

THE SOCIAL ORIGINS OF THE 1910 REVOLUTION IN CHIHUAHUA*

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The history of the Mexican Revolution of 1910 has suffered from the emphasis placed upon personalities and, as a result, critical political, economic, and social issues have been incompletely studied. In examining the causes of the 1910 Revolution in the state of Chihuahua, historians have concentrated their efforts on exposing the political oppression and, to some extent, the economic exploitation exercised by the Terrazas-Creel family.¹ Perhaps more than any other figures of the Díaz era, Luis Terrazas and his son-in-law, Enrique C. Creel, have come to represent in Mexican revolutionary historiography the system of economic and social privilege against which the revolutionaries fought.

While the tyranny of the Terrazas undoubtedly deserves close scrutiny, there were other equally crucial factors that help to explain the creation of revolutionary discontent in Chihuahua in the years before 1910: the economic consequences of the severe depression that struck the state in 1907 and lasted well into 1910; the great suffering caused by disastrous weather conditions—drought in 1907 and 1908 and an early frost in 1909—which ruined the state's staple harvests; and the widespread encroachment on communal and municipal lands that took place after the implementation of the Municipal Land Law of 1905. All of these factors were necessary (although not sufficient) to produce the volatile conditions that ignited in 1910; therefore they must be examined in a balanced manner before the complicated fermentation process of revolution in Chihuahua can be explained.

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THE TERRAZAS

Even in a nation replete with powerful regional caciques and great land-owning families, the empire of the Terrazas was extraordinary, for they combined an iron grip on the politics of their home state with vast and diverse economic interests. General Luis Terrazas, the patriarch of the clan, was the only Liberal leader emerging from the War of the Reform who had retained his political base through the French Intervention, the purges of the Juárez restoration, and two Díaz rebellions. Furthermore, he had withstood the wholehearted opposition of the Díaz juggernaut for three decades, eventually forcing the dictator to come to terms. The Terrazas, particularly the general and Enrique C. Creel, were astute businessmen, as well as politicians, and they employed their skill and resources in each of these realms to reinforce the other.²

Two factors enabled the Terrazas to rule the treacherous politics of Chihuahua and successfully repulse the concerted attacks of the Díaz dictatorship: they mastered the lessons of economics in politics, and they acquired two vital groups as allies, the Conservative elite and foreign entrepreneurs. Over several decades, the family used its great financial resources and widespread business interests to purchase the cooperation of the most adamant opponents and potential rivals. Some were made partners in various Terrazas enterprises, some were permitted to acquire valuable government concessions or tax-free status, and some married into the family.

Luis Terrazas forged his first alliance with the state's Conservative faction when he married Carolina Cuiilty Bustamente in 1852. After the War of the Reform and the French Intervention had discredited this group, they provided silent political and economic support for Terrazas, thus enabling him to gain the upper hand in the delicate balance between Liberal factions in Chihuahua. General Terrazas first established ties to foreign entrepreneurs during the 1860s when he and Enrique Müller, a German immigrant, leased and later purchased the enormous Encinillas hacienda from the Martínez del Río family. The Terrazas subsequently established partnerships with foreigners in all of their major undertakings.³

Despite their political acumen and economic strength, the Terrazas were unable to maintain control over Chihuahua from 1884 to 1902, in the face of the superior military might of the consolidated Díaz regime. The completion of the Mexican Central Railroad in 1884, which enabled Díaz to move quickly large numbers of troops to Chihuahua, effectively ended the state's political autonomy and forced the Terrazas to retreat to their ever-growing estates. The family continued to exert considerable

political influence, retaining control over half of the state legislature and periodically sponsoring insurrections against the Díaz-imposed governors. After eight years of disruptions that severely hampered the state's economic development, Díaz installed a compromise governor, who managed to bring peace from 1892 to 1902. Clearly, however, the dictator tacitly recognized Terrazas hegemony in Chihuahua. In 1902 the two old rivals reached an accommodation whereby Terrazas became governor in return for a specified annual number of Chihuahuense recruits for the federal army.⁴

With the agreement of 1902, the Terrazas, after four decades, ruled unchallenged in Chihuahua. All the rival factions that had previously checked their power had collapsed, victims of old age, death, and economic misfortune.⁵ With no local or national opposition, the character of Terrazas rule changed. Luis Terrazas had been an exceptional nineteenth-century cacique, juggling alliances, operating not only in the tough milieux of the western *serranos* and of the Indian fighters of northern Chihuahua but in the more refined world of Chihuahua City, as well; his successor, Enrique Creel, was a banker, half-American, a *científico* modernizer, concerned not so much with rough ex-Indian fighters as with Mexico City socialites and American capitalists. Luis Terrazas had been a hero of the Indian wars and a patriot who had supported Juárez in the darkest days of the French Intervention; Creel was more at home in New York and Paris as an internationally respected financier. Furthermore, Luis Terrazas rarely left Chihuahua, for the tumultuous conditions there would not permit him the luxury; Creel, as governor, was away from the state as often as he was at home, serving on important banking commissions, later as Mexican ambassador to the United States, and finally as secretary of foreign relations in the Díaz cabinet. It soon became clear, however, that governing Chihuahua was not a part-time job.

