Excavating Urban Democracy: Water Infrastructure and the Public Realm in Los Angeles, circa 1870-1890

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Abstract
This essay investigates the changing contours of the public and the private in Los Angeles at the end of the nineteenth century. It argues that the introduction of engineered water supplies from the 1870s to the 1890s caused urban residents to move their routines and habits—such as washing, bathing, and hauling water—from open ditches to the domestic sphere, catalyzing a retreat from the public in Los Angeles. This domestication of everyday life was accompanied by new forms of ratepayer protest in the growing city. In other words, underground pipes created private regimes while also leading residents to engage in civic activism to demand better water. This duality and tension are at the center of this essay, which follows two storylines. First, it sketches the establishment of water infrastructure that shaped urban built space in Los Angeles. Second, it delves more deeply into the diverse types of political activism by analyzing letters of complaints to the city council. Through the lens of Los Angeles, however, the essay tells a bigger story of public and private tensions in modern America. By exploring a major city through its water supplies, it reconceptualizes urban history as water history.

Introduction
How did the public realm in modern America emerge? To what extent was this transformation fueled by early urbanization? How did it connect with the introduction of underground water supplies? This essay explores the making and remaking of spaces, both public and private, in the late-nineteenth-century United States. More specifically, it examines the multiple dynamics associated with urban water infrastructure and public/private tensions from the 1870s to the 1890s. The argument runs as follows: As underground water pipes and sewers were built, this development facilitated an early or initial retreat of urban dwellers to private spaces and to the domestic sphere. But it also created a new language of the public and a new public activism to demand water. Suggesting that the lines between public and private spaces were redrawn in multiple ways at the same time, this essay argues that water infrastructure can help us understand the transformation of American cities and their public realms in the late nineteenth century.
The essay uses a significant case study: Los Angeles. Most urban theorists today conceive of Los Angeles as the epitome of suburban sprawl. Depicting the city as a place where people live in maximized fragmentation and individualization, they bemoan the loss of urban space in a traditional sense (Davis 223). They agree that this development is rooted in the second half of the nineteenth century, when land speculation and public transport prefigured the way people settled in the region (Fogelson ch. 5, 7; Monkkonen 163; Fulton 7). Railway pioneer Henry Huntington, among others, built and developed housing on remote tracts of land. He connected these sprawling agglomerations to each other via the Los Angeles Railway, the iconic electric streetcars that crisscrossed the region and made Los Angeles almost entirely accessible by public transit. Therefore, much of the urban sprawl in Los Angeles resulted from public transit. With the arrival of cars and freeways in the 1920s and 1930s, fragmentation only intensified further. Building on and expanding this literature, this essay places this story in a broader historical context, arguing that it followed a path set by water infrastructure and water activism, which emerged between 1870 and 1890.

First, the essay suggests that the fragmentation of Los Angeles started early in the 1870s, when open ditches were abandoned and enclosed underground pipes were established in the then-tiny town. In this period, human practices in the city were transformed profoundly. Urban dwellers could no longer haul their water from ditches or public wells; instead, they were required to use indoor water taps, toilets, and bathtubs. Open ditches and wells lost their significance as anchor points of social life. This development resulted in an early loss of public space, which profoundly shaped the way people experienced the city. While this process certainly was not specific to Los Angeles, it had grave consequences for future developments in the region. Most importantly, the uneven provision of water followed both race and class divisions and, consequently, contributed to the making of boundaries in Los Angeles, a city that became deeply structured by all kinds of asymmetries.

Second, the essay traces a competing development, involving political activism in Los Angeles. As urbanization progressed and enclosed water pipes were laid out all over the city through the end of the nineteenth century, Angelenos co-constructed the built environment and urban democracy. They petitioned city leaders to build water mains along certain streets; they demanded dirty and smelly streets be cleaned; they called for the replacement of ill-functioning storm drains; and they urged the authorities to better protect private property by improving urban infrastructure. In short, they opposed elected city leaders and claimed that the political process should be open to demands articulated by individual citizens. Based on original archival research, I argue that this process led to a politicization of everyday life in Los Angeles. With a remarkable number of landowners joining in neighborhood initiatives to criticize the condition of water infrastructure and to ask the
city government to abate these nuisances, city dwellers co-fashioned the thriving city. It must be said, however, that this activism was classed, raced, and gendered, as non-White, poor, and female residents were less likely to petition the authorities. Nevertheless, the patterns of political mobilization were novel in the history of Los Angeles. They ran counter to the individualization and fragmentation of urban space, thereby integrating urban society. These counter tendencies are at the center of my interest in this essay.

Conceptually, my aim is to research the relationship between the built environment and the public, highlighting the structuring power of physical assemblages for the everyday in the city. I claim that built structures—such as houses, streets, water lines, taps, and sewers—profoundly shaped the ways residents could move in the city and make sense of their social collectivities. Water infrastructure is particularly important in this regard. Therefore, I place special emphasis on the materiality of urban everyday life, revealing the formative power of quotidian things such as lavatories, toilet bowls, and bathtubs. Excavating urban democracy, from this perspective, has quite a material dimension.

