

SQUATTING AND THE SETTLEMENT OF THE UNITED STATES

NEW EVIDENCE FROM POST-GOLD RUSH CALIFORNIA

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INTRODUCTION

Squatting is integrally associated with the frontier, Frederick Jackson Turner, and the opening of the American West. The nineteenth- and early twentieth-century historical literature was laudatory, cataloging the valiant struggles of the yeoman farmer on the frontier who paved the way for further westward expansion. In more recent scholarship on squatters, a number of themes have emerged—the conflict between the symbol of squatting and its substance (Bogue 1958); the possibility that settlement occurred too rapidly (Fogel and Ruttner 1972; Anderson and Hill 1990; Allen 1991; Kanazawa 1996); squatters' respect for the laws (Pisani 1994; Taylor 1989)—that deepen our understanding of squatters and their behavior. At the same time,

Advances in Agricultural Economic History, Volume 1, pages 207-233.

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ISBN: 0-7623-0612-2

these new themes have done little to tarnish the original vision of the squatter as a valiant yeoman farmer.

In California, a different, more confusing, vision of squatting has emerged. At the time squatters located on the land in the 1850s and 1860s, California was not purely a frontier and the land in question was not usually in the public domain. Thus, many nineteenth- and early twentieth-century historians cast squatters in the role of villains who invaded Spanish and Mexican land grants and unjustly usurped the property rights of the Hispanic owners (e.g., Bancroft 1874–1890; Cleland 1941; Hittell 1898; Royce 1886). This original interpretation yielded somewhat after Gates (1991) and Pisani (1994) documented genuine uncertainty both about who had interim use rights to land covered by foreign land grants and about whether the courts would ultimately award ownership to the federal government or the holders of land grants. Their arguments have to some degree revived the symbol of the squatter as yeoman farmer in California.

Another source of confusion in California has been the focus on the Sacramento squatters' riot of 1850 and squatting in San Francisco. While interesting, squatters in Sacramento and San Francisco were atypical in the national context—taking up land in cities was not the settlement of the frontier. The focus on these cases has done little to illuminate the more important issue of what was happening on the 12 to 13 million acres covered by Spanish and Mexican land grants. Outside of the cities squatters acted as though the land were public domain, taking up preemption claims of 160 acres and making some minimal improvements.

In both the national and California debates, our understanding of squatters and squatter behavior had been limited by the lack of detailed, quantitative studies of squatting. This paper adds to the literature on squatting in California by taking a quantitative approach, drawing on new evidence, to examine squatting on the 12 to 13 million acres covered by Spanish and Mexican land grants. Specifically, it brings together a data set of all Spanish and Mexican land grants submitted to the courts with newly assembled data on the location and timing of squatting. These data are used both to document the extent of squatting and to test hypotheses on the relationships among squatting, land values, and the characteristics of individual land grants.

Regression results indicate that squatters were acting in a way that is consistent with profit-maximization—the probability of observing squatting on a land grant rose steadily with land value and claim size.

Although not entirely surprising, these findings have implications both for some of the newer themes in the squatting literature and for the older vision of the yeoman farmer. In terms of newer themes, the seemingly rational behavior of California squatters is consistent with Bogue's (1958) findings that Iowa squatters bought and sold claims and acted as minor speculators, substance that is in conflict with the symbol of squatter as a yeoman farmer. Picht (1975) argues that individuals squatted to obtain choice land (see also, Dennen 1976). Both are indications of squatters' responsiveness to economic incentives. This is also consistent with the literature that emphasizes squatters' respect for laws, itself a response to incentives. As for squatters as yeoman farmers, the stereotype may have been true but in California they were rarely settling the remote frontier. This suggests that squatters elsewhere in the United States may also have followed a similar pattern of fairly dense settlement of relatively high value land.

CALIFORNIA UNDER MEXICO AND THE UNITED STATES

From 1821 to 1846 California was a thinly populated remote region of Mexico.¹ In 1840 the population was 5,780 (excluding Native Americans) and up to that point efforts on the part of the central government to induce migration had been almost a complete failure. The major towns were Monterey and Los Angeles, and most of the population was centered on the coast in or near these towns. Although agricultural goods such as wheat, corn, beans, and wine were produced for consumption and intra-regional trade, the economy was driven primarily by the export of cowhides and tallow.

The presence of American trading ships on the coast and American merchants in ports in California, Hawaii, Mexico, and South America as part of the hide and tallow trade had brought California to the U.S. government's attention. In 1846, prompted by California's strategic importance and rumors of French, Russian, and British designs, the United States seized California. For the most part little changed under American military rule. Overland migration from the United States that had begun in the early 1840s continued to gradually increase the American presence in California, but California remained a sleepy agrarian backwater.²

Two major changes came to California in 1848. On January 24 James Marshall discovered gold at Sutter's Mill. And on February

2 Mexico and the United States signed the Treaty of Guadalupe Hidalgo, under which the United States formally acquired ownership of California. Apparently the representatives of Mexico and the United States were not aware of the gold discovery at the time they signed the treaty. Indeed, residents did not take the rumors of discovery very seriously until May 12 when Sam Brannan ran through the streets of San Francisco with a bottle of gold dust in hand. At that point, the male population of San Francisco, Monterey, and to a lesser extent Los Angeles promptly headed for the Sierras. Newspaper reports soon reached the Eastern United States, and President James Polk gave the gold rush further momentum when he mentioned it in his annual message to Congress in December 1848.

In 1849 and 1850 tens of thousands of would-be gold miners arrived by the overland and sea routes, heading immediately for the Sierras. This immigration radically altered the demographics of the region. Formerly coastal, much of the population shifted to San Francisco and the Sierras. The 1850 census also shows that the population was suddenly predominantly young, American-born males. The numbers are striking—more than 90 percent of the population was between the ages of 15 and 44, more than 75 percent was American born, and 90 percent was male. Most were in the Sierras either providing support services for mining—cutting timber, moving goods by mule, running boarding houses, saloons, or gambling parlors, and acting as merchants—or actually engaged in mining.

In September 1850 California became a state, having skipped the territorial stage entirely. The new government had little direct impact on mining. Migration continued throughout the decade, although in the later years some were drawn by land instead of gold. The demographic patterns set in play by the gold rush continue to be evident in the 1860 and even 1870 censuses. In 1860 more than 75 percent of the population was between the ages of 15 and 44, more than 60 percent was American born, and more than 70 percent was male. And in 1870 more than 55 percent of the population was between the ages of 15 and 44, more than 60 percent was American born and more than 60 percent was male (Census of Population 1850, 1860, 1870).

