2 Spices, spies, and speculation

Trust and control in the early Batavia-Amsterdam system

Robert Cowherd

Architectural History only partially overlaps with the role of architecture in history. The historical evidence examined within the disciplinary boundaries of Architectural History only partially overlaps with the architectural evidence of interest to historians. Historians in pursuit of deeper understandings of social, cultural, economic, and political forces increasingly engage buildings, infrastructures, landscapes, and cities in ways that lie beyond the territories of conventional architectural historical approaches. Instead of the curatorial question of what architecture is worthy of study, history requires the broader question: What significant roles has architecture played in history?

This chapter examines the architectures of trade developed at the two ends of a 21,000-kilometer sea route. Rather than looking at either location on its own, an understanding of the forces operating through these architectures compels us to consider Amsterdam and Batavia together as mutually constitutive poles of a world system. Looked at in parallel, we find two versions of the fortified port town typology whose similarities and differences speak to the distinctions between the two ends of a single system. The architectures and landscapes constructed in each city announce a set of instrumental functions essential to the effective operation of extractive regimes. The most obvious of these involve the logistics of moving the most tonnage of commodity materials from one side of the globe to the other or the military defenses against piracy or conquest by rival trading interests; others remain more subtle, specific architectural juxtapositions of transport and trading halls facilitated trust in sight-unseen exchanges.

The examinations of the specific formal-spatial-institutional arrangements of Dutch Batavia (Jakarta) and Amsterdam during the 16th and 17th centuries offer insights to a larger set of instrumental forces that constitute prerequisites for the operations of early-European adventures in expanded trade relations as they became increasingly extractive. Amsterdam's architectural and urban arrangements played a role in reflecting and creating the conditions for the birth of what some have argued is the first and largest multinational corporation in history. At the other end of the grueling sea voyage, Batavia exemplified an architecture of control characteristic of the

widely dispersed type of the European fortified port town. After a period when architectural culture invested much to defend its boundaries against "mere buildings" like those found in Batavia and Amsterdam, there is much work to be done as Architectural History theory examines architecture that means what it means, at least in part, because it does what it does.

Port towns and spices

After thousands of years of floating things to market, the 3rd century BCE scientist Archimedes explained how a boat displaces enough water to equal the weight of its load, no matter how heavy. Even today, no other technology offers a more efficient means of moving large quantities of goods. This simple law of physics is why human settlements have always favored the edge of navigable waterways. Any location where bulky goods can be transferred between boats and wheeled vehicles continue to hold a strategic importance and demand specific architectural arrangements to optimize transfers and the associated operations of trade. Among the multiple elements that figure prominently in the 16th- and 17th-century history of discovery, capture, defense, and control of the transcontinental networks of exchange, the architecture of an interconnected series of fortified port towns facilitated their exploraton. Like the technologically sophisticated ships shuttling goods, munitions, priests, soldiers, laborers, finance, and information between ports of call, the port towns themselves were designed to minimize the labor needed to move goods and secure the town against all threats whether external or from the population of the town itself.

At some point before the 12th century, North Sea fishermen seeking a sheltered location to come ashore began tying up their boats along the banks of the Amstel River. Roads to and from the resulting village fish market made it a convenient place to bridge the Amstel. The bridge became a dam when the monasteries of the area organized individual dikes into a collective effort to resist flooding and protect arable lands. By the 15th century, the market on the *Aemstelredamme* (Amstel River dam), or Amsterdam, was the busiest marketplace in Holland. The Amsterdam market was connected to similar markets across Europe and beyond. Each port-town market in the network connecting to Amsterdam had origin stories that began with the discovery of a place where boats could be moored safely for the transfer of goods between water- and land-based transportation.

Among the goods arriving at the quay in Amsterdam were spices from Venice. Like other ports, fisherman chose a bog close to productive fishing grounds and landed on the last place to flood called the *rivo alto* (high bank), or *Rialto*, still the location of the fish market in Venice. Weary of competing with the salt producers of *Comacchio*, the Venetians conquered them.[1] It became a business model, building fabulous wealth, particularly effective in the spice trade, and eventually manifesting in the splendor of Venice.

Despite the oft-repeated truism that spices were used to preserve meat or to mask the taste of meats gone bad, European cookbooks chronicle a long process by which exotic spices crossed over from the medicine cabinet to the kitchen, where they were added at the end of the cooking process to maintain their flavor, not at the butcher shop to preserve meats.[2] Instead, spices rose in popularity for the familiar reason that it made food taste better. After changing hands several times along the way, the market price of pepper in Amsterdam was about 80 percent higher than its cost in Venice. Anyone who could sail directly from Venice to Amsterdam could make a fortune. Over the course of the 15th century, the incentives for acquiring spices ever-closer to the European source in Venice drove fortunes and competition. For a time, pepper and spices, in general, became a status symbol within reach of a widening segment of society as merchants competed to bring it to markets throughout Europe.

