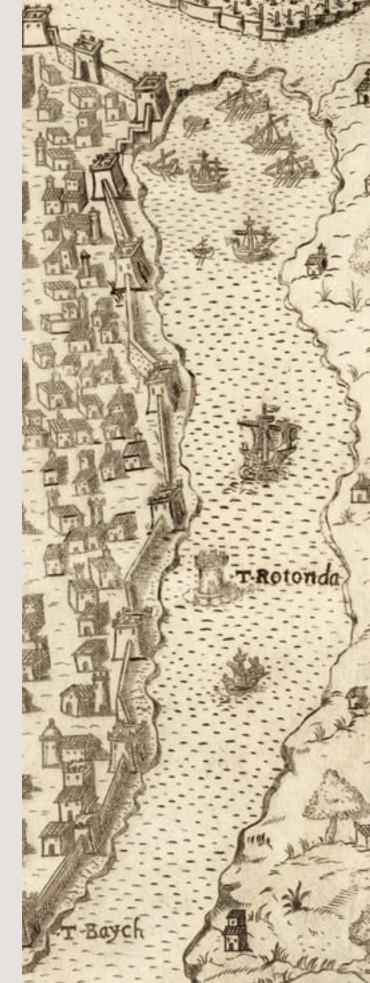
Abstract – The Urban Waterscape of Early Modern Palermo

This article considers the design and ideation of early modern Palermo's urban waterscape, which traced the contours of a hybrid fluvial-maritime system surviving from antiquity. Framing the city's port as a repository of collective memory and a site of self-construction, it questions how interventions undertaken between the fourteenth and seventeenth centuries – culminating in the ill-fated construction of the Molo Nuovo – recalibrated the interface between city and sea, and with it, Palermo's identity. The port anchored the city's cultural and political ecologies, challenging the traditional divide between urban morphology and port planning. Using early modern Palermo as a guide, the article proposes a reinvestment in the interdisciplinary model of the urban waterscape, which regards water as a contested, socio-natural space.

Keywords – Palermo 1300–1600, port design, urban morphology, waterscape

Elizabeth Kassler-Taub Dartmouth College elizabeth.a.kassler-taub@dartmouth.edu



The Urban Waterscape of Early Modern Palermo

Elizabeth Kassler-Taub

Early modern observers sought Palermo's identity in its two vast hinterlands: the arable and the aqueous. A description of the capital of the Spanish Habsburg viceroyalty of Sicily in a seventeenth-century *portolano*, a coastal itinerary, approaches the city from the sea. In painstaking detail, Filippo Geraci, captain of the Sicilian fleet, counsels his fellow navigators on how best to negotiate the entrances to Palermo's ancient and modern ports: the location of the primary landmarks, the reach of the jetties, the depth of the sea floor, and the direction of the winds¹.

Rather than lavishing attention on the city's maritime infrastructure, the fold-out bird's-eye view of the city that accompanies the text emphasizes the surrounding countryside, a verdant fabric stitched together by a patchwork of farms [Fig. 1]. Matrices of crops creep up to the city's edge, tempering the strict geometry of its bastioned enceinte. To the north, a sprawling tract of undeveloped land stretches beyond the frame,

Filippo Geraci, Portulano del Regno di Sicilia [...], Biblioteca Comunale di Palermo (BCP) (Palermo, Sicily), MS 2Qq C 214, fols 109–111.



while to the south a wide river rambles toward the coast. Though the Conca d'Oro, the valley embracing Palermo, was indeed famously fertile, producing an abundance of citrus fruit, the sea never slipped from view.

This tension was inscribed in the city's very name, with a litany of local chroniclers contesting its meaning. In his 1558 history of Sicily, Tommaso Fazello acknowledges that the ancient toponym *Panormus* can be interpreted as either "all garden" or "all port". The Greek *pan*, he says, signifies "all", while *hormus*, in its Latin form, denotes both a "garden" (*giardino*) and a "landing place" (*approdo*)². Vincenzo di Giovanni, writing in the early seventeenth century, casts his gaze toward the water, maintaining that *Panhormus* translates to "nearly all port" (*quasi totus portus*). For di Giovanni, its Greek etymology offers proof of the city's foundation. Palermo, he posits, was first inhabited by the Thracians – "Greeks" – who, given the enormous scale of the bones later excavated on the island, were undoubtedly "giants"³. Roughly two decades later, Agostino Inveges again takes *Panormos* as a reference to the city's ancient port, though, following Homer, he qualifies that the name doesn't connote "any seaport", but one that is both "capacious and deep"⁴. The tendency to define Palermo by its *portualità*, the character and characteristics of its port, privileges the city's thalassic identity – its primeval claim to the sea. The port becomes nothing less than a metonym for the city.

The evolution of Palermo's port, a hybrid fluvial and maritime system, loomed large in the early modern imaginary. Throughout its early history, the city occupied a narrow tongue of land flanked by two, sinuous rivers, both of which drained into the sea. The physiognomy of *Palermo*



1/View of Palermo from Filippo Geraci, Portulano del Regno di Sicilia [...] / Biblioteca Comunale di Palermo (Palermo), MS 2Qq C 214, f. 57

2/View of Palermo antico from Mariano Valguarnera, Discorso dell'origine ed antichità di Palermo et de' primi abitatori della Sicilia e dell'Italia, 1614 / Houghton Library, Harvard University (Cambridge)

antico, as it was known during the period, was the subject of considerable cartographic interest. In an iconic reconstruction of the city's peninsular form, first published in Mariano Valguarnera's 1614 discourse on Palermo's origins, the littoral traces the contours of a widow's peak, with twin estuaries carving the urban fabric from the terra ferma [Fig. 2]⁵. As Valguarnera details, the site deviated from a true peninsula: the coastline, he writes, instead "withdrew into the land". The sea swept into the gaping "mouth" opened by this "rupture of the waterfront", where it split into two brackish basins, each creating a "large and secure port". For this reason, he recounts, the Greeks call the city "Panormos" ($\Pi \dot{\alpha} v o \rho \mu o \zeta$), meaning "all port" (tutto porto)⁶. Inveges lavishes praise on the "admirable and stupendous" site of Palermo's "two natural and famous ports", which he notes are frequently referred to as Destro (right)

and *Sinistro* (left), corresponding to the two respective estuaries⁷. It was the city's rivers, which originated in springs embedded in the mountainous slopes to the west, that brought together its opposing hinterlands. The same waterways that irrigated Palermo's fields and groves bound the city to the sea, dictating the form of its port and lending the city its name.

7 Inveges, Annali della felice città di Palermo (n. 4), pp. 57-60.

² Tommaso Fazello, *Storia di Sicilia*, vol. I, transl. by Antonio de Rosalia, Gianfranco Nuzzo, Palermo 1990, p. 360.

³ Vincenzo di Giovanni, *Palermo restaurato*, Mario Giorgianni, Antonio Santa Maura eds, Palermo 1989, p. 76.

⁴ D. Agostino Inveges, Annali della felice città di Palermo [...], Palermo 1649, p. 58.