PROPERTY RIGHTS IN LAND

To understand squatting, one has to understand not only the demographics of California, but also the underlying patterns of land ownership, which had their origin in the Spanish period. Settlement under Spain began in the late eighteenth century with the establishment of a series of Roman Catholic missions along the California coast. Protected by a series of four military presidios, the goal of the missions was to bring Christianity to the native peoples. Because the missions and presidios were expected to be largely self-sustaining, the missions were given control over large tracts of land. Worked by neophytes (Christianized natives), the missions produced grain, beans, fruit, and cattle.

The Spanish government also granted certain individuals land as a reward for service. After Mexican independence in 1821, the Mexican government continued and expanded the practice of granting land to citizens. Because the government in both cases sought to settle the frontier, grants were conditional on occupation and improvement, typically within one year. Up to the mid-1830s, resistance on the part of the missions limited the extent and location of grants. When the Mexican government decided to secularize the missions in the mid-1830s, it reduced the missions to the status of parish churches and reclaimed control of their lands. This opened up huge tracts of land at a time when the external market for cattle products was growing. The rate at which lands were granted accelerated tremendously.

As a result, most individuals who ultimately received grants received their grants from the Mexican government after secularization. Citizens could apply to the governor of California and receive grants up to 11 leagues (about 48,000 acres) of land. The procedure was straightforward: the applicant sent a petition to the governor that included the request for land and the reason for the request, a description and sketch of the land, and personal information. The governor sent these materials to a local official, the *alcalde*, who attested to the petitioner's standing in the community and verified that the land was unoccupied. If the *alcalde's* report was positive, the governor would usually make the concession, and the *alcalde* would put the grantee in formal possession of his land. Upon the completion of this, grantees submitted the papers related to the grant to the territorial legislature for its approval.

At the time of American seizure of California in 1846, much of the fertile coastal land between San Francisco and San Diego was covered

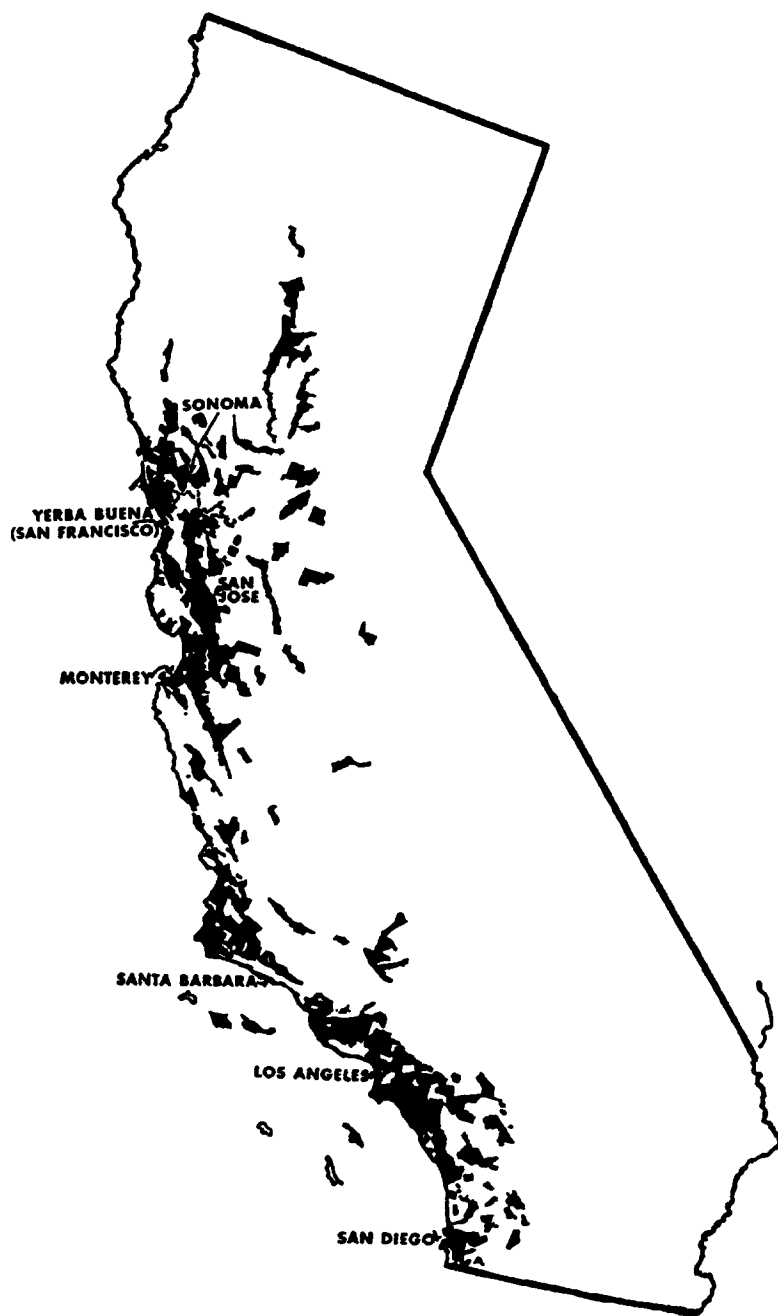


Figure 1. Spanish and Mexican Land Grants

with land grants (see Figure 1). It is important to note that these grants were outside of the town boundaries. Towns such as San Francisco, Monterey, and Los Angeles had received their own grants, and local authorities awarded city lots. Most of the approximately 750 land grants were in use as cattle ranches. Because land had little value, the number and size of the grants posed few problems initially. Americans interested in acquiring land could often buy tracts for less than a dollar an acre including the cattle (see Gates 1991, chap. 5).

Thus by 1848 a mix of Mexicans and Americans owned Spanish and Mexican land grants.³ Under the Treaty of Guadalupe Hidalgo, their property rights were guaranteed protection.⁴ The nature of this protection was uncertain, though, because grants were conditional on occupation and improvement of the land and not all owners had met these conditions. Further, many owners had not had their grants approved by the territorial assembly, an act required for the grant to be valid (see Jones 1850, p. 4). Finally boundaries of the grants were often unclear.⁵

The gold rush of 1848-9 created few immediate problems, because most land grants did not extend to mines.⁶ By radically increasing the population in California, however, the gold rush had set the stage for widespread conflict. It transformed a sleepy, if growing, region of 15,000 in mid-1848 into one that was chaotic and dramatically more populous, with 265,000 inhabitants, by mid-1852. As miners gave up the mines for other pursuits, some began to think about taking up land.