The greatest profits accrued to Venice from the infamous 1204 Fourth Crusade onward. Venice held Constantinople (Istanbul, Turkey) and a controlling share of the spices entering Europe. To maintain this control, the ships carrying spices became the armored cars of the Mediterranean, sailing from Alexandria (Egypt) to Venice in military convoys. Even as pepper remained dominant, ginger, cinnamon, cloves, nutmeg, and mace became lucrative commodities made all the more exotic because not a single merchant could say exactly where they came from. Beyond Alexandria, Muslim trade networks proved impenetrable to spies for centuries. A disciplined code of silence and the obstacles of geography kept prices high and kept the stories of a miraculous cornucopia of spices in far off lands shrouded in mystery. Ottoman Sultan Mehmed II's 1453 conquest of Constantinople did not end the flow of spices. On the contrary, the Ottomans evened the playing field by placing Venice in competition with Genoa, Florence and others.[3]

Lisbon

Despite the lower prices, a European "Age of Discovery" driven by fantasies of a spice monopoly sent spies and ships over the horizon with brutal ferocity. When Portuguese spies sent word across Egypt with clear directions to a great spice market, in 1498 Vasco da Gama sailed around the Horn of Africa and across the Indian Ocean with a cry of, "For Christians and spices!"[4] The Portuguese established a fixed pepper price by treaty with the rulers of the Malabar Coast (India) and sold the same pepper in Lisbon for ten times the price. Unable to end trade through the Red Sea port of Aden, the Portuguese took to piracy, raising protection costs enough to drive prices in Venice to many times the price in Lisbon.[5]

Tracing the spice flows upstream brought them inevitably to the Muslim Port of Melaka, the primary spice emporium of Southeast Asia. In 1511, the Portuguese captured and fortified the port in order to control the Straits of Melaka, the strategic choke point between the Indian and Pacific Oceans.

Black pepper produced on Java, Sumatra, the Malay Peninsula, and elsewhere in mainland Southeast Asia flowed westward through the Straits past Portuguese guns.

Finally, in 1512, the Portuguese fulfilled their mission by being the first Europeans to reach the Spice Islands. The rewards for cutting out the middlemen: The Portuguese purchased cloves for about one one-hundredth (one percent) of the price in Venice.[6] They established fortified storehouses on two separate clusters of what they called the Moluccas (Maluku). The island of Ternate sits among to the islands that were the world's sole source of cloves. Nutmeg and mace turned out to be two products of the same tree found only on the Banda Islands, a two-week sail to the south. Plagued by shipwrecks and local hostilities, the Portuguese worked to maintain their price advantages even as they withdrew to Ambon, about halfway between Ternate and Banda. There they joined Muslim Javanese, Malay, Gujarati, Persian, Arab, and Chinese traders in the interisland trade. With the long chain of exchanges and the still troublesome Ottoman relationships in the Levant and Mediterranean, these Muslim competitors did not have the reach and market access enjoyed by the Portuguese.

During the 16th century, Lisbon surpassed Venice to become Europe's wealthiest city. The European demand for spices increased sharply around the time of Lisbon's emergence as a supplier. About three-quarters of Europe's spices entered Lisbon's harbor under the protection of the Tower of Belem, a massive bastion with 17 guns.[7] The massive fortifications are lightened by delicate stonework exhibiting clear Muslim influences from the architect's prior fortification projects in Morocco. The style of the tower was retroactively identified as Manueline after Portuguese King Manuel I. The salient characteristic of the Manueline is the facile incorporation of a vast diversity of symbolic references from Castile, to Moorish Andalusia, to its vast trade networks in the Mediterranean, Africa, the Indian Ocean, and the Far East. The most dramatic tribute to the 16th-century Portuguese trading empire is the 200-meter-long Jeronimos Monastery, festooned with references to the sources of its funding: the five percent tax on spice traded outside of the royal monopolies.[8]

In response, Venice diversified its commodities, tactics, alliances, and routes to remain a player in East-West trade but never regained its prior dominance.[9] In the 1520s, Papal intervention and Spanish-Portuguese intermarriage softened Spanish claims when Magellan established the westward route to the Spice Islands promised by Christopher Columbus. Even though they never established an absolute monopoly in Asian spices, Lisbon's trade network stretched to Formosa (Taiwan), Macau (China), and Nagasaki (Japan). Lisbon's port was thronged by the masts of ships bound for every port in Europe. The biggest re-export destination after Lisbon was Antwerp harbor, the gateway to the Northern Habsburg Empire with its productive silver mines. Antwerp's rise as the financial capital of Northern Europe ended abruptly in 1576 when mutinous Spanish forces murdered or exiled its residents in an escalation of the Eighty Years' War. Antwerp's financiers fled north to Amsterdam.

