

Pamela O. Long

For Engineering the Eternal City: Infrastructure, Topography, and the Culture of Knowledge in Late Sixteenth-Century Rome (University of Chicago Press, 2018)

Engineering the Eternal City compels and delights. It covers a generation of building and re-envisioning the great and ancient city of Rome, from a devastating Tiber River flood in 1557 until the 1590 death of Pope Sixtus V. It takes up civic and hydraulic engineering, mapping, urbanization, printing, and Romans' own antiquarian pursuits. This means water: river routing and control, new and repaired bridges and aqueducts, and failing sewers. It means the city on the land: layout and construction of wide, straight streets, building and moving monuments; and the city on paper, in maps: drawn, engraved, printed. And it means mechanics: surveying instruments for laying out a new aqueduct, the Acqua Felice; and capstans, ropes, and a snapped hawser that in 1561 dropped into the Tiber, and ruined, a huge machine trying to cross the Ponte Santa Maria. In all of this were people, who lived the reality of the sixteenth-century city that is now hidden, "the sewage, waste, mud on the streets, the devastating floods, the bearing down of horse-drawn coaches, and the rumbling of carts laden with stone and lumber" (219). These are the people who paid for the engineering of Rome through taxes on food that brought them near starvation, in a city without settled mechanisms to fund infrastructure and in which every project became a site of often bitter competition and conflict. Under Sixtus V many urban projects succeeded, including the Acqua Felice, terminating in a fountain in the Piazza di Santa Susanna; and the spectacular relocation engineered by Domenico Fontana of the Vatican Obelisk, brought from Egypt by Caligula and since overshadowed by the Old Sacristy of St. Peter's Basilica, to St. Peter's Square. Compelling is the contrast Long draws between such still-visible successes and their reception by the contemporary people of Rome, who did not celebrate them. The year Sixtus died, 1590, saw reports from clerics of people "dying under the benches of the butchers and other shops, reduced to feed on grass like sheep in the fields and to eat even cats and dead dogs and any filthy food they can find"; and a cleric recorded the finding "more than once of a dead body with his mouth full of grass" (217). The statue of Sixtus V on Capitoline Hill had to be protected after Sixtus's death, from an armed crowd of thousands who wanted to behead it and drag it through the streets. Others wanted to kill Domenico Fontana, who took refuge in the Palazzo Sforza, and emerged to pursue what amounted to a ruined career.

The delight is how such complex events are made to underscore Long's central point: the "lively tradition of interchange about urban engineering in Rome" (200) in a context of conflict, lack of funds, and frequent failures. It was a vigorous, fluid culture shared by people from disparate backgrounds who often found themselves changing their roles as projects developed, and who recognized few boundaries between engineering, and building, and literary, artistic, and political pursuits. The culture of urban engineering and construction flourished, though many working within it did not. Engineering the Eternal City contributes to current interest in Renaissance and early modern craftwork and artisanship, in technology and cities, and to the growing body of literature connecting engineering – and those known as engineers – to states and other seats of authority. It argues for recognizing technology, in its frequently dirty messiness, as an essential part of early modern cultures of knowledge.

Engineering the Eternal City is a historian's history. Long takes us to a storage cabinet in the Archivio Storico Capitolino, Rome, to show us how she dated the crashing of the machine from the Ponte Santa Maria into the Tiber, and to a manuscript in the Biblioteca Nazionale of Naples detailing the adventures of an early Acqua Felice surveying team and its author's innovations in sighting instruments. The many maps and illustrations are beautifully printed

and do not merely embellish but support the text, especially in the discussion of topology, map-making, and Romans' contemporary antiquarian pursuits. Photographs of Rome today appear throughout, and all but two were taken by Bob Korn; they are themselves an essay on the pleasures of an informed historical gaze. *Engineering the Eternal City* is the work of a mature and generous scholar, gifted with both deep curiosity and the scholarly will and skill to follow it up, to learn the languages, learn the math, and take the trip.