

## 2 From Nature to Topography

### Water in the Cities of Roman Northern Italy

**Abstract:** The Po and its numerous tributaries were a dominant feature of Roman northern Italy. Ancient authors emphasize the region's richness in water – and indicate how this challenge was met by cities and settlements. In addition, archaeological research in the region has brought to light numerous remains of water infrastructure in the cities, dating from the 3<sup>rd</sup>/2<sup>nd</sup> century BC to the 2<sup>nd</sup> century AD. This comprises harbours, canals and bridges, as well as manifold installations and architectures as part of the local topographies. The omnipresence of water must clearly have contributed to the regional urban experience. Yet water was not only understood as an infrastructural and technical challenge by the urban communities. It was increasingly embedded in urban spaces and architectural complexes, where its display enriched local cityscapes. The paper seeks to outline this tendency towards an increasingly prominent aesthetic role of water in the regional cityscapes. Drawing on a limited number of examples, it addresses three aspects of water and its role in urban settings: the presence of (natural) water in urban contexts, the decorative use of water to enrich architectural constellations, and the role of water as a locale in urban topographies.

With the following remarks, I seek to focus on changing approaches to water in the Roman cities of northern Italy and on different ways it became manifest as 'urban water', i. e. an amenity contributing to or accentuating a specific, prominently aesthetic, quality of architectural and urban spaces. An aspect of regional cityscapes is thus addressed that not only influenced the experience and perception of urban spaces or the cities as a whole, but also played an important role in defining the urban ambience as a stage for and expression of urban lifestyles, hence relating to wider contemporary concepts of adequate urbanity.

The period chosen comprises the centuries from the 2<sup>nd</sup> century BC to the 2<sup>nd</sup> century AD, i. e. the first centuries after the establishment of Roman rule in northern Italy – and here above all the 1<sup>st</sup> centuries BC/AD. It is this period in which we can trace the introduction of new concepts of urbanity in the region and the development of a flourishing urban landscape (Fig. 1). In the context of the following remarks, I understand, possibly too superficially, 'nature' to be influenced by human intervention, i. e. environment managed by man in a reactive way. 'Topography', on the other hand, designates the elements of former natural constellations that have been appropriated architecturally and inscribed in the cityscape as 'places' or 'locales'.

---

**Note:** My thanks go to the organisers of the Urban Water colloquium, Nicola Chiarenza and Annette Haug, for the opportunity to contribute to the colloquium with a paper on water in the cityscapes of Roman northern Italy. It addresses some phenomena elaborated in my habilitation thesis on the changing aesthetic of the Roman cities in northern Italy (in preparation for publication).



Fig. 1: Roman northern Italy and its cities.

## Water in the Cities: Written sources

The omnipresence and wealth of water in northern Italy was emphasized already in antiquity. Water was regarded as a characteristic feature of the region's environment. Rivers, streams, swamps and lagoons were an immediate, everyday challenge for the settlements. In his *De Architectura*, written during the late 1<sup>st</sup> century BC, the architect Vitruvius highlighted water as a dominant environmental factor in the region.<sup>1</sup> In his paragraph on cities in swampy coastal areas, the northern Italian cities of Altinum, Aquileia and Ravenna find prominent mention.<sup>2</sup> Only a short time later, the Greek geographer Strabo (or his source) describes the region as characterised by watercourses, swamps and lagoons:<sup>3</sup> Ravenna and Altinum, for example, lie like islands in the water, others are partially surrounded by it. We also learn that Ravenna was crossed by canals and could be navigated by ferries. Water must have played a defining role for early Verona, too. According to the late republican poet Catullus, his hometown was characterised by low-lying, swampy areas with standing water along the Adige river and an old wooden bridge leading over it.<sup>4</sup> In this low lying, partly swampy area, crossed only by the via Postumia and featuring only isolated buildings,<sup>5</sup> we can identify the plain in the Adige river bend, an area which was fully developed only for the layout of a new, relocated city from 49 BC on.<sup>6</sup> The Verona which dates back to a Celtic settlement was originally located on the left bank of

<sup>1</sup> See Corso 1983 for references.

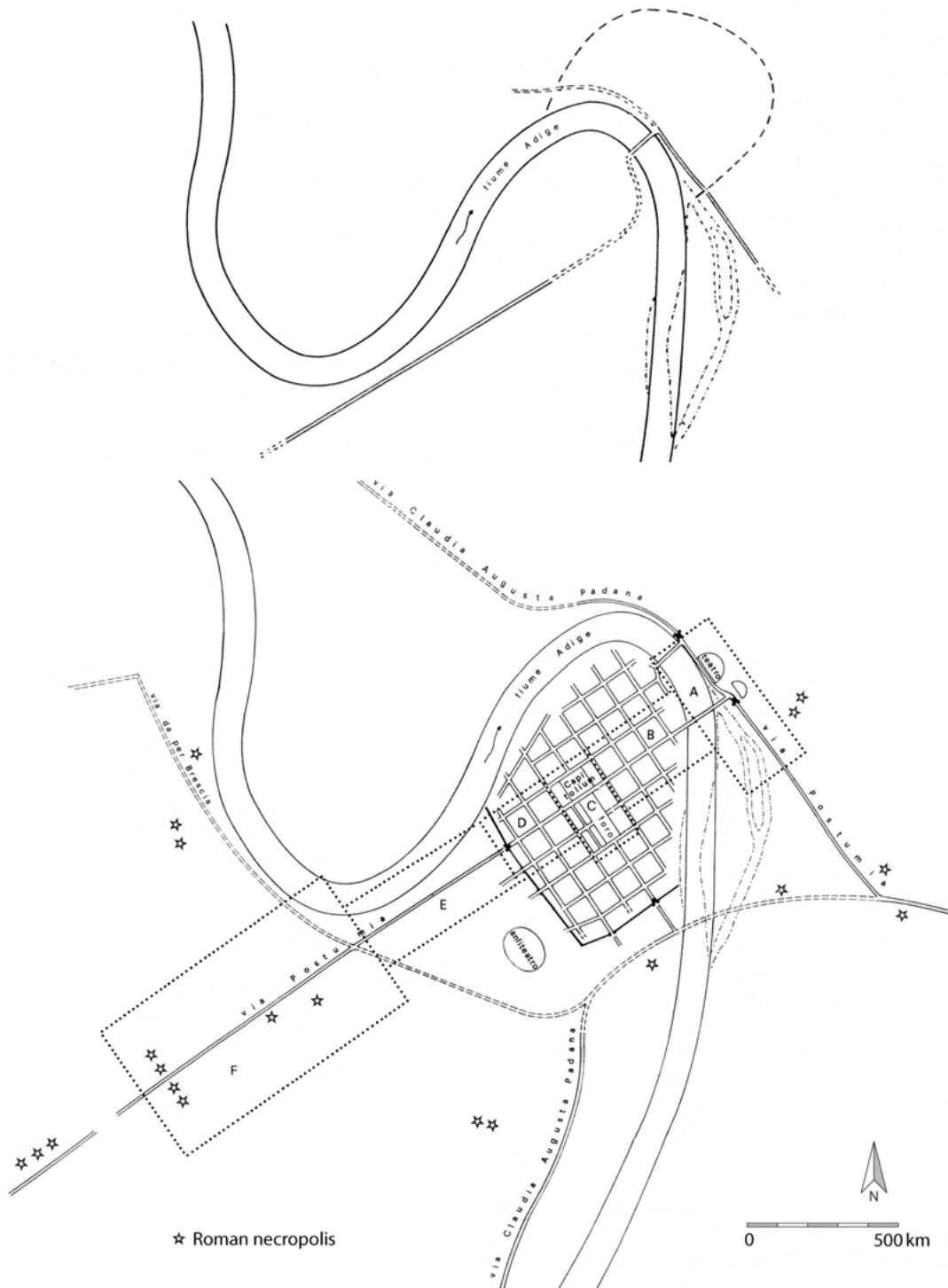
<sup>2</sup> Vitruvius, *De arch.* 1, 4, 11.