Amsterdam

Located near the mouth of three of Europe's major navigable waterways, Amsterdam grew rapidly with the rising volume and value of goods brought by Portuguese ships from across the globe. At war with the Spanish-Portuguese Iberian Union after 1581, the Dutch found themselves cut off from many of their former trading partners at the very moment of an influx of entrepreneurial spirit and capital fleeing Antwerp. Among the many factors contributing to Amsterdam's rapid economic growth after the fall of Antwerp was its role as Northern Europe's warehouse. The typical canal house of Holland (The Netherlands) consisted of a retail shop one-half level below the street, two residential levels starting one-half level above the street, and one or more floors above the home used for storage of goods (Figure 2.1). But these goods were not necessarily related to the retail activities. Instead, they were stocks of goods purchased at one price awaiting sale for (hopefully) a higher price. The Dutch canal house often leans outward over streets to maximize the storage capacity; features stairways that are extremely steep and so narrow that furniture is moved through large windows; and a hoist hangs from the ubiquitous ridge beam at the front roof gable. In this way, every resident of Amsterdam was a speculator, buying and selling lumber, pickled herring, or spices for storage in the capacious attics. When demand was low for Norwegian lumber, a drop in prices would trigger Amsterdammers to buy. In the 1580s, when investors decided to send ships beyond the Iberian- controlled ports to buy goods, shipbuilders sent prices upward, and lumber was lowered down from attics to the canals and floated to the shipyards of Amsterdam. With every home doubling as a warehouse, Holland became a giant machine for moderating price fluctuations through speculation.

In this way, the architecture of the Dutch canal house performed several functions at the heart of what economic historians identify as key factors in the rise of Amsterdam as the most important financial center of the 17th and 18th centuries and the birthplace of modern capitalism.[10] Each of five factors associated with the late 16th-century rise of the Dutch economic position has a more or less direct relationship with the formal-spatial infrastructures of Amsterdam. First, the warehouse attics of canal houses served as a ready stock reserve to buffer changes in supply and demand in ways that stabilized prices. Second, because beating other sellers to the market was the key to getting the best price, hoistways at the front of every house/warehouse, streets that doubled as quays, and the ability to have a barge at the ready for transporting even the bulkiest of goods, created what economists call "elasticity," in which even small changes in price result in rapid changes in supply. Third, the relative liberty enjoyed by entrepreneurs to engage in exchanges without the friction of guilds, royal monopolies, the church,

