UC Berkeley
UC Berkeley Previously Published Works

Title
Zombie infrastructure: A legal geography of railroad monstrosity in the California desert

Permalink
https://escholarship.org/uc/item/6gd8x0gv

Journal
Environment and Planning D Society and Space, 39(4)

ISSN
0263-7758

Author
Sizek, Julia

Publication Date
2021-08-01

DOI
10.1177/02637758211023504

Peer reviewed

eScholarship.org Powered by the California Digital Library
University of California

Zombie Infrastructure: A Legal Geography of Railroad Monstrosity in the California Desert

Abstract: This paper proposes the concept of zombie infrastructure to understand the entangled histories of railroad colonialism, Indigenous dispossession, and corporate power in the California desert. I examine debates over the Cadiz project, a contemporary water project that proposes to take water from a California desert aquifer and transport it to the California coast. I argue that the life of the Cadiz project depends on Cadiz Inc's ability to revive the legal rights and body of a little-used railroad short line, thus bringing back a legal infrastructure and corporate power from the late nineteenth century in the service of a new corporation. In so doing, the Cadiz project enlivens the racialized dispossession of land and labor that the railroad initially required. Routing the politics of a contemporary infrastructure project through the railroad and its zombie past, I argue, places the politics of infrastructure at the intersection of laws, monstrosity, and dispossession. Drawing on economic and legal geography, this paper proposes the concept of zombie infrastructure, a concept that builds on what activists call zombie projects in order to show the life and death of infrastructure, and reveals how contemporary capitalists enliven old infrastructures for new purposes.

--

When I drove to Tom's house, I went around the signs that told me the road was closed: some of the bridges along Route 66 washed out, and the county closed thirty miles of the road that traveled through his small California desert town (Route 66 News, 2017). After the washouts, the only people who traveled the Mother Road are Tom and the other seven residents. Tom, a seventy-year old white man, didn't mind. He moved to the tiny town to get away from people and be closer to his job, which was site monitoring in the mountains at the Native American Land Conservancy's (NALC) preserve twenty miles away. Tom worked for the intertribal nonprofit as a site monitor after he sold them land his family had purchased from the railroad in the 1910s. I met Tom through my own work for NALC that began in 2012, and hung out with him again in 2016, during two years of ethnographic research.

As we sat on his back porch, a train rumbled through his backyard. Tom liked train-watching, telling me that the railroad was a reminder of a better time. Though trains invoked nostalgia, they tracked the present. He remembered watching the military build-up after 9/11 through the train-transported equipment bound for southern California bases. Tom, a veteran, found the railroad interesting, but found other railroad connections troubling. Just a couple of railroad water stops away, Cadiz was to be the site of a new groundwater extraction project, which he feared would make his well run dry as well as the springs in the Old Woman Mountains, where his NALC's preserve is located. The project would take water from the desert aquifer through a to-be-constructed pipeline that would travel alongside a rarely-used railroad short line, connecting to the Colorado River aqueduct and taking the water to the California coast. Tom thought it was just like all of the other projects that had been proposed in the desert—like the Ward Valley nuclear dump and the Bolo landfill, projects that were vehemently opposed by Mojaves, Chemehuevis, and other desert tribes as well as white residents like Tom (Klasky, 1997; Carraher, 1998). Cadiz was just another project animated from the idea that the desert is a

wasteland, a dead place that seemed like it couldn't be affected by extraction or degradation (Kuletz, 1998; Voyles, 2015). The newest iteration of the Cadiz project has many enemies, including the NALC. In 2021, the Native American Land Conservancy is part of a lawsuit opposing a last-minute right-of-way issued by the Trump Administration, arguing that the Bureau of Land Management "did not comply with the required process" to meaningfully consult tribes on their traditional territory (NPCA 2021). This newest lawsuit reflects decades of legal battles against the project, as well as the Cadiz project's constant reappearance. In this article, I follow this project to argue that Cadiz's contemporary reappearance depends on a zombie infrastructure, or the reanimation of both legal and material substrates to make the new project happen. In so doing, Cadiz Inc reanimates histories of dispossession, monstrosity, and colonialism.

My argument, in short, is that the life of the Cadiz project—which would take water from an aquifer and subsequently transport it to the California coast—depends on reviving the legal rights and body of a little-used railroad short line. Cadiz Inc, the company proposing the project, needs to bring the railroad's legal infrastructure back to life for a new purpose. Routing the politics of a contemporary infrastructure project through the railroad, I argue, allows for a new way of looking at the politics of infrastructure at the intersection of law and monstrosity: zombie infrastructure. I use this concept to elaborate what activists call zombie projects, to show the life and death of infrastructure, and to reveal how contemporary capitalist projects depend on repurposing older forms of capitalist investment and, in so doing, resurface histories of dispossession of labor and land. Though the railroad used to be a monopolistic octopus, today it is a zombie reanimated by another company for a new purpose.

In what follows, I trace the life, apparent death, and rebirth of an Atchinson, Topeka and Santa Fe spur line, analyzing the metaphors of liveliness and monstrosity that have animated both contemporary discussions of the corporate persons of Cadiz Inc and the railroad company that preceded it more than a century earlier. My contemporary ethnographic research (2015-2020) is used as the basis of connections to literary, archival, and legal documents that detail the rise and fall of the railroad as a matter of life and death. The article tacks between the understanding of the railroad as an economic and metaphoric engine of desert life and as the rapacious capitalist consumer of desert lives before I turn to understanding the railroad today, as a seemingly empty vessel made to serve new purposes by a new master.

The Zombie and the Railroad

Project opponents call projects like Cadiz 'zombie projects,' referring to their reappearance after apparent death. Cadiz, like many other California water projects, was born during a California drought more than forty years ago, and is a zombie because it "come[s] back to life when people worry about drought" (Everts q. in Waldman 2014). Cadiz Inc has returned with new project iterations incessantly, as activists involved in the long campaigns against the project attested. Employees at the National Parks Conservation Association (NPCA)—who coordinated much of the action against Cadiz—opposed the various iterations of the project for more than twenty years. Along with groups like the Native American Land Conservancy, Mojave Desert Land Trust, and the Sierra Club, NPCA lobbied at the statehouse and in Washington, D.C., packed water district meetings, and filed lawsuits to oppose the Cadiz project.

Activists were obsessed with the project's death. In summer 2020, a Zoom meeting

celebrated what project opponents had hoped would be the final nail in the project's coffin, a bill that passed through the California statehouse months earlier. The people on the call—a mix of environmental organization employees and environmental activists in the Coachella Valley, Los Angeles, and the Morongo Basin—used death metaphors to refer to the project and eponymous corporate person (Bashkow, 2014; Walenta, 2015): "we're close to killing Cadiz," "Cadiz is dead." These metaphors of corporate personhood were normal in these campaigns, as everyone had talked about the project's nine lives and life-after-death during more than 25 years of opposition.