<sup>3</sup> Strabo, 5, 1, 5–8.

<sup>4</sup> Catullus 17; Corso 1986, 583 f. 586. Corso's assumption that this bridge was only a temporary solution is contradicted by Catullus emphasising its age.

<sup>5</sup> Cavalieri Manasse 2008, 74 f.

<sup>6</sup> Corso 1986, 584.



**Fig. 2:** Verona, area of the original settlement (above) and new city layout (below), with via Postumia.

the Adige on the flank of the Colle San Pietro hill (Fig. 2). Since Catullus died before the middle of the 1<sup>st</sup> century BC, his reference can only relate to the old, pre-municipal Verona, i. e. the settlement on the hill(-side). Catullus' Verona offered a remarkably different urban ambience compared to the later city with its street grid and 'up to date' urban appearance in the plain.

## Canals and waterways: Controlling water in the cities

Shaped even more by the local hydrology was the urban layout of Milan, like Verona a major Celtic settlement. Bridges over watercourses and canals within and immediately outside the city walls are mentioned in publications, but are often insufficiently known.<sup>7</sup> The resulting, rather incomplete picture allows no topographical connections to be explored or even a reconstruction of the local network of canals.<sup>8</sup> Yet e. g. the lack of an orthogonal layout of the city (and, accordingly, the experience of the local urban tissue and its streets) has been explained by the local hydrological situation and the earlier settlement development already determined by it.<sup>9</sup> In addition, structures like canals, piers, embankments, bridges and related infrastructure of potential high visibility in the city area proper, as well as in the *suburbium*, must have been perceived as a common element of the local topography and daily urban experience. They prove Milan to be a 'città d'acqua'<sup>10</sup> – even if we are not able to specify the concrete consequences for the local topography and its localized urban spaces.

This, in turn, has been accomplished recently for the city of Altinum, where the topography has been revealed city-wide by a combined analysis of aerial photographs and infrared images<sup>11</sup> (Fig. 3). Here, in a settlement area characterised by fluvial and lagoon processes, canals surrounded and delimited the city area, while two wide inner-city canals of rather irregular course formed the backbone of the city: an East-West canal of about 26 m width and a canal running from north to south of lesser width. Identifiable as dominant elements, the two canals were lined by streets and, at least for some stretches, bordered by stone embankments.<sup>12</sup> They subdivided the city area of approx. 1400 × 700 m into three areas. In addition, the layout of the streets, the location of several public buildings, bridges, moorings and piers with porticoes can be identified. Distinguishable – and explained by the city's development, determined in turn by the local hydrological situation – are e. g. different orientations as well as *insula* sizes of the street system in the city area: the north quarter with its public buildings of the city centre, the south quarter, and the east quarter as a later expansion of the city area.<sup>13</sup> With its canals and their urbanistic impact, Altinum offers remarkable insights into the urban reality of the aforementioned statements by Vitruvius or Strabo, reminding us also of cities of later epochs in the region, such as Chioggia or, of course, Venice, where controlled water played and plays a major role for the urban space, its development and experience.

The important role of canals and waterways for the cities on the *caput Adriae* can also be underlined for Aquileia, the major urban centre of the region. Geophysical investigations carried out by the Austrian Archaeological Institute from 2011 on allowed for the documentation and analysis of river courses and canals in the urban areas outside the city walls.<sup>14</sup> Canals originally running along the old fortification walls show that the city was, comparable to Milan and Altinum, surrounded by waterways: the river Natiso along the eastern and southern side of the city, the *Canale Nord* which connects into the Natiso from the north, and the *Canale Anfora*, which, taking up the orientation of the street grid of the city's layout, led towards the city at about the height of the decumanus running to the western side of the forum. The *canale* then turned north

7 Haug 2003, 67. 414 no. 2.3.: bridge of the 1<sup>st</sup> century AD crossing an open canal running from north to south within the city area.

8 Sacchi 2012, 13 f.

9 Ceresa Mori 2004, 305; Sacchi 2012, 13 f.

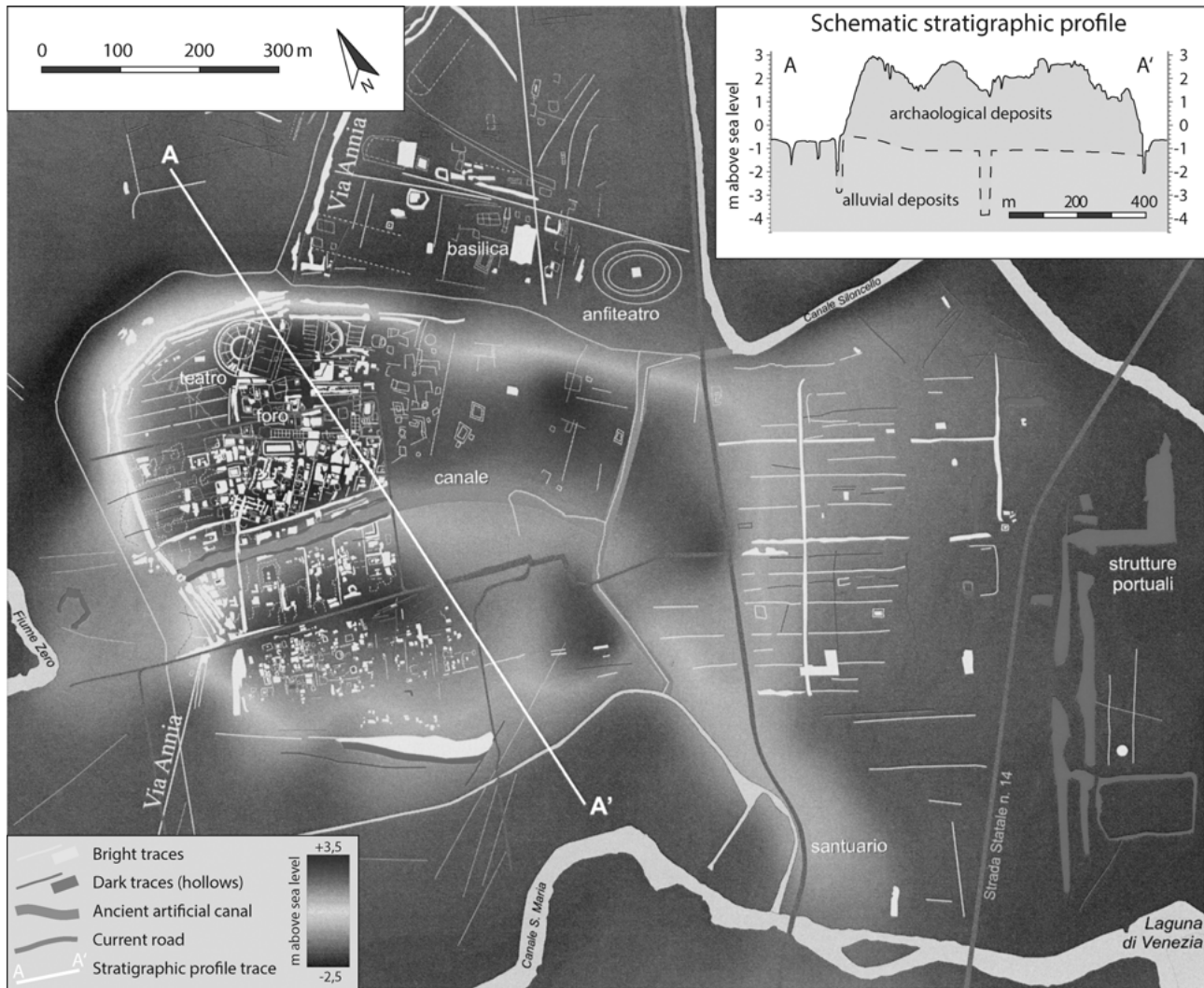
10 Sacchi 2012, 14.