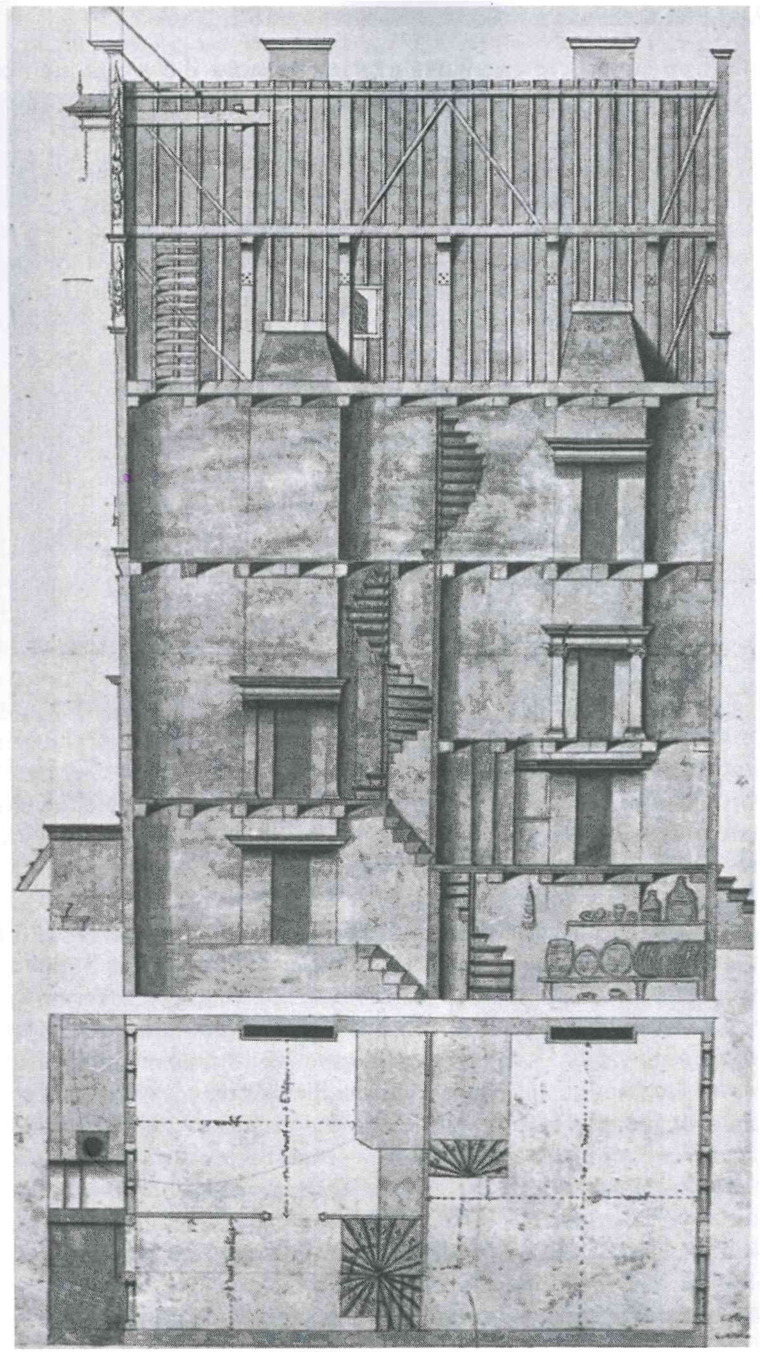

Figure 2.1 1670 section and plan of a "three-story" merchant's canal house (Amsterdam Parish Library). From Renée Kistemaker and Roelof van Gelder, *Amsterdam: The Golden Age, 1275–1795* (New York: Abbeville Press, 1983).

plutocracy, or even licensing bureaucracies, reduced the transaction costs of business and thus, lowered the barriers to engaging in commerce. Fourth, given the need to constantly monitor price fluctuations, in 1585 the commodities market on the dam of the Amstel River was the first market in Europe to distribute price sheets, further quickening the response to changes in market conditions. And finally, the dependability of the information in Amsterdam augmented the size and volume of transactions beyond its former role of regional "gateway" to a new position of global market "entrepot."[11] The last three of these factors were facilitated in part by the architectural performance of an ensemble of buildings organized in and around Amsterdam's Dam Square.

In the early days of the informal market on top of the dam, buyers and sellers of herring took to gathering at a particular shopfront or street corner, separate from those interested in corn or wheat, who gathered at their own designated locations. The social practices of exchange are such that by making the goods available to potential buyers for easy inspection a few steps away on boats moored at the quay, these became suddenly unnecessary. The trade custom of keeping one's dagger in its sheath, but at the ready and on display on one's belt, here gave way to a higher level ritual reinforcement of trust. With mutually beneficial repetition over time, this step came to be taken for granted as there would be consequences for delivering a bad shipment of grain. The verifiability of quality was matched by the establishment of municipal *Waag*, or Weigh Houses, adjacent to the market so that the trustworthiness of the quantity of goods also came to be dependably taken for granted. As trust grew among traders, transactions could be made without the contentiousness that would otherwise slow down commerce.

As the market activity exploded in the early 17th century, Hendrick de Keyser built the *korenbeurs* (corn), or Commodities Exchange, in 1617 and the *Beurs van Hendrick de Keyser* Amsterdam Exchange in 1611. Both markets were constructed on top of the Amstel River adjacent to the quays where goods could be (but rarely were) inspected and practically in the shadow of the *Waag* Weigh House (Figure 2.2). Across Dam Square, the *Wisselbank* Exchange Bank was established inside the City Hall, throwing the weight of the city fathers behind all guarantees of payment. Another factor in the capacity of a marketplace to foster the steady accumulation of trust is a long track record of civility. With so many buyers and sellers shouting and gesticulating in the high-stakes competition for the best prices, the risk of violence could run high. Whereas in a different setting operating under fewer rules, the frenzy of buying and selling might give way to brawling and bloodshed, the Amsterdam Exchange strictly prohibited cursing, shouting, physical violence, or ungentlemanly behavior of any kind. Rules of decorum restricted entry to gentlemen of a certain stature and established standing in the trading community. Early 19th-century depictions based on earlier accounts include merchants and brokers from other lands and cultures.[12] Reinforcing the Exchange as a space of refinement, the upper

Figure 2.2 Architectures of trust on Dam Square in 1624 view of Amsterdam (Berckenrode PD).[13]

galleries of the exchange housed the offices of the various trade guilds alongside the Academy of the Visual Arts. The rules of decorum observed within the architectural framings of the Exchange and the Dam reinforced the daily rituals of deference to the institutions and social norms of trust among trading partners. Together these formal-spatial-institutional arrangements constituted an architecture of trust, operating alone and together, to amplify the benefits of consensual exchange and hasten the consequences for anyone who would break faith.