The corporate body often shifted between the company, its CEO, and the projects the company undertook. These interrelated corporate bodies were assumed in these conversations—activists hoped that killing the project would result in the company's final bankruptcy, ending the CEO's career. The corporate person of Cadiz Inc was both a proposed project and an evil corporation, what David, an environmental activist on the Zoom meeting, called a "truly worthy adversary, who are also evil geniuses [*sic*]." Even David's confusion between the company as a singular adversary and a collection of evil geniuses hints at the messiness of the corporate entity, its personhood, and the collection of project iterations that had accumulated since the 1980s. It embodies what Jayme Walenta, in her analysis of the Enron case, calls the "challenge to determine where the human body of the former CEOs ended and the corporate body... began" (2015: 546). Yet, more proximately, David was referring to the battles between environmentalists and the Cadiz project, and how Cadiz seemed to rescue its project from death through new agreements with water districts and obscure interpretations of old railroad laws. Activists like David simply called Cadiz a zombie because the project seemed undead, but my concept of zombie infrastructure relies on a deeper reading of the project's life as dependent on reanimating railroad infrastructure for a new purpose. I argue that the railroad is a monstrous zombie reanimated in the service of Cadiz Inc, its new master.

As a metaphor, the zombie draws on the same power that J K Gibson-Graham (1996) show in their analysis of the economy, in which body metaphors naturalize and order the economy as an entity beyond our control. Jayme Walenta's analysis of the corporate body furthers this point, revealing how corporate body metaphors are contested sites over who can access the rights of corporate personhood with implications for understanding "a corporation [that] is always in the process of becoming" (2015: 557). These critical approaches reveal the work that different metaphors of corporate—and capitalist—monstrosity can do for understanding the railroad, the original corporate person under the 1886 *Santa Clara v. Southern Pacific Railroad Company* court case. Through using the zombie, I understand Cadiz Inc's corporate personhood in the afterlife of a project of empire (Stoler 2008), a reworking of the conditions under which the railroad was made: land grants and right-of-ways given to the railroad through dispossessing Chemehuevi, Mojave and Serrano tribes.

Postcolonial scholarship often draws on ghostly figures to explain how colonial traces become reanimated in the present. For example, Jean and John Comaroff (2002) argue that the figure of the zombie in South Africa draws on xenophobic fears at the same moment that it reanimates colonial pasts in a moment of shifting contemporary labor patterns under neoliberal capital. For them, the zombie is a figure that can help explain the present through navigating through the past, how historical racialized labor relations haunt the present. I argue that even what appears to be without human labor today—water seeping from a well in the Cadiz Valley—

depends on the racialized dispossession and labor regimes that the construction of the railroad required, making the railroad's reinvigoration today an apt use of the zombie metaphor. The zombie, as anthropologist Zora Neale Hurston (1938) described it in Haiti, is a body reanimated from the grave without a soul, an empty vessel that labors for its bocor (master) without thinking. The zombie was formed in the context of ongoing US colonial presence in Haiti, a means of understanding legacies of racialized and enslaved labor. In extending the use of the word zombie to railroad infrastructure, I consider how infrastructure indexes the state's relationship to its denizens (Ficek, 2018) and reflect on what Manu Karuka (2019: 42) calls railroad colonialism, in which the colonial state attempts "to confine myriad possible futures into the death threat of imperialism." In zombie infrastructure, the already-imperial railroad is the zombie that is being reanimated by a new bocor: Cadiz Inc. In this way, I take seriously Hurston's framework of the zombie and apply it to a seemingly dead infrastructure—the transcontinental spur line—that is is reanimated by a new master.

The life of the railroad today, though distinct from its past as a mechanism of territorial expansion and empire-building, depends on both the physical and legal bodies of the railroad. The latter is a legal infrastructure—a railroad right-of-way, a property status between easement and property—that needs to become reanimated for the Cadiz project to be successful. In short, Cadiz Inc wants to build a pipeline along the infrequently used railroad spur line. To avoid permitting and costly environmental regulation that could delay the project and its profitability, they need a certain legal determination in which the spur line's right-of-way is determined to be more akin to property rather than an easement (right of access) that the railroad can transfer to Cadiz Inc. With such a legal determination, Cadiz hopes to eliminate the possibility of opposition based in pipeline politics (Barry, 2013). Cadiz needs the railroad's octopus past to make a zombie present.

The history of the railroad is central to understanding Cadiz's projects to revive the right-of-way today. In the nineteenth century, the railroad held promise as a great connector and symbol of the aesthetics of modernity. "What is the railroad to do for *us*? — this railroad that we have looked for, hoped for, prayed for so long?" Henry George (1868) famously asked of the transcontinentals that would later arrive in California, showing how infrastructural projects harbor hope and dreams (Larkin, 2013; Wilson and Bayón, 2017). But today, I argue that the question is less about the promise of infrastructure, and more about how the same still-functioning infrastructure has changed. What has the railroad become? While trains used to index aspirations of modernity and the acceleration of space and time (Bear, 2007; Stoler, 2008), today they are considered quaint objects of nostalgia (Stevenson, 2018; Strangleman, 2002). Neither ruins (DeSilvey and Edensor, 2013) nor unfinished or unbuilt infrastructure (Anand et al., 2018; Carse and Kneas, 2019), railroads are both a defunct form of passenger travel and the bedrock of contemporary freight transportation in the United States (Wolmar, 2012). And some railroad lines, like the Arizona & California line that Cadiz hopes to use for their project, are traces of the past, rarely used spur lines that used to be tentacles of the powerful transcontinentals.

The Railroad Dream

The word infrastructure came a French word that was adopted into English to describe the

material—rocks and railroad ties—on which railroad tracks rested (Carse, 2014). That is, infrastructure originally meant "the organizational work required before railroad tracks could be laid" (Carse 2016, 34). When adopted into mainstream use in English in the post-World War II era, infrastructure represented projects of military expansion and international development. Among social scientists, infrastructure has been understood as a site of optimist dreams of modernist progress, enlightenment, and affective attachments to these abstract ideas (Larkin, 2013). Infrastructures feed dreams of connection and capital (Wilson and Bayón 2017), even as we imagine futures beyond infrastructure's inevitable collapse (Carter and Acker, 2020). Yet, just as development projects in Africa often reflected the colonial projects that preceded them (Cooper, 2010), railroads-as-infrastructure reveal their military and imperial pasts even as they represent dreams of progress.

In the United States, the railroad was part of a broader military and imperial project. Railroad surveyors in the mid-nineteenth century were sponsored by the American military (Angevine, 2004). The railroad represented the intersection of military and financial goals of integrating the American West into a white nation. The railroad carried white settlers across the continent, a goal of California Governor Leland Stanford, a railroad magnate who drew on anti-Chinese and anti-Indigenous rhetoric to lobby for a railroad that would connect the two coasts (Karuka 2019, 82-83). Stanford's mission to create a railroad also depended on new strategies of financial securitization and financialization backed by fee simple land grants (White, 2011).