Individuals interested in land encountered tremendous uncertainty. The validity of many grants was questionable and Congress delayed taking action on the issue until 1851, when it finally passed the California Land Act. Under the act, an individual with a Spanish or Mexican land grant could submit documentary evidence of their claim to the land commission. The commission would then investigate the claim and issue a decision on the claim's validity. Either side—the federal government (as the residual claimant for all land) or the claimant—could then appeal the commission's decision to the U.S. District Court in California and from there to the U.S. Supreme Court.⁷ Once validity had been established, a claim was surveyed, any boundary disputes were resolved, and the federal government issued a patent for the land.⁸

Individuals submitted 813 land claims under the act by the March 1852 deadline.⁹ Claimants and settlers had no real insight into the outcome of the process, however, until early 1853, when the first claims began to emerge from the judicial process. And even then, the ultimate

resolution of property rights was far from clear. The prominent landowner, Thomas Larkin, acknowledged the fundamental uncertainty of the situation in an 1851 letter to his half-brother John Cooper: "It's impossible for us to foretell whether Govt. will construe titles by the letter or by the spirit; if the former, it will prove bad for many landholders."¹⁰ The attitude of the courts could, and to some extent did, shift. So although the first decisions were quite favorable to claimants, there was continuing uncertainty about the resolution of property rights.¹¹

During the period of uncertainty about the ultimate resolution of property rights, there was also uncertainty about interim use rights. Although the courts tended to uphold claimants' rights, there were some early pro-squatter rulings. The political climate constantly shifted, with the passage of state legislation favorable to squatters in 1849/1850, 1856, and 1858 and the overruling of the first statute by federal legislation and the striking down of the latter two by the courts. To add to the confusion, there was always the prospect of pro-squatter legislation, such as Senator Gwin's 1852 attempt to pass favorable federal legislation.

Eventually confusion diminished, and the courts awarded claimants legal rights to use and exclude others from their property.¹² Because doing so involved delay and expense, not all owners chose to enforce their rights. If the squatters remained, the owner was not likely to lose his property rights through adverse possession.¹³ Although some squatters and owners may have initially believed that the clock ran from the date of entry, in fact it only ran from the patent date. Given that the average time to patenting was 17 years, the owner could ignore the presence of squatters for a substantial length of time without jeopardizing his rights.¹⁴

Thus, the squatter problem was seemingly a response to a number of factors—the value of the land, uncertainty about the ultimate resolution of property rights, the possibility that they would not be evicted from claims, and the lack of land with clear title that could be purchased (see Umbeck 1981). The lack of land with clear title stemmed directly from the Spanish and Mexican land grants. Owners of claims were often willing to sell, but the outcome of a particular claim under the California Land Act was uncertain.¹⁵ So in effect, a buyer would be getting a contingent claim to a particular piece of land. And because of the vague boundaries of the land grants, the federal government was not able to separate the public from the private domain to begin land sales.

Table 1a. Squatting on Land Grants—Examples from Primary and Secondary Sources

<i>Land Grant</i>	<i>County</i>	<i>Year</i>	<i># of squatters</i>
San Antonio	Alameda	1850, 1853	1500 in 1854
San Leandro	Alameda		indeterminate
Boga	Butte		indeterminate
Arroyo Chico	Butte	1851	indeterminate
Moquelemos	Calaveras	1853	indeterminate
Jimeno	Colusa	before 1855	indeterminate
Larkin Children's	Colusa		indeterminate
Mission San Gabriel	Los Angeles	1855	300-500
Punta de los Reyes	Marin	1854	indeterminate
Mariposa	Mariposa		15,000 in 1856
Huichica	Napa		indeterminate
La Jota	Napa	1859	indeterminate
Jurupa	San Bernardino	1861	25
San Bernardino	San Bernardino	1857	1
Mission Dolores	San Francisco	1856	indeterminate
Potrero de S.F.	San Francisco		indeterminate
Pescadero	San Joaquin	1856/7	indeterminate
Pulgas	San Mateo	1853, 1861	at least 26
Dos Pueblos	Santa Barbara	after 1866	indeterminate
Jesus Maria	Santa Barbara	1874	2
San Marco	Santa Barbara	1863	at least 17
Santa Rosa	Santa Barbara	1861	1
Todos Santos	Santa Barbara		a family
Yerba Buena	Santa Clara		indeterminate
Shoquel	Santa Cruz	after 1850	indeterminate
San Buenaventura	Shasta	1856	indeterminate
Suisun	Solano	1854	at least 3
Bodega	Sonoma	1859	at least 30
Petaluma	Sonoma		indeterminate
Sotoyome	Sonoma	after 1859, 1862	indeterminate
Tzabaco	Sonoma	1853, 1858	200
Los Saucos	Tehama	1856	indeterminate
Ex Mission San Buenaventura	Ventura	1869	indeterminate
Sespe	Ventura	1877	indeterminate
Honcut	Yuba	1850-1	indeterminate
New Helvetia (Sacramento)	Yuba	1849-50	indeterminate

Notes: Under year, blanks indicate that the timing could not be determined. In cases where a grant overlapped multiple counties, it was assigned to the county in which the majority of the land was located.

SQUATTING IN CALIFORNIA

Although the broad outlines of the squatter problem are clear, the details are not well understood. Unresolved questions include: the iden-

tity of the squatters, their reasons for squatting, their numbers, patterns of squatting over time and across space, how long squatters were on the land, how they were using the land, the identity of owners, and the nature of the interaction between owners and squatters. This section summarizes what is known about these issues.

Because squatters left almost nothing in the way of written records, we know very little about who they were—their age, sex, race, place of birth, and with whom they lived. The documentary evidence that has survived, typically newspaper accounts of violence or threats of violence, rarely mentions names, and mobility makes it unlikely that if names had survived they could be uniquely matched to the 1850 or 1860 census.¹⁶ Although their accuracy is open to question, some general descriptions of squatters exist. The nineteenth-century historian Hubert Howe Bancroft's description is fairly typical: there was "a strong element, mainly from the western states and Oregon, of the faith that by the 'higher law' they were entitled to the lands as free American citizens" (Bancroft p. 535; see also Hittell 1898, p. 667).

There are also no clear indications of the numbers of squatters, although the numbers appear to have been large. For instance, in 1850 the Peralta family's grant, San Antonio, part of which became the town of Oakland, came under siege by squatters (Bancroft 1874–1890, pp. 475–478). On February 11, 1854 the *Alta California* reported, "Three hundred people claimed portions of the grant by conveyance from the Peralta family; others held under Castro; and fifteen hundred settlers [squatters] were said to be on the land, mostly without any title" (Gates 1991, p. 165). Newspaper reports indicate that the Tzabaco ranch in Sonoma County had 200 in the mid-1850s (*San Francisco Evening Journal*, April 19, 1853). Unfortunately most reports do not give numbers, the others that do, commonly list numbers below 50 (see Table 1a). We are left again with just a general description, this time by the nineteenth-century historian Hittell (1898, p. 678): "All around the bay of San Francisco and in most all portions of the country where Spanish or Mexican grants existed, there were squatters and squatter claims."