Both of De Keyser's market halls on the Dam reproduced the column and portico arrangement of earlier open markets. For example, we can know the gentlemen in the left foreground of Job Adriaenszoon Berckheyde's 1670 painting of the Amsterdam Exchange (Figure 2.3) are negotiating the price of lumber (column 43).[14] On the bench are brokers waiting to arrange for the rental of attic and cellar storage space in canal houses. The presence of foreign traders would have been a common sight, as merchants and brokers from across the world of the Dutch trading empire would have frequented the Exchange.

Since prices rise or fall depending on scarcity and surplus, the more trade can be centralized in a single point with the greatest number of suppliers and the greatest number of buyers, the more precisely the forces of supply

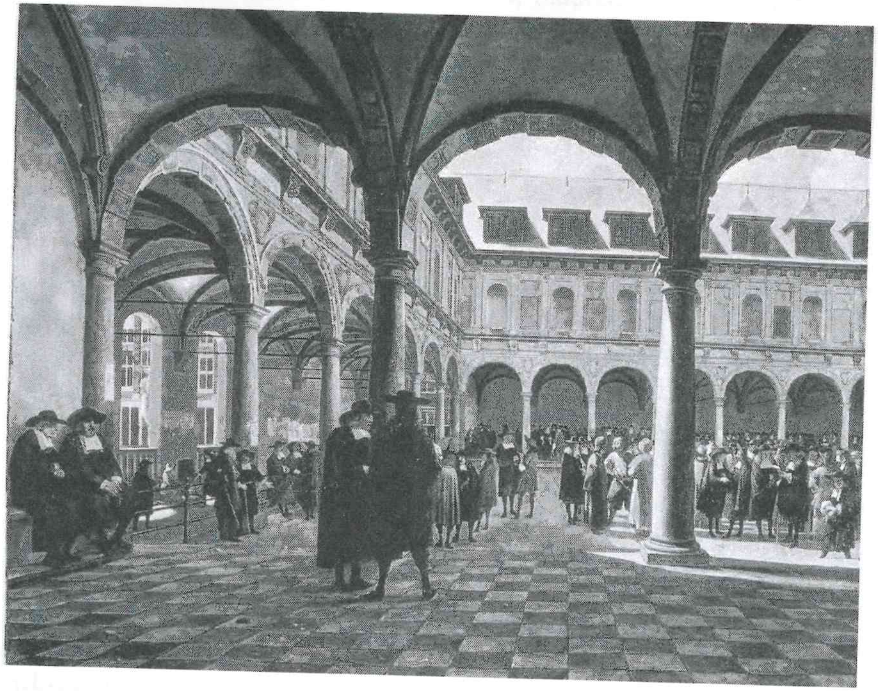

Figure 2.3 Lumber merchants at column 43 in 1670 in the courtyard of the Amsterdam Exchange (Berckheyde PD).[15]

and demand can interact to establish a dependable market price. As Amsterdam came to host the greatest numbers of buyers and sellers in Europe, no other market had as many participants openly bidding prices up or down on a specific good. Though it has become a common term, the origin of the term "open market" was, in this way, quite literal. The formal, spatial, and institutional arrangements of the Amsterdam Exchange came as close to the ideal conditions for gauging the balance point between supply and demand as could be found at the time. The resulting price was considered so dependable that by the 1590s price sheets printed up in Amsterdam were widely disseminated and used to set the market value of commodities throughout Europe.[16] The ability of traders to respond most quickly, and thus most profitably to sudden price changes, came to depend on being physically present at the right column at the right moment in the Amsterdam Market.

Physically present for the buying and selling of spices were a group of gentlemen who recalled the days in Antwerp when Portuguese ships offloaded great volumes of pepper and other spices. The demand for these spices appeared to be so great, especially around holidays, that high prices did relatively little to slow sales. With Portugal united with Spain against the Dutch, the choking off of the spice trade presented an opportunity to anyone

bold enough to take on the high stakes of entering the Far Eastern spice trade. The first barrier to entry was the secrecy of the location of the Spice Islands.