**Water Infrastructure and the Waning of Public Space**

The transformation of Los Angeles into a “modern” city with paved streets and engineered water supplies began shortly after the village became American. California was incorporated into the Union in 1850, and that was the starting point of the remaking and unmaking of its Mexican past (Deverell 6). When the American period started, Los Angeles still was a dusty and sleepy village, miles away from the ocean. Located in a semi-arid region, residents heavily relied on water from the Los Angeles River, which was diverted into the village by means of a wooden wheel (Gumprecht 41-81). It was not until the late 1850s and the early 1860s that urbanization took root in the region. This process further accelerated in the 1870s, when James R. Toberman, who mapped out the street grid system and the water and sewer networks of Los Angeles, was elected mayor in 1872 (Torres-Rouff 219-21). This section sheds light on this physical transformation of the city both above and below ground. It establishes the last third of the nineteenth century as a period when Los Angeles as a public space became sanitized, institutionalized, and commercialized. These three strands (sanitization, institutionalization, and commercialization) will guide my exploration of the domestication of urban life in Los Angeles. But first, I will briefly delve into water practices in the pre-sanitary city.

During the Mexican period and well into the American period, water gathering represented a public activity (Hoffman and Stern 2-7). Water was delivered to the village through open ditches, or *zanjas*; these ditches—and public wells—marked a space where people came together to perform daily routines and talk to each other. We only have a few
first-hand accounts of what everyday life with water looked like in the pre-sanitary city. While these narratives tend to romanticize the early period of Los Angeles, overlooking the prevalence of epidemic diseases and the marginalization of Native Americans by Spanish Mexicans and early American settlers, they also make it abundantly clear how important water infrastructure was for social life in the village. In his autobiographical sketch of early Los Angeles, merchant Harris Newmark describes the water network’s organization and how it was connected to the urban everyday. Prior to the establishment of underground pipes, he details, wealthy householders lived as close as possible to open ditches so that they could easily bring the water into the houses (Newmark 116). Hauling water was a task assigned to women (Layne 34), and the operation of the early water network was a gendered one. As the village expanded, female water carriers gave way to professional (male) water distributors, who delivered water in buckets. Newmark recounts two specific water carriers: “Bill the Waterman,” who distributed water around 1853, and Dan Schieck, who was in charge of hauling water at a somewhat later date (Newmark 116). These water carriers had important social functions in early Los Angeles (Figure 1).

Pre-sanitary Los Angeles was a place where much of daily life occurred around the open ditches and wells. More specifically, the ditches and wells represented spaces of dense interaction, communication, and observation. Not only did residents use ditch and well water for washing, bathing, and other purposes, but they organized their lives around this infrastructure (Layne 16–17). The notion of the public very much was an idea that emerged and was nurtured around these spaces. However, this was not unproblematic. Because water was used for multiple purposes, it was none too clean. Newmark colorfully remembers that

[a]nimals of all kinds, including cattle, horses, sheep, pigs, mules and donkeys, crossed and recrossed the stream continually, so that the mud was in-
cessantly stirred up, and the polluted product proved unpalatable and even, undoubtedly, unhealthful. To make matters worse, the river and the zanja were the favorite bathing-places, all the urchins of the hamlet disporting themselves there daily, while most of the adults, also, frequently immersed themselves. (116-17)

This account is supported by other primary sources of the time, such as newspaper reports and city ordinances, which document these practices of water gathering (Spriggs 18-19). What is important is that such social practices led to contaminated water, which caused frequent outbreaks of deadly diseases. For instance, in 1862 and 1863, a smallpox epidemic killed many residents in Los Angeles (Newmark 322). These epidemics and other public health crises in the village fueled the remodeling of urban life.

Arguably, the most important driving force behind the establishment of engineered water supplies was the attempt to sanitize the city. It is a well-known and yet important story that new knowledge about infectious diseases spurred the replacement of open ditches and wells with underground pipes as well as garbage removal and street cleaning (Rosenberg; Evans). Starting in early nineteenth-century England, the sanitary movement aimed to improve public hygiene through the removal of filth and the rebuilding of cities in accordance with sanitary principles (Melosi 103-16; Duffy). These ideas traveled from England to other European towns and to North America. New York City established a municipal street cleaning system as early as 1798, while other cities lagged behind. For engineered water systems, it took even longer to start operation. Philadelphia installed cast-iron water pipes in 1818; Pittsburgh followed in 1828, St. Louis in 1832 (Duffy 71-76). Finally, the sanitary movement also took root in the village of Los Angeles, where hygiene conditions were poor. From the late 1860s onwards, open ditches were replaced by underground pipes (Gumprecht 63-69). The need to fight fires also spurred the construction of water hydrants in wealthy neighborhoods (Spriggs 42-45). Sanitizing the city was anything but a linear success story, and hygiene conditions remained poor in Los Angeles even after engineered water supplies were introduced (City of Los Angeles 5). As a result, the people of Los Angeles repeatedly suffered from severe epidemics. As late as 1924, a pneumonic plague killed almost 40 people (Bogen 175-76; Molina, *Fit to Be Citizens* 83-88; Deverell 176-82). Catastrophes like the epidemics of 1862 / 1863 and 1924 catalyzed the sanitation of the city.