Individuals often claimed to be squatting with the intent of acquiring property rights to valuable land through preemption.¹⁷ Congress did not formally grant preemption rights in California until 1853, but many anticipated the passage of such an act. For instance, in 1852 a ranch manager reported to one owner: "A portion of the settlers are making

extensive improvements....They take up what they call a preemption of 160 acres" (Larkin 1951–1968, p. 83). After 1853 squatters stood on somewhat firmer legal ground. Orson Lyon, the defendant in an 1863 ejectment suit, argued his case, stating, "That land is Public land belonging to the United State of America and at the time of the entry by this Defendant said land was vacant...this Defendant made entry on said lands for the purpose preempting the same under the laws of the government" (*Javier Alviso v. Orson Lyon*, Third District Court, Santa Clara County 1863).

What little we know about how squatters were using the land indicates that not all squatters intended to stay through preemption. In the short run, squatting could provide a place to build some type of dwelling, access to resources such as the owner's cattle and timber, and perhaps space to grow one or two seasonal crops. If a squatter's claim was reasonably established, he could often sell it together with his improvements to another squatter. Even for squatters contemplating staying to preemption, uncertainty created an incentive for short-term maximization of the land's potential. The consequent common property problems were manifest in inefficient use of land and water and over harvesting of timber (see Larkin 1951–1968 IX, pp. 83 and 317; M. T. McClellan to Thomas Larkin, Dec. 22, 1853; Charles Sterling to Thomas Larkin, Feb. 10, 1852; Clay 1999).

The number of squatters, the general climate of uncertainty, and squatters' short time horizons raise two related issues—how the incidence of squatting changed over time and how long squatters were on the land. The general consensus among scholars seems to be that squatting peaked in the mid-1850s as miners flowed out of the mines. Among other things, this coincides with the peak in squatter political power.¹⁸ The presumption is that, as uncertainty about the validity of claims began to be resolved and the courts struck down against pro-squatter legislation in the latter half of 1850s, squatting began to fall off.

Without better evidence on the incidence of squatting, little can be said about its duration beyond a few generalizations. Some squatters are known to have left voluntarily, after selling to owners or abandoning their claims. Others left after legal action or threats of legal action by the owners. For those who stayed on the land and eventually acquired title, it is unclear whether they were preempting claims or buying from the owners.

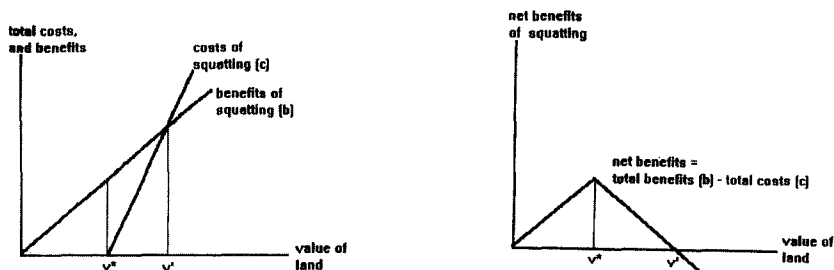
There is also the issue of where squatters chose to locate. If squatters had perfect insight, we would expect them to act rationally and maximize expected value of their claims. In doing so, squatters had to weigh two factors—the value of the land and the risk of being expelled. The high land values seemingly more than compensated for any risk of expulsion in and near cities, particularly San Francisco, because squatters clustered there. In the next section using new data on squatting, we investigate the relationship between squatting and the value of land.

Before exploring this relationship, it is useful to discuss two other topics—who owners were and the nature of the interaction between owners and squatters. One might assume that, although squatters' identities are rarely known, owners' identities would be known. Interestingly, this is not true. Owners frequently sold all or an undivided fraction of their claim to other parties, and the timing of these transfers is very difficult to reconstruct.¹⁹ This is important, because changing patterns of interaction between owners and squatters may in part be a result of a change in ownership or the addition of more owners. Unfortunately, the inability to identify owners also means that the patterns of squatting explored in the next section cannot be linked to the characteristics of particular owners such as their age, education, or ethnicity.

Interaction between the owners of a particular land grant and an individual squatter began with his initial decision to squat. A variety of relationships grew up from there: owners elected to ignore the intrusion, tried to convert the squatter to a rental or purchase contract, or attempted to eject the squatter. In the latter two cases, the squatter responded by deciding to accept or reject the contract or by deciding whether to leave peacefully or resist ejection.²⁰ Although we do not observe the factors in these decisions, the cost of conflict both in and out of court, the benefits to a more secure tenure arrangement, the value of the land in other uses, and reputation effects (particularly for owners) all probably played important roles in both squatters' decisions and owners' decisions. In the end, squatters continued as squatters, stayed on as renters or owners, or vacated the property.

AN ECONOMIC THEORY OF SQUATTING

To motivate the empirical analysis that follows, we construct a simple economic theory of squatting. If squatters behaved as rational economic agents, their decision to squat on a particular tract of land would have



Figures 2A and 2B. The Costs and Benefits of Squatting

been determined by the relative benefits and costs of squatting on that land. The total benefits (b) and total costs (c) of squatting are defined as:

$$b = g(\text{land value, opportunity cost}), \text{ and} \quad (1)$$

$$c = f(\text{land value, technology of enforcement, claim size}). \quad (2)$$

In these expressions, the total benefits of squatting on particular land are a positive function of the value of the land ($f_v > 0$), and a negative function of the opportunity cost of squatting ($f_o > 0$).

The total costs of squatting on a given claim are a function of the value of the land claim (v); the technology of enforcing property rights (t); and the size of the land claim (s). Costs are positive function of land value ($g_v > 0$) because the more valuable the claim, the more resources the owner of the claim would dedicate to enforcing his property rights and deterring squatting. Hence squatters would have to overcome more obstacles to successfully usurp valuable claims. Costs are also a positive function of the technology of enforcement ($g_t > 0$). The more advanced the technology of enforcing property rights (fences, the judicial system, state-supported militia, and so on), the harder it would be to usurp land through squatting. Costs are a negative function of claim size ($g_s < 0$) because the larger the claim, the more difficult it would be for the owner to fence in the land and fight off squatters, which in turn would make it easier for squatters to usurp the land.

