualize the most plausible reconstruction hypotheses in their drawings. One of them was the Dutch Piet de Jong (1887-1967), who is considered 'one of the best-known, most distinctive, and most influential archaeological illustrators of the 20th century'.[181] By the first decades of the 20th century, he was involved in several projects: he worked with Arthur Evans and the British School to make reconstructions of the Palace at Knossos and with Carl Blegen and the American School at Athens for the reconstruction of the Palace at Pylos, and participated for several years in the American excavations in the Athenian Agora. His numerous watercolours, depicting reconstruction of objects, wall paintings and buildings (one example in Figure 2.15), have had a great influence on shaping the image of Aegean prehistory and Classical archaeology. The level of detail and quality in the drawings made these works of art in themselves, as stated by Rachel Hood: 'The archaeologists asked for a restoration of the pictures and patterns on the pottery or a reconstruction of an architectural moulding. What they got were

[177] Richardson 2001, 79.
[178] Gell and Gandy 1852, 98.
[179] Gell and Gandy 1852, 125.
[180] Gell and Gandy 1852, 168.
[181] Papadopoulos 2007, 2.

Figure 2.14 Reconstruction of one of the city gates of Pompeii (Gell 1852, pl. XIX).

works of art.'[182] All the scholars that he worked with held a high opinion about him, Blegen for example remembered him as '(...) our artist, whose constructive imagination recreated and brought to vivid perception the lingering aura of the Royal Mycenaean rulers who dwelt in this palace.'[183]

In the same period, in Italy, the archaeologist Giuseppe Gatteschi (1862-1935) was working on a series of reconstruction drawings of ancient Rome. The research related to this study took up thirty-four years of his life (1890-1924) and its publication in 1924 (the '*Restauri*') was endorsed by great archaeologists of the time, specialists in Roman topography such as Rodolfo Lanciani (1845-1929), and Christian Hülsen (1858-1935).[184] Unlike de Jong, Gatteschi is nowadays not well known and sparse information on his life can be derived from his documents and publications, such as the fact that he was born in Alexandria in Egypt and moved to Rome in 1895.[185] Gatteschi based his reconstructions on a variety of sources (ancient authors, coins, the Severan *Forma Urbis Romae*, works of Renaissance architects), on his own personal observations of the buildings, and on the new archaeological discoveries that were made at that time.[186] With the help of a photographer and some artists, such as Ulderico Bellioni, Oreste Betti, Augusto e Guido Trabacchi, he tried to recreate lively scenes of the ancient urban way of living by inserting drawings of people occupied in everyday activities in his reconstructions.

Gatteschi embarked in this work aiming to preserve the memory of the ruins that he was seeing quickly disappearing after the major urban renovation that Rome was undergoing in that period. As Raphael before him, he complained that Rome had been destroyed not so much by the weather, earthquakes

[182] Rachel Hood cited by Papadopoulos 2007, 17.
[183] Cited by Papadopoulos 2007, 13.
[184] Gatteschi 1924. See also Capodiferro 2006.
[185] From an autograph document by Gatteschi kept at the Archivio Storico Capitolino di Roma, cited in Cecchini 2007, 400.
[186] This information is found in the preface of Gatteschi's publication (1924) written by Orazio Marucchi.