11 Ninfo et al. 2009; Mozzi et al. 2011; Tirelli 2011.

12 The construction of the bank of the main channel is largely unknown. An excavation near the local museum, however, uncovered a part of the western border of the canal. It featured – at this place – a more than 4 m deep ramp-like section with steps dating back to the 2<sup>nd</sup> half of the 1<sup>st</sup> century BC: Vigoni 2013, 100 fig. 67.

13 On these differences in the urban area of Altinum, see Tirelli 2011, 61–66.

14 Groh 2011, 156 figs. 3, 10; Groh – Schimmer 2013, fig. 4.



along the city wall in order to enter the *Fossa Ausset*, which was in turn connected to the *Canale Nord*. Aquileia's waterways show an urban area defined by water in a much more immediate way than is evident today – or visible in most of our plans of the ancient city. Until the 3<sup>rd</sup> century, the wide *Canale Anfora* leading from the west towards the city area was probably one of the city's main harbour areas, connecting Aquileia with the sea: geophysical and survey results show here a densely built area with extensive harbour structures, such as quays, piers and huge storage buildings, but also a street running along the canal towards the city centre.<sup>15</sup> These harbour structures reached up to the city wall and thus were only a short distance away from the city centre with its forum.

Milan, Altinum, and Aquileia can exemplify how controlled water and its infrastructure, such as canals passing through urban space, embankments as places of numerous activities, and bridges connecting separated areas, contributed to the local topographies of a great number of cities in the region. Water and related infrastructure were part of the everyday life in 'their' local urban or suburban spaces and added to their experience and perception alike.

**Fig. 3:** Altinum, the city area and its reconstructed topography.

<sup>15</sup> Groh 2011, 156 figs. 3–5; Groh – Schimmer 2013, 61 figs. 4. 7.

## Staging water: fountain architectures and installations

Beginning with the 1<sup>st</sup> century AD, we witness a new phenomenon in dealing with water beyond the management of ‘natural’ water: the enriching of urban spaces or architecture with decorative water installations, leading to new ways to encounter water in the regional cityscapes. This local desire to enrich the local cityscape clearly benefitted from the construction of large over-land aqueducts establishing a continuous freshwater supply for the cities of the region from the end of the 1<sup>st</sup> century BC. The new, continuous water supply allowed for various new forms to embed water in the urban space besides the omnipresent, yet unspectacular (and here left out) street-side fountains of utilitarian purpose. Among these new forms, we find monumental and elaborate fountain architectures that may be described as ostentatious stagings of water in urbanistic contexts, as well as smaller decorative installations embedded as an aesthetic contribution to architectural settings.

Especially the often so-called *nymphaea*, i. e. monumental and richly decorated fountain architecture, which became increasingly popular in the architecture of the Imperial period, are often considered iconic water installations of Roman urbanity.<sup>16</sup> Bordering squares or streets, the aesthetic impact of these monuments on their built environment cannot be underestimated. In addition, they attracted attention and contributed to the micro-climate and acoustic background of their location, thus shaping urban space by adding specific surplus value. However, compared to the abundance of such monuments known from the cities of e. g. Asia Minor or the Levant, the evidence for comparable architecture from the cities of northern Italy is rather sparse. Only thanks to a fragmentary inscription dated to the late 1<sup>st</sup> century AD with monumental lettering do we know e. g. of the existence of a *nymphaeum* in Roman Como.<sup>17</sup> Archaeologically known, yet uncommon and remarkable, is a constellation in Milan, where along a street about 150 m west of the forum two decorative fountains were located opposite each other:<sup>18</sup> according to the excavators, the first one consisted of an 8 m wide rectangular basin, a rear second basin and a final apse. Traces of wall painting, mosaics and marble veneer are mentioned as evidence of a former lavish design. Less well known is the second, unexcavated building, which lay on the same axis as the first. Other *nymphaea* contributing to urban spaces in the cities of the region may be inferred hypothetically – if at all – from groups of dislocated decorated marble elements that must have belonged to the decorative orders of monumental architectural designs, yet of unknown function.<sup>19</sup>

<sup>16</sup> On such monumental fountain architecture, their not unproblematic terminology – and its shifting meaning since the Hellenistic period – as well as the manifold architectural and aesthetic solutions applied during the Roman imperial period and their urban impact, see Letzner 1990, 24–59; Gros 1996, 418–444.

<sup>17</sup> Pais 1884, no. 747; Goffin 2002, 93.

<sup>18</sup> Letzner 1990, 143. 194. 391 f. no. 242 pl. 89, 1 (first *nymphaeum*); Neuerburg 1965, 257 f. no. 227; Letzner 1990, 392 (second installation).

<sup>19</sup> Prominent are the groups of such marble elements from Milan and Parma. In Milan, F. Sacchi was able to define two such groups, both of 2<sup>nd</sup> century AD date (*‘gruppo II’* and *‘gruppo III’*; Sacchi 2012, 91 f. 161–186 nos. 71–94 pls. 44, 4–64, 2 (*‘gruppo II’*); Sacchi 2012, 92. 187–194 fig. 60 nos. 95–99 pls. 64, 3–68, 2 (*‘gruppo III’*)). The numerically larger group II comprises decorated elements of at least five to six Corinthian orders of different coloured marble varieties (cipollino, portasanta, bigio antico, africano, proconnesian). Group III, on the other hand, consists of elements of a composite order, including again different coloured marble varieties. In terms of material of a different character (only proconnesian marble of white-greyish colour), three groups from Parma studied by M. P. Rossignani also date to the 2<sup>nd</sup> century AD (Rossignani 1975, 43–65). Group B, with its elements of triangular and segmental arches, as well as a peopled acanthus scroll of a richly decorated architecture, is of particular interest here. The former architectural context of the groups both from Milan and Parma is not known. We can imagine them as former elements of ornamental façades of theatre stages, thermal baths or *nymphaea*. Yet these richly decorated monumental façades made of imported marble are conspicuous exceptions in northern Italy. Considering their limited number, the obvious ambition and the quality of their craftsmanship, they belong to the top range of architectural monuments erected in the region and must have prominently enriched their urban spaces.

Ultimately only one monumental decorative fountain from northern Italy is better known in its design and urban context, if not in dating. The installation was documented in Rimini during excavations in the area of the *cardo maximus* leading to the city's forum square.<sup>20</sup> It consists of a raised three-quarter circular basin seven meters wide with an – again elevated – apse (with the water inlet), and, in front of the large basin and on a lower level, a rectangular basin of only three meters width and therefore of considerably smaller size. With its overall size, the fountain was a prominent later addition to the urban centre of Rimini and its monumental topography. Remains of a marble revetment (Cipollino) of the larger basin and of white marble for the smaller one bear witness to an – at least in the regional context – ambitious initiative. However, the setting of this monumental fountain is in a striking way unusual, indeed almost counterproductive, considering its potential to contribute to this area of the urban space bordering the forum: it was not placed as an ornamental installation at a prominent location for a wider area, e.g. the forum square proper, but set back considerably from the square into the *cardo*. There, the *nymphaeum* appears to be squeezed into the *cardo maximus*, and even to have largely blocked it: the passage left between the installation and the west wall of the forum basilica was now only 1.7 m wide.

Reviewing the epigraphical and archaeological evidence, it is obvious that monumental fountain architecture like the richly decorated *nymphaea* known as prominent 'urban furniture', e.g. from the Roman East, were rather exceptional in the cities of Roman northern Italy. They were never as omnipresent as e.g. in the cities of Asia Minor and the Levant, and they never played a comparable role as decorative architecture enriching prominent spaces of local cityscapes aesthetically.<sup>21</sup> Yet the existence of monumental decorative fountains in at least some of the cities of northern Italy, and their architectural designs, attest their appeal as an adorning 'urban motif' for the regional cities, too.