POLITICS AND REVOLUTIONARY DISCONTENT

Political discontent in Chihuahua centered around several issues in the eight years before 1910: the Terrazas virtually monopolized state government at every level, controlling the governorship, installing family members and close associates in the legislature, judiciary, and local offices; Enrique Creel himself became controversial, both because he was half-American and because of his extended absences from Chihuahua; corrupt and tyrannical local political bosses ran roughshod over their constituents; both the police and the judiciary were notoriously venal and arbitrary; and, finally, state government policies favored foreign

entrepreneurs and members of the Terrazas inner circle, often at the expense of other sectors of the population, especially in matters of taxation.

In 1902, Díaz appointed Luis Terrazas governor; after winning election to a four-year term in 1903, the general stepped aside in favor of Creel, who served as interim governor until 1907, when he won his own four-year term. Late in 1910, the general's youngest son, Alberto, succeeded Creel, whose duties as a member of the Díaz cabinet beckoned him to the capital. From 1903 to 1911 the state legislature was a private club, composed of family members and close associates. Until that time, the *porfirista* Governor Miguel Ahumada (1892–1902) had carefully maintained a balance in the legislature between various factions. After the 1902 agreement, however, the Terrazas eliminated all opposition.

At the same time, the Terrazas took control of the state judiciary. In the two-year court term before the reconciliation (1901–1903), there were no Terrazas family members or allies among the *magistrados* of the Supremo Tribunal de Justicia of the state, and only two family members and two allies were among the nine *suplentes* (alternates). Thereafter, the clan maintained a clear majority on the court.⁶ The family's control of the judiciary went still further, for Francisco Terrazas (the general's grandson) headed a group of lawyers, popularly known as "El Universal," who monopolized all the business before the courts in Chihuahua.⁷ Upon their return to power, the Terrazas also appointed their allies to crucial posts as *jefes políticos*. In 1903, Governor Terrazas replaced nine of eleven *jefes*, retaining only two trustworthy agents, Urbano Zea in Guerrero and Francisco Mateus in Galeana.⁸ In addition, family members and allies held a wide variety of state administrative offices, ranging from state treasurer to director of primary instruction.⁹

Enrique Creel became a political lightning rod when Silvestre Terrazas, editor of *El Correo de Chihuahua*, made him a symbol of the inequities of Chihuahua society. Silvestre, later a hero in the Revolution and governor of Chihuahua, first criticized Creel in June 1906 for what he believed to be the illegal extension of General Terrazas' term as governor.¹⁰ The struggle continued during Creel's gubernatorial campaign in 1907. Silvestre steadfastly insisted that, despite Creel's considerable talents, he was ineligible to be the constitutional governor of the state, because he was not a Mexican citizen.¹¹ He considered the issue of citizenship to be far more than a legal technicality, for he feared that Americans would use this as a precedent to take over northern Mexico politically as they had economically. This struck a particularly responsive chord among small mineowners, small shopkeepers, and miners, who had long resented the favoritism shown foreigners in Chihuahua.

Moreover, Silvestre believed that Creel's candidacy was indicative of the disdain the Terrazas-Creel had for the state's constitution and laws. He objected again when Díaz named Creel ambassador to the United States, arguing that during Creel's long absences, interim governors would rule; this would, in effect, deprive the people of their right to an elected governor.¹²

The Banco Minero robbery of March 1908 catalyzed and symbolized the discontent with the Terrazas-Creel. For months it occupied the front page of *El Correo* with headlined revelations of government abuses and injustice. Governor Creel took personal charge of the investigation, imprudently placing himself squarely in the middle of the sordid affair. *El Correo* exposed one government outrage after another—unwarranted arrests, disdain for proper legal procedures, and mistreatment of prisoners.¹³ The Banco Minero affair aroused Chihuahuans to an unprecedented degree. *El Correo* sold out every issue. The newspaper started a fund for the families of jailed suspects; donations poured in from all over the state. Most of the money came in sums of less than a peso, indicating that the contributions came mainly from working people. Mutualist societies, composed mostly of workers and artisans, actively raised money for the fund. Petitions demanding that the government respect the rights of the accused forced the appointment of defense counsel.¹⁴ Undoubtedly, the affair, coming amid a severe economic downturn, with thousands unemployed and many small businesses failing, laid bare the discontent of Chihuahuans. The miner whose family had no food because he had no work, the small farmers whose land the Terrazas and their henchmen had taken away, and the men whom the *jefes* had jailed unfairly, all could see clearly the injustice of the Terrazas-Creel regime.