Sanitizing the city was both a literal and figurative process. Since Los Angeles was a place with many different ethnic communities and a growing number of poor people, sanitary ideals were a means of negotiating race and class affiliation and, in the end, an instrument for defining citizenship (Hoy 87-89). Matthew Gandy argues that introducing water pipes and sewers meant transforming the “private city” into the “public city” (Gandy, “Das Wasser” 22). Pointing to how people became
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connected to one single network, he maintains that this helped establish the notion of the public. However, in the case of Los Angeles, things are more complex. On the one hand, the water system of Los Angeles connected people to engineered water supplies; on the other hand, access to the system of provision was organized unequally. Residents of non-White origin—Chinese and Mexican Americans—were provided with indoor water taps and toilet facilities only at the beginning of the twentieth century. The White majority in the city deemed Chinatown and Sonoratown as less worthy of being connected to the network. Thus, several categories of difference structured urban life in Los Angeles and excluded non-White residents from some of the privileges of citizenship (Molina, *How Race Is Made*; Troesken; Gyory; Sandmeyer). Primarily, these asymmetries were due to the intersection of race and class in Los Angeles. More specifically, unequal access to supplied water resulted from financial restrictions imposed on Chinese and Mexican residents. These people simply could not afford to pay for house connections, as the city charter required them to do (Caswell 134). Owner initiative played an important role here. Because many non-White residents were tenants living in adobe structures and cheap wooden one-story homes, they had to hope that their property owners would pay for the extensions. Before the beginning of the twentieth century, only a few did (Torres-Rouff 224). At the same time, poor living conditions contributed to the prevailing stereotypes of Chinese and Mexicans as dirty, inferior, and incapable of using “modern” water technologies (e.g., “Hell’s Half Acre” 3; “A Chinese Chapter” 3). White residents built boundaries around their urban spaces both literally, through unequal access to water infrastructure, and figuratively, through powerful discourses painting non-White residents as inferior.

Establishing underground water networks was a driving force for the creation of new political institutions and the professionalization of the city bureaucracy. The city council introduced the Office of the Water Overseer in 1854, a decisive leap for the development of municipal government in Los Angeles, which also brought a new logic of political administration (Spriggs 20–21). During the Mexican period, a so-called Zanjero oversaw the open ditches. After the village had become American, the council formalized his duties and empowered him with authority to force water users to comply with his demands. According to an ordinance approved in 1872, he was in charge of “the supervision and government” of all ditches (McPherson 55). The importance of the Office of the Water Overseer can hardly be overestimated. Especially when compared to other American cities, he was one of the most powerful men in town, with two deputies and his own staff (Gumprecht 60). In the 1860s and 1870s, his monthly salary even exceeded that of the mayor (McPherson 60). This office decidedly fueled the institutionalization of municipal government in Los Angeles. Apart from political institutions, establishing the water system also helped catalyze the juridification of
Los Angeles, which was still an unregulated and fluid space at the time. In particular, river water was defined as the property of the City of Los Angeles (Dorland 31). Soon after its foundation in 1781, the village had claimed all rights to the water, but farmers in the adjacent San Fernando Valley also wanted to take the water for irrigation. In 1895, court rulings decided the case in favor of Los Angeles, but ownership of the water remained contested until the 1970s (Gumprecht 89–92).

Private initiative was strong in Los Angeles, and this had implications for the construction of water pipes as well. Shortly after California joined the Union, the operation of the water network in Los Angeles became a private enterprise (but its oversight remained a public task). In 1868, John S. Griffen, Solomon Lazard, and Prudent Beaudry bought the franchise to build and operate a network to supply private homes with potable water (Hoffman and Stern 8–9). They founded the Los Angeles City Water Company, which successfully ran the network until the city municipalized the system in 1902 (Deverell and Sitton 18–23). The fact that private developers played a crucial role in the establishment and operation of the water network in Los Angeles is certainly one explanation for the commercialization of the access to water during the period and the blurring of lines between the private and the public, but it also had something to do with prevailing values in American society. During the Mexican period, water was a universal good, and residents could haul it from the river free of charge (Torres-Rouff 222). After 1850, however, the council introduced fixed prices for both drinking and irrigation water (Hall 550). Compared to the Mexican period, the commercialization of water in Los Angeles was a turning point for the residents’ relationship to this precarious good, prompting discussions about the contours of the public. The introduction of fixed price rates also foreshadowed what historian Jeremy J. Schmidt labels the re-conceptualization of water as a “resource” in the early twentieth century (4–5).