More common, and in the variety of installations more diverse, was, in contrast, the integration of water as an accessory element of monumental architecture or built spaces by means of subordinate decorative fountains. Two dislocated inscriptions from Verona point to a valorisation and enrichment of a distinct urban space by establishing such fountains – as the result of a testamentary donation, i.e. a private initiative.<sup>22</sup> The initiative included, among others, an unknown number of fountains (*salientes*<sup>23</sup>), that were possibly located in the surroundings of the city's most dominant suburban building, the famous amphitheatre. Unfortunately, these decorative fountains are attested only by the inscriptions. Although they let us assume the amphitheatre and its immediate surroundings, i.e. a periodically frequented location, to be upgraded as an urban space by decorative settings of water, their exact location, design and especially impact on this distinct (sub-)urban space remain unknown to us.

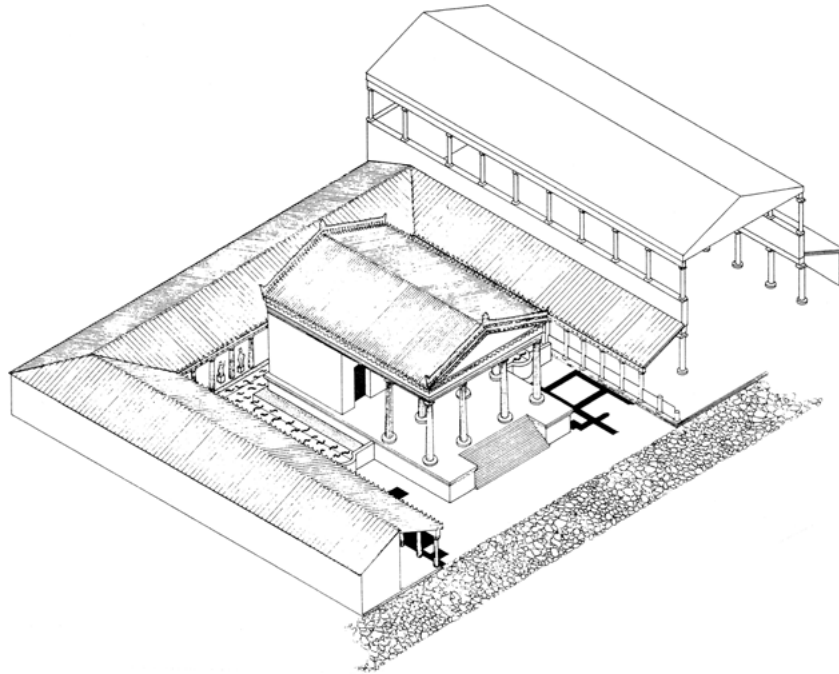
A better understanding of water embedded in a monumental architectural setting by means of decorative fountains can again be provided only by a limited number of archaeologically known contexts. Thus, in the Flavian-period Capitolium in Brescia, the major local sanctuary towering above the forum of the city, the remains of a pedestal on the left side of the wide staircase leading from the already elevated forecourt to the temple proper and its main cella

<sup>20</sup> Ortalli 2011, 139 f. figs. 2. 7. 11.

<sup>21</sup> On monumental fountains in the cities of the Roman East, see e.g. Richard 2012. The reasons for the only limited impact of this type of urban monumental architecture not only in northern Italy, but in the western provinces in general (with the exception of north Africa) are difficult to assess. Probably decisive factors might have been a differently rooted elite culture of urban engagement, aiming also at contributing to the splendour of a city, as well as the well-documented rivalry among cities that encouraged also the striving for an aesthetic enhancement of local cityscapes.

<sup>22</sup> CIL V, 3222; Ricci 1893, 12 no. 26; Alföldy 1985, 217; Letzner 1990, 78.

<sup>23</sup> On the Latin term *salientes*, defining a category of decorative fountains embedded in architectural contexts, see Letzner 1990, 75–82.



**Fig. 4:** Luni,  
reconstruction of  
Capitolium, Porticus  
and water basin.

shows an opening for water runoff.<sup>24</sup> A *pendant* can be assumed for the right side of the staircase. The stairs must have been flanked by small fountains enriching the architecture with their decorative quality, but also accentuating the final access to the temple.

In a similar way, the experience of several architectural complexes in the city centre of the colony of Luni was enhanced by small fountains or embedded water installations during the early Imperial period. The space between the old temple of the Capitolium and its surrounding three-winged portico, for example, was transformed in the middle of the 1<sup>st</sup> century to a wide – and elevated – marble-clad water basin.<sup>25</sup> As a built structure, the basin connected the temple podium and the podium of the portico. But by isolating the temple from the surrounding architecture by means of water, the capitolium was also singled out and emphasized as major monument of the community (Fig. 4). In the sanctuary immediately to the east of the forum (the so-called sanctuary of Diana), erected at about the same time, we find instead water installations comparable to those in Brescia. Here too, the staircase leading to the small temple building was flanked by ornamental fountains accentuating the temple and the stairs leading to it as a focal point at the end of the colonnaded courtyard of the sanctuary.<sup>26</sup> Again, such fountains adorned the steep flight of stairs leading to the temple of Luna in the spacious sanctuary with its emphasized alignment, located in the northern part of the city.<sup>27</sup> At the local forum, a marble-rich small open air enclosure of unknown function at the southern end of the square, the so-called *area con fontane*, comprised six small fountains surrounding a large marble-clad pedestal and an altar. The decorative fountains must have contributed substantially to the atmosphere and specific experience of this small enclosure located at the public centre of the colony.<sup>28</sup> These

<sup>24</sup> Dell'Acqua 2014, 322 f. fig. 1.

<sup>25</sup> D'Andria 1973, 644; Lavizzari Pedrazzini 1977, 354–356 pl. 4; Rossi 1998. A similar function as water basins enriching temple areas can be hypothesized for the remains of a large basin in the sanctuary at the via Postumia immediately outside Verona's Porta Borsari (maybe a sanctuary of Iuppiter) and in Bologna for a marble basin of 4 × 11 m in the area north of the two forum temples: Cavalieri Manasse 1998, 121 f. (Verona); Bergonzoni et al. 1976, 89 f. no. 72. 2. A. 2 (Bologna).

<sup>26</sup> Durante – Landi 2001, 30. 33–35.

<sup>27</sup> Bonghi Jovino 1973, 657 f. pls. 186, 5. 187, 2.

<sup>28</sup> Rossignani 1973, 137–141.



examples of a valorisation of architectural spaces e. g. by small fountains illustrate the contribution of embedding water installations to the specific experience of a monumental built space. Imperial period Luni demonstrates water to be a clearly omnipresent element of the local sacred topography and as a significant contribution to the specific atmosphere of its locations.

The potential variety of installations for a decorative display of water in monumental architecture can finally be exemplified by a lost inscription from Parma which points to a more unusual integration of water into an architectural context.<sup>29</sup> The text of the inscription documents the costly transformation of a city gate into a lavishly decorated monument by the citizen Q. Munatius Apsyrtus during the 1<sup>st</sup> century AD. Apsyrtus had, from his own funds, the street from the forum to the city gate paved and the gate decorated with marble, sculptures and decorative fountains: *marmoribus statuis fistuleis et salientibus ornavit*. It is not possible to connect this gate and its decorative fountains with a gate architecture known archaeologically. The appearance and design of the gate before and after the initiative of Apsyrtus must therefore remain unknown, as must the specific contribution of the *salientes* to the architecture. Yet the reported find spot of the long-lost inscription suggests that the initiative might refer to the eastern city gate, i. e. the entrance of the Via Aemilia, the main overland route of the region passing through the city.<sup>30</sup> The decorative accentuation of one of the most important points of access to the city and, in the same way, focal point of the local main street was achieved also by embedded *salientes*.