⁵ Mariano Valguarnera, Discorso dell'origine ed antichita di Palermo e de' primi abitatori della Sicilia, e dell'Italia, Palermo 1614, p. 425. For a bibliography, see Cesare Barbera Azzarello, Raffigurazioni, vedute e piante di Palermo dal sec. XV al sec. XIX, Caltanissetta 2008, scheda no. 22, 36, 74, 120, 130.

⁶ Valguarnera, Discorso dell'origine ed antichita di Palermo (n. 5), p. 81.

And it was in the topographical mutability and natural ecology of Palermo's rivers that local humanists found evidence of the city's layered histories – both real and invented. The Papireto river, which delimited Palermo's northern flank, was an especially potent lieu de mémoire. Named for the eponymous papyrus once cultivated along its marshy banks, the river was rumored to be inhabited by crocodiles⁸. Invoking their sixteenth- and seventeenth-century predecessors, Antonino Mongitore and Francesco Maria Emanuele e Gaetani, marchese di Villabianca, claim that the Papireto was in fact an "arm of the celebrated river Nile", likewise known for its dense thickets of reeds. The waters of the Nile, they write, flowed from Egypt to Sicily through a complex system of subterranean channels, a kind of fluvial umbilical cord that fed Palermo with the memory of Egyptian antiquity9.

When period observers speak of the city's port system, they are neither referring to the basin that anchored the medieval mercantile economy, nor to the building campaigns that gave it shape - the excavation of the seabed to accommodate low-slung vessels, or the renovation of the docks that facilitated the transportation of goods from ship to shore. Instead, their narratives pose water as a fluid site of self-construction, where the city's past and the promise of its reinvention ebbed and flowed like shifting tides. But in Palermo, water figured a sense of place as well as time. As tightening Spanish control recalibrated Palermo's reach in an increasingly global economy of people, things, and ideas, this literary quest for the origins of its port was an effort to "locate" the city on the geopolitical map, and thus to reaffirm its enduring cultural relevance.

This article interrogates the design and ideation of early modern Palermo's urban waterscape. Between the fourteenth and seventeenth centuries, a succession of engineers worked to control the rivers and streams that traversed the city's low-lying neighborhoods. Land reclamation initiatives salvaged new urban zones from swampy riverbeds that repeatedly clogged with silt and refuse. At the waterfront, a series of large-scale experiments in urban planning and hydraulic engineering dramatically altered the structure and function of the Cala, the natural port created by the Papireto estuary. The Molo Nuovo, a monumental artificial port opened between 1566 and 1590 on the city's unbuilt northern outskirts, represented the culmination of this centuries-long project to improve the city's maritime infrastructure. Fraught by political controversy and funding shortages, the realization of the port disassociated the city from its primary point of access to the sea, displacing mercantile activity and straining coastal defenses. These compounded changes, I argue, destabilized the city's relationship to water, eliciting anxieties of loss that echo across the pages of period chronicles, and even bleed into modern accounts of the city's urban history.

I treat interventions in Palermo's maritime and fluvial systems as vehicles in the development of its urban waterscape, rather than as symptoms of a port city suffering the growing pains of modernization. The historical-geographical concept of the "waterscape", a product of the ecological turn in the humanities, has attained interdisciplinary resonance, though it has yet to be adopted in scholarship on early modern cities. Used to account for the social, political, and cultural dimensions of the practices that engineered the urban experience of rivers and the sea, "waterscape" regards water as a contested, socionatural space. To speak of the "urban waterscape" is to acknowledge water's agency in the political ecology of a city¹⁰. Understood as a methodological provocation, the waterscape encourages us to see urban planning and port planning as mutually constitutive design practices.

The morphological changes experienced by Palermo in early modernity are an index of its evolving – and often volatile – response to the vicissitudes of water. For the viceregal capital, water was both a medium of connection and an instrument of disconnection. The rupture of the city-sea interface, coupled with the suppression of its rivers, was, at its core, a rupture of urban memory. This signaled a profound crisis. In cities like Palermo, where a sense of self was irrevocably tied to the deep historical stratigraphy that gives meaning to place, identity was neither singular nor stable; it was instead made of multiple, conflicting pasts. Reconstructing Palermo's urban waterscape better equips us to articulate the critical reception and transhistorical implications of its early modern experience of loss.

Changing boundaries

A port city's interstices – whether the riverbank or the coast – are not simply permeable membranes, fueling the mobility of people and things, but inherently mutable boundaries, distorting in response to urban pressures and environmental change. In our contemporary moment, those boundaries have become an urgent architectural problem as rising tides, encroaching erosion, and the shrinking of major fluvial arteries challenge our most basic assumptions of topographical fixity. This is nothing new: looking to classical accounts by Strabo and others, early modern theorists grappled with the impact of coastal instability on the siting and planning of cities. In his fifteenth-century treatise, for instance, Leon Battista Alberti cautions that "shorelines change" (i liti si mutano), recalling that the Pharos (faro), or lighthouse, in Alexandria, was once knee-deep in water, only to be later anchored on dry land¹¹. On Sicily, the mythologization of Scylla and Charybdis, lurking in the Strait of Messina, fed a near-obsessive interest in the volatility of the littoral from antiquity through early modernity. Writing of Capo Peloro, at the island's tip, Nicola Aricò frames "Pelor" as a terraqueous "illimite": neither land's end nor its origin, the *illimite* is a boundless boundary. In Arico's view, the spatial construct of "terracqeous continuity" was metabolized architecturally, in designs that renegotiated early modern Messina's relationship with its port¹².

In Palermo, too, engineers relentlessly redrew the city's terraqueous boundaries as the fluctuation of its rivers and the sprawl of the urban fabric toward the sea upset the equilibrium between the city and the water that surrounded it. Palermo's fluvial system was composed of three primary waterways: the Papireto and the Kemonia, which fed its estuaries, and the more substantial Oreto, which irrigated the countryside to the immediate south of the city. The subject of laudatory poetic verse in both antiquity and early modernity, the course of the Oreto remained largely unchanged throughout its history. A plan of the river from Villabianca's *Fontanagrafia Oretea*, begun in 1777, charts its slow descent to the sea from Monte Milicandone, which, Villabianca notes, neighbors the hills around Monreale [Fig. 3]¹³. Accounts of an eleventh-century Pisan siege, during which hostile ships penetrated the countryside from the mouth of the Oreto, suggest that the river was navigable for much of its early history¹⁴. In both its Phoenician and Aghlabid-Fatimid iterations, the calling card of Palermo's fluvial system was in fact its hyper-navigability, which allowed for the expedient movement of goods and the safe quarter of besieged naval fleets¹⁵.