As governor, Creel centralized authority, eliminating all vestiges of local autonomy. Toward this end, the legislature adopted the Law for the Organization of the Districts of 1904, which replaced the *presidentes municipales* and *presidentes de secciones*, the most important popularly elected local officials, with new officials, *jefes municipales*, who were to be appointed by the governor. These *jefes* presided over the municipal councils (*ayuntamientos* or *juntas*), exercising wide-ranging legislative and police power.¹⁵ From 1905 to 1910 complaints about local officials filled the pages of *El Correo*. Localities that had for decades carefully guarded their independence deeply resented the loss of autonomy and the imposition of outsiders as *jefes municipales*. Many appointees proved unfamiliar with and insensitive to their surroundings. Moreover, there were frequent allegations of the *jefes'* corruption, incompetence, and arbitrariness.¹⁶

The areas where there were frequent and repeated abuses by local authorities were the same areas where the Flores Magóns' Partido Liberal Mexicano (PLM) drew its heaviest support. Oppressed citizens from these areas formed Anti-Reelectionist Clubs in 1909 and 1910. Later these regions produced the first uprisings in 1910 and 1911 and provided many leaders for the Revolution.

Complaints against local authorities were especially vocal in the Guerrero District. Bachíniva suffered the rule of the hated Jefe Luis Y. Comadurán. Continual protests against the authorities in Temosáchic led to the ouster of its jefe in 1909, but his replacement proved no better. In 1908, fifty citizens of Namiquipa went to Chihuahua City to protest the tyrannical activities of their jefe. Bachíniva, Temosáchic, and Namiquipa were centers of revolutionary activity in 1910. Bachíniva was the scene of one of the first revolutionary uprisings. One of the leading revolutionary figures, José de la Luz Blanco, was a native of Temosáchic. Pascual Orozco, Jr. came from nearby San Isidro.¹⁷

During early 1909, protests arose against the local jefe in Bocoyna, Benito Juárez District. Complaints to Governor Creel brought no response; a few months later an Anti-Reelectionist Club was established there. The pueblo was one of the first to take up arms in December 1910. In Nonoava, in the same district, the actions of the jefe provoked the founding of an Anti-Reelectionist Club led by Delfino Ochoa, who had written many protest letters to *El Correo*. There were numerous complaints against the abuses of local authorities in Ciudad Camargo in 1909; after more than a year of futile protests, an Anti-Reelectionist Club appeared in September 1910. In Valle de Zaragoza, near Hidalgo de Parral, the local jefe was the object of protests from 1907 to 1910. When Hidalgo de Parral pronounced for the Revolution in 1910, the call came from Valle de Zaragoza.¹⁸

The Chihuahuan judiciary was a morass of corruption and incompetence. After a year of campaigning on the pages of *El Correo* for desperately needed reform, Silvestre Terrazas declared in November 1908 that justice in Chihuahua was a fiasco and liberty was dead. The situation had not improved by 1910. Protests arose from all over the state, often from the same areas where other local authorities oppressed the inhabitants.

Local police were another source of bitter resentment; there were frequent complaints of despotism, corruption, and inefficiency from every part of the state.¹⁹ The state rural police force was a consistent and hated instrument of oppression. Formed by Governor Creel in 1904 to "guard the country and persecute wrongdoers," the *rurales* acted instead to enforce the will of large landowners.²⁰ For example, in 1908

they harassed the people of Janos who protested illegal land seizures. Joaquín Chávez, the chief of rurales in Guerrero and Rayón districts, became a symbol of Terrazas oppression in western Chihuahua.²¹

In Chihuahua, it was impossible to obtain favorable action from the state government without the expensive intervention of a member of the Terrazas inner circle. In return for lucrative concessions and contracts, subsidies, and tax exemptions provided to native and foreign entrepreneurs, the Terrazas and their allies received attorney and notarial fees, commissions, stock, or jobs. At the local level, *jefes* were less sophisticated—they stole, extorted, and embezzled. *Jefes*, police, tax collectors, and judges received bribes in exchange for favorable tax assessments and overlooking law violations. There were continual complaints of favoritism and nepotism.

The system not only excluded the vast majority of the populace from sharing in the economic growth of the area, it also inflicted severe hardship on the middle and working classes. When Creel became governor, he embarked upon a massive and expensive public works program. The state borrowed two million pesos between 1903 and 1911 to finance the construction of public buildings and sewer and water systems.²² In order to pay for these projects, which afforded lucrative contracts and land speculation for the oligarchy and foreigners, the legislature raised taxes. Since both the oligarchy and foreigners enjoyed tax exemptions or favors on their haciendas, stores, and mines, the burden fell hard on small landowners, small merchants, and small service establishments. These groups found themselves encumbered by unfair taxes that not only increasingly absorbed their income but also put them at an acute disadvantage in relation to their bigger and more influential competition.²³

In 1904, Creel sponsored a new tax law, which squarely laid the burden of taxation on small holders, small merchants, artisans, and manual laborers.²⁴ Those affected did not feel the full impact of the law during the heady boom days in 1905 and 1906, but when the depression struck in mid-1907, the taxes became an intolerable load. Complaints flooded into *El Correo* about unfairly high taxes and favoritism shown to those with influence, particularly foreigners.