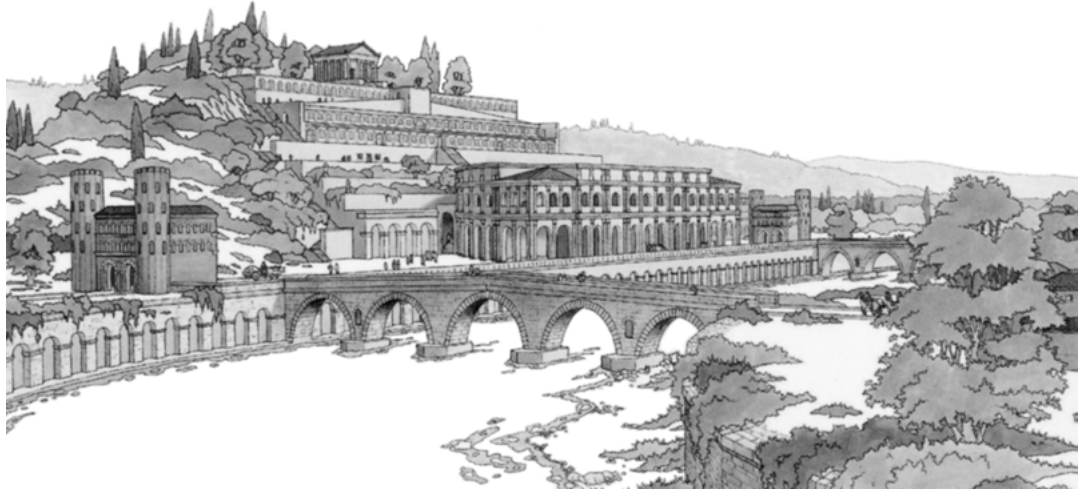
The outlined forms of the embedding of water in architectural settings show the aspirations of local communities and individuals to enrich their urban spaces and to create additional value to their ambience. In this (as well as in the solutions applied), the cities of northern Italy seem to follow more general trends in dealing with urban space during the Roman Empire. But the conspicuous lack of monumental fountain architecture, for example, as urban furniture comparable to the prominent nymphaea in the Roman East is an obvious indicator and reminder of the importance of a regional focus when dealing with urban phenomena. Yet besides their limited number, our restricted knowledge of the local topographical context and built environment of the small number of known monuments also prohibits a concrete assessment of their impact on 'their' urban space. A far more precise picture emerges, in contrast, from the smaller decorative fountains as an embedded element of monumental architecture. The number of installations known with contexts, sometimes several in one city, allows for a better understanding of their local impact, but also of the aesthetic strategies and surplus underlying their installation. Where known, most of them enriched the ambience of – at least partially closed – architectural spaces, prominently sanctuaries. Here, the decorative fountains were always placed according to the overall architectural layout of the architectural complex, i. e. as part of an overall aesthetic concept, not as self-contained installations. Within these spaces, they highlighted built units, such as temple buildings within sanctuaries, by attracting the gaze of the viewer, adding a playful element to a static monumental setting. Finally, their placement (or the placement of their architecture) shows several of them accentuating situations of transition, like gates and flights of stairs, or emphasizing hierarchies within an architectural context. Monumental topographies gained a new aesthetic dimension, urban spaces offered an increased, richer experience.

## Natural water in regional cityscapes

Compared to such decorative installations enriching architectural situations, the architectural transformation of (natural) water into a topographical locale of urban space meant a completely

<sup>29</sup> CIL XI, 1062; De Maria 1988, 248 f. no. 30 fig. 27.

<sup>30</sup> Vera 2009, 245. 249.



**Fig. 5:** Verona, hillside with theatre and terraces.

different level of appropriating water in an urban setting. An initiative that must have stressed the resources of the city for years or even decades can be found in Verona. Only a few years after Catullus' description of his hometown, the local community took the decision to relocate the settlement to the area in the bend of the Adige river, where a new city, now with an up-to-date orthogonal layout, was established.<sup>31</sup> As a result, the area of the former settlement on the hillside on the now opposite side of the river was available for a new development: only a few decades later, it was thoroughly and monumentally reshaped. The most prominent building here now was the large theatre, which rose only 10 m behind the Adige's embankment, immediately above the street along the bankside.<sup>32</sup> The approximately 105 m wide cavea of the building was embedded in the slope of the hill, while the rear wall of its 71 m wide stage building with the bulky *parasceniae* formed a multi-storey façade towards the city on the other side of the river. And this theatre was no solitary monumental building: it was visually and structurally embedded into an ambitious architectural reshaping of the entire slope, starting from the theater's cavea. This reshaping included a gallery crowning the cavea and, above all, a sequence of three built terraces and ramps climbing up to the summit of the hill that was crowned by a sanctuary and its temple<sup>33</sup> (Fig. 5). The over 120 m wide walls of these terraces were each structured by different decorative arrangements of niches, half columns and entablatures: the plain rear wall of the lower, about 10 m deep terrace featured a fountain at its western edge, while a corresponding installation might be assumed for the eastern edge today occupied by a monastery building. The wall of the only 1.5 m narrow middle terrace exhibits in symmetrical arrangement a rectangular central and two semi-circular niches, framed by a sequence of blind windows. Doric half-columns and entablature decorate the whole width of the wall. Finally, the 7 m deep upper terrace, situated already 41 m above the level of the theatre's orchestra, was decorated with a central niche and an arrangement of semi-columns with entablature. As a result, the slope of the hill was, from the embankment of the river up to the sanctuary on the hilltop, completely 'architecturized'. Distanced by the separating river, but at the same time connected to it, a highly articulated monumental prospect incorporating hillside as well as river opened up to viewers from the city. River and embankment, theatre façade, the sequence of terraces, and the crowning temple must have exhibited a specific scenographic quality,<sup>34</sup> making the river an element of the built local cityscape.

<sup>31</sup> Cavalieri Manasse 1998, 111–113 fig. 1.

<sup>32</sup> Cavalieri Manasse 1987, 17–22; Tosi 2003, 537–540 pl. 12. 100–120.

<sup>33</sup> Cavalieri Manasse 1987, 20 f.; Tosi 2003, figs. 102. 103. 109–112.

<sup>34</sup> Cavalieri Manasse 1987, 20 f.