While the plans for the railroad drew upon new military and capital formations, the railroad depended on the support of the federal government through Congressional land grants that dispossessed California desert Indigenous Peoples. In the California desert, the Atchinson, Topeka, and Santa Fe links Needles and Barstow, claiming the traditional territory of Chemehuevi and Serrano peoples (Wood, n.d.). In most cases, land grants preceded the establishment of tribal reservations, proving that the US government's priority was the railroad (Sutton, 1967). The railroad recruited Diné and Chinese labor to build the railroad lines (Drover, 1985), and built a railroad station atop the town of Needles, the home of the Mojave people, and where the Fort Mojave Reservation is today.

The land grants given to the railroad were in a distinctive checkerboarded pattern that extended ten miles in each direction from the railroad right-of way. In contrast to the right-of-way, which is an easement given to the railroad from the US government and is thus more restricted, the land grants were fully owned by the railroad and meant to be sold. The land grants were to encourage homestead settlement and increase the value of adjacent government lands (Johnson 1976, 144). By selling the land grants, the railroad was to subsidize railroad construction while settling the desert.

Needles was one of many towns along the railroad meant for white settlement. The company's dream was that white settlers would buy the land along the line, so they named the water stops in alphabetically appealing names—what I call the ABC towns. Amboy, Bristol, Cadiz, Danby, Edson, Fenner, Goffs, Homer, Ibex and Java punctuated the rail line as water stops ten miles apart (Myrick, 1963: 766). Their order, like a numbered grid, implied that the desert was already surveyed and made to be empty for white settlers, but the railroad land grants were and still are Chemehuevi, Mojave, and Serrano lands (Trafzer, 2015). The named towns encoded desires that the railroad's sale of lands would bring not only railroad profits, but organized settlement, like other roads that had promised infrastructural connection to big cities elsewhere

(Harvey and Knox, 2015). But the names failed to attract new settlers or government interest, leaving the desert a wasteland beyond settler colonial dreams—a place where Chemehuevis, Serranos and Mojaves could escape to be beyond government control.

Though railroads ruled the nineteenth century, very few were constructed after World War I (Headrick 1988, 49-50). Although few new lines were constructed and many were abandoned, railroads retained their importance. Neither a ruin that commemorates a past nor a past form of infrastructure in need of a retrofit, railroads were still central to freight transportation even as they ceded their importance as passenger transportation (Wolmar, 2012). The railroad lines also determined the routes of other forms of transportation, by making both legal and physical routes for new infrastructure. That is, railroad infrastructure became the basis of future projects, and today highways, power lines, and natural gas pipelines all follow their paths.

The odd position of the railroad today—both essential to contemporary transcontinental transportation, but no longer retaining the monopolistic power it once had—is the tension that animates the remainder of this article. What matters, for the success of the Cadiz project, is what the railroad has become. In what follows, I track the railroad monster through its metaphors, from its incarnation as the all-powerful octopus in the nineteenth century through its slow cession of importance throughout the twentieth century.

The Railroad Monstrosity

When the railroad came to the California desert, it crossed the expanse that had previously challenged those who had hoped to reach the coast. Railroad historian David Myrick later described the desert as "wild and desolate country, treacherous to man or beast," as he recalled the sandstorms that Chinese-American railroad workers worked through when other workers stopped (1963: 762, 766). What was built as the Atlantic and Pacific by Chinese-American labor became part of the Atchinson Topeka and Santa Fe (ATSF) line maintained with Diné labor imported from the Arizona and New Mexico territories (Chang, 2019; Drover, 1985). While the railroad's construction depended on the labor of racialized others, for whites, the railroad promised prosperity (Karuka, 2019; George, 1868) and the reordering of time and space (MacDougall, 2006) offered an opportunity to upend past social relations (Freeman, 1999).

The flip side of the railroad's promise of connection was the sinister collapse of space and time that scholars later called "action at a distance" (MacDougall, 2006). This action at a distance described more than the railroad's speed: it also revealed how the railroad had far-reaching influence over politics and the economy. Political cartoonist G. Frederick Keller (1882) captured the anti-railroad monopoly stance in his 1882 cartoon, "The Curse of California." [insert Figure 1] The cartoon depicted the railroad as a monstrous octopus whose tentacled grip spanned the state of California, strangling miners, stage lines, and grain farmers. The background includes a cemetery dedicated to railroad deaths, including one for the Mussel Slough tragedy, a deadly standoff between Southern Pacific railroad officials and locals over railroad land grant prices. Keller's cartoon presaged the 1886 *Santa Clara* case that declared the corporation as a corporate body (Walenta, 2015), and framed the railroad as a monster that inspired one of the most famous novels about turn-of-the-century California: Frank Norris' (1901) *The Octopus.*

Frank Norris' novel centers on the conflict between grain farmers and the railroad, what seems like a conflict over land. For Norris, it was a conflict not necessarily over land, but over

wheat, what he thought was the lifeforce of the novel (Starr, 1986: vii). Norris' obsession with the crop was supposed to become a three-volume realist trilogy that covered growing wheat (*The Octopus*), distributing and selling it (*The Pit*), and consuming it (the unwritten *The Wolf*) (ibid). In *The Octopus*, the railroad is a parasitic middleman who raises freight prices and land rents to make profits.

In one passage, Norris described how the railroad sucks the life from the towns, feeding itself like a parasite.

> "The map was white, and it seemed as if all the colour which should have gone to vivify the various counties, towns, and cities marked upon it had been absorbed by that huge, sprawling organism, with its ruddy arteries converging to a central point. It was as though the state had been sucked white and colourless, and against this pallid background the red arteries of the monster stood out, swollen with life-blood, reaching out to infinity, gorged to bursting; an excresence, a gigantic parasite fattening upon the lifeblood of an entire commonwealth." (Norris, 1994: 289)

Norris' vivid description of the railroad as a blood-sucking organism would have been familiar to his readers, who were used to seeing depictions of monopolistic corporations and churches as octopuses. Sinister and powerful, the octopus was known to many as the 'devil-fish' (Hugo, 2002 [1866]). At the time, many—including Victor Hugo, who is often credited with bringing the octopus into public view in his 1866 *Toilers of the Sea*—saw the creature as vicious and blood-sucking. The octopus shared characteristics with vampires and inspired the hydra, the latter of which Norris also used to describe the railroad monster (Lee, 1875: xiv-xv; Norris, 1994 [1901]: 370). The octopus was so powerful as a metaphor to describe the railroad because it was a spatial and infrastructural metaphor that revealed the extent of the railroad's transportation monopoly. The octopus' limbs also were analytically potent to describe the new railroad spur lines that began to appear to support new mining ventures or connect together separate railroad lines.