Figures 2A and 2B present one plausible scenario regarding the structure of the costs and benefits of squatting. In Figure 2A total

Table 1b. Squatting on Land Grants—California
Supreme Court, 1850–1869

<i>Number of Ejectment Cases Related to Squatting</i>		52
<i>Number in San Francisco</i>		4
<i>Number where location cannot be identified</i>		23
<i>Number matched to land grants</i>		25
<i>Land Grant</i>	<i>County</i>	<i>Year Cases Reach CSC</i>
*San Antonio	Alameda	1853
San Lorenzo	Alameda	1861
Fernandez	Butte	1859
*La Jota	Napa	1859
Omochumnes	Sacramento	1856
Rio de los Americanos	Sacramento	1860
Campo de las Franceses	San Joaquin	1861
*Pulgas	San Mateo	1860
Canada de Guadalupe Visita- cion y Rodeo Viejo	San Mateo	1862
San Mateo	San Mateo	1861
Pastoria de las Borregas	Santa Clara	1861, 1867
Rinconada de los Gatos	Santa Clara	1854
Ulistac	Santa Clara	1867
Los Putos	Solano	1860
Roblar de la Miseria	Sonoma	1862, 1864
Johnson's Ranch	Yuba	1860
*New Helvetia	Yuba	1854 (2), 1857, 1860 (3), 1861

Notes: *s indicate that evidence of squatting was found elsewhere in the historical record (these grants are also listed in Table 1a).

costs and benefits increase with the value of the land, holding constant the technology of enforcement, the size of the claim, and the opportunity cost of squatting. When the value of the underlying land (per unit) is at or below v^* the true owner of the land does not find it profitable to expend resources fighting off squatters. However, as the value of the land rises above v^* , the owner of the claim spends more and more resources to deter squatting, and as a consequence, the costs of squatting rise at a faster rate than the benefits. In this scenario the net benefits of squatting are maximized when squatters chose to squat on land of value v^* . While squatting on land of greater value increases total benefits it also requires the squatter to incur increased costs because he has to fend off the true owner of the claim who is trying to deter squatters.

DATA AND ANALYSIS

Data: Sources, Description, and Significance

This paper draws on three new data sets to shed light on squatting in California. The first data set is comprised of widely reported cases of squatting—cases that made their way into the newspaper or other records of the period. The data were collected from a number of sources: every major secondary source on the history of California, county histories for each of the counties in which there were land grants, and hundreds of books on individual land grants. Examples were recorded only if they included specific details such as names, places, or other facts. Wherever possible, the incident was linked to a specific ranch and traced back to newspaper reports or other primary source material. This yielded data on squatting for 36 land grants (see Table 1a).

Because of possible sample selection bias in the first data set—highly sensational and violent cases are probably overreported—and the relatively small number of documented cases relative to contemporary accounts, second and third data sets were collected. The second data set is all ejectment cases related to squatting that reached the California Supreme Court between 1850 and 1869. The supreme court, and not a lower court, was selected, because it is the only court of the period for which printed opinions are widely available. Although this data set too has sample selection problems—only high-value cases were likely to reach the supreme court, it provided a cross check for some examples in the first data set as well as 13 additional examples (see Table 1b).

The third data set consisted of squatting cases from Santa Clara County during the mid-1860s.²¹ Santa Clara County is located between the Pacific Ocean and the southern part of the San Francisco Bay and includes the city of San Jose and Stanford University. A prosperous agricultural region, Santa Clara County was chosen because of its high land values, proximity to San Francisco, and distance from the squatter hot spots in Alameda, Napa, and Sonoma counties. The mid-1860s were chosen because they were the only period for which the type of case could be readily determined from the indexes. Customarily cases were only indexed by the names of the plaintiff and defendant, not by case type, but for some reason the clerk during the 1863–1868 period noted the case type in the general index. The handwritten case records

Table 1c. Squatting on Land Grants—Santa Clara County, 1863–1868

<i>Number of Ejectment Cases Related to Squatting</i>		83
<i>Number Filed but Later Dropped</i>		36
<i>Number Filed and Prosecuted</i>		47
<i>Of 83, number in San Jose</i>		9
<i>Of 83, number where location cannot be identified</i>		70
<i>Of 83, number matched to land grants</i>		4
<i>Land Grant</i>	<i>County</i>	<i>Year Cases Reach SCC</i>
Portrero de Santa Clara	Santa Clara	1863
Rinconada del Arroyo de San Francisquito	Santa Clara	1863/1864
San Juan Bautista	Santa Clara	1863
San Ysidro	Santa Clara	1863

Notes: Ejectment cases represented 11 percent of the caseload over the period 1863–1868. Of the nine cases in San Jose, six were dropped and three were brought to trial. Of the four matched to land grants, two were dropped (Portrero and Rinconada) and two were brought to trial (San Juan Bautista and San Ysidro). Of the 70 remaining cases, 28 were dropped and 42 were brought to trial.

were then pulled and the location of the conflict was identified. This yielded data on squatting for four additional land grants (see Table 1c).

In light of evidence from the first two data sets, the data from the Santa Clara County court records proved to be a surprise for a number of reasons. First, more than 40 percent of the suits filed were later dropped, indicating that squatters either came to terms with owners or moved on. Second, both the number of cases filed and the number brought to trial were substantial, and the ones brought to trial involved a variety of different locations. Third, these cases were not for the removal of old squatters, but rather for removal of individuals who had begun squatting recently, almost always within the previous six months. What this suggests is that squatting was much more pervasive than either of the first two data sets would suggest, confirming general reports to this effect. Further, it suggests that squatting continued to be a significant problem much longer than is generally acknowledged.

To investigate the determinants of squatting, these data on squatting are used in conjunction with a data set of all claims submitted under the California Land Act.²² This data set includes information on claim size and location (county).²³ Additional county-level data were collected on the value of farmland per acre and the number of persons per square acre in 1860.²⁴ Table 2 provides descriptive statistics for all of the variables. The mean value of an acre of farmland was \$8.50, though the distribution is skewed, exhibiting a few very large values in the right tail.

Table 2. Descriptive Statistics

	No. of obs. = 1	Mean	Standard deviation	Minimum value	Maximum value
Value of farm land, \$=s per acre (county average)	...	8.50	11.13	1	56
Persons per square acre (county average)	...	0.26	1.16	.002	6.11
Claim size, square leagues (1 league = 4,438.68 acres)	...	3.62	3.58	.00004	20
=1 if squatter on claim; 0 otherwise	74	...	...	...	...
No. of observations	753				

Notes: The incidence of squatters on claims (74) is higher than the incidence of squatters on land grants reported in Tables 1a-1c (53), because some grants were submitted as multiple claims due to subdivision of the grants.