Between the eleventh and thirteenth centuries, as Palermo re-oriented itself toward the Cala, natural sedimentation and the detritus of a growing population curtailed the scope of that system. The recession of the Papireto and the Kemonia did little to resolve the challenge of urbanization at the fringes of the city, where a pattern of periodic flooding gave way to the equal menace of swampy riverbeds. The Papireto's stagnant waters, contaminated by the tanneries formerly active along its banks, posed a growing danger to public health. Attempts to canalize the river began in 1323 with the intention of draining the swamps that had come to dominate its lower course; absorbing

- 10 On the concept of the "waterscape", see, for instance, Erik Swyngedouw, "Modernity and Hybridity: Nature, *Regeneracionismo*, and the Production of the Spanish Waterscape, 1890–1930", Annals of the Association of American Geographers LXXXIX/3 (1999), pp. 443–465; Nik Heynen, Maria Kaika, Erik Swyngedouw, In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism, New York 2006. On water as urban space, see Daniel Savoy, Venice from the Water: Architecture and Myth in an Early Modern City, New Haven 2012.
- 11 Leon Battista Alberti, L'achitettura di Leon Battista Alberti tradotta in lingua Fiorentina da Cosimo Bartoli gentil huomo & accademico fiorentino, Florence 1550, pp. 102–103.
- 12 Nicola Aricò, Illimite Peloro: Interpretazioni del confine terracqueo. Montosorli Del Duca Ponzello Juvarra D'Arrigo, Messina 1999, pp. 15–23, sp. p. 16; pp. 75–99, sp. p. 81.
- 13 Villabianca, La fontanagrafia Oretea (n. 8), pp. 113–123.
- 14 Theresa Jäckh, "Water and Wealth in Medieval Sicily: The Case of the Admiral's Bridge and Arab-Norman Palermo (10th–13th centuries)", Wiley Interdisciplinary Reviews: Water, VI/5 (2019), pp. 1–12, sp. p. 7.
- 15 Maria C. Ruggieri Tricoli, Maria Desirée Vacira, Palermo e il suo porto (750 a.C. – 1986), Palermo 1986, p. 19.

Francesco Maria Emanuele e Gaetani, marchese di Villabianca, La fontanagrafia Oretea (Le acque di Palermo), Salvo di Matteo ed., Palermo 1986, pp. 125–127.

⁹ Antonio Mongitore, Della Sicilia ricercata, vol. II, Bologna 1977, p. 167; Villabianca, La fontanagrafia Oretea (n. 8), p. 127.



3/ Path of the Oreto from Francesco Maria Emanuele e Gaetani, marchese di Villabianca, *Fontanagrafia Oretea* / Biblioteca Comunale di Palermo (Palermo), MS Qq E 87, ff. 13v–14r these otherwise uninhabitable tracts of land into the urban center would allow for the construction of much-needed housing. This early effort proved unsuccessful. In 1447, the Palermitan Senate directed further work to "save" the city from the "foul-smelling fumes" generated by the swamp's "infectious air". As late as 1591, residents found themselves mired in mud, leading the viceroyalty to construct an artificial canal to facilitate drainage¹⁶.

The Kemonia, which once delimited the city's southern boundary, was also the subject of reclamation initiatives. In the fourteenth century, attention turned to the *platea maritima* (*Piano della Marina*), abutting the Cala. Described by Inveges as "a large and perpetual swamp of sea water", the zone was the product of the Kemonia's progressive retreat inland¹⁷. Though this first phase of intervention yielded the rudimentary form of the Piazza Marina, problems persisted¹⁸. In 1460, for instance, viceregal authorities called for new improvements to combat stagnant rainwater in the area, as well as the build-up of refuse that continued to flow down the Kemonia¹⁹.

By the early fourteenth century, the Cala had filled with silt, raising the seabed and leaving it too shallow to accommodate the increased girth and weight of military and commercial vessels. A number of ordinances, the first of which was issued in 1330 by Frederick III, attest to the severity of the port's limitations. A campaign to modernize the Cala's infrastructure continued throughout the Aragonese period, with a surge in building activity between 1445 and 1492 devoted to the extension of the jetty, the excavation of the seabed, and the construction of additional warehouses. Stalled by funding shortages, work proceeded piecemeal, leaving the port inadequate to the city's basic needs. In 1469, for example, a violent storm destroyed ships anchored in the Cala, exposing its susceptibility to the Greco-Tramontana winds²⁰. The early modern form of the Cala didn't crystallize until the first decades of the sixteenth century, as the city and its port were together engirded within a continuous chain of bastioned fortifications.

Even as Palermo's fluvial system receded from view, the city remained vulnerable to water.

An entry from the diary of local humanist Filippo Paruta on September 27, 1557, describes the assault of a "great rain" that breached the city walls in the middle of the night. The water, the diarist recounts, deluged the city, penetrating as far east as the Porta Patitelli, previously known as the Bāb al-Bahr (Sea Gate), and levelling "infinite" homes in its path. Hundreds were killed, boats sunk where they were anchored, and the support walls of a bridge crumbled from the sheer pressure of the onslaught²¹. "It seemed", Fazello later observed, as though the flood had "decided to ruin Palermo"²². The destruction has been attributed to an experimental project undertaken three years prior to regulate the Fiumetto (Flumen Malitemporis), a narrow waterway that cut across a densely populated zone. Informed by Iberian precedent, hydraulic engineers constructed a dam and canal upstream to redirect the Fiumetto beyond the city walls, though the system proved ill-equipped to contain the staggering accumulation of rainwater²³.

As Palermo's checkered history demonstrates, its waterscape was the product of a domino-effect of hydraulic and urban interventions – some reactionary, others painstakingly planned – that tested the limits of architecture's capacity to harness

- 16 Pietro Todaro, Guida di Palermo sotteranea, Palermo 2002, pp. 74–76.
- 17 Inveges, Annali della felice città di Palermo (n. 4), p. 60.
- 18 On the Piazza Marina, see Maurizio Vesco, La Kalsa e le sue piazze. Archivi, storia e progetto urbano a Palermo, Palermo 2018, pp. 53–70; Giovanni Fatta, Piazza Marina a Palermo: Memorie di cronaca cittadina, Palermo 2019, pp. 11–20.
- 19 Marco Rosario Nobile, "La seconda vita dello Steri: 1458–1535", in Lo Steri di Palermo tra XIV e XVI secolo, Idem et al. eds, Palermo 2015, p. 67.
- 20 Tricoli/Vacira, Palermo e il suo porto (n. 18), pp. 85–88; Giovanni Cardamone, Maria Giuffrè, "La città e il mare: il sistema portuale di Palermo", in Sopra i Porti di Mare, vol. III, Sicilia e Malta, Giorgio Simoncini ed., Florence 1997, pp. 159–192, sp. pp. 162–164.
- 21 Filippo Paruta, "Diario della città di Palermo [...]" in Diari della città di Palermo dal secolo XVI al XIX, Pubblicati sui manoscritti della Biblioteca Comunale, vol. I, Gioacchino di Marzo ed., Palermo 1869, pp. 1–197, sp. pp. 19–20.
- 22 Tommaso Fazello, Le due deche dell'historia di Sicilia del R.P.M. Tommaso Fazello [...] divise in venti libri del P.M. Remigio fiorentino, Venice 1573, p. 268, quoted in Lavinia Gazzè, L'acqua contesa: Sicilia e territorio (secc. xv–xvIII), Catania 2012, p. 17.
- 23 Maurizio Vesco, "L'alluvione di Palermo del 1557 tra rischio idrogeologico, speculazione edilizia e piani di ricostruzione", in La citta liquida la città assetata: Storia di un rapporto di lunga durata, Massimo Galtarossa, Laura Genovese eds, Rome 2014, pp. 161–187.