The cunning, blood-sucking vampire was the natural counterpart to the sneaky, predatory octopus. Only a year after Hugo introduced the bloodthirsty octopus, Marx's 1867 *Capital, Volume I* depicted capital as vampiric: "Capital is dead labor which, vampire-like, lives only by sucking living labor" (Marx, 1867). The vampire appeared in "The Working Day," describing how capitalists seek to extend the working day in order to reap more benefits from the worker's labor, an experience familiar to Chinese-American and Diné workers on railroad lines. Later, scholars understood the vampiric monstrosity of capital as the miserly nature of the capitalist (Moretti, 2005 [1983]: 94) as well as a metaphor for the relationship between the living and the dead under capital, in which the accumulated forms of past wealth control the present in a magnification of the *ancien regime* (Neocleous, 2003). Beyond the sucking of value, then, the vampire served as a metaphor for understanding how social relations from the dead come to rule the living through the persistence of old social forms into the present. To live in the time of monsters, as Žižek (2010) has (mis)translated Gramsci, is to be in a crisis in which "the old is dying and the new cannot be born," a time during which "morbid phenomena...come to pass" (Gramsci 1992,2: 32-33).

Monstrosity expressed the far-reaching changes that began with the railroad's arrival while consolidating the railroad's influence into a single body. Even though the vampire didn't capture the spatial extent of the railroad's regime, Norris drew on blood-sucking metaphors to articulate how he thought the railroad was controlling and the grain farmers who his novel followed. Norris largely ignored, however, the racialized labor used to build and maintain the railroad, the work gangs whose labor was most similar to the Marx's description of nineteenth

century labor sucked by corporate vampires. Norris, though somewhat sympathetic to the plight of a Native American figure in *The Octopus*, was also a nationalist and Anglo-Saxonist whose work slid into anti-Semitism (Goldsmith, 1967), making it unsurprising that he ignored the labor of racialized others who built and maintained the railroad.

While the idea of the railroad as an octopus was popular, some of Norris' contemporaries questioned if the railroad octopus did have a stranglehold over California politics (Deverell, 1994: 142). Historians today also question whether railroaders were cunning octopuses or just bumbling "men in octopus suits" who were motivated by pettiness and vengeance as much as they were by company profit and efficiency (White, 2011: 230).

Although the railroad may not have been as obviously sinister as people like Norris had presented it as being, railroads' influence over future transportation infrastructure can't be disputed. The railroad octopus grew new limbs until World War I, connecting industries like mines to freight transportation as well as lines to each other. In the desert, a new spur line connected Cadiz—on the ATSF line—to other transcontinentals in Parker, Arizona (Myrick, 1963). After World War I, the railroad lines became the basis for new transportation infrastructure, like the establishment of Route 66 along the ATSF line in the California desert. In the next section, I chronicle the apparent death of the railroad—that is, what happens when the railroad is no longer the monopolistic octopus, and what happens to the small towns that had existed to support the railroad line.

The Death of the Monopolistic Octopus

The ABC towns along the railroad line were built to support the railroad and encourage settlement in the Mojave, but Tom thought that the railroad only made the desert into a transportation hub, not a place to live. As we drove through the Piute *[sic]* Mountains, so named for being Chemehuevi aboriginal territory,[1] down a series of unmaintained roads, Tom told me about how it used to be during his 1950s childhood, back when he visited his grandparents in the desert. His grandparents drove in a Cadillac because the roads were maintained by the county, unlike today's rough 4WD road. Back then, the cafes along Route 66 were still thriving, but they would soon start struggling when I-40 was constructed to ease the demands on transportation in the region. To grade the new route for I-40, the government initially planned to use an atomic bomb, a reflection of the way that the new interstates were explicitly military, national security, and public works projects, as well as the status of the desert as wasteland (Kirsch, 2005). As car travel wore away at the railroad's old monopoly on transportation, it seemed like the railroad was losing its grip on the California desert and its industries.

Tom told me that the ABC towns started dying back when I-40 was constructed, and that Californians found the area only to be a place to travel through and exploit rather than a place of value. A newspaper columnist in the 1950s and 1960s referred to the region as the "magic triangle" or "lonesome triangle" whose borders were defined by transportation routes, terms picked up by scholars who said that the ABC towns were only pit stops for what was transported through them (Bard, 1972). The "magic triangle" defined by its transportation erased the desert's history, making it seem like no one—including Chemehuevis and Mojaves who lived there—

[1] Chemehuevis are the southwesternmost Tribe of Southern Paiutes (Trafzer 2015).

could have prospered in such a wasteland. To the American public, the ABC towns epitomized rural disconnection. In 1977, Johnny Carson invited the whole town of Essex (then, 50 people; today, 8) to a live taping of the show because the town had no television signal to watch it at home (Quinn, 1977). Today, Tom felt disconnected from the rest of the state—the city people, he disparagingly called them—who he thought set out to ruin his home by proposing landfills, nuclear waste storage, and groundwater extraction projects in his backyard.

The myriad projects proposed in the 1980s depended on the same railroad that Tom enjoyed watching in his backyard, and arose through a change in railroad management away from an octopus or monopoly style and toward short-term profits in the 1980s (Gibson and Horvath, 1983; Lazonick and O'Sullivan, 2000). Rather than maintain the many railroad lines that had been constructed a century earlier, railroad companies kept their main lines and sold off short lines for short-term profit. In the desert, ATSF sold off its shortlines, including the one that connected Cadiz to Parker. The spur lines became part of new shortline conglomerates who bought up many seldom-used shortlines for short haul freight. The mainline remained part of ATSF, but the profit-making strategy for the mainline was also shifting to favor freight contracts for new projects. The Bolo landfill, proposed by Waste Management Inc and ATSF, would use the railroad line and old railroad land grants for waste transportation and storage, but rely on the expertise of WMI to design and operate the landfill (Carraher, 1998). The project, what one might call a literal wastelanding of the desert premised in land grant checkerboarded landownership (Voyles, 2015), failed amid WMI's many corruption scandals in the late 1990s. Yet Bolo still reflected a shift to this new corporate profit-making strategy, signaling the end of the octopus era and what Tom saw as investment in the California desert.

To Tom, the shortline sale and Bolo project were signs that no one wanted to make the desert a better place to live by improving it. When Cadiz Inc. bought 30,000 acres of checkerboarded railroad land grant in 1983, Tom said that he thought that they would be farming —what he saw as a beneficial use of the land after years of neglect. Drawing on his own ideas of improvement, Tom justified Cadiz growing citrus and grapes as making the desert better, putting the land to good use rather than leaving it to its own devices. 'Making the desert bloom' through irrigation projects has a long history in California (James, 1906), and such modernist aspirations to redirect and divert water for agriculture were the basis of extensive dam and irrigation projects on California's rivers (Hundley, 2001).