The mean value of density is 0.26 persons per acre, though again the distribution is skewed with a few large values in the right tail. It appears the mean claim size was large, just over 3.6 square leagues.

Analysis, Results, and Interpretation

To identify the determinants of squatting, we estimate the following two logit models:

$$S_i = \hat{a} + \hat{a}_1 V_i + \hat{a}_2 V_i^2 + \hat{a}_3 Z_i + \hat{a}_i, \quad (3)$$

$$S_i = \tilde{a} + \tilde{a}_1 D_i + \tilde{a}_2 D_i^2 + \tilde{a}_3 Z_i + a_i, \quad (4)$$

where S is a dummy variable which assumes a value of one if claim i had one or more squatters, and zero otherwise; V equals the average value of an acre of farm land in the county in which claim i was located; V^2 equals the average value squared; D equals the number of persons per square acre in the county in which claim i was located (population density); D^2 equals density squared; Z is the size of the claim in square leagues; and \hat{a} and a are error terms.

The average value of an acre of farm land and population density are two alternative measures of how valuable land was in the county in which claim i was located. In light of the theoretical model outlined above, we expect to observe the following patterns. Presumably, as the value of land in the county rose, the more attractive the claim became to

Table 3. Regression Results

	Model (1)			Model (2)		
	Coeff.	Std. error	p-value	Coeff.	Std. error	p-value
=1 if squatter on claim; 0 otherwise	Dependent variable			Dependent variable		
Value of farm land, \$=s per acre (county average)	0.15	.051	.003	...	...	...
Value-squared	-.001	.001	.053	...	...	...
Persons per square acre (county average)	...	...	...	12.4	5.19	.017
Persons per square acre- Squared	...	...	...	-1.97	.853	.021
Claim size, square leagues	0.18	.032	.001	0.18	.036	.001
Constant	-4.30	.481	.001	-4.30	.367	.001
Chi-square statistic (3 d.f.)	123.48			93.84		
Prob > critical value	significant at .001 level			significant at .001 level		
Pseudo R-squared	0.15			0.12		
No. of observations	753			753		

Notes: Standard errors have been corrected for spatial correlation, and claims in the same county are assumed to have correlated error structures. This correction increases the estimated standard error.

squatters and the more likely squatters were to locate on the claim. However, as land and the claim became more valuable, the true owner of the claim would also have become more likely to invest in resources to deter squatting. When the value of land was below some threshold level (v^* in Figures 2A and 2B), owners would not have found such investments profitable. Given this, we also include a squared term in both models. The coefficient on the size of the claim has a positive expected value; as the size of the claim grew, it would have become increasingly costly for the owner of the land to monitor and deter squatters from invading his claim. In addition, we control for the possibility that error terms are correlated for claims located in the same county. In the absence of such controls, we would underestimate the true standard errors of the parameter estimates.

Table 3 reports the regression results. As expected, claim size, value (density) are positive and significant. Value-squared (density-squared) is negative and significant. In part because these regressions include squared terms, it is not a straightforward process to interpret the coeffi-

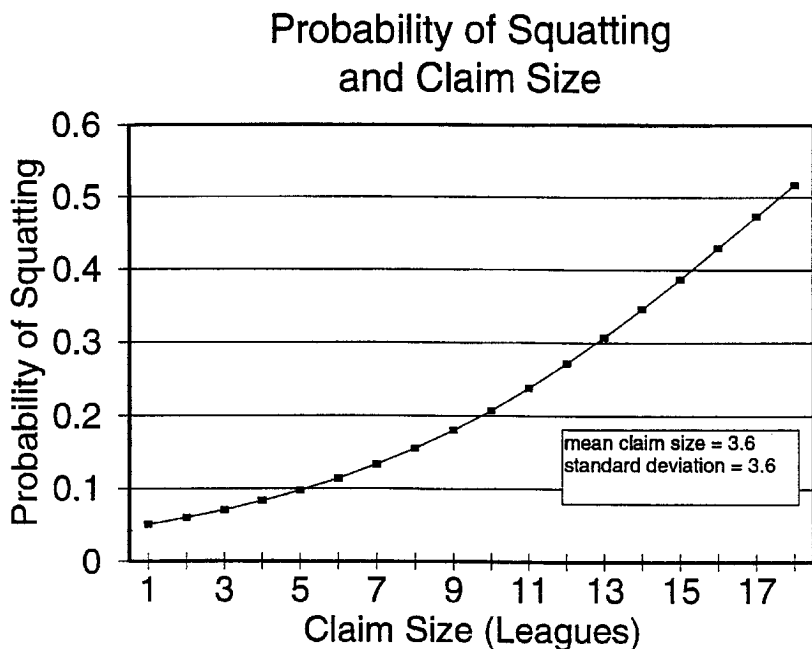


Figure 3. Probability of Squatting and Claim Size

cients. Figures 3 and 4 help clarify the situation. Holding the value of land (and the value of land-squared) constant at its mean value, Figure 3 shows how the probability of squatting on a given claim changed with claim size. For claims of mean size (3.6 leagues), the probability of observing a squatter would have been between 5 and 10 percent. For claims greater than 15 leagues, the probability of observing a squatter would have been at least 35 percent. Holding claim size constant at its mean value, Figure 4 shows how the probability of squatting on particular claim changed with the value of the land in the claim's county. As long as the value of an acre of land was between \$1 and \$45, the probability of squatting rises steadily with land value. However, for the most valuable tracts of land, squatting becomes less likely as land values rise. These results suggest that owners of land only began to invest in (effective) measures to deter squatting for the most valuable pieces of land.

The central implication of the regression results is that squatters' location decisions were largely consistent with profit maximization.