4/ The city of Palermo mourning the death of William II from Peter of Eboli, *Liber ad honorem Augusti sive de rebus Siculis /* Burgerbibliothek (Bern), Cod. 120.II, f. 98r

5/ Orazio Maiocco and Natale Bonifacio, Palermo città principalissima nella Sicilia, 1602 / Bibliothèque nationale de Erance (Parie)



aqueous terrain. The two most iconic views of pre-modern Palermo nonetheless belie the messiness of its maturation. The first, a twelfth-century miniature in Pietro Eboli's manuscript Liber ad honorem Augusti sive de rebus Siculis that depicts the city in mourning for the death of the Norman sovereign William II, presents the Cala as a near-perfect semicircle. Crowded with fish and neatly enclosed by a chain, Eboli's Cala, identified as the portus Panormi, is a port reduced to an ideal [Fig. 4]²⁴. In what became the most widely disseminated view of sixteenth-century Palermo - designed by Orazio Maiocco, engraved by Natale Bonifacio, and first issued in Rome in 1580 by the prolific publisher Claudio Duchet – we encounter a city that has expanded well beyond its Norman-era boundaries [Fig. 5]. Though the attenuated, gooseneck-like entrance to the Cala suggests the city's

gradual thrust toward the sea, Maiocco merely gestures toward the changes wrought in the intervening centuries. Tightly bounded by its fortified perimeter, Palermo re-emerges as the *città quadrata*, the result of a campaign to regularize the organic contours of Panormus – though, as the plan reveals, its peninsular form left a ghost-like imprint on the urban fabric that persists to the present²⁵.

Cartography is a silent witness to urban change. We might comb a view like Maiocco's for evidence of the reorganization of a haphazard neighborhood, or the straightening of a winding street; so too might we observe the presence of a new city square, or the evolution of a key monument. In our hunt for these insertions and erasures, we account for what the image chooses to forget – for lost spaces and lost time. Beginning in the early eighteenth century, however, as antiquarianism



6/ Domenico Campolo, *Pianta del Palermo antico*, 1726–1727 / Sala Almeyda, Archivio Storico del Comune di Palermo (Palermo)

took hold in local humanistic circles, an emergent genre of city views and plans sought to give voice to the city's changing morphology. Straddling the cartographic impulses toward deconstruction and reconstruction, each superimposes the form of *Palermo antico* over the body of the early modern city, its surface peeled away like the skin of an anatomical *écorché*.

One of earliest examples of the genre, produced by Domenico Campolo between 1726 and 1727, depicts the three fortified zones of the ancient city – identified as "Neapolis", "Paleopolis", and "Transpapiretum" by curling *trompe l'oeil* banderoles – in crisp axonometric projection [Fig. 6]²⁶. In the painting, which is currently displayed in the Sala Almeyda of the Archivio Storico del Comune di Palermo, a planimetric rendering of the early modern urban fabric surfaces from the Kemonia and Papireto riverbeds. Reimagined by Campolo, the rivers occupy multiple registers of time. Above, clusters of ships navigate the estuaries into the surrounding hinterland, while below a dark wash seeps into the interstice between Neapolis and Paleopolis – a proleptic symbol of its eventual disappearance. The treatment of the city's sea ports

²⁴ On Eboli's plan, see Hannah Baader, Gerhard Wolf, "A Sea-to-Shore Perspective: Littoral and Liminal Spaces of the Medieval and Early Modern Mediterranean", *Mitteilungen des Kunsthistorischen Institutes in Florenz*, LVI/1 (2014), pp. 3–15, sp. pp. 3–8.

²⁵ On quadratura, see Marcello Fagiolo, Maria L. Madonna, Il teatro del sole: La rifondazione di Palermo nel Cinquecento e l'idea della città barocca, Rome 1981, p. 27. On the urban trace of Panormus, see Maurizio Vesco, "Fenomeni insediativi sulle mura del Cassaro a Palermo: Un caso di studio", in Le città medievali dell'Italia meridionale ed insulare, Aldo Casamento, Enrico Guidoni eds, Rome 2004, pp. 231–244.

²⁶ On Campolo's view, see Federica Scibilia, Terremoto e architettura storica: Palermo e il sisma del 1726, Palermo 2015, pp.42–45, 73–74.

is also marked by temporal distortion: though the Cala – compressed between the extension of the city's primary axis and the fortified complex of the Castellammare – is accurately represented in its final form, the Molo Nuovo, completed over a century before Campolo set brush to canvas, is notably absent²⁷.

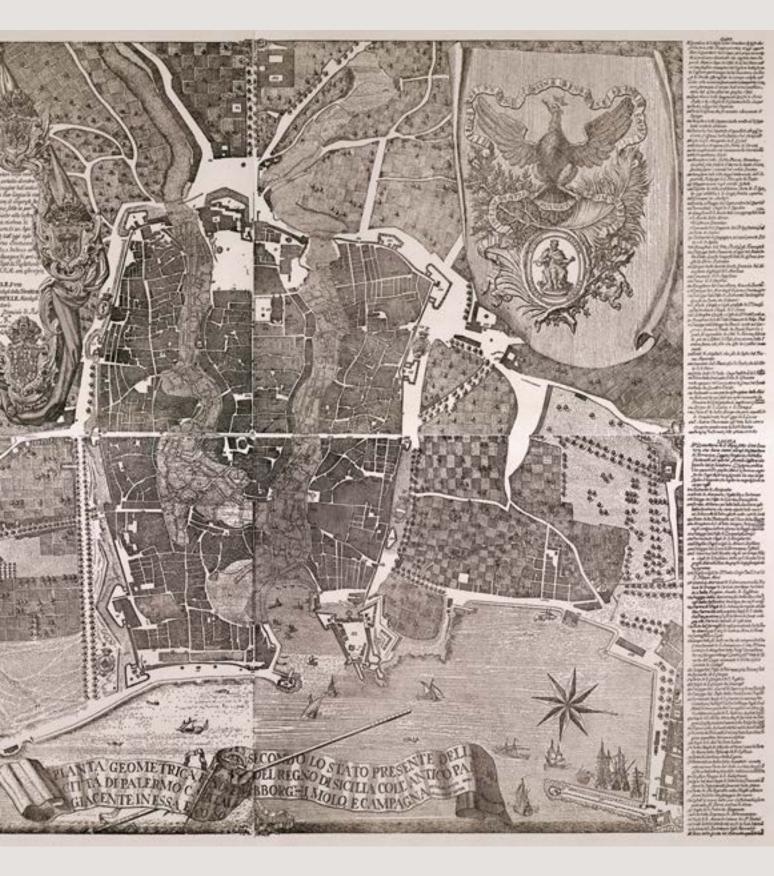
A quadripartite print commissioned by Villabianca in 1777 builds on Campolo's modest compositional model [Fig. 7]. Here, a meticulous plan of Palermo, the Cala, and the Molo Nuovo, executed by the royal engineer Nicola Anito, is nestled within an expansive bird's-eye view of the city's arable hinterland. The early modern city is represented in its complete form, with a subtle shift in the articulation of city blocks indicating the voids once occupied by water. Similar composite views of Palermo antico and the early modern city abound until the end of the nineteenth century. Across the genre, the driving interest is not in Palermo's urban morphology, but rather in the loss - and recovery - of its waterscape. Even in Villabianca's plan, which would seem to privilege the minutiae of streets and squares, that sense of loss is palpable. According to a lengthy inscription in the cartouche in the upper left quadrant, the plan presents "the image of Palermo antico which was once characterized by its two ports (suoi due Porti), created by two tongues of the sea that later dried out"28.