But it was often the case that such improvement was for speculative profit, not for its own sake. In the 1880s, land speculators preyed upon Easterners in the desert land rush. Speculators planted olive trees or hung oranges from the branches of Joshua trees to dupe city people, symbolize the land's farming potential, and manifest sellers' long-term commitment to the land, only to let the trees die after all of the land had been purchased (Lothrop, 1993: 277). In these cases, improvement was not a good faith effort to make the desert agricultural, but rather a speculative investment to ensnare unsuspecting homesteaders or investors.

While Tom had initially believed that Cadiz was going to improve the desert land, his opinion quickly changed when the company revealed its scheme to take water from the aquifer to the coast. After he saw the pumping numbers that the company proposed, he began to worry about his groundwater and the plants and animals that depended on local springs. "Cay-dizz shouldn't be taking out desert water," he said, marking his preference for the Anglicized pronunciation of the Spanish name, a mark of rural locality in the California desert. He feared

that the well at his ABC house would dry up with a lower groundwater table, and that the springs would dry up. The springs, which support bighorn sheep, bobcats, and mountain lions in the harsh desert, were well-known by Tom from his acidhead days after the Vietnam War. He worried for not only the animals, but for the cultural survival of tribes.

Tribes in the area have opposed the Cadiz project (Wood n.d.). In the 2021 lawsuit against Cadiz, NALC argues that the project would destroy water sources important for tribes that "continue to visit, gather, and utilize these special areas in the desert for our cultural survival" (NPCA 2021). The intertribal land trust's comment, which emphasizes continued Indigenous presence on desert land, also refuses the idea that colonization is complete or successful.

Tom's skepticism of the government and corporations was reflected in his sense that his (few) neighbors had been bought out by Cadiz in order to support the company's ambitions.[2] "They can't buy me out," he confidently told me, though he suspected that the county had already been bought out by lobbyists for the corporation. Tom's sense was that corporate actors and the government were working together to make projects like Cadiz happen against the interests of ordinary people like him (for a similar case, see Lepselter, 2016). His sense—that *something* was wrong—seemed to be a more extreme version of what I had heard from so many others about the Cadiz water project: that it would just be the newest *Chinatown*. For Cadiz opponents, Roman Polanski's (1974) *Chinatown* represented all that was wrong in water provision in California. Though Californians often take the film as only a slightly fictionalized rendering of the construction of the Los Angeles Aqueduct (Andersen, 2004; Erie and Brackman, 2006), the film instead shows the sensibility that Californians like Tom have, that there is a cabal of power brokers who decide what really happens while ordinary people are left out.

The Cadiz project had also been through multiple iterations, furthering the sense—to Tom and others—that it was a zombie project that would never go away. Before the newest iteration, the company had proposed a partnership with the LA Metropolitan Water District in a groundwater storage project before political will fell away from the project in 2000.[3] The end of this project, and Cadiz's revenue losses in other ventures (including specialty citrus and raisins), seemed never to doom the corporation. To Tom and environmentalists, Cadiz was just an undead zombie.

Legal and Zombie Infrastructures

The continued life of the Cadiz project has most recently depended on reinvigorating part of the railroad octopus, an ATSF spur line between Cadiz and Parker, AZ, now owned by a shortline conglomerate. This spur line—known as the Arizona and California, or A&C—connected Parker to the ATSF mainline, and was constructed between 1905 and 1910, near the end of the octopus era (Waters, 1950). After railroad consolidation and the sale of the line to a

---

[2] I have not been able to substantiate Tom's claim that Cadiz bought people out, but allegations of corruption were true in the 1990s Waste Management Inc Bolo landfill project, in which WMI created a sham organization that purported to represent Fenner, Amboy, Cadiz, and Essex residents that favored the project (Carraher, 1998).

[3] The Cadiz project faced scandal when reported revealed that Cadiz owner Keith Brackpool had given major campaign contributions to Governor Gray Davis (Clifford and Perry, 2000). The late 1990s was a time of political and corruption scandal in the California desert that led to the demise of several projects (Carraher, 1998).

short line conglomerate, today the line is seldom used, merely transporting 20,000 railroad cars from Arizona to Barstow during a year, averaging less than one train a day (BNSF, 2019). While the railroad line is largely irrelevant for the railroad, it has become a centerpiece in the debate over Cadiz because the company plans to move the water in a pipeline alongside the railroad right-of-way. Like other cases of pipeline politics in which transporting extracted materials becomes the political point of contention (Barry, 2013), the debate over the pipeline that would convey water from the Cadiz project site to the Colorado River Aqueduct has become a centerpiece of conflict. Like other projects "built on the literal ground of historical patterns of land grabs" (Pasternak and Dafnos, 2017: 740), pipeline politics build on history of dispossession and racialized labor that I've described. In contrast to other projects, though, this pipeline conflict does not concern the extent of federal government power (eminent domain) or the specter of environmental catastrophe through pipeline spills as in the case of the Dakota Access Pipeline. Instead, this conflict is about the limits of the railroad's political and economic power under the Railway Right of Way Act of 1875, and the extent to which the railroad line can be repurposed to new ends. Or, in the metaphorics of the zombie, the question is how and to what extent Cadiz Inc can act as a bocor to bring the old railroad back to life as zombie infrastructure.

The debate over Cadiz's pipeline hinges on the interpretation of the legal rights that the right-of-way confers. Unlike the railroad land grants, which were given in fee simple title or complete ownership, the Supreme Court has consistently declared that railroad right-of-ways are in a gray area between property and easement (Thayer, 2015). *Where* right-of-ways fall on this scale is less clear. While the boundaries of the rights a right-of-way confers is muddied, it is obvious who benefits from interpretations that favor one side or the other. If the right-of-way is determined to be more like property, then railroads can more easily subdivide their rights and conduct projects alongside the right-of-way. In contrast, a right-of-way more like an easement benefits the federal government, who retains greater rights over the land that they own underneath the right-of-way.

While land grants given to the railroad were theirs as private property and could be freely sold (as in, for example, NALC's land or the ABC towns), the limits of ownership for the railroad right-of-way is less clear. Technically, a railroad right-of-way occupies a gray legal area between an easement and fee property, between only a right to access and a private property right that implies greater access and control. In the octopus days, railroad companies often treated right-of-ways as absolutely owned parcels, and divided the rights in their easements to allow for telegraph lines to be constructed in the late nineteenth century.

Though the government initially allowed for the construction of communications infrastructure along railroad right-of-ways, the Supreme Court later rejected attempts to make railroad right-of-ways seem like true property. In *Great Northern Railway Co. vs. United States* (1942), the Supreme Court decided that the between-easement-and-fee status of the right-of-way did not include the right to subsurface minerals. In tandem with the rise of environmental regulation in the 1970s, court cases further limited the scope of what a railroad could do with its right-of-way. In *Home on the Range v. AT&T Corporation* (2005), a district court determined that the railroad could not subdivide the railroad right-of-way to allow for the construction of a fiber optic cable along the subsurface. The court argued that the railroad couldn't subdivide its easement without regulatory oversight from the federal government because the proposed use was outside of the scope of the original easement: that is, a railroad purpose.