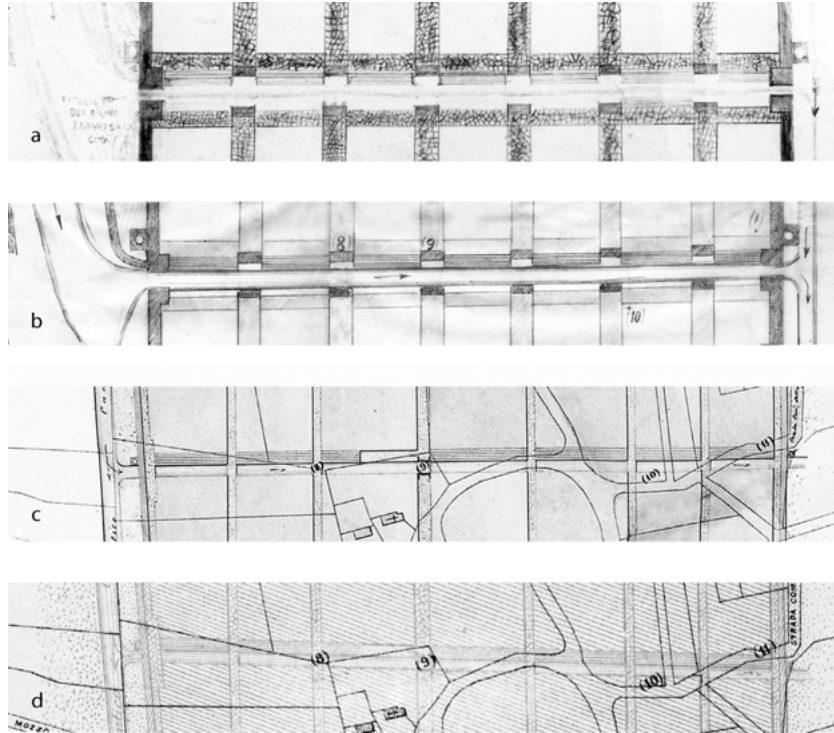


**Fig. 6:** Concordia, urban layout with canal separating second and third row of *insulae*, from south.

A slightly different, yet more immediate role for the urban topography can be discerned in the colony of Iulia Concordia. Here, as in nearby Altinum or Milan, watercourses played an important role in shaping the local character of the settlement established between two small rivers that received its almost uncompromising orthogonal layout during the later 1<sup>st</sup> century BC. A 9 m wide canal dividing the city area is, however, a local feature that distinguishes Iulia Concordia clearly from both cities mentioned. Connecting the two small waterways surrounding the city, the canal was, in a remarkably consistent way, embedded into the urban layout: it was adjusted to the street grid and accompanied one of its decumani as an inner-city east-west waterway. Known only from late 19<sup>th</sup> century excavations, its prominent role for the local urban space can only be specified by consulting old plans and descriptions<sup>35</sup> (Figs. 6–7). While the south side of the canal was formed by only a simple wall, its north side received a more elaborate – and spacious – architectural definition: here six wide stone steps connected the canal with the accompanying decumanus. Although the exact depth and height of these steps are not known, the 19<sup>th</sup> century drawings and descriptions indicate an approximate total depth of 9 m and a height of altogether 1.8 m.<sup>36</sup> With a length of over 750 m and interrupted only by the bridges of the *cardines* crossing the canal, these downright monumental steps were one of the most striking architectural features within the city walls.

<sup>35</sup> Bertolini 1880; Vigoni 2006; Vigoni 2013.

<sup>36</sup> Vigoni 2006, 459 f. fig. 5; Vigoni 2013, 97. Should the steps indicated in the plan given by Bertolini 1880, pl. 14 be true to scale, the six steps would correspond approximately to the width of the accompanying decumanus.



**Fig. 7:** Concordia, detail of the canal according to old plans.

Two inscriptions of the late 1<sup>st</sup>/early 2<sup>nd</sup> century AD are usually connected to this initiative.<sup>37</sup> Both inscriptions, formerly free-standing, approx. 1.1 m high stelae, were found in the area of the canal and must have been erected in its context. They document for the public that two prominent inhabitants of Concordia, both *liberti* of the same person and both *seviri*, took over the costs for steps (*crepidines*) of two sections of the canal, itself not explicitly mentioned (*inter murum et pontem*, and *inter duos pontes*; these specifications only make sense for the canal as the object of the initiative, as well as the context of the inscriptions). This large-scale improvement of the local infrastructure was therefore a private donation and euergetic contribution to the local topography. Moreover, since the city's layout with canal – and street grid – had existed already for some time, it was a subsequent initiative that must have had some impact.

But how could this initiative be understood in its urban context? With the inner-city canal, water was already a formative component of the initial layout and urban space of Concordia. Yet in its embedding, a conspicuous local approach is evident. From the beginning integrated in a remarkably consistent way into the layout of the city, the canal, being a part of it, was subsequently the object of architectural articulation as a monumental locale. This, however, did not result in a sophisticated or even grandiose architectonic design, such as a promenade. Finds from the area indicate an ongoing commercial use of at least parts of the canal,<sup>38</sup> although the actual harbour with its corresponding infrastructure was located outside the city.<sup>39</sup> Yet the area of the canal was also sought for official monuments. An honorary inscription for a high-ranking imperial official of the Late Antonine period found in the eastern section of the canal steps points to a certain publicity in this area:<sup>40</sup> the inscription with its size of 150 × 80 cm must have formed part of an impressive honorary monument erected somewhere along the canal.

<sup>37</sup> CIL V, 1886 and 1887; Bertolini 1880, 414 no. 10 pl. 14 (findspot); Vigoni 2006, 464 fig. 6 f.; Vigoni 2013, 104 figs. 73. 74. Against a connection of both inscriptions with the steps proper and for a different assessment of the urban role of the canal, see Laird 2015, 254–261.

<sup>38</sup> Vigoni 2013, 125–154.

<sup>39</sup> Vigoni 2013, 109–111 fig. 78 pl. 2. 5.

<sup>40</sup> CIL V, 1874; Bertolini 1880, 415 no. 11 pl. 14; Vigoni 2013, 105 fig. 75.

Therefore, although a commercial use of the canal for the inner-city handling of goods is likely, the wide area of the steps contiguous to the street grid, their monumental design, the presentation of freestanding inscriptions and, later, of a massive honorary monument, both of which presuppose and imply a certain publicity, may argue against its use as a purely commercial infrastructure. It is a hypothetical, but nevertheless appealing assumption to imagine this urban area along the northern side of the canal as a more high-profile location, possibly even with a sought-after public character. The case of Concordia thus indicates a more coherent, ‘total’ appropriation of water than the one in neighbouring Altinum or in Verona mentioned at the beginning. In its subordination to the local street grid and its complete architecturalization, it is conceived here as a topographical place, as a locale for the public, for localised interaction and even monumental communication – apart from the forum.

With their ambitious architectural initiatives, Verona and Iulia Concordia confront us with two different approaches to including or even embracing water, i. e. local watercourses, on a large scale in their topography. In Verona, the river was one element of a monumental reshaping of a complete hillside, including river embankment, theatre, terraces, and a sanctuary. The result was a veduta-like arrangement, with the river serving as a visual starting point, yet also distancing the viewer. In Iulia Concordia, on the other hand, we find a local watercourse completely subordinated to the city layout with its orthogonal system of streets and insulae, and, thanks to the subsequent donation of the steps, upgraded as a locale. Yet despite these different approaches, both in Verona and Iulia Concordia water was embedded in a remarkably coherent, prominent way as an element of an overall urban arrangement. Nature became topography.

## Local water and local identity: the case of Padua

The many-layered local ‘treatment’ of water within urban space in northern Italy finds a rare and unusual facet in the case of Padua, pointing to the potential meaning of water in a local cityscape beyond the infrastructural or aesthetic aspects outlined above. Already during the late Republican period, the old Venetic and later Roman city was praised for its prosperity. According to Strabo, Padua was the best of all the cities in the region. The geographer Pomponius Mela characterises the city in his *De Chorographia* as *urbs opulentissima*.<sup>41</sup> City and territory were, according to Livy, himself a Paduan, characterised by watercourses, canals and a lagoon landscape.

An important urban factor was the river Metuacus, which surrounded the core area of the ancient city. Several areas and infrastructures of the Roman ‘riverscape’ of Padua are known from archaeological excavations. Bridges, piers, and warehouses along the river formed an important part of the Metuacus’ waterside. Yet one of the structures, excavated in today’s *Via Battisti* 1, is of particular interest: a wide, probably semicircular architectural setting built from large trachyte blocks and dated to the middle of the 1<sup>st</sup> century BC.<sup>42</sup> The known remains of the only partially excavated architecture allow for a reconstruction as a kind of wide, stepped exedra with at least seven 29 cm high steps, opening towards the river and descending to it. Due to its unusual layout, the structure can hardly be interpreted exclusively as a pier for the handling of goods. Rather, it has features of a monumental architectural setting that instead indicate a specific character as a place for a special purpose. The river would thus be a topographical space for a discrete location with a specific monumental quality.<sup>43</sup>

<sup>41</sup> Mela 1, 60.

<sup>42</sup> Ruta Serafini 2002, 57 f.; Vigoni 2013, 99 f. fig. 66; Zara 2018, 132 fig. 92; 447 no. 114.