It is analytically productive to link the making of individual and urban identities to the physical geography of Los Angeles. I argue that the built environment of indoor water taps and bathtubs fueled the relocation of water practices to indoor spaces and the individualization of public life in the city. It is difficult to measure exactly what came first: social values manifesting themselves in physical structures or structures formatting urban identities. In the case of Los Angeles’s water network, however, evidence suggests that people’s lives—their daily interaction with water, their washing, cooking, and eating—was moved from public to private spaces. As public wells were abandoned and open ditches replaced by underground pipes (first made of wood, then of bricks, then of cast-iron), built structures prompted residents to retreat to the domestic sphere. Of course, this development was not specific to Los Angeles; it occurred in every city where public water infrastructure was replaced by indoor facilities. Drawing on Norbert Elias’s *Civilizing Process*, I refer to this phenomenon as the “domestication” of everyday water practices.
(Gleichmann). To some extent, the construction of water pipes reorganized space in Los Angeles. What we know today as the phenomenon of a declining public space and public realm leading to privatization of people's lives did not only result from the twentieth-century unmaking of public transit in Los Angeles, from motorization and suburbanization—although these developments certainly deepened such trends (Avila 185-223). Rather, Los Angeles's preference for the private sphere was set on track in the mid-nineteenth century, when enclosed water pipes forced residents into their homes.

A second development contributed to the domestication of public space in Los Angeles. Residents did not automatically follow the script of the intended use of water infrastructure. Instead, the council and the water utility actively had to push them not to use water from the ditches and wells, but rather to turn on the tap in their homes. In doing so, council members reshaped how individuals engaged with public space in Los Angeles, convincing them to move daily activities into their homes. Developing an elaborate user pedagogy, city authorities and the utility aimed at governing water practices. Certainly, this was a complex and non-linear process that took many years. However, the 1870s appear as a decade of accelerated reorientation toward the domestic sphere. In April 1872, the council passed an ordinance prohibiting the use of irrigation water for domestic purposes (McPherson 57). Residents were told to take water only from indoor pipes (or ditches and wells that carried potable water). Two years later, in August 1874, the council passed comprehensive sanitary laws. These laws required people to stay inside their homes in case of contagious diseases (Desnoyers 101-02). They also urged city dwellers not to "permit the discharge from any drain, cesspool, sink, water-closet, privy, bath-closet or other parts of any premises [...] into any street, avenue or alley, so as to create a public nuisance, or into any zanja or irrigating ditch in said city" (Desnoyers 104). According to the council, household sewage needed to be hidden from the public. All things personal belonged in private houses, the ordinance implicitly claimed. Prohibiting the washing of clothes and the bathing of persons and animals in irrigation ditches, it produced a domestic sphere separate from the public (Tomes 511).

Certainly, this ordinance targeted bad hygiene conditions in Los Angeles. Aimed at teaching residents sanitary rules and how to spot dirty or smelly water, the domestication of water practices was part of a broader effort to establish a new sensory order in the city. However, the ordinance also trained residents in the proper use of water infrastructure. People were to internalize that hauling water from ditches or wells was unsanitary; that it was safer to use tap water; that individual hygiene had to be performed in the bathroom; that bodily wastes were not to be exposed in public. Internalizing the proper use of infrastructure went hand in hand with learning to do specific everyday routines in private spaces. This learning process, however, was not straightforward. As late
as 1912, the council passed an ordinance prohibiting the use of bathrooms and water closets for sleeping, cooking, eating, and any purposes other than those related to the toilet (“Bathrooms and Water-Closets” 677). This hints at the willfulness of people who insisted on using infrastructure in their homes according to their own needs. Nevertheless, introducing engineered water supplies fueled the domestication of everyday life, which led to the waning of public space in Los Angeles. This anticipated the social, cultural, and political fragmentation caused by suburban sprawl and motorization in the twentieth century. Defining boundaries was integral to this process. It was property owners who were wealthy, White, and male who made public space in Los Angeles by sanitizing the city, establishing new political institutions, and transforming water into a consumer good. They employed the built environment to materially impose disparities on non-White and poor Angelenos. In this process, raced and classed stereotypes manifested themselves in unequal access to the water network. They were carved into the physical structure of Los Angeles, and since infrastructures serve as political technologies of power, they molded people’s behavior. In sum, the geography of Los Angeles forged the ways in which citizens could make sense of their community and broader social relationships. However, this was only one part of the story.