The criteria of "railroad purpose" has become increasingly important in these cases, especially as railroads are given less flexibility in what they can do with their right-of-ways (Thayer 2015). For Cadiz, arguing that their water pipeline fulfills a railroad purpose could help avoid regulatory demands, and therefore much of their pro-pipeline argument was premised on how the water pipeline would be useful for the rarely-operated railroad. The company argued that the pipeline would provide a sprinkler system that would fight potential fires along the railroad line, a problem that is atypical for the desert line and normally solved by sand (Kenna, 2015). Under Cadiz's interpretation, the pipeline could serve a railroad purpose—fire suppression—and thereby skip the regulatory processes that might otherwise be necessary to approve the construction of a new pipeline on federal lands.

Environmentalists and regulators alike have questioned whether Cadiz's water pipeline is only incidentally related to the railroad, or if the pipeline would truly serve a railroad purpose. A 2015 letter from Bureau of Land Management puts it in this way: "groundwater capture and use, not fire suppression, drives the design of the [water pipeline]" (Kenna, 2015: 4). In tandem with an Obama-era Department of the Interior Solicitor's opinion (M-370125) from 2011, this letter solidified the criteria of railroad purpose as determining whether a new development along a right-of-way was valid. The Obama-era solicitor's opinion emphasized a legal doctrine in which easements given by the federal government are construed against the grantee, meaning that the federal government retains more control over the easement.

Six years later, the Trump Administration acting Solicitor revoked this guidance in a new memo (M-37048), arguing that the courts have erred in requiring a railroad purpose for railroad right-of-way development. He argued that any incidental benefit the railroad might receive from the project is sufficient to approve the project and that a strictly construed railroad purpose is unnecessary (BLM's Analysis, 2020). In January 2021 before leaving office, the Trump Administration approved the right-of-way, which is now being challenged by a lawsuit from NALC and NPCA (NPCA, 2021). This act de-emphasized the role that the federal government has in regulatory projects, consonant with other policies to roll back federal regulation under the Trump Administration.

While the shift in federal policy around the definition of railroad purpose coincides neatly with regulationist and anti-regulationist approaches to governing, the pipeline debate ultimately hinges on the interpretation of a nineteenth-century railroad law and its application to a rarely-used shortline today. The question is: what power and influence the railroad maintains from its octopus days in which the corporation wielded great economic and political power? Can Cadiz revive the railroad's old legal apparatus and bring back the railroad as a zombie for new purposes?

The liminal status of the railroad right-of-way is a livingdead zombie infrastructure, one that is no longer animated by the political and economic power of the railroad octopus but attempts to re-enliven old uses of the railroad for new purposes and corporations. Like the zombie brought back to life after apparent death to labor for a bocor, the right-of-way today is brought back to perform a purpose different from what it was originally meant to do, in support of a new project. It is this feature that makes the Cadiz a zombie project, in which Cadiz Inc is the bocor that tries to reanimate the railroad on the old legal and physical infrastructure of the spur line between Cadiz and Parker.

A Railroad to Nowhere

David, a Latino anti-Cadiz activist working for one of the major green nonprofits, told me about his half-joking plan to protest the Cadiz pipeline. He'd walk walk the little-used railroad tracks parallel to the proposed pipeline carrying a cardboard cut-out of a train, asking any passers-by how to get to Burning Man. His joke highlighted the absurdity of profit-seeking city people coming to the desert and the lack of desert know-how that seemed to characterize the Cadiz project from the beginning.

An actual protest would be politically useless: David knew that he'd find only ravens and jackrabbits, and not even a single train. While he imagined the protest as a satirical take on the country-city relationships that characterized the project, it was also his critique of the railroad's role in the Cadiz project. The cardboard cutout, and the train that it represented, was simply bringing back the train as a flimsy version of its former self, nothing like the railroad octopus that once ruled the Mojave.

The cardboard cut-out train was a joke about something that Cadiz had planned to do in order to make their water pipeline into a railroad purpose: build the Cadiz Southeastern Railway (CSER). The new railway is not much more than a website that advertises the future historic steam train operation with artist-rendered drawings (Cadiz Southeastern Railway, no date). The new railway project recalls an older look and feel of the desert, advertised to nostalgic railroad enthusiasts.

CSER's vision was to support the Cadiz project by demanding a water pipeline, and a use for the seldom-used railway that would then need to be controlled by Cadiz, Inc. In tandem, both CSER and the pipeline could serve to strengthen Cadiz's broader claim to the railroad right-of-way, and thus make it easier to build the pipeline alongside it. Yet this project, with its rarely-updated website, seems to be more of a fantasy than a reality, something that a Bureau of Land Management official noted when commenting on the status of the right-of-way when he asked "if it [the Cadiz Southeastern Railway] is a reasonably foreseeable activity or merely speculative" (Kenna, 2015).

The CSER is tied to the fate of the Cadiz Inc water project. CSER, ideally, would provide a legal shelter under which the pipeline could more easily go forward, under the auspices of the new railway and a railroad purpose. In the mixed metaphors of the turn of the century, one might call the CSER a Trojan iron horse, which midwifes a profitable pipeline into existence through sneaking the railroad octopus back in, like in a 1909 political cartoon showing an octopus sneaking into a statehouse via Trojan horse (Bradley, 1909). The way for Cadiz to sneak in their own project—through CSER—is a turn toward the past in the form of a steam-engine tourist train.

On the CSER website, Cadiz posted a thirty-second launch video for the train. Following standard footage that Cadiz Inc often uses to represent itself—a shot of a desert sunrise over agricultural fields and water that gushes from a pump—the video then shows a steam engine running on a short section of disconnected track, a road to nowhere.

Conclusion

When Henry George (1868) asked "What is the railroad to do for *us*?," he was asking

about the effects that the railroad might have on income inequality in California, and how the lines might transform the lives of everyday people. What would new infrastructure bring? Tom's hopefulness for Cadiz's plans evaporated after he learned that their agricultural plans were less about improving the land and more about securing access to the water underneath. In a statement, Chemehuevi Tribal Chairman Charles Wood (n.d.) says: "Our Tribe knows that the Cadiz project is not a conservation project and its aggressive pumping of water fails to save water for our children, grandchildren up to the Seventh Generation." Pointing to the intergenerational importance of protecting water in the California desert, Wood reflects on way that intergenerational railroad colonialism and wastelanding are enrolled in Cadiz's project of short-term profits.

The tourist train, like the farm or the water project, is simply going to drain the California desert dry to color the lines of the railroad like the octopus Frank Norris described, to cause greater intergenerational damage. Rather than promise new success in the desert, the train is only a hollow vessel, a zombie, meant to bring a new dominating form of corporate capital into the desert through an old one. That is, the railroad is no longer the fearsome octopus, but instead only a zombie reanimated by the bocor of Cadiz Inc.