The state legislature imposed a troublesome burden on skilled craftsmen, artisans, and workers in 1908, when it levied a tax on members' contributions to mutualist societies. This law, which was meant to limit the amount of money these organizations could loan to working people, threatened the virtual extinction of the societies. The measure probably stemmed from the Terrazas' pique at the societies' fund-raising efforts on behalf of the suspects in the Banco Minero robbery and from

the Terrazas' desire to eliminate competition for their banks. The state raised taxes in 1908 by an estimated 300 to 400 percent (in some cases as much as 1000 percent); once again, the burden fell on the middle and working classes.²⁵ Another law, passed two years later, caused hardship for small farmers and freighters, because it placed a levy on all work animals in the state, such as horses, oxen, burros, and mules. Large landowners, of course, paid nothing on the thousands of head of livestock on their vast estates.²⁶

Chihuahuans protested these unfair impositions. A man from Temosáchic wrote to *El Correo* that taxes were two or three times what they should have been and that the increases had made worse the already sorry economic conditions in the region.²⁷ Later Temosáchic would be a hotbed of revolutionary activity. In San Andrés, fifty miles west of Chihuahua City, residents rioted in 1909 to protest unfair taxes levied on their work and livestock. The taxes must have been especially galling to the people of San Andrés, because the collector also managed the undertaxed holdings of Enrique Creel in the area.²⁸ The San Andrés region proved to be a fertile ground for the Revolution, producing three of its most prominent leaders: Francisco Villa, Cástulo Herrera, and Ceferino Pérez.²⁹

LABOR AND REVOLUTIONARY DISCONTENT

From colonial times, labor conditions in Chihuahua had differed sharply from those in the center of the country. Much of the land was isolated and desolate. There were no sedentary Indian communities to provide food and labor for the conquering Spaniards. Until the 1880s, it was a dangerous region, devastated by raiding Apaches and Comanches who swept down from the North. Men who came north in search of work in the mines of Hidalgo de Parral were, for the most part, mobile and free, possessing none of the traditional familial and village ties of the Indians of the center.³⁰ The defeat of the Apache chieftain Victorio in 1880 brought an end to the terror, and the completion of the Mexican Central Railroad in 1884 ended Chihuahua's isolation.

Peace and transport opened up the land and mines for exploitation; the ensuing economic development widened the differences between labor conditions in the North and center. The burgeoning mining industry insatiably demanded more labor; the haciendas and ranches needed hands to tend the cattle and the soil. The simultaneous development of the United States Southwest created further demand for large numbers of unskilled laborers. The railroads provided cheap transport for workers who could and did move on to better jobs further north.

Many crossed the border to work on the construction of the great trans-continental railroads, to gather cotton, or labor in the mines of New Mexico and Arizona, where the wages were double those in Mexico.³¹ Forced to compete for scarce labor, employers offered higher wages and better working conditions. Relative prosperity, however, had its cost, for as Chihuahua boomed when mineral prices were high and when investment from the United States poured across the border, it suffered equally when the mines closed and the investment ceased. The price of mobility, freedom, and better wages was periodic misery.³²

Statistics compiled from the state's *Anuarios*, the work of the Seminario de la Historia Moderna de México, and other sources clearly indicate that Chihuahuan workers were the most well paid in Mexico.³³ They enjoyed the best working conditions and the highest standard of living in the country. This was true not only for miners, but for agricultural and industrial workers as well. An observer, writing in the *Engineering and Mining Journal* in 1907, reported that Mexican workers had risen from virtual slavery in the 1890s—when a peon earned one peso per week, augmented by two-thirds of a bushel of corn, and a miner received fifty centavos a day—to the point where they earned a peso a day as field hands and up to three pesos a day in the mines.³⁴ The U.S. consuls in Chihuahua reported in 1908 that wages had risen 10 to 20 percent since 1897, most significantly since 1902. Wages had improved to the extent that workers were buying lots on the installment plan and building their own homes.³⁵

The introduction of foreign capital boosted wages because foreigners were willing to pay above the going rate in order to attract labor. In some instances, the entrance of a foreign company into a region produced dramatic results: during the two years after William C. Greene began operations in the Sierra Madre in western Chihuahua, wages jumped 25 percent; when a foreign company took over the Lluvia del Oro mines in Andrés del Río, wages quadrupled.³⁶

The migration of Mexican workers to the United States not only pushed up wages on both sides of the border, but became “an agency of something approaching social revolution.” An estimated sixty thousand Mexicans annually crossed over to the United States between 1902 and 1907. Wages in the U.S. were double those in Mexico, because employers paid in gold instead of silver. In addition, workers often received free lodging and transportation to and from their work place as part of their contracts. Between 1903 and 1907, because of the escalating demand for unskilled labor, wages in the U.S. Southwest rose 25 percent. Some workers were able to accumulate savings, sometimes amassing enough to set up a small store or buy land. Even more important, migrant

workers became accustomed to a better living standard.³⁷ The demand for labor reached its peak during the boom years of 1905, 1906, and the first half of 1907. Although the Chihuahuan work force as a whole increased by 50 percent from 1895 to 1910 and the mining work force doubled from 1895 to 1907, it did not satisfy the demand.³⁸ Two major railroad projects, a vast state and municipal government public works program, and the construction of a new smelter in Chihuahua City by the American Smelting and Refining Company (ASARCO) added to the already high demand for labor in the northern mines and the American Southwest.