Batavia

In 1592, ten gentlemen gathered in secret around a rare map containing details purchased from a Portuguese mapmaker of the Indian Ocean route to the Spice Islands. Needing confirmation of multiple details, they dispatched a young adventurer named Cornelis de Houtman to Lisbon impersonating a man of business. When he was imprisoned for espionage, the Dutch gentlemen paid a ransom for his release. De Houtman's report on the location of key ports and Portuguese defenses emboldened the gentlemen to bankroll four ships and 249 sailors as the *Compagnie van Verre* (Long-Distance Company). Its mission was to become the first Dutch expedition to bring a cargo directly back from the Spice Islands.[17] Despite De Houtman's near failure in Lisbon, he was placed in charge. The expedition followed the more southerly route favored by Muslim traders, avoiding the Portuguese-controlled waters around India and the Straits of Melaka to exit the Indian Ocean via the Sunda Strait. Despite being welcomed by the Sultan of Bantam, De Houtman's combination of arrogance and ignorance had doomed the venture from the start. Insufficient provisions, scurvy, mutiny, murder, a pirate attack, and arbitrary violence against the people of Bantam and Madura resulted in a failure to reach the Spice Islands, the loss of one ship, and the death of two-thirds of the crew. A Balinese King's gift of peppercorns was the only way the *Compagnie van Verre* was able to repay investors without suffering massive losses.

Despite the near disaster of De Houtman's adventure, investors throughout the northern provinces formed their own companies, each existing only for the duration of a single voyage. By 1601, some 65 Dutch ships had left for Java and Sumatra (Indonesia) with some investors losing everything, and one famously returning in 1599 packed with 500 tons of spices and a fourfold return on investment.[18] The markets at both ends of the journey responded quickly with inflated prices on Java and a glut in Holland. Each new voyage became less and less attractive as an all-or-nothing gamble with prohibitive costs and decreasing price advantages. In 1600, the English East India Company emerged as a competitor. In 1602, the solution was the formation of the Dutch East India Company (*Vereenigde Oostindische Compagnie*, VOC). Although the English East India Company was formed two years earlier, the VOC was the world's first joint stock company with transferable shares and limited liability, greatly reducing the risks of ownership and the barriers that prevented selling shares in De Keyser's Amsterdam Exchange, the first stock exchange.[19] Other extraordinary powers derived from its governmental authority representing six city councils and the United Provinces of the Dutch Republic. As the first, and some argue the largest, multinational corporation, it had the authority to wage war, negotiate treaties, and claim territories. The company held a 21-year monopoly on all Dutch voyages to the East Indies. It sold shares in the company that paid dividends every ten years, averaging out the successes and failures over more than a hundred expeditions.

The key factor in the emergence of paper-based exchanges generally, and the trading of shares in the VOC joint stock company specifically, was a well-established set of institutions of trust with a long track record of successful transactions in which the need for actual inspection of the physical goods could be taken for granted. These conditions were well-established in part through the architectures and infrastructures of trust in Amsterdam. The combination of trustworthiness and flexibility greatly broadened the appeal of investing in the new company. As VOC shareholders began to receive handsome dividends, sometimes paid in pepper, cloves, or nutmeg for storage in canal house attics, the value of stocks rose. Ultimately, this mechanism for financing the activities of long-distance trade raised more operating capital than the royal houses of Portugal and Spain and the less innovative practices of the English East India Company combined.[20]

The longer time horizon of the Dutch East India Company introduced an opportunity previously unavailable to Dutch investors: the spice monopoly that eluded the Portuguese and the Spanish crowns. The Dutch established a fort on Banda Neira and displaced the remaining Portuguese to establish its primary base of operations in Ambon. So firm were the Portuguese fortifications of Melaka that the Dutch were forced to use the Sunda Strait between Sumatra and Java until 1641. The English East India Company proved a more difficult adversary, as they always seemed to be one step ahead of Dutch efforts to capture and hold the port towns of the archipelago. In 1619, after decades of sustained rivalry, the newly appointed Dutch Governor-General J.P. Coen brought a new level of unbridled violence to the multisided battle for Jayakarta. In one swift move, Coen drove the English away, defeated the Sultan of Bantam, and drove off the Prince and people of Jayakarta, burning it down to the ground.[21] On its ashes, Coen built the fortified port town of Batavia (an ancient name for Holland) as the new headquarters of the Dutch East India Company from where it could control ships at the multiple choke points of the Southeast Asian archipelago.

Intent on establishing a monopoly no matter the cost, the Dutch killed the English defenders of Run Island and uprooted every nutmeg tree they found.[22] In 1621, Coen murdered all but 1,000 of the approximately 15,000 residents of the Banda Islands. About 200 Bandanese survivors remained to ensure the proper care of the nutmeg trees tended by slave labor from other islands. Nutmeg trees found elsewhere were either transplanted to 68 Dutch nutmeg plantations on three of the Banda Islands or destroyed.[23] In a mixed message from his bosses, Coen received a letter from the VOC Directors, known as the "Gentlemen Seventeen," severely reprimanding Coen for his near-genocide of the Bandanese along with a 3,000-guilder bonus.[24]