Taking seriously the metaphorics of monstrosity (Schlosser, 2016) does more than examine what Sarah Juliet Lauro calls the "semiotic fecundity" of the zombie as a figure of the "rapacious hunger of a capitalistic and increasingly corporate society" (2017: x). Zombie infrastructure references a material and legal substrate on which the pipeline would rest, and how new extractive projects not only build on, but rework their underpinnings into new forms. In this way, zombie infrastructure adds to understandings of how infrastructures are changing, shifting, degrading, and being remade. Yet finally, and perhaps most importantly, zombie infrastructure recalls the tangled aftermaths of railroad colonialism at the same time that it considers the zombie underpinnings of American empire. By surfacing the railroad's past at the center of a water project, it considers today's projects still rely on histories of Chinese-American and Diné labor and the project of dispossessing Chemehuevis, Mojaves, and Serranos of their land.

Bibliography

Anand, N, Gupta, A and Appel, H (2018) *The Promise of Infrastructure*. Durham: Duke University Press.

Andersen, T (2004) *Los Angeles Plays Itself*. Thom Andersen Productions.

Angevine, R (2004) *The railroad and the state: war, politics, and technology in nineteenth-century America*. Stanford, Calif: Stanford University Press.

Bard, R (1972) *Settlement Pattern of the Eastern Mojave Desert.* PhD Dissertation. University of California, Los Angeles.

Barry, A (2013) *Material Politics: Disputes along the Pipeline*. Oxford: Wiley.

Bashkow, I (2014) 'What Kind of a Person is the Corporation Afterword', *PoLAR: The Political and Legal Anthropology Review*, (2), pp. 296–307.

Bear, L (2007) *Lines of the Nation: Indian Railway Workers, Bureaucracy, and the Intimate Historical Self.* New

York: Columbia University Press.

BLM's Analysis Examining Whether Certain Components of the Cadiz Project Further a Railroad Purpose (2020). Sacramento, CA: Bureau of Land Management. Available at: https://www.cadizinc.com/downloads/2020_Cadiz_letter_and_analysis.pdf (Accessed: 10 February 2020).

BNSF (2019) *BNSF Names Arizona & California Railroad 'Shortline of the Year'*, *BNSF Railway*. Available at: https://www.bnsf.com/news-media/news-releases/shortline-of-the-year-2019.html (Accessed: 7 January 2020).

Bradley, L D (1909) *Before the Trojan Horse is admitted, The Puzzled Citizen will have to be shown a little more fully*.

Cadiz Southeastern Railway (no date). Available at: http://www.desertsteamtrain.com/ (Accessed: 7 January 2020).

Carraher, C (1998) 'Dump in the Desert: A Scrapbook of the Bolo Dump Fight'. Joshua Tree, CA.

Carse, A (2014) *Beyond the big ditch : politics, ecology, and infrastructure at the Panama Canal*. Cambridge: MIT Press.

Carse, A (2016) 'Keyword: Infrastructure', in Harvey, P., Jensen, C. B., and Morita, A., *Infrastructures and Social Complexity: A Companion*. Taylor & Francis, pp. 27–39.

Carse, A and Kneas, D (2019) 'Unbuilt and Unfinished: The Temporalities of Infrastructure', *Environment and Society*, 10(1), pp. 9–28. doi: 10.3167/ares.2019.100102.

Carter, D and Acker, A (2020) 'To Oblivion and beyond: Imagining Infrastructure after Collapse.' *Environment and Planning D: Society and Space* 38 (6), pp. 1084–1100. https://doi.org/10.1177/0263775820911940.
Chang, G H (2019) *Ghosts of Gold Mountain: the epic story of the Chinese who built the transcontinental railroad*. Boston: Houghton Mifflin Harcourt.

Clifford, F and Perry, T (2000) 'Desert Water Entrepeneur Closely Tied to Governor', *Los Angeles Times*. Print, 16 April, p. 1.

Comaroff, Jean and Comaroff, John (2002) 'Alien-Nation: Zombies, Immigrants, and Millennial Capitalism', *South Atlantic Quarterly*, 101(4), pp. 779–805. doi: 10.1215/00382876-101-4-779.

Cooper, F (2010) 'Writing the History of Development', *Journal of Modern European History*, 8(1), pp. 5–23. doi: 10.17104/1611-8944_2010_1_5.

DeSilvey, C and Edensor, T (2013) 'Reckoning with ruins', *Progress in Human Geography*, 37(4), pp. 465–485. doi: 10.1177/0309132512462271.

Deverell, W (1994) *Railroad Crossing: Californians and the Railroad, 1850-1910*. Berkeley: University of California Press.

Drover, C E (1985) 'Navajo Settlement and Architecture in Southeastern California', *Journal of California and Great Basin Anthropology*, 7(1), pp. 46–57. doi: 10.2307/27825212.

Erie, SP and Brackman, HD (2006) *Beyond Chinatown: The Metropolitan Water District, Growth, and the Environment in Southern California*. Stanford University Press.

Ficek, RE (2018) 'Infrastructure and Colonial Difference in Puerto Rico after Hurricane María', *Transforming*

Anthropology, 26(2), pp. 102–117. doi: 10.1111/traa.12129.

Freeman, MJ (1999) *Railways and the Victorian imagination*. New Haven [Conn.]: Yale University Press.

George, H (1868) 'What Will the Railroad Bring Us', *The Overland Monthly*, 1(4).

Gibson, KD. and Horvath, RJ (1983) 'Aspects of a Theory of Transition within the Capitalist Mode of Production', *Environment and Planning D: Society and Space*, 1(2), pp. 121–138. doi: 10.1068/d010121.

Gibson-Graham, JK (1996) *The end of capitalism (as we knew it) : a feminist critique of political economy*. Cambridge, Mass. : Blackwell Publishers.

Goldsmith, AL (1967) 'Charles and Frank Norris', *Western American Literature*, 2(1), pp. 30–49. doi: 10.1353/wal.1967.0025.

Gramsci, A (1992) *Prison notebooks*. Trans. Buttigieg. New York: Columbia University Press.

Harvey, P and Knox, H (2015) *Roads: An Anthropology of Infrastructure and Expertise*. Cornell University Press.

Headrick, D R (1988) *The tentacles of progress: technology transfer in the age of imperialism, 1850-1940* Oxford: Oxford University Press.

Hugo, V (2002) *The Toilers of the Sea*. Translated by J. Hogarth. New York: Penguin.

Hundley, N (2001) *The great thirst: Californians and water -a history*. Rev. ed. Berkeley: University of California Press.

Hurston, Z N (1938) *Tell my horse: voodoo and life in Haiti and Jamaica*. New York: Perennial Library.

James, G W (1906) *The wonders of the Colorado Desert (southern California).* Boston, Little, Brown, and Company.

Johnson, H (1976) *Order upon the land: the U.S. rectangular land survey and the upper Mississippi country*. New York: Oxford University Press.