As wages and working conditions improved, workers grew more assertive, demanding an end to traditional impediments, particularly the preferential pay and treatment accorded foreigners. Workers also protested unfairly high prices at company stores, the payment of wages in scrip instead of cash as prescribed by law, the deduction of money from their pay for nonexistent or inadequate medical services, and harassment by company police.³⁹ The Cananea strike in Sonora in 1906 set off a wave of strikes in Chihuahua against these grievances and for higher wages. Carpenters, railroad mechanics, streetcar operators, and biscuit factory workers all walked off their jobs. Labor unrest reached the extent that the federal government sent a detachment of forty rurales to reinforce the troops already there. The strikes continued in 1907, when Chihuahua City street cleaners, textile workers, railroad trainmen, engineers, and firemen staged job actions.⁴⁰

During the second half of 1907, however, the situation changed drastically. Financial depression in the United States caused mineral prices to plummet; investment stopped abruptly. Many mines, unable to operate profitably, closed down. At the same time, depression dried up employment opportunities in the United States. The first signs of the disaster appeared in spring 1907, when ASARCO lowered wages at its smelter in Chihuahua City. In November, two of the largest mining complexes in Mexico, Velardeña in Durango and Cananea in Sonora, closed, throwing several thousand men out of work. Simultaneously, the Río Tinto mines near Terrazas Station in Chihuahua shut down, leaving five hundred unemployed. ASARCO ceased mining operations in both Santa Eulalia and Santa Bárbara in Chihuahua, adding more than a thousand to the unemployed. Almost every mine in Hidalgo de Parral closed. Those mines in the state that continued to operate did so with fewer workers and reduced wages. A U.S. ban on Mexican contract migrant workers created a crisis along the border. As many as two thousand unemployed workers congregated in Ciudad Juárez at various

times between 1907 and 1910. The state and federal governments furnished train fare for many of them, in an effort to prevent violence.⁴¹

There is significant evidence that unemployed workers joined the revolutionaries. The PLM and, later, the Anti-Reelectionists received considerable support in Hidalgo de Parral, the hardest hit mining area.⁴² Cástulo Herrera, a boilermaker union leader and a founder of the Anti-Reelectionist Club in Parral in 1909, was one of several revolutionary leaders from this region.⁴³ Jobless workers, led by the PLM, took part in disturbances in Casas Grandes and Palomas in northwestern Chihuahua in 1908.⁴⁴ In December 1908, bandit groups, composed of unemployed mineworkers, attacked haciendas in Gómez Palacio, just south of the Chihuahuan border in Durango.⁴⁵ Unemployed miners and lumbermen probably took part in the revolution in Guerrero, where the shut-down of the massive Greene mining and lumber enterprises put a thousand men out of work in 1908.⁴⁶ Miners and lumbermen were, subsequently, identified as an important segment of Madero's army at Ciudad Juárez in April 1911.⁴⁷

Since many agricultural workers and small landowners labored in the mines and factories and then returned to the land for planting and harvest, it is likely that some of the agrarian unrest in Chihuahua in 1908 and afterwards resulted from the lack of outside employment possibilities for peasants at the same time the Terrazas and their allies were mounting a concerted effort to take their land. A similar pattern of depression-caused unemployment and the encroachment of the latifundia on small holdings led to revolution in Morelos in 1910.⁴⁸

THE MIDDLE CLASS AND REVOLUTION

Chihuahua's economic boom, which lasted from the late 1890s to 1907, not only produced great benefits for the working class, it also provided unprecedented opportunities for the growth of a middle class: small landowners found markets for their crops and livestock in the burgeoning mining camps and cities; the state's growing population required the services of small merchants and artisans; muleteers and freighters transported supplies and ores to and from isolated mining camps; the thriving construction industry demanded skilled tradesmen, such as carpenters and bricklayers; and the mines and railroads needed shift bosses and foremen.

At the same time that the Chihuahuan economic and political system provided new opportunities, however, it severely limited their scope. As we have seen, small landowners, merchants, and artisans

were disadvantaged by unfair taxes and government favoritism. Access to lucrative government contracts and land was restricted to a small group around the Terrazas and foreigners. Credit was unavailable, for the resources of the Terrazas banks went to finance foreign companies and elite consumption. The oligarchy also controlled opportunities for professionals; lawyers were especially affected because of "El Universal," the general corruption of the courts, and the Terrazas' control of access to political office. Moreover, the oligarchy foreclosed opportunities for upper level white-collar employment. Jobs at the Terrazas banks, for example, went almost exclusively to the general's numerous nephews and cousins. For the most part, these inequities were blurred during the boom years; the depression brought them into sharp focus.