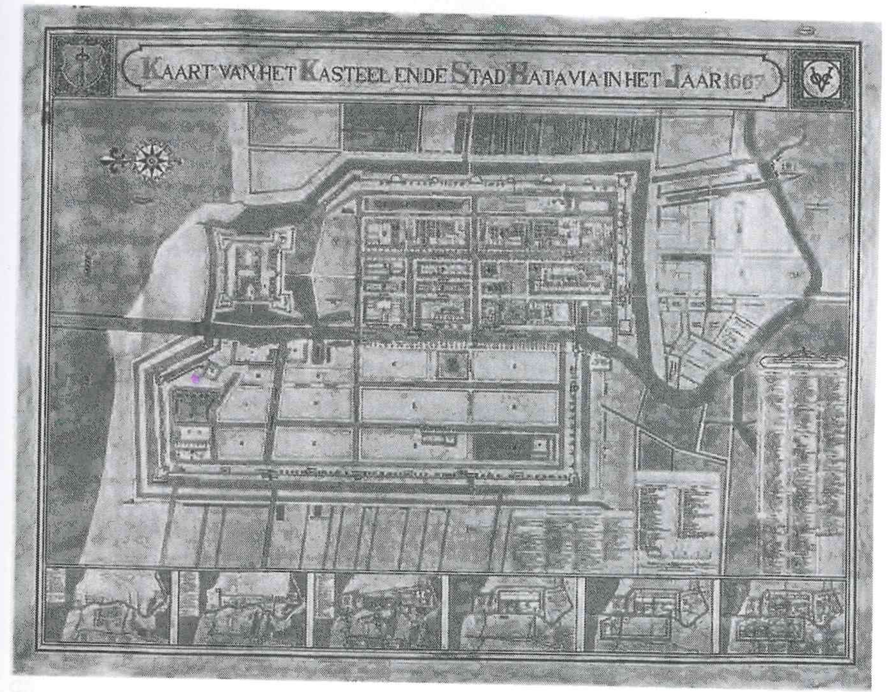

Figure 2.4 1667 map of Batavia (PD).[25]

The other 800 surviving Bandanese were enslaved to work on digging canals and constructing the fortifications of Batavia in a tropical translation of the Dutch fortified port canal town. The Ciliwung River was canalized, establishing a grid of parallel and perpendicular canals for every block of the town (Figure 2.4). The houses were a Chinese variation of the Dutch canal house, with the roof ridges turned parallel to the canal to ease construction and supposedly to create a modicum of shade against the relentless tropical sun.[26]

In the first decades of the Batavia-Amsterdam transfer of spices, the company pursued and eventually eliminated the competing flows of cloves, nutmeg, and mace. Starting in the middle of the 17th century, the dream of a spice monopoly became a reality. From the 1620s to the 1640s, the ratio of the company's purchase price in Ambon to its sale price in the Amsterdam Market was about three or four for both cloves and pepper. As a native of Malabar (India), pepper was grown throughout the tropics, so a markup ratio between purchase and sales prices of three or four is likely to be a dependable reflection of the cost of doing business. In the 1650s, the Dutch achieved exclusive control of the world's clove supply, which allowed them to sell cloves for about ten times its purchase price. This rose to an astounding 25 in the 1660s before stabilizing at around 14 where it remained for a century.[27]

The central challenge to the smooth operation of the tremendous extraction machine that was the VOC was how to control such a vast operation with the minimum number of Dutch men. The first manifestation of this challenge was military. With the right fortifications, as demonstrated by the fortified port town of Melaka, a small number of defenders are capable of withstanding attacks of overwhelming force and numbers. The Flemish polymath Simon Stevin from Bruges (Belgium) designed the fortifications for Batavia, Amsterdam, and port towns throughout the Dutch sphere of influence.[28]

The second and perhaps more ever-present threat to the survival of the VOC was administrative: How do a handful of Europeans subjugate and control a vast workforce, a majority of whom are slaves? The Dutch Governor-General was completely dependent upon the appointed Chinese Captain who in turn directed several Lieutenants and Secretaries.[29] The key to maintaining the strict hierarchies that prevented the Chinese from finding common cause against the Dutch minority was to amplify the distinctions of class, sub-nationality, and clan as much as possible. The Chinese Quarter on the west bank of Batavia's main canal was subdivided to reinforce these class and clan distinctions. This was all the more important because several of the more successful Chinese merchants were significantly wealthier than much of the Dutch population of Batavia. The wealthiest Chinese merchants and officers were given special privileges that served to distance them from those they oversaw. The rest of the non-European population of Batavia was carefully assembled from all over the Dutch trading world. Each group was kept small in number to reduce the possibility of unified armed insurrection. Each identity group was housed in a small ethnically segregated enclave. Each ethnically segregated enclave or *kampung* was named for the group. Thus the 800 survivors of the 1621 Banda Island massacre served as soldiers garrisoned in the northeast corner of town in *Kampung Banda,* adjacent to the Bandanese Canal. These segregated enclaves were characterized by their carefully controlled thresholds and gateways that were locked at night and guarded throughout the day. The canals of Batavia added another level of protection against the free movement of residents as bridges served as additional guarded checkpoints. The locally indigenous Javanese and Sudanese populations were excluded from Batavia altogether in order to better prevent armed revolt, especially after the 1629 siege by the Javanese Sultan of Mataram.[30]