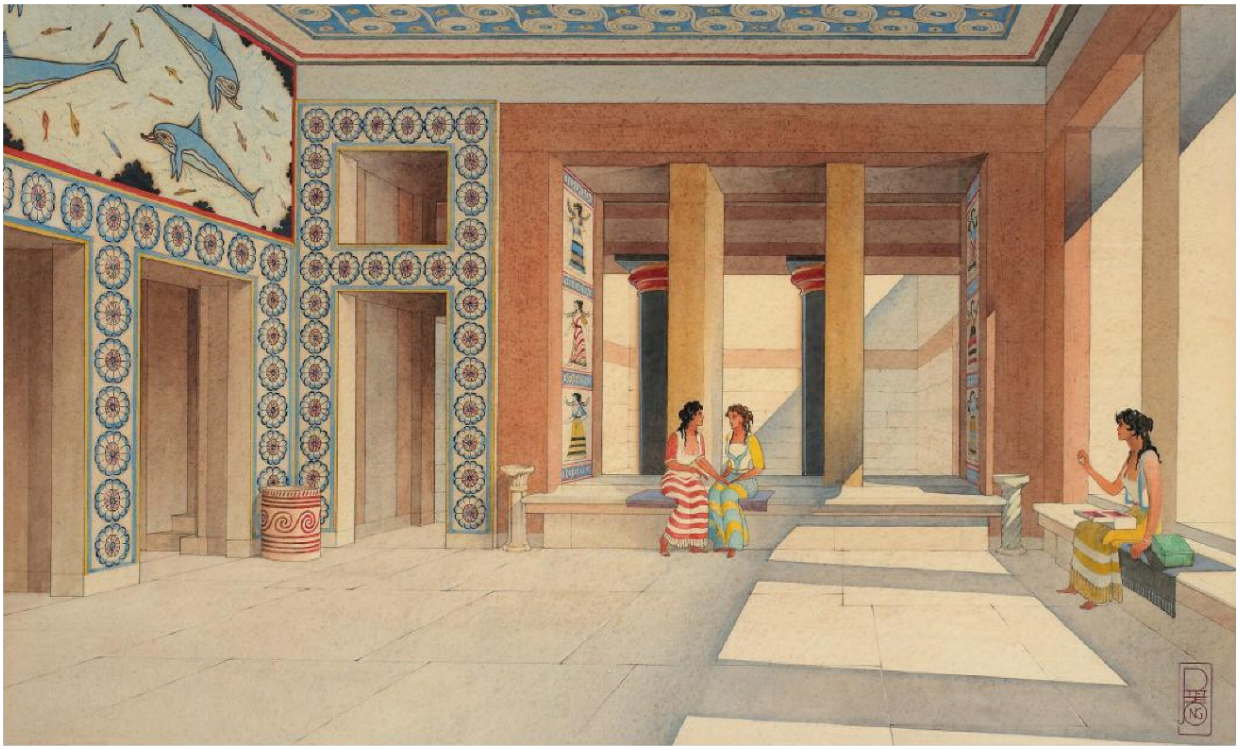

Figure 2.15 Reconstruction of the 'Queen's Megaron' at Knossos for the Herakleion Museum made by Piet de Jong (after Papadopoulos 2007, Figure 1, p. 3).

and Barbarian invasions, but rather by men, and especially by the 16th century Popes.[187] He wanted to provide the reader with enough information about the reliability of his reconstructions. For this reason, his method was to supply each reconstructed view of ancient Rome with a photograph of the current state of the corresponding place taken from the same perspective of the reconstruction. In this way, one could immediately catch the correspondence between the two and be convinced of Gatteschi's accurate study.[188] Moreover, likewise Lauro's *Antiquae Urbis Splendor*, each drawing is accompanied by a short textual explanation in Latin, Italian, French and German discussing the sources that were used for the reconstruction (Figure 2.16).

A brief note in Italian at the end of another of his work, the *Restauro grafico del Monte Capitolino, Foro Romano e monumenti circostanti nell'anno 300 dopo Cr.*,[189] published in 1897, informs us that 'Gius. Nob. Gatteschi, archaeologist, is recommended to the foreign gentlemen for archaeological excursions to the monuments of ancient Rome and to the Villa at Tivoli'.[190] This can help us to better situate Gatteschi's vision and didactic aims: as the 17th century Swiss guard Hans Gross, he also worked as tourist guide

[187] See the introduction in Gatteschi 1924 and their autograph letters which are enclosed at the beginning of the work under the title 'Giudizi di illustri scienziati sull'opera del prof. Gatteschi'.

[188] 'Il Gatteschi, nel presentare agli studiosi i Restauri di questi gloriosi monumenti ha adottato il metodo assai razionale di mettere a confronto con i suoi disegni di restauro le fotografie dello stato attuale, cioè dello stato in cui presentemente si trovano gli avanzi di quei monumenti stessi fra i moderni edifizi; onde se ne veda a colpo d'occhio la corrispondenza. E chiunque potrà persuadersi che i suoi restauri non sono il prodotto di una fervida immaginazione come alcuni ideati da altri, ma che hanno la loro base nello studio accurato di tutto ciò che può sapersi intorno alla vera forma di ogni singolo monumento.' Preface of Gatteschi 1924.

[189] The title continues: 'Conferenza letta al Museo Urbano nell'Orto Botanico l'8 marzo 1897 per invito della commissione archaeologica comunale'.

[190] Gatteschi 1897, last page (unpaginated).

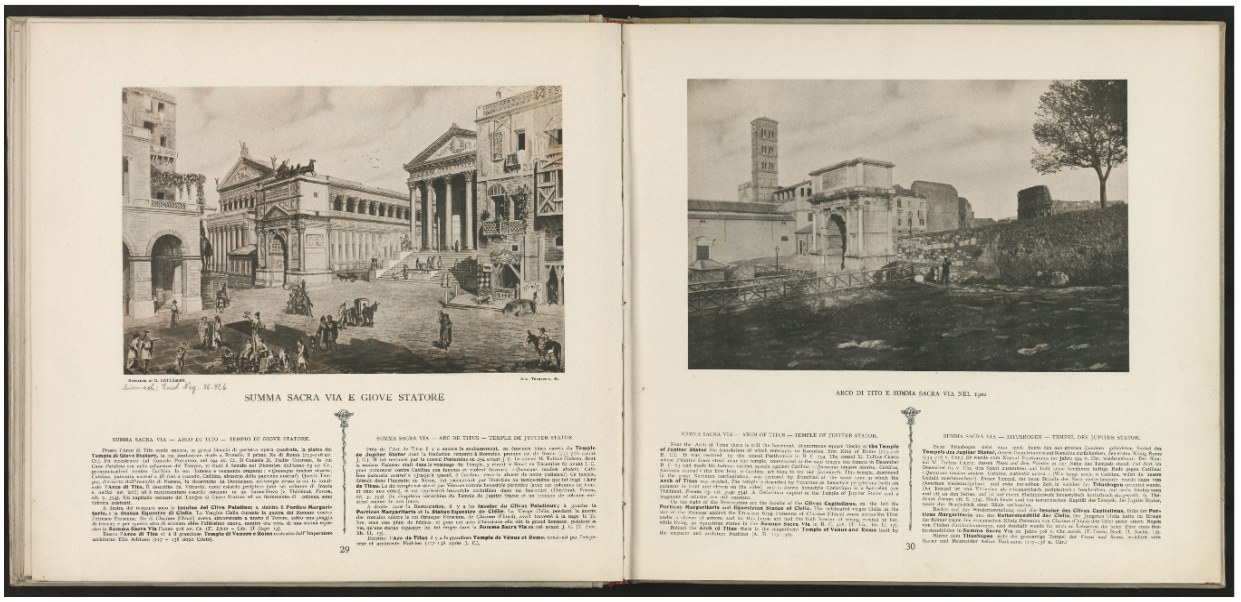

Figure 2.16 Gatteschi's reconstruction and photograph of the area of the Via Sacra and the Temple of Jupiter Stator (Gatteschi 1924, 29-30).