The process by which the middle class evolved is largely unexplained and the extent of its expansion remains unmeasured, especially for the years before 1902. However, the information provided by the state government in its *Anuarios* and *Periódico Oficial* after 1904 clearly indicates the enormous growth of this sector. Figures furnished by the *Anuarios* of 1905 and 1906 denote a significant increase in the number of small mercantile establishments in the state.⁴⁹ The trend was most noticeable in the Galeana, Iturbide, and Guerrero districts, where new railroad construction had stimulated mining, agriculture, and commerce.

The *Anuarios* present striking evidence of the expansion of the middle sector in its data on small industrial establishments and artisan shops. These businesses seldom employed more than one or two people, and, with the exception of a few Chinese laundries, were all owned by Mexicans. Forty-eight percent of these enterprises were founded from 1902 to 1906; 32 percent during 1905 and 1906, the period of Chihuahua's greatest prosperity. A large increase in the number of small industrial shops took place in Guerrero, where more than half began operations after 1902 and 25 percent in 1905 and 1906. Even more remarkably, in Iturbide, 73 percent of these enterprises began in 1902 or after. Ninety percent of the establishments in Chihuahua City began in this period, and 35 percent of these businesses in Hidalgo de Parral started after 1902.

Determining an increase or decrease in the number of small landholders is difficult, because the term "ranchos" is not defined in the *Anuarios* and the figures fluctuate enough to cast some suspicion on their reliability. There was, nonetheless, a discernible increase in the number of *ranchos* from 1905 to 1908 (especially in Benito Juárez, Guerrero, Hidalgo, and Jiménez districts), followed by a decrease in 1909.⁵⁰

Upward mobility was certainly possible in Chihuahua in the first decade of the twentieth century. We have already seen how some work-

ers accumulated savings and used them to start their own shops. The *Periódico Oficial* provides another clue to the prevalence of this mobility. It lists the names and occupations of people who registered mining claims. Many of the men were categorized as *agricultor*, *minero*, *empleado público*, *empleado*, *mecánico*, *operario*, and *labrador*. Since the registration of mining property required a fee, start-up capital, and a knowledge of bureaucratic procedures, this is an indication that some workers aspired to the middle class.

Two factors, which preceded and accompanied the depression of 1907, added to the frustration of the middle sector. One was foreign investment which, while it had created much of the sector's opportunities, undermined middle-class enterprises through competition. The Mormon colonies in northwestern Chihuahua, for example, vied with natives to supply food and lumber to the mines in the region and bid for hauling and construction contracts.⁵¹ Foreign-owned merchant and commission houses competed against small storekeepers.⁵² Small entrepreneurs suffered, too, from the modernizing tendencies of foreign companies. Aerial tramways and railroad spurs built by mining companies replaced many muleteers and freighters.⁵³ The other was the tax structure—the greatest disadvantage borne by the middle class. They could not compete against bigger operators who enjoyed tax exemption. *El Correo* noted in 1907 that the opening of a new store in Valle de Zaragoza with "anticonstitutional" privileges was wrecking the other local merchants who had to pay taxes.⁵⁴

The depression struck the middle sector hard. The decline in employment and income lessened the need for their small stores and shops. The end of the construction boom hurt the tradesmen who had started their own businesses in the preceding five years. The U.S. consul in Chihuahua reported in 1909 that merchants had lost 10 to 20 percent of their business and were unable to meet their obligations.⁵⁵ Notices of the failure of commercial houses appear in *El Correo* and the *Periódico Oficial* through 1910.⁵⁶ Small-scale mine operators were ruined by the low mineral prices. Always at a disadvantage because of discriminatory transportation and smelter charges, these miners could not, with their limited capital, lower production costs enough to earn a living. The severe drought in 1907–1908, especially devastating in the Sierras, struck another cruel blow at the miners. Small landowners probably endured the depression better than the other groups, but successive droughts and frost took an increasing toll on them from 1907 to 1910. Because the Terrazas controlled all the state's banks, the middle sectors could not obtain credit to maintain their enterprises through these difficult times.