This project to preserve the memory of Palermo's rivers – and with it the city's ancient and medieval iterations – can be understood as a cartographic response to a wave of literary mourning for the city's ancient waterscape that gathered in strength in the previous century. Especially telling is Inveges' *Annali della felice città di Palermo*, published in 1649, in which the Sicilian historian chronicles the city's changing face. Inveges mines the writings of his fifteenth-, sixteenth-, and seventeenth-century predecessors for detail, punctuating his commentary with a series of schematic plans of *Città Vecchia (Palermo antico)*, each of which reflects a different account



²⁷ For a bibliography, see Azzarello, *Raffigurazioni, vedute e piante* (n. 5), scheda no. 128–130.

²⁸ For a facsimile and transcription, see *La pianta geometrica di Palermo di Marchese di Villabianca (A.D. 1777–1791)*, Rosario la Duca ed., Palermo 1970.



7/ Francesco Maria Emanuele e Gaetani, marchese di Villabianca, *Pianta geometrica secondo lo stato presente della città di Palermo* [...], 1777 / University of Michigan Library, Stephen S. Clark Library (Ann Arbor)

of the city's topography, urban plan and defensive system [Figs 8-9]. For Inveges, the sedimentation of Palermo's rivers and the suppression of its peninsular form was tantamount to a betrayal of the city's true, water-bound sense of self. Palermo's great flanking ports were not simply lost, but quite literally interred: the city's withdrawal from the water, he repeatedly argues, was the result of an "agonizing burial" (dolorosa sepoltura). The site once carved by their currents is today occupied by "the streets and palaces of the city: and lies miserably buried (giace miseramente sepolto) beneath the foundations of [its] buildings [...]". Inveges is preoccupied with the unknown date of the rivers' disappearance, lambasting others for "abandoning" him to follow alone in the "tracks of Time" (l'orme della Cronologia)²⁹.

That the loss of Palermo's waterscape was acutely felt in the early seventeenth century should come as no surprise. Born just four years after the completion of the Molo Nuovo, Inveges belonged to a generation that inherited a city caught up in a collective reckoning. For even as it fixed Palermo's once-fluid boundaries in place, the new port plunged the city's identity into a state of flux.

Palermo's Icarus

By the time the Deputazione del Molo, the administrative body appointed to oversee construction of Palermo's new port, was finally dissolved in 1591, efforts to shift maritime activity away from the Cala had spanned nearly a century³⁰. In the 1510s, the Senate first lobbied viceroy Ettore Pignatelli to allow taxation revenue to be funneled to the construction of a new port to the north of the city walls. Within a decade, these plans were abandoned, only to be reprised in earnest in 1566, by which point both municipal and viceregal authorities had consolidated the political and financial capital necessary to initiate a project of this scale³¹. In October of that year, the Consiglio Civico again issued a plea for a modern port directed to the viceroy García de Toledo, contending that the city had languished in decline due to the neglect of prior viceregal administrations. A new port would not simply "enrich" the so-called Città

felice but would realize its potential for greatness: "For centuries, our ancient forebears [...] desired a port for this city, because its happy site (*felicissimo sito*) lacks only a port to make it one of the most famous cities of Italy and Europe"³².

Palermo's Molo Nuovo was as much a product of viceregal vanity as it was a statement of municipal ambition. Formerly the *Capitan General* de la Mar of the Spanish Habsburg fleet, García was sympathetic to the council's call. Bolstered by his naval experience, the viceroy was closely involved in the design process, personally signing off on modifications to existing plans. In March of 1567, just months before a formal ceremony to mark the start of construction, García wrote to the Senate from Genoa with the news that he had engaged two Genoese engineers to oversee the design and construction of the port. Two weeks later, Fabiano (Fabio) Bursotto and Bartolino (Bartolomeo) Carmaino set sail for the island at the viceroy's behest. "So that no time is wasted" upon their arrival, the viceroy charged the Senate with beginning work on the pontone, a temporary dock from which to lower the largest stone blocks for the foundations – cut to Bursotto and Carmaino's specifications – onto the seabed³³.

The viceroys dispatched to the island by the crown regularly solicited the involvement of foreign engineers, particularly when confronted with the need for defensive and hydraulic interventions on variable coastal terrain. Previously, when the extension of the fortified perimeters of Sicilian cities beyond the water's edge necessitated wall and bastion foundations to be laid in silt, authorities sought the expertise of engineers trained in the wetlands of Venice and the Veneto, who were thought to be well-versed in the challenge of "building in water"³⁴. When work on the Molo Nuovo began, Palermo's building sites were already crowded with Ligurian architects and stonecutters, as well as Piedmontese and Tuscans engaged by the Genoese mercantile community, which exerted considerable economic and political influence in the city. Genoese investment in the port, signaled by the diplomatic "loan" of its engineers to the Sicilian viceregal capital, was self-serving: the improved efficiency of Palermo's port promised to bolster Genoa's commercial ties

with Spanish territories in the southern Mediterranean at a moment of when regional trading networks were undergoing a global expansion.

As ample correspondence between the imperial court and authorities on Sicily reveals, Bursotto's activity in Palermo solidified his burgeoning reputation as a port designer. In September of 1584, Philip II wrote to Juan Alfonso Bisbal, Conde de Briático, then Presidente del reino, to solicit Bursotto's services in the construction of an artificial port at Málaga on the basis of his experience in Palermo³⁵. When Bursotto departed for southern Spain the following year, he installed the Tuscan engineer Camillo Camilliani in his stead³⁶. Camilliani would have been intimately familiar with Sicily's hydraulic and defensive technologies. His oversight of the Molo Nuovo came on the heels of the completion of his Descrittione delle marine di tutto il regno di Sicilia, a comprehensive survey of the island's coastal fortifications, which consisted of bastioned port cities linked by towers, many of which were in disrepair³⁷.

From Málaga, Bursotto became largely itinerant, positioning the Molo Nuovo as a model for contemporary interventions in ports across the Mediterranean. In 1587, he consulted on repairs to the port of Gibraltar, only to be dispatched in 1589 to Tangier, then a Spanish *presidio*; and, in 1603, he was dragooned into the notorious project to construct a new port in Naples, begun in 1598 according to widely faulted designs by

- 31 Vesco, "Un viceré ammiraglio" (n. 29), pp. 115–116.
- 32 Cardamone/Giuffrè, "La città e il mare" (n. 23), pp. 171–172.
- 33 Lettere di don Garcia de Toledo al Presidente del Regno Carlo Aragona Tagliavia, BCP, Qq E 16, f. 267v quoted in Vesco, "Un viceré ammiraglio" (n. 29), p. 118.
- 34 Elizabeth Kassler-Taub, "Building with Water: The Rise of the Island-City in the Early Modern Mediterranean", *Journal of the Society of Architectural Historians* LXVIII/2 (2019), pp. 145–166, sp. p. 147.
- 35 Archivo General de Simancas (AGS), Estado Sicilia (ES), Legajo 1154, n. 220.
- 36 AGS, ES, Legajo 1155, n. 12–13.
- 37 Giuseppe Samonà, "L'opera dell'architetto fiorentino Camillo Camiliani in Sicilia alle fine del '500," *Rivista del R. Istituto* d'archeologia e storia dell'arte, IV (1931), pp. 227–278.