and certainly was confronted by the difficulty of conveying an image of the ruins' past appearance to the interested tourists. Following his will, some of the visual reconstructions that he prepared for the *Restauri* were placed in the area from the Imperial Fora to the Theatre of Marcellus, on the spot of the sites represented on the occasion of the fiftieth anniversary of the unification of Italy in 1911. From an epistolary exchange between Gatteschi and the municipality of Rome, we learn that he saw this as the only way in which 'the great majority of people that look at our glorious ruins without understanding anything about them, will be able to get the right impression of Imperial Rome at its maximum splendour'.[191] This reconstruction of Imperial Rome, which aimed to impress the viewers with a powerful visual image of its past grandeur, is a recurrent topic in the period between the Risorgimento and WWII and was instrumental in the process of construction and legitimation of the role of Rome as the capital of the unified peninsula, and of Italian colonial aspirations.[192]

The didactic use of reconstruction drawings continues also in more recent periods. They appear copiously as illustrations in books and exhibitions to convey a more immediate impression of the everyday life in the ancient world. Examples of influential publications that employed such drawings in the 20th century are Wycherley's *How the Greeks Built Cities* (1949), Paul MacKendrick's *The Greek Stones Speak* (1962) and Peter Connolly's and Hazel Dodge's *The Ancient City, Life in Classical Athens and Rome* (1998), containing, among others, the reconstruction drawing of the acropolis of Athens reproduced in Figure 2.17 (top left). A good example of an artist who was able to inject his artistic flair to archaeologically informed reconstructions, was the Englishman Alan Sorrell (1904-1974).[193] He studied art in England and won in 1928 a Prix de Rome scholarship that allowed him to get acquaintance with antiquities and archaeologists in Rome. Sorrell's unique style has fascinated and inspired generations of archaeologists

[191] Letter by Gatteschi addressed to the Ufficio VI di Storia dell'Arte – comune di Roma, cited in Cecchini 2007, 401.

[192] See Giardina and Vauchez 2008, esp. 181-2.

[193] An exhibition of Sorrel's works was held at Sir John Soane's Museum in London from 25 Oct. 2013 to 25 Jan. 2014. For a biography and discussion of his works, Llewellyn and Sorrell 2013.