The effects of the inequitable system and the depression led many

of the middle class to oppose the regime and they comprised much of the leadership of the Anti-Reelectionist movement and the Revolution in Chihuahua. Abraham González, revolutionary governor of the state, a leading Anti-Reelectionist and *maderista*, was a small entrepreneur.⁵⁷ Pascual Orozco, Jr., the leader of the Revolution in Guerrero, was a freighter and small shop owner.⁵⁸ Silvestre Terrazas, the regime's most vocal critic and later a revolutionary, was the owner of a newspaper and print shop.⁵⁹ Anti-Reelectionist leader Francisco Hernández was a merchant, as was revolutionary Guillermo Baca.⁶⁰ Guerrero rebels Francisco D. Salido, Abelardo Amaya, Alberto Orozco, and Pascual Orozco were mineowners.⁶¹ Félix Terrazas, another rebel from Guerrero, was a lumber dealer and rancher.⁶² One of the founders of the Anti-Reelectionist Club in Chihuahua City, Aniceto Flores, was the proprietor of a small flour mill; two other founders, Aureliano S. González and José Barraza, were mineowners. Tomás Silva and Pascual Mejía, also prominent Anti-Reelectionists, were lawyers.⁶³ Other Anti-Reelectionist leaders were artisans and officials in mutualist societies: Longinos Balderrama and Alberto Talavera were tailors and officers in La Sociedad "Zaragoza" de Sastres; Jesús Ferrer and Policarpo López were shoemakers and officers in La Sociedad "Morelos" de Zapateros.⁶⁴

AGRICULTURE AND REVOLUTION

Chihuahua is 45 percent desert; another 30 percent is dry grassland and oak savanna (although nearly two-thirds of its land was employed in agriculture in 1971, only 5 percent is suitable for crops); the remainder of the state is pine forest and subtropical deciduous forest.⁶⁵ Even in the nineteenth century, Chihuahuans took reasonably good advantage of their limited agricultural possibilities. Chihuahua became a leading live-stock raiser. Farmers tapped the precious few rivers, streams, lakes, and wells for irrigation water. Despite these efforts, the state's agricultural production, particularly of staple crops, was always precarious and at the mercy of cyclical periods of sometimes terrible drought. From the 1870s, political disruptions often accompanied these periods of suffering and hardship. The droughts hit hardest in Guerrero District where, during the nineteenth century, several rebellions coincided with them. In 1907 and 1908 another severe drought struck Chihuahua, followed in 1909 by an early frost, which badly damaged the state's staple production. Again, it affected Guerrero most adversely. It is not surprising, from the past pattern, that political unrest arose during these years and led ultimately to rebellion.

Although there is a definite pattern of drought, crop failure, and

rebellion in Chihuahua, particularly in Guerrero, weather and harvest conditions were necessary but not sufficient causes for unrest and revolt. In almost every case, political disputes ignited the discontent brought on by adverse agricultural conditions. In the late 1870s, the state, ruined by Indian raids and nearly two decades of civil war, suffered through crop failures in 1877 and 1879.⁶⁶ In the latter year, a local faction in Guerrero, allied with the Terrazas, used the pretext of protesting unjust taxes to rebel against and oust the *porfirista* Governor Ángel Trías, Jr. Poor harvests again victimized the state in 1884 and 1885, keeping staple prices and the cost of living high through 1887.⁶⁷ In 1886, there was a violent struggle between political groups in Cusihuiríachic. The following year, the state legislature split into two contending camps of *terracistas* and *porfiristas*.

In both cases, although agricultural conditions may not have been the primary causes of unrest, they exacerbated existing discontent.⁶⁸ From 1891 to 1895, Chihuahua experienced a prolonged drought. Staple prices rose sharply; the cost of living increased 56 percent in two years.⁶⁹ Seven rebellions took place in the state during this period. Coupled with the severe economic downturn that accompanied it, the drought may have detonated the volatile political rivalry between *porfiristas* and *terracistas*. Guerrero was the major area of unrest during this drought. The most important outbreak occurred in Tomóchic, where the inhabitants were massacred by a federal army in September 1892. There was another rebellion in Santo Tomás (municipality of Namiquipa) in March 1893. Six months later a rebel group appeared in the area of Palomas (Galeana). In 1895 and 1896, other rebels operated in extreme eastern Chihuahua near Ojinaga. Finally, Tarahumara Indians rioted in Agua Amarilla (Guadalupe y Calvo) in May 1895.⁷⁰

Poor weather ruined the crops in 1901 and 1902. Staple prices rose and with them the cost of living.⁷¹ At the same time, the devaluation of the peso brought on a nation-wide economic downturn. Nonetheless, neither unrest nor rebellion ensued, for the harvest failure and the recession were neither severe enough nor of sufficient duration. Moreover, there were no outstanding political issues or rivalries to spark a revolt. However, the combination of drought and frost between 1907 and 1909 differed from earlier weather disasters because it followed the most successful harvests in Chihuahuan history. Although the crops of 1908 and 1909 were not terrible by normal Chihuahuan standards, they came after a period of low staple prices and rising living standards. Like the depression that accompanied it, the drought followed an era of prosperity, which worsened its effect. This succession of boom and bust had a particularly adverse impact in Guerrero, where both the corn and

wheat crops had doubled in 1906 and remained high in 1907. Wheat production then dropped in 1908 and corn production fell precipitously in 1909. It is very likely that these crop failures contributed to the creation of revolutionary discontent in the region.