**The Rise of Urban Activism and the Changing Contours of the Public**

As Los Angeles ran the risk of losing its public space, a growing number of residents increasingly embraced the idea of the public. They joined in neighborhood initiatives and organized mass meetings, urging the council to pay attention to the city’s dysfunctional public infrastructure. More specifically, they wanted the city authorities to pave streets, lay pipes, and construct storm drains. Demanding that the city’s physical infrastructure should be bolstered, they participated in improving public space in Los Angeles.

In the following paragraphs, I turn to an analysis of letters of complaint (or petitions) to the Los Angeles City Council written by residents. These letters reveal the agency of people in shaping urban space and urban politics, and they divulge new public activism to demand water. While the city charter did not define any rules for residents who wanted to appeal to governing bodies, Los Angeles as an urban space depended on property and business owners to articulate what they regarded as a lack of infrastructure in the city (Fogelson 102-07, 247). Like in other cities, urban dwellers seized on this instrument as a way of co-fashioning the city. For my argument, it is not important whether the council actually passed ordinances based on these appeals. The fact that its minutes were filled with deliberations dealing with concerns raised by urban dwellers is sufficient proof that individuals had a startling agency
in improving the city.¹ As the petitioners were overwhelmingly male, White, and wealthy, these letters expose that the concept of public space in Los Angeles was a gendered, raced, and classed one. They also further complicate the prevailing narrative about Los Angeles as a domesticated and privatized space. They establish that there was a competing trend, which mobilized residents and integrated the fragmented city.

In Los Angeles, three different but interrelated causes of anger existed: unsanitary conditions in the city, technological breakdowns, and the city government’s price politics. They serve as my perspectives to explore petitions to the council written between 1889 and 1892. During these four years, no major disasters or changes occurred in Los Angeles that would have absorbed residents’ attention. Rather, these were quiet years, enabling people to focus on the urban condition of the city.

As the nineteenth century neared its final decade, Los Angeles was very much a dynamic space in the making (Fogelson 137–63). According to many observers at the time, streets were dirty and smelly, and supplied water was often unsanitary (see, among others, Newmark 115-17). A colorful report issued by the citizens’ general executive committee in 1890 found the water supply operated by the utility “utterly unfit for domestic use.” The report held that “[t]he water is conveyed in open ditches, running for miles through stock ranches, the stock standing in the ditches leaving their filth. Further, the water is thick with all kinds of unhealthy rubbish. At the head of the ditch the water is comparatively pure, but is made filthy by stock being allowed to wallow in it.” According to the report, sanitary conditions largely depended on the existence of enclosed underground pipes. Water was only pure if “taken direct[ly] from the fountain head, run through pipes and not exposed to daylight until drawn at the faucet for use” (“The Water We Drink” 2). How the engineered water system should be organized, however, remained in dispute among the residents of Los Angeles, and water supplies and sewers proved to be highly controversial in the city. Even the council itself was at loggerheads about how to improve the sanitary conditions (“Sewer System Discussed” I10).

Disunity caused mobilization, however. Property owners were concerned about the public appearance of their city. They went before the council worrying about the dirt accumulating in open ditches and the stench caused by smelly water. As they raised their voices against optical or olfactory nuisances caused by dysfunctional infrastructure, they challenged the political authority of city leaders. For example, a group of property owners on West 7th Street called the city authorities’ attention to the “intolerable” stench of the sewer on this street, which was “causing people driving by on street to hold their noses” (petition dated 8 July 1889). A neighborhood initiative from the crossing of First Street and Olive Street, where downtown is located today, complained about “a large body of stagnant water in the gulch […] which is a menace to the health of all who live in the neighborhood” (petition dated 8 Feb. 1890).
A third group of property owners from the city of Compton protested against the sewer that “passes near our property and creates an unbearable stench that is causing disease to spread throughout our section of the country and is a great nuisance” (petition dated 20 Jan. 1890). This last petition was driven by anger about the stinking sewer, but it was also fueled by local rivalry with Los Angeles, as the latter ducted one of its main sewers through Compton. It is crucial to note that residents also protested insufficient supplies of water causing bad hygiene conditions in their homes. In November 1890, a homeowner criticized the utility for failing “to supply sufficient water to flush the closet in the upper story of my house” for the past seven days, “thereby creating a nuisance and a stench and endangering health” (petition dated 3 Nov. 1890). These petitions indicate “a growing sense of entitlement and consumer awareness” in these years that was new in the history of consumption (Trentmann and Taylor 65).

Taken together, urban dwellers issued warnings about unsanitary conditions in Los Angeles, which they regarded as a threat to their health or simply as an eyesore. In a letter to the Los Angeles Times, a resident named W. F. Wheeler warned that in Los Angeles’s warm and sunny climate, “sprinkling of dirty streets or the flushing of open gutters” was not an adequate cleaning method, as the water would simply trickle away (3). Suggesting that filth should be removed by designated workers, he revealed anxieties over the city’s public appearance. Inhabitants like Wheeler increasingly saw the present state of urban space as an obstacle preventing Los Angeles from becoming a “modern” metropolis. Being modern was of utmost importance for the self-image of Los Angeles (Deverell 2-3). Often, these residents were recent migrants to the city (Fogelson 63-84). They came to Los Angeles in the 1880s, when the transcontinental railway brought thousands of settlers to the West Coast. Grown and raised in the East or the Midwest, they were used to different kinds of cities. Against the backdrop of their experience of the urban, they criticized the poor state of roads, water pipes, and sewers in Los Angeles. They also pushed the city’s electrification and the construction of the famous Los Angeles Railway. In retrospect, they can be seen as a driving force in the development of the city (Fogelson 84).