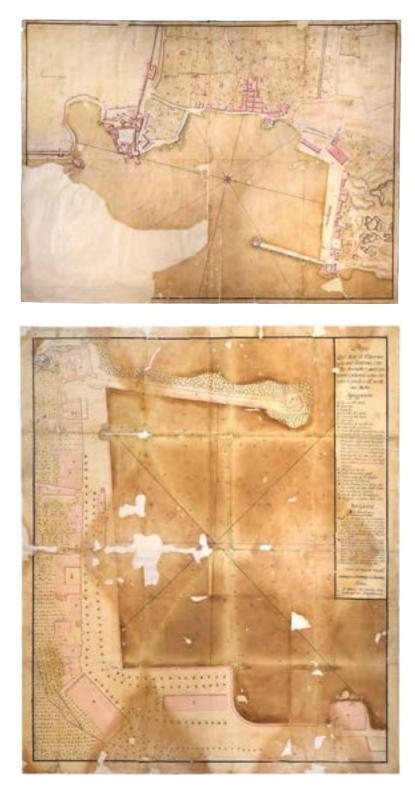


8/ La città vecchia di Palermo from Agostino Inveges, Annali della felice città di Palermo [...]
(Palermo, 1649), f. 67 / Kislak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania (Philadelphia)

9/ La Pianta dell'Antico Palermo del Valguarnera from Agostino Inveges, Annali della felice città di Palermo [...] (Palermo, 1649), f. 84 / Kislak Center for Special Collections, Rare Books and Manuscripts, University of Pennsylvania (Philadelphia)

²⁹ Inveges, Annali della felice città di Palermo (n. 4), pp. 59–62.

³⁰ Maurizio Vesco, "Un viceré ammiraglio per un'isola: García Álvarez de Toledo e il potenziamento delle infrastrutture maritime siciliane", in La Sicilia dei viceré nell'età degli Asburgo (1516–1700): la difesa dell'isola, le città capitali, la celebrazione della monarchia, Stefano Piazza ed., Palermo 2017, pp.111–136, sp. p. 122; Tricoli/Vacira, Palermo e il suo porto (n.8), pp. 130–131.



10/ Pianta topografica con il porto di Palermo, 17th century / Archivio di Stato di Napoli (Naples), Piante e disegni, cartella xxxIII, unità cartografiche 9 11/ Piano del Molo di Palermo [...], 17th century / Archivio di Stato di Napoli (Naples), Piante e disegni, cartella xxxIII, unità cartografiche 10 Domenico Fontana. Despite his subsequent fame, Bursotto's design for Málaga was criticized by seventeenth-century engineers, who maintained that he had failed to reconcile the port with its urban environment – the same problem that plagued Palermo's Molo Nuovo³⁸.

With a planned width of 300 canne (roughly 600 meters) and the capacity to house some 200 vessels, the Molo Nuovo was slated to be the largest port in the Mediterranean³⁹. A mid- to late seventeenth-century plan of the city in the collection of the Archivio di Stato di Napoli details the site of the artificial port, which occupied the former site of the tonnara di San Giorgio [Fig. 10]⁴⁰. Connected to the Castellammare and the basin of the Cala by a stretch of underdeveloped coastline, the Molo Nuovo is visibly isolated from the urban center. A better conserved plan, datable to the same period, offers a tightly framed view of the rectilinear space of the port, noting the depth of the seabed in Neapolitan palmi [Fig. 11]. Outfitted with a modest fortification at the base of the jetty, the lip of the port is sparsely occupied by an arsenal, various warehouses, lodging, and chapels. In contrast to the circumscribed space of the Cala, the plans attest to the Molo Nuovo's monumental scale, determined by the lengthy arm of its jetty, which runs parallel to the coast⁴¹.

Though Italian and Spanish encomiastic descriptions of the Molo Nuovo likened the unfinished port to the greatest achievements of the Romans – even calling it the eighth wonder of the world – it fell far short of its projected size⁴². By 1571, only 160 canne of the intended 300 had been achieved; nearly two decades later, when the port was deemed complete, it measured a mere 230 canne in width⁴³. Progress was stymied as funds earmarked for the Deputazione del Molo were diverted for other purposes. Municipal officials repeatedly petitioned the imperial establishment to halt work on the Molo Novo in order to devote resources to the city's defensive system. One missive, written in July of 1576, ticked off the successes of the project - the port's width of 188 canne, its capacity to house over 100 vessels, and the depth of the seabed - imploring the court to "consider simultaneously the importance of the fortification of the city"44.

From the start, the Molo Nuovo was on a collision course with efforts to overhaul Palermo's urban plan. In 1567, as the first foundation stones were lowered onto the seabed, the city began a costly project to reorient and regularize the Cassaro, its ancient central axis, and to extend it east, toward the waterfront. As Campolo's view attests, the earliest iterations of the axis extended the full length of Panormus, establishing a direct dialogue between city and sea. The absorption of Panormus into Palermo's expanded footprint interrupted that dialogue, leaving the terminus of the Cassaro at the city's navel. By 1581, the protracted project, which depended in large part on the expropriation of private property in its path, yielded a continuous street stretching nearly two kilometers long⁴⁵.

Tariffs levied for the Molo Nuovo were frequently re-authorized to support the extension of the Cassaro and the construction of the tributary-like streets that grew from its course. The realization of the Strada Colonna, a waterfront promenade abutting the city's bastioned walls that was begun in 1577, relied on those funds, as did the construction of a bridge over the mouth of the Oreto. And in 1584, when plans to extend the Cassaro west, toward Monreale, were set in motion, it was again the Molo Nuovo that felt the financial strain. At the turn of the century, viceroy Bernardino de Cárdenas, Duke of Maqueda, authorized the appropriation of funding from the Deputazione del Molo to support the opening of the Strada Nuova (via Maqueda), which bisected the Cassaro and forged Palermo's cruciform plan, as well as the Porta Felice, the triumphal threshold that defined the eastern terminus of the Cassaro⁴⁶.

The primary impediment to the realization of the Molo Nuovo was the controversy that dogged its design. In addition to hindering the importation and exportation of goods, the chosen site taxed the city's defensive system. In a memorandum penned March 15, 1571, Don Juan de Cardona, the Marquis of Pescara, bemoans the Molo Nuovo's distance from the city, which causes a number of "inconveniences" (*descomodidades*) for its citizenry. The lack of a suitable fortress, he writes, prevents the Spanish fleet from wintering in the port as it is impossible to safely "release the ground soldiers" stationed at the site from their defensive duties. In response to the Molo Nuovo's limitations, Juan de Cardona proposes reopening its borders to construct a closed *darcena*, or internal harbor, capable of accommodating more than 100 vessels; it would be "without a doubt," he boasts, "the greatest to date". His description of the *darcena* suggests that it would have been located between the Molo Nuovo and the Cala, thereby connecting the city's ports by a navigable channel⁴⁷.