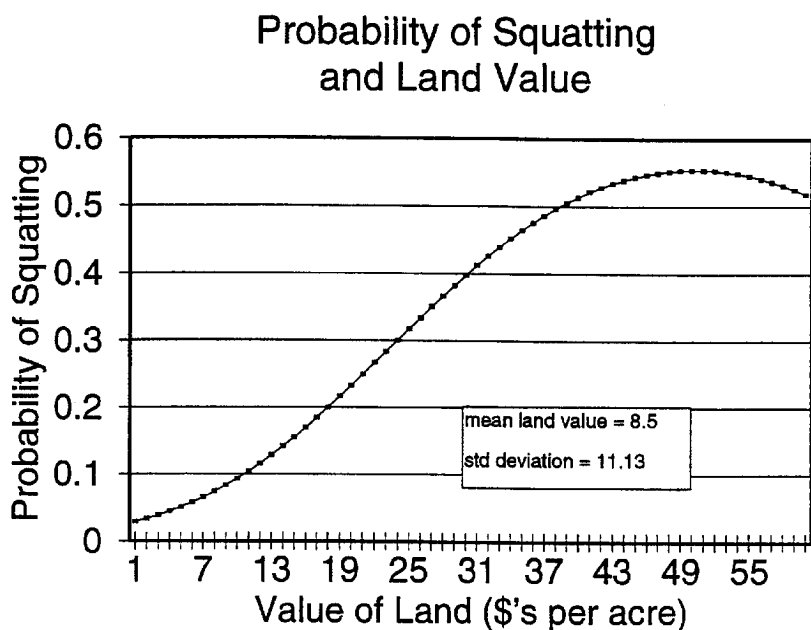


Figure 4. Probability of Squatting and Land Value

Although squatters' propensity to settle on high value land may not seem surprising, this is among the first empirical evidence of this behavior in either the national or the California context.²⁵ These findings add weight to two recent themes in the historical literature—that the symbol of squatting did not necessarily accord with the substance and that squatters' often respected the laws. Bogue's (1958) evidence on the Iowa claims clubs found that squatters often bought and sold claims and acted as minor speculators, behavior not consistent with our vision of them as yeoman farmers. And Picht (1975) argued that individuals squatted to obtain choice land. Both are indications of squatters' responsiveness to economic incentives. Findings by Taylor (1989) and Pisani (1994) that squatters in Maine and California respected the law provide further indication that squatters responded to incentives.

Squatters' responsiveness to economic incentives also undermines to some degree the older vision of the squatter as a yeoman farmer. For instance, squatters in California only rarely chose to settle on the frontier and almost never had to engage in stereotypical activities such as clearing the land of trees. Further, like Bogue's Iowa squatters, Califor-

nia squatters bought and sold squatting claims and in some cases laid claim to more than 160 acres, activities not traditionally associated with the yeoman farmer. The California experience suggests that squatters elsewhere in the United States may also have followed a similar pattern of fairly dense settlement on relatively high-value land.

Concerns and Caveats

A possible concern with our results is that county land value per acre or population density were endogenous, that is, squatter settlement affected land values or population density for the county as a whole.²⁶ Two factors make this unlikely. First, squatters were unlikely to comprise a significant fraction of the county population or cover a significant fraction of land in a county. Second, land values and population density seem to have been largely dictated by geography, particularly proximity to the San Francisco Bay. In the years just prior to the gold rush, land in that region was already gaining in value relative to land around the capital city of Monterey and the city of Los Angeles and population was shifting as well.

A second concern is that the data set, by construction, probably understates the number of cases of squatting; it is doubtful that we have been able to uncover all of the cases of squatting. If the data set understates the frequency of squatting, the calculated probabilities of squatting as a function of land value and claim size may well be too small. While this does not alter our central conclusions that larger claim size and higher land values increased the probability of squatting, it may alter the magnitude of the estimated effect. A related concern is that these data overrepresent Santa Clara County, which was a county with high land values. It is possible, therefore, that the correlation between squatting and land value is driven by observations in Santa Clara. To explore this possibility we dropped all observations from Santa Clara from the data set and reestimate equations (3) and (4). Dropping the Santa Clara observations did not alter our results in any meaningful way. A final concern is that squatting was driven by factors other than those specified in equations (3) and (4), and that these factors may have varied across time and space. To explore this, we added regional and time dummies to our empirical models. Adding these dummies does not alter our results in any meaningful way.

HISTORICAL ADDENDA

Although one might have predicted that squatting activity would end after the issuance of a patent, this was not the case. Conflict continued as squatters began to attack the validity of the original grants with the hope of overturning the patents. By 1887 the government appeared on the brink of litigation to overturn patents. In his 1887 report, the U.S. surveyor general for California addressed the issue of patents for land grants that had been exposed *ex post* as fraudulent. The risk to all landholders of reopening litigation was evident: "While I state positively that I can prove the existence of those frauds, and that titles to thousands of our most productive acres have been so obtained, yet the fact remains that a title has been obtained, and the prosperity of our State demands that the validity of these titles be for once and all determined by Congress" (Surveyor General 1887, p. 54).

The predicted government suits never materialized, but squatter harassment of owners continued. On March 3, 1891 the U.S. Congress passed an act that stated: "Suits by the United States to vacate and annul any patent already issued must be brought within five years from the passage of the act and, as to any patent thereafter issued, within six years after the date the patent was issued" (Robinson 1948, p. 107). Thus in 1896, almost all owners were protected from challenge by the United States. The next year the Land Settlers League tried to revive squatting by beginning to organize private challenges to land titles. This movement faded, but a Homesteaders Association was organized in the 1920s for the same purpose. Alarmed by the persistent challenges, Congress directed the Committee on Public Lands and Surveys to investigate. The committee found, "Since 1922 about 800 homesteaders had expended \$300,000." Their eight-page report issued in 1932 concluded that "attacks upon the titles were made by persons seeking to profit financially at the expense of well intentioned, but grossly misled, applicants for homestead entry" (Robinson 1948, pp. 129–131).

CONCLUSION

Squatting is an important but not well understood phenomenon in settlement of the American West. Settling ahead of the official government survey, squatters populated Turner's frontier. Discussions of squatters are often couched in terms of the mythical yeoman farmer

carving out a livelihood on the edge of civilization. If one moves beyond the myth, one finds that there is very little detailed evidence on squatters or squatter behavior.

Squatting was a widespread phenomenon in California during the 1850s and 1860s. When the United States acquired California from Mexico in 1848, Spanish and Mexican land grants covered between 12 and 13 million acres of valuable land. To resolve property rights, Congress put in place a process for examining the validity of grants and awarding patents for the land. By bringing hundreds of thousands of people to California, the gold rush set the stage for conflict between the owners of these land grants and squatters.

In this paper, we use new data on squatting on Spanish and Mexican land grants in California to examine squatter behavior. The results of logit regressions comparing grants that experiences squatting with those that did not indicate that squatters' location decisions were largely driven by land values. Holding grant size constant, squatting was more likely to occur on grants in counties with higher land values. Although the consistency of squatter behavior with profit maximization may not surprise many economic historians, the finding is important for two reasons. First, this is one of the first times that such behavior has been documented in the settlement of the American West. Second, interpreting squatters as responsive to economic incentives in this context lends weight to newer themes in the squatting literature that emphasize the importance of incentives, further eroding the view of the squatter as the yeoman farmer.