<sup>43</sup> Yet the concrete appearance of this construction beyond the architectural layout or even its valorisation as an installation remain unclear. The use of the very durable material trachyte as well as no mention of a white limestone or any decorative elements point to a rather utilitarian design. Considering this, it is hypothetical – yet has a certain charm – to connect this construction with a regularly staged naval battle to celebrate a historic victory

However, Padua is noteworthy above all because our written sources on the city (and river) give us exceptional insights into a local collective tradition connected to, shaped by and regularly affirmed by local water – the river as a locale of collective identity. Our source is the Roman historian Livy, himself a native of Padua. In his account of the Venetic naval victory over the Spartan Kleonymos during his expedition to the North Adriatic in 302 BC, Livy mentions that the enemy's ships' beaks captured on this occasion were kept in the old temple of Iuno in the city.<sup>44</sup> In this context he also mentions that, in remembrance of this significant victory each year on its anniversary, a *certamen navalis*, a naval battle, was held on the river flowing through the city (*in flumine oppidi medio exercetur*).<sup>45</sup> His account underlines that this event related to a historical episode from a time long before Roman control of the region played a major role as a component of local Paduan identity. It could be experienced in different media (spolia, performative staging) and topographical locations (temple, river) and was kept up at least until the time of Livy. In particular, the naval battle, taking place as a spectacle on the river as a central locale of the city, must have been staged in the presence of large parts of the regional population. With all these aspects, the Metuacus passing through Padua connected in an immediate way collective tradition and facets of a well-established local identity with the topographical location 'river'.

## Urban water in northern Italy: A summary

The Po plain, rich in tributaries, streams and meadows, has always required melioration, drainage and canalisation. Water was therefore not only a constitutive component of the regional environment, but it has always been a challenge for the regional urban communities. In consequence, canals and watercourses were a significant factor in the development of the regional cityscapes, not only in the obvious examples of the delta of the Po or the cities situated at the *caput Adriae*, but also e. g. in Milan or in Verona.

However, a closer look reveals a far wider range of ways of handling local water as well as of embedding it in the cityscapes. Beyond the above-mentioned infrastructural level with its canals, watercourses and related constructions and their consequences for urban and suburban topographies, we find water since the 1<sup>st</sup> century AD increasingly embedded in urban architecture. Installations like fountains enriched, whether as monumental architectures or as subordinate installations, built environments in manifold ways and accentuated their specific setting. In their diverse types they contributed, as can be seen at Luni, in a prominent way to the perception and aesthetic experience of 'their' urban (sub-)spaces and their ambiances. Yet the embedding of water was also possible on a far larger scale. In Verona and Iulia Concordia, a local watercourse was transformed into a prominent locale (or constitutive element of it) of the built topography. Finally, our sources on Padua remind us that the importance of local water for an urban community may not be restricted to infrastructure or installations, but may also include a role as a link to and as a place of local identities.

As a general tendency and beginning with the early Imperial period, the regional water became more and more 'urbanised'. Beyond water supply and disposal, it was increasingly the object and focus of architectural initiatives and ambition. The archaeological record reveals a remarkable range of initiatives and solutions to embed water not only as a topographical feature of the cityscapes, but also as a decorative contribution to urban spaces in order to enhance their

---

(see below) and to interpret it as an installation to accommodate spectators in the manner of a VIP stand (Vigoni 2013, 100).

<sup>44</sup> Liv. 10, 2. 14.

<sup>45</sup> Liv. 10, 2. 15.

aesthetic quality and to enrich their experience. Yet our lack of knowledge of the appearance of most installations and monuments, as well as of their concrete architectural and spatial settings, prohibits a more concrete analysis of their specific contribution to local urban spaces. But considering that the ‘cities in the water’ or ‘city islands’ of Vitruvius or Strabo are sketched by them primarily from the viewpoint of technical control of water and its presence as a natural element within settlement contexts,<sup>46</sup> archaeology can add important observations and especially introduce a wider perspective, namely one of the manifold forms of architectural initiatives and ambition to upgrade water to an urban feature, as well as on the enrichment of urban spaces by means of water installations as a major aesthetic contribution to local cityscapes. We can trace a changing approach to water in urban settings, indicating the emergence of a new facet of regional urbanity.

## Illustration Credits

Fig. 1: Haug 2003, pl. 1.

Fig. 2: Cavalieri Manasse 1998, fig. 1.

Fig. 3: Ninfo et al. 2009, fig. 82.

Fig. 4: Rossignani 1995, fig. 9.

Fig. 5: Cavalieri Manasse 2012, p. 252.

Fig. 6: Pettenó – Vigoni 2013, pl. 4 = Bertolini 1880, pl. 1.

Fig. 7: Vigoni 2013, fig. 63.

## Bibliography

### Epigraphic corpora

Pais 1884: E. Pais, *Corporis inscriptionum Latinarum supplementa Italica I. Additamenta ad vol. V Galliae Cisalpinae* (Rome 1884).

### Secondary literature

- Alföldy 1985: G. Alföldy, Review of R. Chevallier, *La romanisation de la Celtique du Pô. Essai d'histoire provinciale*. BEFAR 249 (Rom 1983), *Germania* 63, 1985, 216–218.
- Bergonzoni et al. 1976: F. Bergonzoni – G. Bonora – G. Bonora Mazzoli, *Bologna romana*, 1. *Fonti letterarie. Carta archeologica del centro urbano*, *Fonti per la Storia di Bologna* 9 (Imola 1976).
- Bertolini 1880: D. Bertolini, *Concordia Sagittaria*, NSc 1880, 411–437.
- Bolla 2005: M. Bolla, *Sculture del teatro romano di Verona, decorative e iconiche*, *Quaderni del Civico Museo Archeologico e del Civico Gabinetto Numismatico di Milano* 2, 2005, 7–89.
- Bonghi Jovino 1973: M. Bonghi Jovino, K – Il grande tempio e l'area adiacente, in: L. Frova (ed.), *Scavi di Luni. Relazione preliminare delle campagne di scavo 1970–1971* (Rome 1973) 653–691.
- Bonomi – Robino 2007: S. Bonomi – M. T. A. Robino, *Adria fra Etruschi e Romani*, in: L. Brecciaroli Taborelli (ed.), *Forme e tempi dell'urbanizzazione nella Cisalpina (II secolo a.C. – I secolo d. C.)*, *Atti delle giornate di studio*, Torino 4–6 maggio 2006 (Borgo San Lorenzo 2007) 85–90.
- Cavalieri Manasse 1987: G. Cavalieri Manasse, Verona, in: E. Buchi – G. Cavalieri Manasse (eds.), *Il Veneto nell'età romana* (Verona 1987) 3–57.
- Cavalieri Manasse 1998: G. Cavalieri Manasse, *La Via Postumia a Verona, una strada urbana e suburbana*, in: G. Sena Chiesa – E. A. Arslan (eds.), *Optima via. Atti del convegno internazionale di studi “Postumia. Storia e archeologia di una grande strada romana alle radici dell'Europa”*, Cremona 13–15 giugno 1996 (Cremona 1998) 111–141.

<sup>46</sup> Vitruvius does not mention *nymphaea* or monumental decorative fountains: Letzner 1990, 30.