The complexity and diversity of so many distinct ethnic, class, and clan groups necessitated the imposition of strict sumptuary codes governing the way every resident of Batavia was permitted to dress. Sumptuary codes were used in Medieval Europe to limit extravagant displays of consumption as a strategy of social climbing. Non-Dutch residents of Batavia were required to wear outward symbols of their identity to help armed guards enforce rules of strict spatial segregation. Portuguese-speaking mixed race Mardijkers from Madura were often baptized into Christianity, could be freed from slavery when his master died, and were permitted to wear shoes (Figure 2.5).

Figure 2.5 1704 Topaz Mardijkers, Batavia (Churchill PD).

Further degrees of class distinction were signaled by whether or not the shoes featured metal buckles and whether those buckles displayed pewter, brass, silver, or gold. Maps were keyed to illustrated books as tools in the architectural regime of spatial segregation. Sumptuary codes included elements of dress, objects carried, and means of conveyance. These methods were used in the VOC port of Cape Town (South Africa), thus their obvious similarities to the divide-and-rule strategy employed by the 20th-century Grand Apartheid system.

The same 1667 map of Batavia (Figure 2.4) listed the names of Dutch residents keyed to where they lived on the east (upper) side of the main canal. The first buildings constructed after the fortifications tended to be cultural icons such as the Church, City Hall, the Governor General's Palace, and other symbols, supporting claims that the European way of life was being recreated in the tropics. The European enclave of Batavia was extravagant by comparison, bearing the names of the six cities joined together in the VOC. On maps featuring perspective views, the city of Batavia was often depicted as if it were simply another Dutch town, just further away. Maps were used as both technical instruments for administering the town as well as vehicles of propaganda for attracting investment and young recruits into the company project. The scale of buildings, public spaces, and a general grandiosity and grace were all exaggerated in order to attract Europeans to relocate to Batavia. Even the proximity of the mountains and distance were grossly misrepresented in order to more closely match popular notions of the ideal city in Europe at the time. One of the lasting legacies of these port towns is their role in sustaining a relatively high quality of life for a handful of Europeans while imposing strict physical segregation and social fragmentation as a means to dependably subjugate a large workforce.

One city worlds apart

The rapid transformation of the swampy lands around Batavia were closely paralleled in Amsterdam. The expanding flow of goods and the associated profits, especially on those goods supplied solely by the Dutch East India Company, drove the expansion of the cities on both ends of the global exchange route. The labor force in Batavia grew in proportion to the activities of the company. In Amsterdam, the constant flow of goods, the growth of the company infrastructure, and wealth attracted ever greater flows of immigration to the city. The concentric additions to the canal network of Amsterdam was a land speculator's dream come true (Figure 2.6). From the first landing of a single fishing boat in Java or Holland, the water's edge stretches exponentially in the fractal geometry of a canal network, even within the strict confines of a fortified port town. During the 17th century, the Dutch cut canals through the wetlands and hardened the edges of extensive canal networks on two sides of what was to become one of the longest and most exploitive and productive projects of colonial extraction.

Figure 2.6 1688 map and view of Amsterdam (Frederik de Wit PD).[31]

As the entrepôt activities diversified from spices to coffee, tobacco, sugar, and tea, Batavia had to increase its capacity for processing and storage. For every ton of goods transferred through Batavia, a certain value of dividends was paid out in Amsterdam. Sometimes, dividend payments were made in the goods themselves, in which case, the goods stored in the canal house attics in Amsterdam are likely to have been at one time stored in a parallel world of attic storage spaces in Batavia. In this way, the VOC was a mechanism that directly translated the growth of Batavia into the growth of Amsterdam as the literal accumulation of wealth generated by the new multinational capitalism that it made possible. The value embedded in the paper shares of the Dutch East India (VOC) joint stock company came to depend upon the operations and relationships structured by Batavia and Amsterdam's physical architecture, urban form, and geography.

Notes

1 Michael Krondl, *The Taste of Conquest: The Rise and Fall of the Three Great Cities of Spice* (New York: Ballantine Books, 2008), 545.
2 Ibid, 84–122.

3 William H. McNeill, *Venice: The Hinge of Europe, 1081–1797* (Chicago: University of Chicago Press, 2009), 86.

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