Karuka, M (2019) *Empire's tracks: indigenous nations, Chinese workers, and the transcontinental railroad*. Oakland, California: University of California Press.

Keller, G F (1882) *The Curse of California*.

Kenna, J (2015) 'Bureau of Land Management to Jason Peery and Scott Slater'. Available at: http://www.cadizinc.com/downloads/BLM_Letter.pdf (Accessed: 15 May 2020).

Kirsch, S (2005) *Proving grounds: Project Plowshare and the unrealized dream of nuclear earthmoving*. New Brunswick, NJ: Rutgers University Press.

Klasky, P (1997) *An Extreme and Solemn Relationship: Native American Perspectives on the Proposed Ward Valley Radioactive Waste Dump*. San Francisco State University.

Kuletz, V (1998) *The Tainted Desert: Environmental Ruin in the American West*. Psychology Press.

Larkin, B (2013) 'The Politics and Poetics of Infrastructure', *Annual Review of Anthropology*, 42(1), pp. 327–343.

doi: 10.1146/annurev-anthro-092412-155522.

Lauro, S J (2017) ‘Introduction: Wander and Wonder in Zombieland’, in *Zombie Theory: A Reader*. Minneapolis: University of Minnesota Press, pp. vii–xxiii.

Lazonick, W and O’Sullivan, M (2000) ‘Maximizing shareholder value: a new ideology for corporate governance’, *Economy and Society*, 29(1), pp. 13–35. doi: 10.1080/030851400360541.

Lee, H (1875) *The Octopus: Or, The ‘devil-fish’ of Fiction and of Fact*. London: Chapman and Hall.

Lepselter, S (2016) *The resonance of unseen things: poetics, power, captivity, and UFOs in the American uncanny*. Ann Arbor: University of Michigan Press.

Lothrop, G R (1993) ‘The Boom of the ’80s Revisited’, *Southern California Quarterly*, 75(3/4), pp. 263–301. doi: 10.2307/41171682.

MacDougall, R (2006) ‘The Wire Devils: Pulp Thrillers, the Telephone, and Action at a Distance in the Wiring of a Nation’, *American Quarterly*, 58(3), pp. 715–741.

Marx, K (1867) *Capital, A Critique of Political Economy*. Translated by B. Fowkes. New York: Penguin.

Moretti, F (2005) *Signs taken for wonders: on the sociology of literary forms*. London ; New York: Verso (Radical thinkers, 7).

Myrick, D (1963) *Railroads of Nevada and Eastern California*. Berkeley, CA: Howell-North Books.

Neocleous, M (2003) ‘The Political Economy of the Dead: Marx’s Vampires’, *History of Political Thought*, 24(4), pp. 668–684.

Norris, F (1994) *The octopus: a story of California*. New York, N.Y., U.S.A: Penguin Books (Penguin twentieth-century classics).

National Parks Conservation Association (NPCA) (2021) ‘Tribal and National Parks Groups File Lawsuit to Defend Mojave Desert Sacred Lands, Wildlife and Water from Cadiz’ Available at: https://www.npca.org/articles/2859-tribal-and-national-parks-groups-file-lawsuit-to-defend-mojave-desert (Accessed: April 16, 2021).

Pasternak, S and Dafnos, T (2017) ‘How does a settler state secure the circuitry of capital?’:, *Environment and Planning D: Society and Space*. doi: 10.1177/0263775817713209.

Polanski, R (1974) *Chinatown*. Paramount.

Quinn, B (1977) ‘Mitzi Gaynor, Orson Bean, Dr. Carl Sagan’, *The Tonight Show Starring Johnny Carson*. Burbank, CA: NBC.

Route 66 News (2017) ‘More bridges washed out between Essex and Amboy’, *Route 66 News*. Web, 1 August. Available at: https://www.route66news.com/2017/08/01/bridges-washed-essex-amboy/.

Schlosser, K (2017) ‘Critical geosophies: A pyschotopological reading of Rice’s vampires and Romero’s zombies’, *Environment and Planning D: Society and Space*, 35(3), pp. 533–549. doi: 10.1177/0263775816662468.

Starr, K (1986) ‘Introduction’, in Norris, F., *The Octopus*. New York: Penguin, pp. vii–xxxi.

Stevenson, R (2018) '"Vision Isolated in Eternity": Nostalgia Catches the Train', *Humanities*, 7(4), p. 95. doi: 10.3390/h7040095.

Stoler, A (2008) 'Imperial Debris: Reflections on Ruins and Ruination', *Cultural Anthropology*, 23(2), pp. 191–219. doi: 10.1111/j.1548-1360.2008.00007.x.

Strangleman, T (2002) 'Constructing the Past: Railway History from below or a Study in Nostalgia?', *The Journal of Transport History*, 23(2), pp. 147–158. doi: 10.7227/TJTH.23.2.3.

Sutton, I (1967) 'Private Property in Land Among Reservation Indians in Southern California', *Yearbook of the Association of Pacific Coast Geographers*, 29, pp. 69–89.

Thayer, K L (2015) 'The 1875 General Railway Right of Way Act and Marvin M. Brandt Revocable Trust v. United States: Is This the End of the Line?', *The University of the Pacific Law Review*, 47, pp. 75–104.

Trafzer, C (2015) *A Chemehuevi Song: The Resilience of a Southern Paiute Tribe*. University of Washington Press.

Voyles, T (2015) *Wastelanding: Legacies of Uranium Mining in Navajo Country*. Minneapolis; London: University of Minnesota Press.

Waldman, P (2014) 'Can Water Under the Mojave Desert Quench California?', *Bloomberg Businessweek*, 6 March. Available at: http://www.businessweek.com/articles/2014-03-06/amid-california-drought-cadiz-plans-to-pump-desert-water.

Walenta, J (2015) 'Corporate personhood and the corporate body: the case of former energy giant Enron on trial for fraud', *Environment and Planning D: Society and Space*, 33(3), pp. 545–559. doi: 10.1177/0263775815594302.

Waters, LL (1950) *Steel Trails to Santa Fe*. Lawrence, Kan.: University of Kansas Press.

White, R (2011) *Railroaded: the transcontinentals and the making of modern America*. 1st ed. New York: W.W. Norton.

Wilson, J and Bayón, M (2017) 'Fantastical materializations: Interoceanic infrastructures in the Ecuadorian Amazon', *Environment and Planning D: Society and Space,* 35(5), pp. 836–854. doi: 10.1177/0263775817695102.

Wolmar, C (2012) *The Great Railroad Revolution: The History of Trains in America*. PublicAffairs.

Wood, C (n.d.) 'Chemehuevi Indian Tribe Statement of Opposition to the Cadiz Water Conservation, Recovery and Storage Project.' https://www.mdlt.org/wp-content/uploads/2018/04/Tribes_-Chemehuevi-statement.pdf

Žižek, S (2010) 'A Permanent Economic Emergency', *New Left Review*, 64, pp. 85–95.