- Cavalieri Manasse 2008: G. Cavalieri Manasse, Gli scavi del complesso capitolino, in: G. Cavalieri Manasse – B. Portulano – D. Gallina (eds.), *L'area del Capitolium di Verona. Ricerche storiche e archeologiche* (Verona 2008) 73–152.
- Cavalieri Manasse 2012: G. Cavalieri Manasse, Architettura romana in Cisalpina, in: H. von Hesberg – P. Zanker (eds.), *Architettura romana. Le città in Italia. Storia dell'architettura italiana* (Milan 2012) 240–267.
- Ceresa Mori 2004: A. Ceresa Mori, Il caso di Milano, in: S. Augusta-Boularot (ed.), *Des Ibères aux Vénètes*, CEFR 328 (Rome 2004) 293–306.
- Corso 1983: A. Corso, Territorio e città dell'Italia settentrionale nel „De architectura“ di Vitruvio, *Aven* 6, 1983, 49–69.
- Corso 1986: A. Corso, Ambiente e monumenti della Cisalpina in Catullo, *AquilNost* 57, 1986, 577–592.
- D'Andria 1973: F. D'Andria, CS – Zona nord del foro, in: L. Frova (ed.), *Scavi di Luni. Relazione preliminare delle campagne di scavo 1970–1971* (Rome 1973) 573–646.
- De Maria 1988: S. De Maria, Gli archi onorari di Roma e dell'Italia romana, *Bibliotheca Archaeologica* 7 (Rome 1988).
- Dell'Acqua 2014: A. Dell'Acqua, Nuovi dati sull'architettura, in: F. Rossi (ed.), *Un luogo per gli dei. L'area del Capitolium a Brescia (Borgo San Lorenzo 2014)* 321–359.
- Di Filippo Balestrazzi 1999: E. Di Filippo Balestrazzi, Le origini di Iulia Concordia, in: G. Cresci Marrone – M. Tirelli (eds.), *Vigilia di romanizzazione. Altino e il Veneto orientale tra II e I sec. a. C. Atti del convegno, Venezia, S. Sebastiano, 2–3 dicembre 1997* (Rome 1999) 229–257.
- Durante – Landi 2001: A. M. Durante – S. Landi, Luna. Un foro di età imperiale, *GiornStorLun* 49–51, 1998–2000, 13–64.
- Goffin 2002: B. Goffin, *Euergetismus in Oberitalien*, Habelts Dissertationsdrucke. Reihe Alte Geschichte 46 (Bonn 2002).
- Groh 2011: S. Groh, Ricerche sull'urbanistica e le fortificazioni tardoantiche e bizantine di Aquileia. Relazione sulle prospezioni geofisiche condotte nel 2011, *AquilNost* 82, 2011, 153–204.
- Groh – Schimmer 2013: S. Groh – F. Schimmer, Neue österreichische Forschungen in Aquileia (Italien), *Archäologie Österreichs* 24, 2013, 59–63.
- Gros 1996: P. Gros, *L'architecture romaine du début du III<sup>e</sup> siècle av. J.-C. à la fin de la république romaine. Les monuments publics* (Paris 1996).
- Haug 2003: A. Haug, Die Stadt als Lebensraum. Eine kulturhistorische Analyse zum spätantiken Stadtleben in Norditalien, *Internationale Archäologie* 85 (Rahden 2003).
- Laird 2015: M. L. Laird, *Civic Monuments and the Augustales in Roman Italy* (New York 2015).
- Lavizzari Pedrazzini 1977: M. P. Lavizzari Pedrazzini, CS – Zona nord del foro, in: L. Frova (ed.), *Scavi di Luni II. Relazione preliminare delle campagne di scavo 1972–1973–1974* (Rome 1977) 353–362.
- Letzner 1990: W. Letzner, Römische Brunnen und Nymphaea in der westlichen Reichshälfte, *Charybdis* 2 (Münster 1990).
- Mozzi et al. 2011: P. Mozzi – A. Fontana – A. Ninfo – F. Ferrarese, La struttura urbana di Altino. Telerilevamento e contesto geomorfologico, in: G. Cresci Marrone – M. Tirelli (eds.), *Altino dal cielo: la città telerivelata. Lineamenti di Forma urbis. Atti del convegno, Venezia 3 dicembre 2009, Studi e ricerche sulla Gallia Cisalpina* 25 = *Altinum* 6 (Rome 2011) 15–38.
- Neuerburg 1965: N. Neuerburg, L'architettura delle fontane e dei ninfei nell'Italia antica, *MemNap* 5 (Naples 1965).
- Ninfo et al. 2009: A. Ninfo – A. Fontana – P. Mozzi – F. Ferrarese, The Map of Altinum, Ancestor of Venice, *Science* 325 (5940), 2009, 577.
- Ortalli 2011: J. Ortalli, Il foro di Rimini, una nuova immagine, in: S. Maggi – B. Marchesini (eds.), *I complessi forensi della Cisalpina romana: nuovi dati. Atti del convegno di studi, Pavia 12–13 marzo 2009* (Borgo San Lorenzo 2011) 131–149.
- Pettenò – Vigoni 2013: E. Pettenò – A. Vigoni (eds.), *Riscoprire Iulia Concordia. Nuovi dati da vecchi scavi – il Fondo Frattina*, *Album* 19 (Rubano 2013).
- Ricci 1893: S. Ricci, Il. Verona – Recenti scoperte epigrafiche e archeologiche, *NSc* 1893, 3–23.
- Richard 2012: J. Richard, Water for the City, Fountains for the People. Monumental Fountains in the Roman East. An Archaeological Study of Water Management, *Studies in Eastern Mediterranean Archaeology* 9 (Turnhout 2012).
- Rossi 1998: A. Rossi, Un'indagine sul bacino-fontana del capitolium di Luni. Primi risultati, *QuadStLun* 4, 1998, 43–64.
- Rossignani 1973: M. P. Rossignani, CM – Foro e zona sud del foro, in: L. Frova (ed.), *Scavi di Luni. Relazione preliminare delle campagne di scavo 1970–1971* (Rome 1973) 81–202.
- Rossignani 1975: M. P. Rossignani, La decorazione architettonica romana in Parma (Rome 1975).
- Rossignani 1995: M. P. Rossignani, Foro e basilica a Luni, in: M. Mirabella Roberti (ed.), «Forum et Basilica» in Aquileia e nella Cisalpina romana. Atti della XXV Settimana di Studi Aquileiesi, aprile 1994, *Antichità altoadriatiche* 42 (Udine 1995) 443–446.



- Ruta Serafini 2002: A. Ruta Serafini, L'archeologia urbana: nuovi dati, in: H. Hiller – G. Zampieri (eds.), Padova romana (Rubano 2002) 57–73.
- Sacchi 2012: F. Sacchi, Mediolanum e i suoi monumenti. Dalla fine del II secolo a.C. all'età severiana, Contributi di Archeologia 6 (Milan 2012).
- Tirelli 2011: M. Tirelli, L'immagine della città dalla ricerca tra terra e cielo, in: G. Cresci Marrone – M. Tirelli (eds.), Altino dal cielo: la città telerivelata. Lineamenti di Forma urbis. Atti del convegno. Venezia 3 dicembre 2009, Studi e ricerche sulla Gallia Cisalpina 25 = Altinum 6 (Rome 2011) 59–80.
- Tosi 2003: G. Tosi, Gli edifici per spettacoli nell'Italia romana (Rome 2003).
- Vera 2009: D. Vera, Parma Imperiale. Storia di una città dell'Italia settentrionale romana da Augusto a Giustiniano, in: D. Vera – M. G. Arrigoni Bertini (eds.), Storia di Parma II. Parma romana (Parma 2009) 219–308.
- Vigoni 2006: A. Vigoni, Il canale interno di Iulia Concordia. Dati storici, archeologici e topografici, in: D. Morandi Bonacossi (ed.), Tra Oriente e Occidente. Studi in onore di Elena Di Filippo Balestrazzi (Padua 2006) 451–468.
- Vigoni 2013: A. Vigoni, Le strutture e i materiali, in: E. Pettenò – A. Vigoni (eds.), Riscoprire Iulia Concordia. Nuovi dati da vecchi scavi – il Fondo Frattina, Album 19 (Rubano 2013) 75–124.
- Zara 2018: A. Zara, La trachite Euganea. Archeologia e storia di una risorsa lapidea del Veneto antico, Antenor Quaderni 44,1 (Rome 2018).