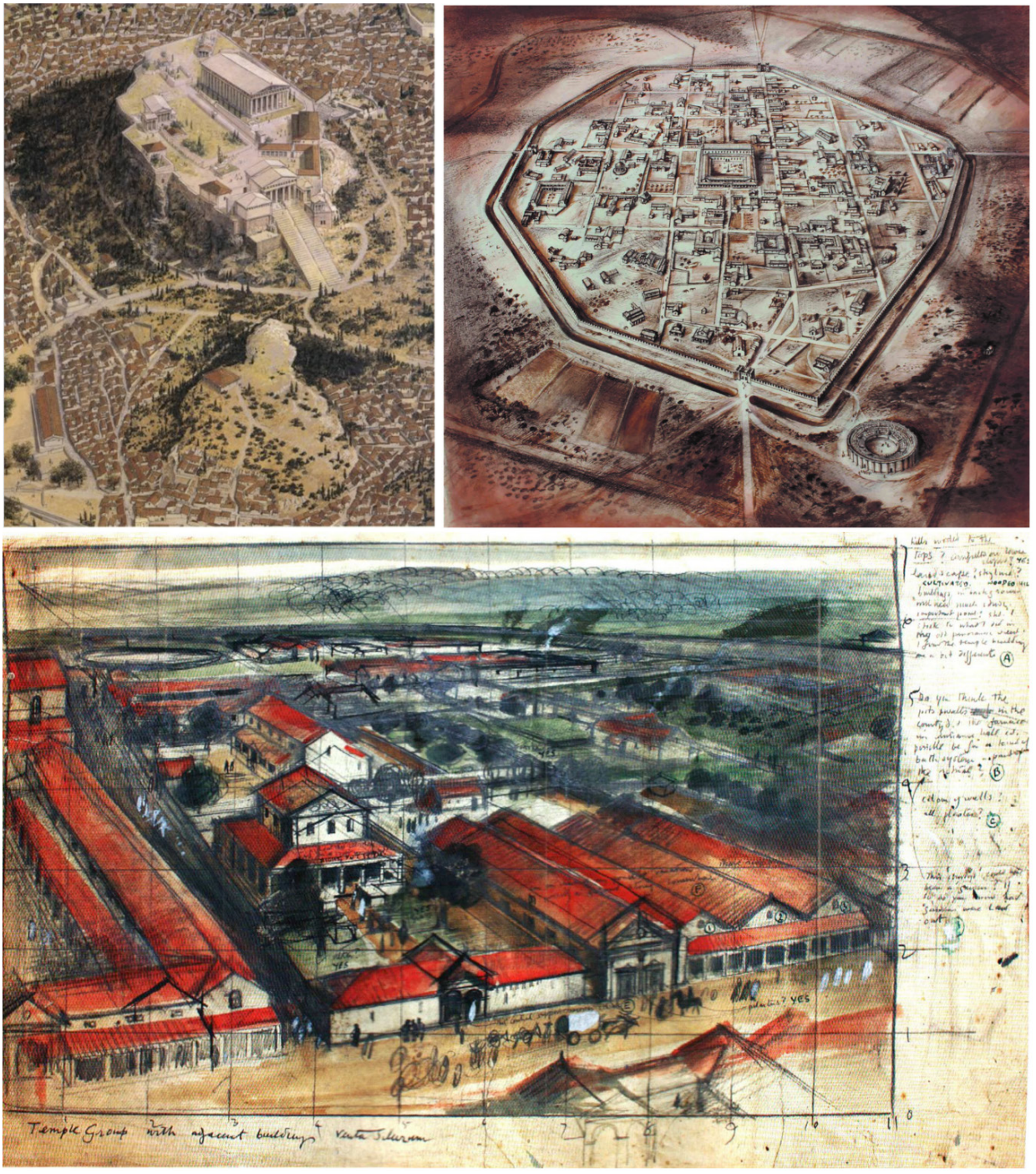

Figure 2.17 Top, left: View of Athens, reconstruction drawing by P. Connolly (in Connolly and Dodge 1998). Top, right: The Roman town of Silchester by Alan Sorrel; Bottom: Preparatory stage for the reconstruction drawing of the temple area at Caerwent, Wales by Alan Sorrell with his annotations on the margin (after Catling 2013, 34 and 37).

(Figure 2.17, top right). Among the archaeologists whom he worked with, there is Sir Mortimer Wheeler, who involved him in the reconstruction paintings of Ur.[194]

[194] Llewellyn and Sorrell 2013, 41.

Although Sorrell was always keen on describing himself as an artist and not as an archaeologist, his drawings helped to trigger new research questions that the archaeologists that he collaborated with had not thought about before. In a preparatory sketch of the temple area at Caerwent, Wales, one could see his drawing method, based on a gridded canvas that allowed him to maintain the correct proportions and perspectives and the presence of many annotations and questions about the rendering of the scene that he wanted to discuss with the excavators. For example, Sorrell wonders about the most likely vegetation cover on the background of the scene and of the temple's courtyard, and makes inquiries on the correct locations of architectural elements (Figure 2.17, bottom).[195]

Other drawings bear traces of the extensive correspondence he engaged with archaeologists to clarify his uncertainties and suggest the inclusion of details in a rigorous and collaborative reconstruction process.[196] When he was asked to create a reconstruction drawing of the Mesolithic archaeological site of Star Carr in Yorkshire, he decided to add a shelter to the scene even if no archaeological evidence could support its presence. The reasonableness of his conjecture was proved when in 2010 the traces of what has been defined 'Britain's oldest house' were discovered at the site.[197]

In the 19th century, physical models also started to be employed as a means to display the extant remains or the reconstruction hypotheses for an archaeological site. One of the earliest three-dimensional models of Italian antiquities is the one of Pompeii that was made in the late 19th – early 20th century (Figure 2.18). This model had a troubled history and was on display again in the early 1990s at the National Archaeological Museum of Naples after restoration work that tried to save this delicate and dusty piece.[198] The streets were made of plywood, while the walls were of cork that was incised to create the different brickworks such as *opus reticolatum* and *incertum*. The frescoes are reproduced on the walls by using at first a base of plaster, and later on decorated paper that was used also for the floors. The vaults and ceilings were made in separate pieces so that it was possible to lift them to inspect the interior of the buildings.[199] The model was of great importance for scholars, since, as the German archaeologist Johannes Overbeck pointed out, it recorded the ancient city, and allowed an overview of the excavations that could not be achieved with the panorama photographs that were available at that time.[200] It is, however, even more important nowadays because, notwithstanding the ravages of time, the model keeps the record of *insulae* and decorations that are now lost, either destroyed during the wars or decayed from negligence.

Several physical 3D models have been created to represent the city of Rome in Imperial times. The first attempt to create a three-dimensional reconstruction of this city was made by the sculptor Giuseppe Marcelliani between 1904 and 1911.[201] This monochromatic model, known as the *Restitutio Urbis* (or 'La Roma di Coccio', since clay is the material that it is made of), aimed to show Rome in the 4th century AD. The result, however, should be considered more as an artistic product than a reliable attempt to create a volumetric reproduction of the ancient urban layout. Marcelliani's artistic background played in fact a relevant role in the realization of the project, which shows little archaeological knowledge of ancient Roman topography and landscape and is mainly based on fantasy.[202]

[195] Catling 2013, 32-39.
[196] Perry and Johnson 2014.
[197] Catling 2013, 37.
[198] Sampaolo 1993, 89-91.
[199] Sampaolo 1993, *passim*.
[200] Cited by Sampaolo 1993, 85.
[201] An earlier three-dimensional representation of some key monuments of Rome (among others, the triumphal arches of Titus, Septimius Severus and Constantine that are now lost) is the fountain called 'la Rometta' made by Pirro Ligorio in the gardens of the Villa d'Este. This scenographic monument had a symbolic meaning and embodied in three dimensions Ligorio's interest for Roman antiquities (see Madonna 1991).
[202] Giuliani 2007, 261; Ciancio-Rossetto 1990, 11-15.