Leaking pipes that caused intermittent water supply or flooded streets were a second cause of consumer anger around 1890. People experienced breakdowns and disruptions in the system constantly. More specifically, it was quite common for water infrastructure to fail due to technological breakdowns or poor material. Reasons for this are to be found in the city’s complex topography, its rapid, sprawling growth, the use of substandard construction materials, and the provision of inadequate storm drains. Although breakdowns and repairs were an integral part of daily life, residents zeroed in on these breakdowns as a topic of complaint. In some petitions, residents simply asked the council to connect their houses to a different water pipe, to extend water pipes or
sewers to adjacent streets, or to replace ill-functioning pipes with better ones (cf., e.g., petitions dated 6 Aug. 1889 and 5 May 1890). In others, they addressed deficiencies in the water infrastructure more explicitly. Often, they asked the council to repair broken pipes (cf., e.g., petition dated 4 Aug. 1890). In both cases, they called the city authorities’ attention to deficient infrastructure and urged them to remedy shortcomings. Consequently, the poor state of water infrastructure mobilized wealthy White male residents in Los Angeles and led them to develop a new language of the public realm and, consequently, to reconsider public space in the city.

In particular, petitions frequently addressed inadequate storm drains. In October 1889, for instance, citizens from Second Street in downtown explained that the storm water drain on the north side of the street was not adequate “to let the storm water out of and away from the flume or larger storm water drain” (petition dated 4 Oct. 1889). A few days later that month, a homeowner from the corner of Temple and Beaudry Streets petitioned the council to build a catch basin or storm drain to protect his property. He complained that his ground “has been damaged in the recent rain very seriously, by the water from the street running upon his said property” (petition dated 22 Oct. 1889). Grumbling about natural forces such as devastating rainstorms, these petitioners struggled with the effects of environmental catastrophes, which were co-produced by both natural processes and inadequate infrastructure. Experiencing ecological forces prompted Angelenos to rethink the divide between the city and its natural environment, and that included definitions of urban modernity. Los Angeles remained a rural community until well into the twentieth century. Even in downtown Los Angeles, housing density was low and houses were scattered between well-spaced gardens, agricultural fields, and vacant lots. With Los Angeles retaining a distinctly rural character, the co-existence of canyons and water pipes, citrus fields, and unpaved roads made it difficult for the council to convert their notion of a functional city into reality. Los Angeles’s physical structure, so to speak, was the result of the intermingling of technologies and their users with environmental obstacles. As a petitioner complained about the “constant overflowing or leaking of a Zanja well” on the Southwest corner of Figueroa and Pico Streets—“very disagreeable to people walking and getting in and out of vehicles on the curbs, besides being an eyesore to everybody”—they negotiated the fragile and hybrid relationship between technological and natural forces on the one hand and human agency on the other (petition dated 11 Aug. 1890).

A third force driving citizens to address the council was money. Urban dwellers regularly urged the city government and the water utility to lower prices. This is the third key strand of criticism they directed to the council, clearly exposing the prominent role of citizens in reclaiming the public realm in Los Angeles. A telling example is the case of pri-
vate land developers who were improving 2nd Street Park. In late August 1889, they asked the council to reduce their monthly water rate from $10 to $2. Arguing that the rate was too high, they reminded the council that they were developing the square into a “public resort” with their own financial means. Claiming that “it would be but just” if the council reduced the water rate, they held that “scarcely any water is lost, for the same passes from the pipe into the lake and from the lake into the zanja” (petition dated 26 Aug. 1889). This petition reveals the significance of private entrepreneurs for development in Los Angeles, and it exposes the fact that water rates in Los Angeles were contested. Furthermore, it indicates that public/private tensions were fluid, easily allowing individuals to connect their entrepreneurial interests with the common good.

While rates for potable and non-potable water in Los Angeles were low in comparison to other cities in the United States, residents were sensitive to any price increase. According to the price scheme of March 1891, users had to pay 75 cents on a monthly, flat-rate basis for a three-bedroom home occupied by a single family. However, rates increased with the number of rooms: four rooms cost 90 cents; five rooms $1; for a bathtub in a private residence, users were charged 25 cents, and for a urinal, $.1. For sprinkling lawns and gardens, the utility billed consumers 1 cent per front foot (“Appendix B: The Water Rates” 3). These water rates were quite affordable, and they were even cheaper than those of 1868, when fixed price rates were introduced. For example, a single-family household of no more than five persons had to pay $2 on a monthly, flat-rate basis in 1868 (“Old and New Water Rates” 4). With rates in 1891 25 percent cheaper than in 1868 (for a family living in three rooms), they further dropped to only 65 cents in 1894 (“The Water Rates: New Ordinance Adopted” 3).