The design would have mimicked the structure of the ancient port of Rome at Ostia, sited at the Tiber's northern meeting point with the Tyrrhenian Sea. As a reconstruction of Ostia's waterscape in Antonio Lafreri's Speculum Romanae Magnificentiae (1540–1580) indicates, the heavily fortified bipartite port consisted of a semicircular outer harbor constructed by Claudius in the first century and a hexagonal inner harbor added by Trajan [Fig. 12]. The harbors were linked by an artificial channel fed by the waters of the *Fiumicino*, a narrow tributary of the Tiber, which drained into the sea just beyond the curving arm of the jetty. By the time Juan de Cardona called for the addition of a darcena at the Molo Nuovo, the image of Ostia was a familiar touchstone in architectural circles. Interest in the ancient port, sparked by a plan produced by Giuliano da Sangallo in the late fifteenth century, continued unabated until at least the turn of the seventeenth century. In his treatise Sopra i porti di mare,

- 40 On the site, see Vincenzo di Giovanni, Palermo restaurato, Mario Giorgianni, Antonio Santamaura eds, Palermo 1989, p. 106.
- 41 Given the presence of the Fonte di Quattro Venti, both plans can be dated between 1632 and the turn of the eighteenth century, by which point the fountain was in ruin.
- 42 Vesco, "Un viceré ammiraglio" (n. 29), p. 120.
- 43 AGS, ES, Legajo 1143, n. 13.
- 44 Ibidem, Legajo 1146, Año 1576, n. 23.
- 45 See Aldo Casamento, La rettifica della Strada del Cassaro a Palermo: una esemplare realizzazione urbanistica nell'Europa del Cinquecento, Palermo 2000.
- 46 Tricoli/Vacira, Palermo e il suo porto (n. 18), p. 128.
- 47 AGS, ES, Legajo 1136 (Año 1571), n. 294.

³⁸ On Bursotto, see Alicia Cámara, "De Palermo a Málaga. Fabiano Bursotto y la ingenería de puertos en el Renacimiento", Lexicon, VII (2008), pp. 7–22; Sabina de Cavi, Architecture and Royal Presence: Domenico and Giulio Cesare Fontana in Spanish Naples (1592–1627), Newcastle upon Tyne 2009, pp. 24–41.

³⁹ On the port's scale, see AGS, ES, Legajo 1145, Año 1576, n. 97; Giorgio Simoncini, "La Sicilia marittima fra xv e XIX secolo", in *Sopra i Porti di Mare*, vol. III, *Sicilia e Malta*, pp. 9–69, sp. p. 19.

Teofilo Gallacini extolls Ostia's "admirable" (*mirabile*) structure on the basis of a relief on an ancient medal, attributing the port's greatness "above all to its fortress"⁴⁸.

Outcry over the Molo Nuovo's vulnerability precipitated a series of proposals to extend Palermo north, an undertaking that would in turn stretch its urban defenses along the waterfront. The prospect of the city's *extra moenia* growth was the focus of active debate throughout the 1570s, eliciting impassioned arguments by viceregal authorities and military engineers alike, among them the itinerant Italians Gabrio Serbelloni and Giovan Giacomo Paleari Fratino, who crisscrossed the Mediterranean in the service of Philip II⁴⁹. Calls to expand Palermo came alongside a steady uptick in its urban population. Between 1570, when its inhabitants hovered around 70,000, and the turn of the century, the population nearly doubled in size.

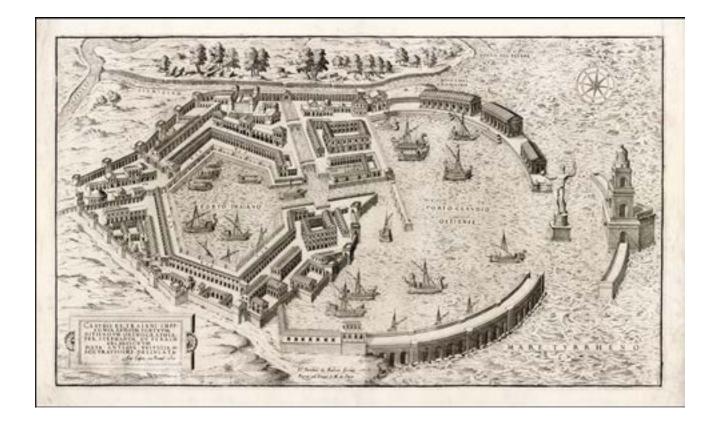
Over the course of the decade, the city witnessed the gradual establishment of the Borgo di Santa Lucia on undeveloped land between the city walls and the site of the Molo Nuovo. Advocates for the settlement held that it would also reduce overcrowding. In 1572, Fratino writes that a "great number" of Palermitans were displaced when their homes were "destroyed to order and dignify" (radizzare et nobilitar) the city's neighborhoods⁵⁰. The Borgo, which was to include the construction of grand promenades and palaces, was part of ongoing plans by the Consiglio Civico to gentrify Palermo, though it was soon occupied by fishermen⁵¹. The Borgo's shortcomings were cast into sharp relief during the devastating plague of 1575, when, owing to its continued isolation from the urban center, the zone was coopted by the city as the site of a makeshift lazaretto⁵².

Well into the seventeenth century, the Molo Nuovo struggled to fulfill its function. Access to fresh water for those disembarking at the port was scarce, necessitating the addition of public fountains and basins. And as was the case with the Cala in centuries prior, the persistent accumulation of silt raised the seabed, muddying the water and prompting the city to install a *pontone*, a pontoon outfitted with dredging equipment, to maintain the port's planned depth⁵³. In its outsized ambition, Palermo had evidently flown too close to the sun.

But the core problem of the port was never the nuts and bolts of its maritime infrastructure. Nor was it the strain on the defensive system caused by its distance from the city. Instead, the displacement of the port beyond the city's boundaries marked the definitive loss of Palermo's identity, characterized for centuries by the continuity of city and sea. In this way, the Molo Nuovo posed a distinctly urban problem. A yearning for recuperation colors the language of period proposals to remedy the port's perceived failures. As early as 1568, a missive issued by the Consiglio Civico observes that extra moenia expansion would "embrace the Molo Nuovo within the city, and make the port our own, and not common property of friends or enemies"54. Though on its face the proposal reads as a call to arms, the desire to reassimilate the port into built space – to make it, once more, our own – bespeaks a rising urgency to recover Palermo's urban waterscape, and with it, the city's sense of self.

Elegy for the sea

The essential question of a city's relationship to its port remained unresolved throughout the early modern period. Alberti recommends that urban foundations be laid at a distance from the harbor, citing the volatility of coastal cities, which, he argues, are "continually troubled and churned by the attraction of political change and by the excessive power of the merchants"55. His contemporary, Francesco di Giorgio Martini, in contrast, advocates for cities to be built adjacent to their ports, enabling the urban defensive system to seamlessly protect the city's maritime threshold. An experimental design that appears in the second draft of Francesco's Trattato di architettura (1487–1500) explodes the urban boundaries open to the water, swallowing the port into the space of the city [Fig. 13]. By elevating the architectonics of port design into an architectural frame, the design blurs the boundary between built and unbuilt space. Over the course of the sixteenth century, attitudes shifted as engineers militarized the space of the port in response to mounting threats of naval assault across the Mediterranean. Burdened with the weight of modern fortifications, the port is said to have been divested of its urban function⁵⁶.