Figure 2.18 The 3D physical model of Pompeii at the National Archaeological Museum of Naples (source: https://it.wikipedia.org/wiki/File:Plastico_di_Pompei_1.JPG).

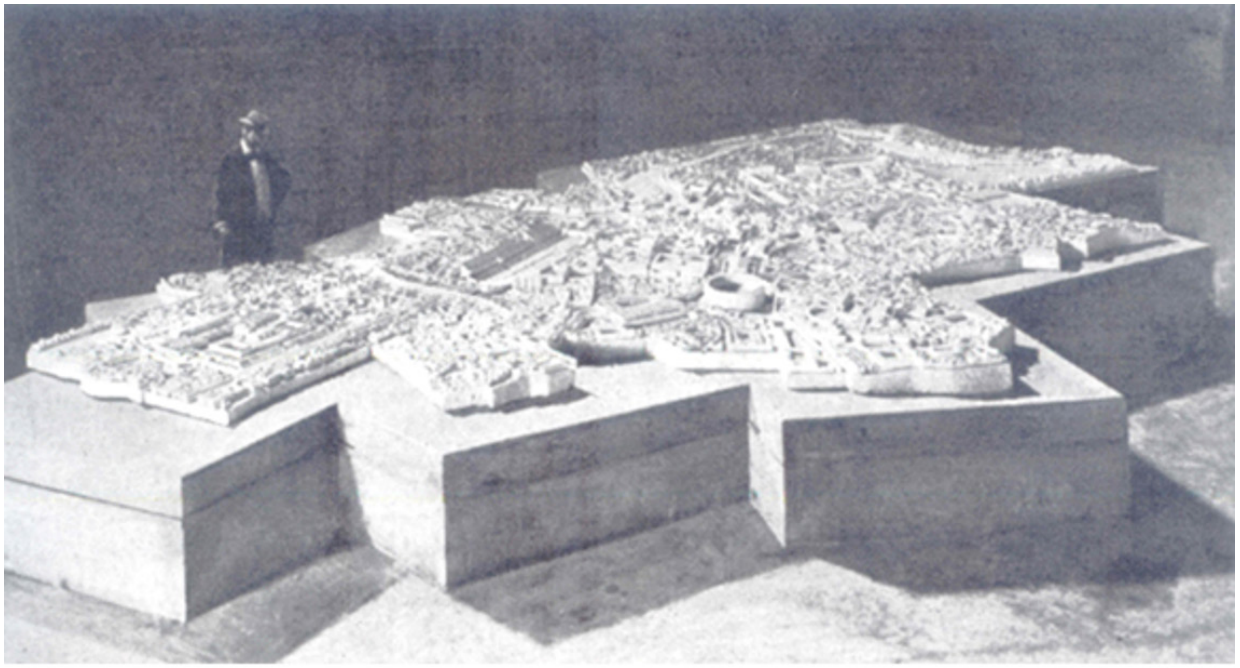

Figure 2.19 Paul Bigot and his 3D model of Rome in 1911 (after Royo 2006, Figure 95, p. 165).

In the same period, the French architect Paul Bigot created his 'Le plan de Rome', a 75 m² model presenting again the city at the time of the emperor Constantine. The model was first displayed during the 1911 exhibition celebrating the fiftieth anniversary of the unification of Italy (Figure 2.19).[203] In order to facilitate the assembling of his model, Bigot divided it into 102 modules that could be easily combined together as pieces of a puzzle. The French architect started to work on this project in 1904 and continued to modify it until his death in 1942, conducting in the meantime research on Roman architecture and city planning.[204] During this period, the urban layout of Rome went through major changes and many archaeological discoveries were made that shed new light on the urban development of the ancient city. For this reason, Bigot devised a workflow that allowed him to quickly update the model when new information needed to be included. He therefore based his work pipeline on the creation of sketched mock-ups made of clay that could be revised several times before being finally plaster casted.[205] Bigot paid also much attention to colours, that nowadays have mostly faded away, and to the contrast that the architecture in travertine and marble would create against the surrounding green vegetation.[206] Moreover, it seems that Bigot had installed several projectors around the model emitting various colours to recreate the effect of light in Rome during different day and night times.[207]

A different celebration, the bi-millenary of Augustus' birthday in 1937, was the occasion to create another plaster-model of Rome, made by the Italian architect Italo Gismondi. The model was displayed during the 'Mostra Augustea della Romanità', an exhibition that Mussolini wanted in order to stress the connection both between the magnificent ancient Rome and the new one that he intended to create, and between Augustus and himself.[208] Gismondi, as previously Bigot, based his model on the fragments of the 'Forma Urbis' that Rodolfo Lanciani had published in 1901 and that reported all the major buildings of ancient Rome that were known at the time of its creation at the beginning of the 3rd century AD. The model was made on a 1:250 scale and it extends over a surface of about 200 m², filling up an entire room of the *Museo della Civiltà Romana* in Rome. While the plaster-model of Rome is Gismondi's best known achievement, he actually created many reconstruction drawings of ancient buildings and other plaster-models, representing for example Hadrian's Villa at Tivoli,[209] the complex of Claudius' and Trajan's harbours, and the ancient city of Ostia, the last two being currently on display at the Museo della Via Ostiense – Porta S. Paolo in Rome.[210] Especially Gismondi's reconstructions of Ostia's apartment complexes (or *insulae* as they have been called by Guido Calza, the director of the excavations in that period) moved beyond the scope of archaeological representation and became ideal models for contemporary urban planning and architecture. According to Kockel, in fact, Gismondi's drawings provided a powerful visual tool to express Calza's view, namely that the *insula* could be seen as the exemplary solution to be emulated in order to resolve the pressing problem of finding accommodations for the increasing population in Rome during the 1920s and 1930s.[211]