Citizens in Los Angeles constantly pressured the utility to keep the rates below the prices allowed by the contract of 1868. Many Angelenos shared a preference for low water rates, which was strongly influenced by the scarcity of water in this semi-arid region. Against all economic laws, tight supply and strong demand did not result in high prices for water. Rather, there was a shared consensus among citizens that affordable water supplies were essential for the city to grow and to prosper. Even the pro-business Times claimed that the council “should not permit any higher rates than those at present prevailing to be charged, for the present rates are high enough” (“Water Rates” 6). These attitudes led residents to protest even cautious price adjustments by the council. Frequently, the Times reported about protests advocating further reductions in water rates. In 1895, for example, a representative of the Vernon property owners and irrigators filed a petition asking for a reduction in water rates (“Want Reduced Water Rates” 6). This petition was anything but an exception. When pondering new water rates, members of the council were regularly besieged by property owners lobbying for lower
In February 1892, at a special session of the council, a contractor named Dodd opined, as the *Times* paraphrased, “that the rate charged for water used in cement work was too high, as it amounted to thirty times higher than the meter rate. He thought that 5 cents per barrel, instead of 15 cents as at present, would satisfy all parties concerned, as not more than half a barrel of water was necessary to each barrel of cement” (“The Water Rates: Special Session” 3). At the same time, water companies presented their pleas for higher rates. Council members usually decided in favor of the petitioners.

Protesting rising prices, water users revealed anxieties over the commercialization of this valuable good. With their criticism, they implicitly addressed such fundamental questions as the ownership of the water system, legitimate consumer demands, access to and exclusion from the network, and, more generally, residential rights to water and sanitation. These questions connect the public and the private in Los Angeles. Indeed, discussion about the water system in the final decade of the nineteenth century centered around two questions: first, the abandonment of flat rates in favor of meter rates and, second, public ownership of the system.

In the course of the late 1880s, water waste and water scarcity led the council and the utility to consider the installation of water meters. The utility regarded meters as a suitable means for leading users to save water (Read 426). The first meters were put into practice in 1889 (Hoffman and Stern 14). However, installing meters was a particularly slow process in Los Angeles—in other cities in the United States, the metering of private homes happened faster (Melosi 126). Even in 1919, only 12 percent of all households in Los Angeles were metered (e.g., 88 percent still paid flat rates) (“Install Water Meters” II9). Reasons are to be found in the prevailing civic mistrust in interventions in private affairs, which led residents to engage in political micro-activism against the utility. Granting meter men access to private property was objectionable to many citizens. They feared an invasion of their privacy and increasing water rates (“Meters Demolished by Angry Patrons” I5). Archival evidence suggests that some individuals even faced problems when it came to understanding water bills based on meter rates. For instance, a citizen protested against his water consumption being metered by the Los Angeles Water Company (petition undated [Sept. 1889]). Confounding meter rates with flat rates, with only the latter being fixed by the council, he revealed deficits in knowledge about the functioning of a meter (Figure 2). In May 1890, about one hundred citizens held a meeting discussing the advantages and disadvantages of meter rates (“A Mass Meeting” 2). Fears were high that meter rates would result in rising water bills. While we know little about the inner workings of these initiatives, conflict and dissent among the activists, their agendas, and social composition, primary sources such as these clearly reveal local activism in privileged neighborhoods.
A second point of discussion was public ownership of the water system. Citizens in Los Angeles began to favor municipalization in the late 1880s, when the utility increasingly proved incapable of serving the growing city (Deverell and Sitton 18-23). Driven by the city’s boosters, reclaiming the municipal water network was a decisive feature of the Progressive Era in Los Angeles and nationally (Masten). At a meeting at Temperance Temple on Broadway in June 1890, which was, according to the *Times,* “largely attended by citizens and property-owners,” a resident lobbied for the city to take over the water network (“Water Meeting” 2). A year before, Mayor Fred Eaton had advocated public ownership by promising that the city would reduce water rates by “at least 25 per cent” (“Mayor’s Statement” 8). The proponents of municipalization often hinted at the prospect of lower prices or they pointed to other cities that already owned their systems (Hoyt and Galbreth 3). The movement grew bigger and bigger during the 1890s, popularizing the notion of a strong municipal government. In 1902, the city finally bought the water system back from the Los Angeles City Water Company. Exposing a widespread preference for public ownership, this kind of activism aimed at restoring the idea of the public in Los Angeles.