ACKNOWLEDGMENTS

The authors would like to thank Avner Greif, Roxanne Nilan, Alan Olmstead, and Lee Alston for helpful discussions at many stages of this project; Lou Cain, Lance Davis, Stan Engerman, Shawn Kantor, Peter Lindert, Ken Sokoloff, participants at the Conference on Land, Labor, and Tenure and the 1996 Economic History Association meetings, and seminar participants at UCLA, Caltech, Northwestern, University of Illinois, and Stanford University for helpful comments; and Lauren Clay and Jeff Brown for excellent research assistance. Financial support for Karen Clay from the Huntington Library and the Social Sciences and Humanities Research Council of Canada is gratefully acknowledged.

NOTES

1. Officially, Alta California was a territory of Mexico until the mid-1830s when it was promoted to a department. It never became a state.
2. Unlike the migrants of 1849 and 1850 who would later come by the tens of thousands drawn by the promise of gold, these migrants came by the tens drawn by the promise of large tracts of fertile land.
3. The standard wording of the grants prohibited sale, but in practice transfer was tolerated under prior regimes and continued to be tolerated under the United States.
4. There is some question as to why the United States would want to honor property rights created by foreign governments. The United States had honored them in the past, often to gain the cooperation of the local population, and the Supreme Court had taken a strong stand on the issue. For a more detailed analysis of the California Land Act and the outcome under the act, see Clay (1999).
5. Individuals had submitted sketches with their original petition, but as Henry Halleck found in his 1849 report on land titles, "These sketches frequently contain double the amount of land included in the grants; and even now very few of these grants have been surveyed or their boundaries fixed" (Halleck 1850, p. 122).
6. John Sutter's New Helvetia and John C. Frémont's Las Mariposas, did, however, and severe conflict emerged on both of these grants.
7. Once validity had been established, a claim was surveyed, any boundary disputes were resolved, and a patent was issued.
8. As with the public domain, patents here definitively established the recipients' property rights.
9. Congress allowed an additional 31 claims to be considered, although they were submitted after the deadline.
10. Larkin VIII, p. 365. T. O. Larkin to John Bautista Rogers Cooper, January 9, 1851.
11. At the end of the process, 551 patents were issued for 8.9 million acres (see Figure 1).
12. Their legal rights stemmed from the fact that they had greater "color of title" than did squatters whose claim, if any, derived from the federal government's rights.
13. Under adverse possession statutes in most states, "settlers who could show continued, actual, and exclusive possession and who had met the taxes on the land for seven to twenty years could at the end of the required time claim absolute title" (Gates 1991, p. 166). On the 1850 and 1855 California adverse possession laws and the political ramifications of these laws, see Pisani (1994, pp. 288-301).
14. On average, it took five years for a claim to be resolved in the courts and an additional 12 years before a patent was issued. The delay in patenting is in part attributable to extensive boundary litigation and in part attributable to lengthy delays in surveying. With regard to surveys, owners had to pay for the survey and the government did not require it to be done within a specific time. Owners chose to delay because of capital constraints, the low value of the land, and in some cases the option value of waiting to survey so boundaries could encompass valuable land in the area.
15. See, for example, Larkin IX, p. 119, John Frisbee to Thomas Larkin, August 6, 1852, and X, p. 174, Memorandum on Huichica Lands, July 24, 1855, and Gates (1991,

p. 203). Initially, few squatters purchased. Once owners' property rights were more secure, however, squatters' views changed (see Larkin X, p. 240. Talbot Green to Thomas Larkin, Feb. 9, 1856).

16. On the extreme mobility in California during this period, see Mann's (1982) study of Grass Valley.

17. From the late eighteenth century on, Congress had, in a number of instances, conferred preemption rights on settlers—individuals who were squatting on the specific tracts of public land. Preemption rights allowed these settlers to buy the land they were on from the government at a fixed price rather than at auction. In the Preemption Act of 1841, Congress extended these rights to settlers on most of the surveyed land that was in the public domain. Individuals could buy up to 160 acres at \$1.25 per acre. In 1853 Congress extended preemption rights to settlers in California and other western states.

18. Viewing Democrats and Whigs as unresponsive to their needs, settlers held a convention with an eye to establishing a separate political party in 1855. In 1856 and again in 1858 pro-settler legislation was passed, although both were eventually struck down.

19. For instance, in 1853 Ysidro Sanchez sold Charles Lux and a partner 1,700 acres of Buri Buri, a ranch located just south of San Francisco. As Lux and Henry Miller began to build their cattle empire, they purchased pieces of 15 ranches and slowly bought out the other owners (Iglar 1995, p. 4, footnote 7, and p. 10).

20. If they thought that ejection was unlikely, most squatters saw no point in agreeing to a voluntary contract, which required payment of at least nominal rent. Thus, only one of the nine families on the Children's Rancho accepted Thomas Larkin's offer to lease them 640 acres for five years at \$5 per year (Larkin 1951-1968, IX, p. 83; Charles Bolivar Sterling to Thomas Oliver Larkin, Feb. 10, 1852).

21. Attempts were made to collect data from both Santa Clara and San Mateo counties. The records for San Mateo were archived off site and the person in charge indicated that they would be difficult to locate, because the historical documents were not properly cataloged. The records for Santa Clara County were more readily available. A check of the case files there indicated that squatting cases were a small proportion of the hundreds of cases that the courts heard during the 1850s and 1860s. An analysis of the types of cases tried in the county courts is beyond the scope of this project. For more on the possibilities and difficulties of working with county-level historical records in California, see Davis (1973).

22. Individuals originally submitted 813 land claims under the California Land Act. An additional 31 claims were submitted late, but these are excluded because submission was typically in the 1870s. Of the 813, 60 claims were deleted for one of the following reasons: the claim was abandoned before being heard by the land commission, usually because of consolidation with another claim; the claim was submitted by a city or the Catholic Church; the claim was a clerical error; or the claim was a preemption claim (i.e., the claim was not based on a Spanish or Mexican land grant).

23. The data set also contains information on the year in which the grant was made, and whether records of the grant survived in the government archives (owners could also have records). Data on the original grant, including date granted, size, and location, are from Avina (1932), Bowman (1958), and Hoffman (1862). Data on the surviving government records are from the *Report of the Surveyor General of California* (1880).

In unreported results, neither year granted nor surviving government records had a significant effect on the probability that squatting would be observed.

24. In unreported results, we examine county-level data for 1870 and get similar results. The 1850 census data is unusable due to the loss of records for a number of counties and the difficulties of conducting the census at the peak of the gold rush.

25. For contemporary evidence on squatters in Brazil, see Alston, Libecap, and Schneider (1996).

26. There is a related literature on the endogeneity of titling and investment by squatters (see Alston, Libecap, and Schneider 1996; Besley 1995; Lanjouw and Levy 1998).

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