Gismondi looked at the ancient structures with the technical eye of an architect, looking especially to materials and construction techniques, but 'he combined a knowledge of the archaeological material which is remarkable for a technician',[212] and the archaeologists trusted him for his accuracy and

[203] Pasqualini 2006, 631. The model has been restored and kept at the University of Caen; recently it underwent a process of digitization and a virtual visit has been created, see Fleury and Madeleine 2010, 67-75.
[204] Royo 1992.
[205] Giuliani 2007, 261.
[206] Bigot 1942, 6 cited by Royo 1992, 596.
[207] Royo 1992, 596.
[208] The Istituto Luce recorded a propaganda video that presented the exhibition, see http://www.youtube.com/watch?v=cneYAemeNqU (last accessed Sept. 2016).
[209] Ten 2007, 277-80.
[210] Pellegrino 2007, 275-6.
[211] Kockel 2005.
[212] In the words by archaeologist Giuseppe Lugli, cited in Filippi 2007, 15.

precision in surveying and recording ancient monuments. It is interesting to analyse the methodology that Gismondi applied to the creation of his model of Rome, to see how the Roman architect dealt with challenges that also the modern model-maker is confronted with.[213] The first challenge that Gismondi had to overcome was the necessity of reconstructing the entire city, although many of its parts were not archaeologically documented. This situation called for solving two problems, the first one was to find a way to relatively quickly fill in the empty areas with buildings, and the second one was to distinguish the buildings archaeologically attested from those that were inserted only to create a plausible view of the ancient city. To tackle the first problem, Gismondi created two categories of Roman building types, the *insula* and the *domus*, dividing each of them in three subtypes, thus obtaining six basic types that he could then arrange randomly to generate variety in the urban layout.[214] To solve the second problem, he chose to create buildings with different levels of detail, by moulding only a volumetric outline for the building for which little or nothing was known and adding more details to those that were archaeologically documented. As Tschudi noted, 'these two different approaches to architectural 'unknowns' may be seen to mark a transition from a historicist model of ancient Rome to a modernist one.'[215]

In 1951, Gismondi's plaster model of Rome was used in Mervyn LeRoy's cinematographic adaptation of *Quo Vadis: A Narrative of the Time of Nero*, the epic historical novel by the polish writer Henryk Sienkiewicz (1895). Ironically, the model that was originally commissioned for the 1937 exhibition aiming to connect Mussolini's and Augustus' Rome was now used in the scene where Nero illustrates to his court his megalomaniac project for the new Rome he had envisioned (Figure 2.20).[216] The novel was rendered as a movie adaptation on five different occasions (the Italian silent movies in 1912 and 1925, the Hollywood blockbuster in 1951, the miniseries for Italian television in 1985 and the Polish version in 2001), each of them giving prominence to and interpreting in different ways the various themes of the story such as politics, ethnicity and religion.[217] For example, in the adaptation released in 1951, the aftermath of WWII, the American audience could easily grasp the reference to Hitler and the Nazi's persecution of the Jews in Nero's madness, his destructive effects on Rome and the persecutions against the Christians.[218] The Polish version of the novel focused instead on different aspects (such as the more explicit allusions to Poland and to the pontificate of Pope John Paul II), associating Nero's rule to the communist regime and Saint Peter to the Polish Pope.[219]

Quo Vadis' movies are just an example of how the image of the reconstructed ancient world that has been elaborated and transmitted in movies has always been permeated by contemporary ideas and messages. In recent years, film historians have started to look at historical movies as powerful agents that shaped and popularized a historical narrative of the past, which represented and addressed the needs of the contemporary society.[220] At the beginning of the 20th century, some indeed considered cinema as the new frontier to teach history and reconstruct the past in a way that could surpass in accuracy and capability of engagement any previous attempt.[221] As Wyke has shown, Roman virtues, such as military courage, the Emperors' vices and the rise of Christianity opposed by the cruel Roman Empire have been

[213] For a detailed explanation on how Gismondi organized his work through preparatory sketches and drawings, see Giuliani 2007, 261-5.
[214] Tschudi 2012, 391.
[215] Tschudi. 2012, 391.
[216] Wyke 1997, 140-1.
[217] The five adaptations have been analysed in Scodel and Bettenworth 2009.
[218] Scodel and Bettenworth 2009, 93-7; see also Skwara 2013, 166. As Skwara notes, the 1951 version of the movie was received very differently by the Polish audience, which could see it only in the 1980s and could relate less to the allusions suggested in the movie (Skwara 2013, 167-8).
[219] Scodel and Bettenworth 2009, 97.
[220] Wyke 1997, 8-13.
[221] Wyke 1997, 9.