Taken together, these petitions to the council and the coverage by the *Times* are examples of how daily life in Los Angeles became politicized in the face of deficient water infrastructure. Residents did care about public space in the city. Urging the council to improve the poor condition of the water network, they criticized the way the city was governed. Not only did they assume agency for the development of urban space in Los Angeles, but they also articulated conceptions of urban modernity, sanitation, cleanliness, and domestic comfort, which differed from ideas...
nurtured by city leaders and other residents. These differing notions led to heated discussions in neighborhood meetings, in confrontational written exchanges between citizens and city officers, and in social conflict more generally. I argue, however, that conflict is something productive that helped people find common ground. More specifically, I claim that writing petitions to the council, organizing mass meetings, and discussing those issues in daily life integrated the fragmented landscape of Los Angeles both geographically and socially. I draw here on the ideas of the German sociologist Georg Simmel, who suggests in the fourth chapter of his 1908 study *Sociology: Inquiries into the Construction of Social Forms* that conflict can help stabilize a society. Simmel believes that conflict is important for social change and a beneficial feature of social life, leading groups of people with divergent standpoints to create internal solidarity and work to reduce dissent. Conflict, he writes, “is actually a curative move against the dualism leading towards division, and a way to work out some kind of unity” (227).

For the case of Los Angeles, Simmel’s conflict theory points out that political mobilization, which was an intrinsic part of everyday life with water infrastructure, strengthened urban cohesion and led Angelenos to embrace public spaces. In the end, I argue, this process resulted in the rescaling of boundaries and the integration of dispersed space in Los Angeles. The making and remaking of Los Angeles’s water infrastructure can serve as a vehicle for exploring the mutual construction of the built environment and the urban public. From a more conceptual perspective, telling the story of the public realm through its hydrological structures substantiates the claim made by Matthew Gandy that urban history can be read as water history (*Concrete and Clay* 22). Indeed, water and water infrastructure seem crucial to understanding how cities grew, how they fought diseases, and how they negotiated citizenship and political participation. In Gandy’s words, “[t]o trace the flow of water through cities is to illuminate the functioning of modern societies in all their complexity” (*Concrete and Clay* 22). The rise, fall, and renewal of urban democracy is integral to this complexity.

**Conclusion**

If Los Angeles proves anything, it is that the city is not exceptional in terms of its geographical and topographical conditions, its ecological surroundings, its built environment, and even the social or cultural parameters structuring urban life. Most of the American Southwest resembles Los Angeles, especially west of the 20-inch rainfall line (Reisner 136); most larger cities in the United States exhibit extensive urban sprawl, and many of them suffer from the decline of civic participation in urban democracy. What might be unique about Los Angeles, historically, are the myths people told (and tell) about the place, the way the city invited people to seek their fortune there—Los Angeles as the land
of promise that forges “a relationship between the past and the present that makes every tomorrow unnaturally close by” (Deverell 2). However, myths die hard.

While it is certainly true that Los Angeles went through further individualization and fragmentation in the course of the twentieth century, this process was not initiated by motorization and suburbanization gaining momentum in the 1920s and 1930s. It was deeply enmeshed with the establishment of an engineered water supply and wastewater removal network in the nineteenth century, which domesticated public life in Los Angeles. As residents could no longer get their water from open ditches or wells, but had to get it from indoor water taps instead, their relations to each other and to the public in Los Angeles were transformed. Shortly thereafter, as this essay demonstrates, a competing trend emerged as more and more migrants to the area were unsatisfied with the condition of the water infrastructure. They formed neighborhood initiatives, exposing new types of grassroots activism. These findings have important implications for the broader domain of the public realm in modern America. I argue that these initiatives can be understood as manifestations of early social movements, decentralizing urban democracy to also include ordinary citizens. Even if they only represented the wealthy Anglo-Saxon male minority of Los Angeles’s diverse population, these residents claimed a share in building the city. To the extent that they cared about the physical face and the development of this place, they aimed at reclaiming the public in Los Angeles. Nevertheless, this notion of the public was an exclusionary one, further marginalizing subaltern people.

Excavating the roots of urban democracy in Los Angeles, I do not want to overemphasize my argument by stating that these citizens saved the idea of the public in Los Angeles. I only wish to highlight that those who identify Los Angeles as the prototype of social fragmentation and individualization in American urban history oversimplify a complex story. The histories of the public and urban space in Los Angeles were contingent, as the contours of urban democracy were contested. While this may hold true for cities in many other spatial and temporal contexts, Los Angeles is a significant case study for exploring the relationship between the public and the built environment. Citizens took umbrage at dysfunctional water infrastructure, which acted as a driving force in mobilizing and assembling large numbers of residents around issues of literal and figurative cleanliness, ownership of universal goods, and citizenship and social belonging in a raced and classed urban society. In the end, water technology forged debates about individual and collective identities and prompted people to answer the question of what it could mean to be an Angeleno or Angelena in the 1890s.
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