12/ Reconstruction of Ostia from Antonio Lafreri, *Speculum Romanae Magnificentiae* (1540–1580) / The Metropolitan Museum of Art (New York)

13/ Francesco di Giorgio Martini, View of an Ideal Port from *Trattato di architettura* (1487–1500) / Biblioteca Nazionale Centrale (Florence), Fondo Nazionale II.I.141, f. 87r

- 48 Giorgio Simoncini, "L'architettura dei porti", in Sopra i Porti di Mare, vol. 1, Il Trattato di Teofilo Gallaccini e la concezione architettonica dei porti dal Rinascimento alla Restaurazione, Giorgio Simoncini ed., Florence 1993, pp. 37–72, sp. pp. 47–48; Teofilo Gallacini, Sopra i porti di mare, Biblioteca Comunale (degli Intronati), MS. L IV, 3 as reproduced in Sopra i Porti di Mare, vol. I, pp. 26–27.
- 49 See, for instance, AGS, ES, Legajo 1143 (Años 1571–1574), ns. 18, 25.
- 50 Maurizio Vesco, *Viridaria e città: Lottizzazioni a Palermo nel Cinquecento*, Rome 2010, pp. 11–15.
- 51 Cardamone/Giuffrè, "La città e il mare" (n. 23), p. 174.
- 52 Giovanni F. Ingrassia, Informatione del pestifero et contagioso morbo, Luigi Ingaliso ed., Milan 2010, p. 227.
- 53 Cardamone/Giuffrè, "La città e il mare" (n. 23), p. 179; Tricoli/ Vacira (n. 18), Palermo e il suo porto, p. 146.
- 54 Simoncini, "La Sicilia marittima" (n. 38), pp. 20–21.
- 55 Leon Battista Alberti, *On the Art of Building in Ten Books*, Joseph Rykwert *et al.* eds, Cambridge 1988, p. 97.
- 56 Giorgio Simoncini, "L'architettura dei porti" (n. 47), pp. 40–53.



Perhaps by virtue of these lacunae, architectural historians lack a robust model of the early modern port city as a morphological type, reinforcing a disciplinary tendency to silo considerations of port design from histories of urban development. Foundational contributions to the history of Sicily's maritime infrastructure in the 1980s and 1990s resisted a reading of the port as a catalyst of urban change. For instance, in his account of Sicily's "peripheralization" in the fourteenth and fifteenth centuries, Henri Bresc leans on a reductive binary of "the port city" and "the port without a city" to chart what he sees as the island's progressive alienation from the sea. Though Bresc ascribes a certain exceptionalism to Palermo's port – it is the only Sicilian city, he says, that manifests "close connections between urban development and port functions" – he maintains that it is "the function of the capital that creates the conditions for the development of the port"57.

Yet, the transhistorical currency of Palermo's port system meant that even the most prosaic of infrastructural interventions, whether the design of a jetty or the reclamation of an unruly stretch of coastline, doubled as an act of self-construction. Accounting for a port's agency in the political ecology and cultural memory of an early modern city demands not simply new models but new methods; it demands, in other words, that we see a port as part and parcel of an urban waterscape. Stirrings of this revisionist view have surfaced in modern and contemporary narratives of Palermo's urban development - a bellwether, perhaps, of an appetite for an interpretative turn to come. In "renouncing" its relationship with the sea, one account claims that the city "abdicated its natural geo-historical vocation." With this loss, the Città felice entered a decidedly "unhappy period"58. Palermo's discontent is thought

to have only deepened in the nineteenth and twentieth centuries as the concentration of industrial activity around the Molo Nuovo prompted the Cala's infrastructure to be razed to the ground. Even a 1939 regulatory plan for the city, which featured the slogan "Palermo's return to its sea" (*Il ritorno di Palermo al suo mare*), included provisions to at least partially backfill the Cala, thus erasing its form⁵⁹. With an eye toward these modern losses, Rosario la Duca writes of Palermo's *mare nascosto*, its "hidden" sea: "There was once a time in which Palermo was a city on the sea" – a time of which only a "memory" remains⁶⁰.

That memory was, however, never of the sea alone. What such elegies for Palermo's past leave unspoken is the deeper loss of its flanking rivers, long since buried beneath the paving stones of its streets and squares. Forged by mountain springs, the city's port system was terraqueous, as dependent on land as on sea. If the Molo Nuovo, cast during the period as the reclamation of Palermo's thalassic inheritance, did little to fulfill its promise, it was in no small part because of its disavowal of the fluidity of the city's natural boundaries, which had, for centuries, suspended the riverbank and the littoral in tension. Reimagined in the pages of local chronicles and liberally reconstructed by cartographers long after the port's completion, Palermo's urban waterscape was a shorthand for a lost identity that seemed to forever elude the city's grasp.

- 58 Tricoli/Vacira, Palermo e il suo porto (n. 18), p. 5.
- 59 Maurizio Vesco, La Kalsa e le sue piazza: Archivi, storia e Progetto urbano a Palermo, Palermo 2018, pp. 9–18, sp. p. 14.
- 60 Rosario la Duca, La città perduta: Cronache palermitane di ieri e di oggi, Naples 1975, p.95.

⁵⁷ Henri Bresc, "La città portuale e il porto senza città nella Sicilia dei secoli XIV e XV", in La città portuali del Mediterraneo: Storia e archeologia, Ennio Poleggi ed., Genoa 1989, pp. 287–294.

Městská vodní krajina raně novověkého Palerma

Autorka článku se zabývá palermským přístavem a vývojem jeho hybridního říčního a námořního systému, který měl pro raně novověkou imaginaci velký význam. Ve svých počátcích se město rozkládalo na úzkém výběžku, který obtékaly dvě řeky - Papireto a Kemonia - jež se obě vlévaly do moře. Tato dvojice ústí řek, které byly v tomto období označovány jako "dva městské přístavy", pak dala vzniknout starobylému povodí městského přístavu, známému jako Cala. Od jedenáctého do čtrnáctého století, kdy se palermské řeky i Cala postupně zaplňovaly odpadky a bahnem, se uskutečnila řada melioračních prací, jejichž cílem bylo odstranit stagnující dešťovou vodu v bažinatých okrajových částech města a vyhloubit mořské dno pro obchodní lodě. Autorka se domnívá, že pro dobové kronikáře znamenal následný

ústup, a nakonec i vymazání městských řek, krizi identity, která se v následujících staletích jen prohlubovala. Úsilí o generální opravu ústí Palerma do moře vyvrcholilo výstavbou Molo Nuovo, monumentálního přístavu na severním okraji města. Přístav navržený potulným janovským inženýrem, který měl být největším ve Středomoří, se brzy stal předmětem vášnivých diskusí. Nový přístav byl totiž zcela vytěsněn z městské struktury, zatížil obranný systém města a připravil ho o hlavní přístup k moři. Autorka článku ukazuje, že debaty o návrhu přístavu, které pokračovaly v nezmenšené míře po celou druhou polovinu šestnáctého století, byly zásadní pro otázku prostorového vztahu mezi městem a přístavem. Tento vztah byl pak reflektován nejen v soudobé literatuře, ale také v teoriích o ideálním městě.