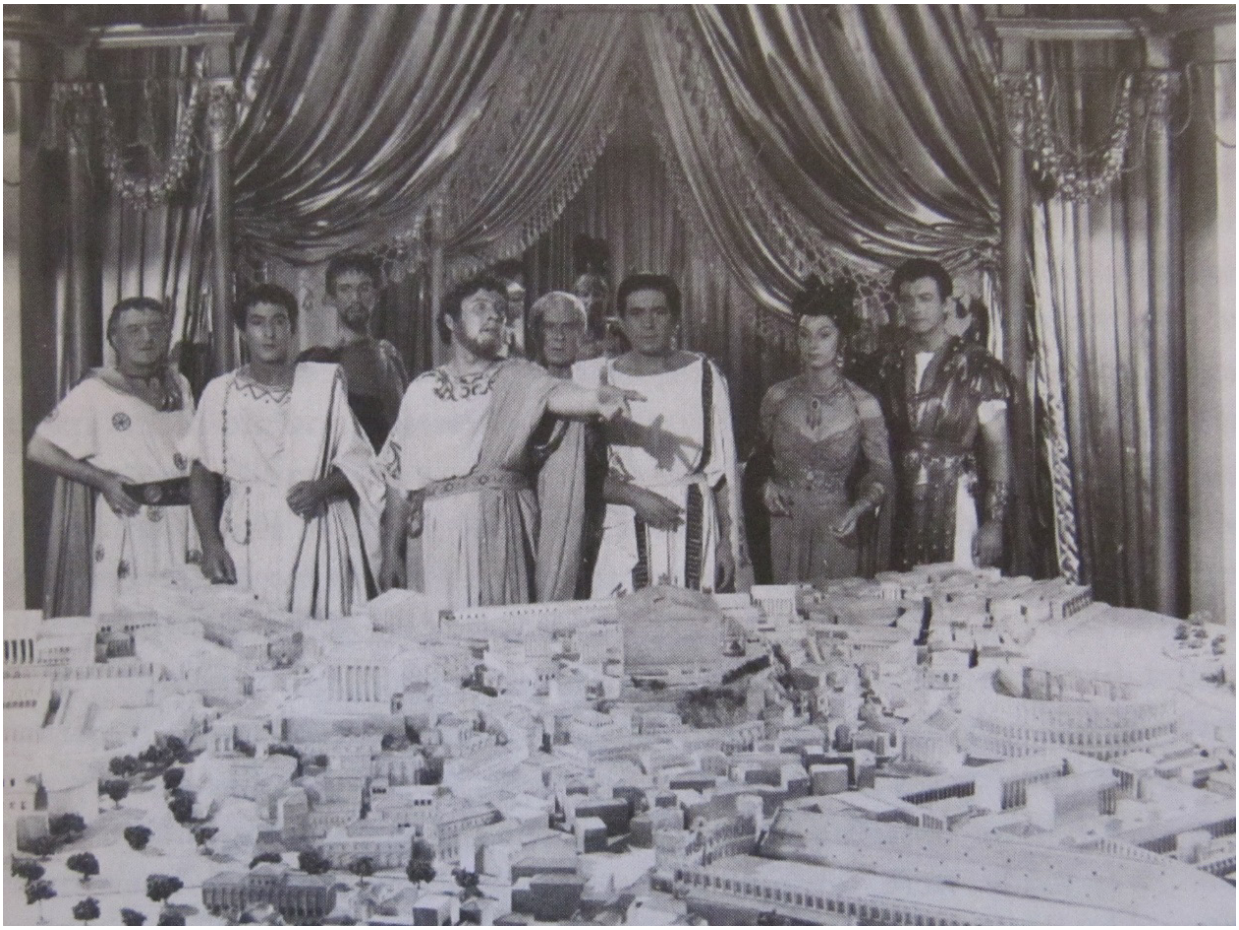

Figure 2.20 Scene from the movie QuoVadis *(1951) in which Nero illustrates his plan for his new Rome in front of Gismondi's plaster model (from Wyke 1997, 141).*

deployed as recurrent themes in an extensive filmography to support different narratives, including nationalism, imperialism or opposition to tyrannical regimes.[222] In the early years of the introduction of cinema, for example, movies provided the collective experience needed to foster feelings of national identity in the United States and in Italy, two countries struggling to create an internal cohesion. The Italian cinematographic production of *Scipione l'Africano* in 1937, sustained by copious financing by the Fascist regime, was infused with colonial ideology. This movie aimed to contribute to the creation of the ideal Fascist Italy that had to be 'wise, strong, disciplined and imperial', and resurrect the 'immortal spirit of Rome', as envisioned by Mussolini in his speech for the celebration of the foundation of Rome on the 21 April 1922.[223]

The dominant Hollywood style of historical movies that was popular until the 1950s and is well expressed by the colossal productions such as *Ben-Hur* (1959) and *Spartacus* (1960) knew a rapid debacle in the course of the 1960s, culminated in the bankruptcy of the 20th Century Fox caused by the costs that the movie studio had to sustain for *Cleopatra* (1963), the most expensive production of the time, that did not return the expected revenues.[224] During the 1960s, the audience could not identify any more with the clichéd characters and themes that had been proposed until that time in these rather

[222] Wyke 1997, 14-33, esp. 20.
[223] Transcript of Mussolini's speech published in his newspaper *Il popolo d'Italia*, cited in Wyke 1997, 21.
[224] Wyke 1997, 184.

standardized productions.[225] In striking contrast with the visual language that characterized Hollywood historical movies, European filmography adopted other schemes and narratives. The change in taste and the different image of the past that is projected in movies in the late 1960s and early 1970s is well represented by Fellini's *Satyricon* (1969), where alien and desecrating Roman characters played in the fragmented narrative that wanted to render in this way 'the potsherds, crumbs and dust of a vanished world.'[226]

2.7 Conclusions

This chapter has attempted to contextualize the reconstructions of Graeco-Roman cities within their historical framework by discussing a selection of case studies from the 15th to the 20th century. Such research aimed to contribute to the still rare studies on the creation and reception of visual reconstructions of antiquities, which add interpretative keys to explore the complex relationship between ancient and modern cultures. The case studies discussed in this chapter have demonstrated the richness of clues in visual reconstructions, which, their often questioned archaeological reliability aside, contribute to the interpretation of the historical context in which they were created. The act of visually representing a reconstruction hypothesis in fact always entails a (more or less conscious) process of selection, interpretation and cultural appropriation. Any type of reconstruction of antiquities, be it a drawing, a plaster model or a cinematographic adaptation, lends itself to be constructed to express and legitimate present ideas and needs, at the same time shaping and aligning itself to the contemporary traditional view of the past.

The ways in which humanists, antiquarians, architects, artists and film makers have looked at the past and what they wanted to express with their renditions have varied considerably: for the humanist historian Biondo, the ancient restored monuments were instrumental to support the papal plans of the architectural renovation of Rome; Annius of Viterbo's forgeries contributed to emphasise the role of his hometown; antiquarians such as Lauro wanted to convey a suggestive impression of ancient Rome that could still transmit the ancient glory of the city and be popular among visitors who came from across the Alps; Gismondi's plaster model visually and physically brought back the magnificence of Imperial Rome that Mussolini wanted to connect to; and finally, the cinematographic images of Rome mirrored contemporary political, ideological and social issues. The attention to this topic is still relevant today, as the selection of specific elements of the past for substantiating a cultural narrative or an ideological discourse can still be seen in how archaeological objects are represented and how the notion of heritage is constructed, as shown by recent research in the field of heritage studies.[227]

The attempt to preserve the vanishing traces of an ancient past that could still hold meaning for the present has been always one of the triggers for surveying and drawing material remains. Many scholars over the centuries have complained about the critical condition of ancient ruins, which have been constantly spoiled not only by time and weather, but also by pillages, commerce and negligence, or indifference. This is well exemplified by the city of Rome, first the capital of the Roman empire and then of the Catholic church, that, soon after the decline of the Roman empire, became a quarry of marble for the construction and embellishment of new buildings and a 'warehouse of ancient sculpture'.[228] Reconstructions, therefore, have become also a valuable source of information on the state of knowledge of the time of their creation and also a visual memory of many structures that nowadays are lost, as the drawings of Cyriac of Ancona or the 3D physical model of Pompeii remind us.

[225] Wyke 1997, 184-5.
[226] Fellini 1978, 17 cited in Wyke 1997, 189.
[227] Watson and Waterton 2010, 84-97; Hamilakis 2016.
[228] Weiss 1969, 8.

When the interest for antiquities started to extend outside the limited audience of antiquarian circles, another reason to prepare reconstruction drawings was to present what the ancient buildings looked like to visitors and to engage them in a more popular and approachable vision of antiquities. This is the purpose of the 17th century Swiss Guard Giovanni Alto, but also, more close to us, of many drawings that were commissioned to Piet de Jong and Alan Sorrel to be displayed in musea. Finally, architects have been accustomed to prepare reconstructions of ancient buildings as part of their training, to understand how buildings were constructed and to gain the skills that would allow them to apply ancient construction techniques in their contemporary architectural projects. This is a recurrent theme in the work of Leon Battista Alberti, in Piranesi's engravings and in the European architects that came to Rome and then created many buildings in their own countries following classical taste.

Besides exploring the different functions of reconstructions over the centuries, the case studies discussed have allowed us to follow the development of a scientific methodology to deal with historical sources and archaeological remains. By starting to question the reverence for the authority of the written word, antiquarians began to adopt an empirical approach based on first hand observations and personal surveys as the prime way to gather information. The direct study of the extant remains, starting with Biondo, Cyriac of Ancona and Ligorio, had a clear impact also on the way in which antiquities were represented, as the textual descriptions that had been well suited to replicate the information found in ancient authors fell short in conveying the physicality of the ruins, thus opening to an increasing use of visual representations. A further methodological turning point is moreover represented by the growing awareness of the uncertainty related with any reconstruction of antiquities, as is present in the work of Buonarroti, and the related increased inclusion of explicit information about the reliability of the reconstructed parts, as well exemplified by Gell's *De Pompeiana*.

As a final note, one might find a parallel between the enthusiastic views on the potential benefit offered by the new cinematographic representations of historical narratives and the introduction of computer technology for the creation of digital reconstructions. As the next chapter will show, while the challenges of representing the past remained the same in the digital era, computer-based visualizations can offer some solutions (although some of them still underexploited) to convey the transient nature of reconstructions, which inevitably reflect the state of the knowledge at the time of their creation, and to make explicit the subjectivity of the reconstruction derived from the modeller's interpretation of the available archaeological evidence.