The contrast between depression and drought and prosperity and abundance was stark. Since 1900 Chihuahuans had enjoyed an almost unbroken rise in their standard of living. Wages and working conditions both improved considerably. At the same time abundant harvests kept the cost of living lower than anywhere else in Mexico. While real income declined throughout the country, it rose in Chihuahua. During 1906 and 1907, the prices for staples—corn, wheat, and beans—were the lowest in Mexico. However, in 1908 corn prices rose by 55 percent and bean prices by 40 percent. These increases, when combined with massive unemployment and reduced wages, proved a volatile mixture.⁷²

LAND AND REVOLUTION

As the construction of the Mexican Central Railroad had stimulated Chihuahua's economic development during the 1800s, the extension of the state's railroad network after 1898 helped precipitate the state's unprecedented economic boom. The Chihuahua and Pacific Railway, the Río Grande, Sierra Madre, and Pacific Railway, the Sierra Madre and Pacific Railway, Kansas City, Mexico, and Orient, and the Mexico North Western Railway spread east and west, joining the major population and mining centers to Chihuahua City and opening up previously inaccessible mining, timber, and agricultural regions. As a result, land values in areas served by the railroads increased enormously. Stimulated by the prosperity and growing population, urban land values, especially, rose sharply. Mining areas experienced a boom in claim registrations. Land and mine speculation accompanied the spread of the railroads, pushing prices up even higher.

Eventually, as was the case in Morelos, land became so valuable that latifundists and speculators (the ranks of which included politicians and businessmen) undertook to appropriate the lands of small holders, ejidos, and municipalities, and, empowered by the Municipal Land Law of 1905, began a massive onslaught against these holdings, which instigated widespread tension and contributed to rebellion in 1910.⁷³

The pattern of Chihuahuan landholding, like its labor conditions, differed substantially from that in the center of Mexico. There were two basic types of landowners in Chihuahua, hacendados and rancheros. The hacendados often owned vast tracts of land, much of which they had obtained during the massive give-away of government lands in the

1880s.⁷⁴ The *rancheros* had acquired land either from the Spanish Crown during the late eighteenth century or from the Mexican government in the 1860s as part of programs which established military colonies, known as *presidios*, along the northern frontier.⁷⁵ These settlements, which included Janos, Paso del Norte, San Carlos, Coyamé, Carrizal, and Nami-quipa, formed a picket line across northern Chihuahua. The original grants provided that in return for militia service against the Indians, the settlers and their families received land, certain privileges (such as the *fuero militar*), as well as exemption from taxes.⁷⁶ The *presidios* remained independent, sometimes allying with neighboring haciendas or other *presidios* against the Indians, but more often than not making their own arrangements with the Comanche and Apache raiders. It was not unusual for inhabitants of these settlements to deal in contraband or even to accompany the Indians on raids southward.⁷⁷ Throughout the nineteenth century, the former *presidios* proved important allies of the hacendados against the Indians and in the violent factional disputes that characterized Chihuahuan politics. Consequently, these settlements were able, for the most part, to maintain their holdings against the surveying companies that carved up Chihuahua during the 1880s. Their land was still relatively inaccessible and they were able to play off competing political groups against each other. The situation changed drastically after the turn of the century, however, for the expanding transportation network ended their isolation, thus enhancing the value of their land, while the return of the Terrazas to power ended the possibilities for political maneuver.

The Municipal Land Law of 1905 prompted a massive attack on the properties of the former *presidios* by latifundists and speculators; *rancheros* first resisted peacefully and then rebelled.⁷⁸ The oldest conflicts occurred in Cuchillo Parado in the municipality of Coyamé (Iturbide), a military colony granted by Benito Juárez in 1865. A local hacendado, Carlos Muñoz, a member of the Terrazas inner circle, attempted in 1903 to expropriate 43,000 acres of land from the colony. Cuchillo Parado won its initial fight to keep the land in dispute, but new conflicts arose. Later, village spokesman Toribio Ortega was the first revolutionary leader to rise against the government in 1910. The extension of the Kansas City, Mexico, and Orient line from Chihuahua City to Ojinaga undoubtedly induced the renewed struggle for this land.⁷⁹ The same railway line affected another former military colony, San Carlos in the municipality of Ojinaga (Iturbide), which contested the borders of its land with Governor Creel, who owned an immense tract in the area. The situation deteriorated to the point in May 1909 that *rurales* were dispatched to prevent violence.⁸⁰

Former military colonies Janos (Galeana District) in northwestern Chihuahua and Namiquipa (Guerrero District) in the western part of the state also lay in the path of railroad expansion and, as a result, experienced an extensive assault on their land. There were 123 adjudications of municipal or ejido land in Janos between 1905 and 1908. Sixty-six of the adjudications took place in 1908, after which the pueblo protested to Porfirio Díaz, who evidently arbitrated the dispute in much the same way as he did in Anenecuilco in Morelos.⁸¹ The onslaught, led by two local hacendados and the jefe, continued unabated in 1909. Authorities called in police and rurales to force the people off the land. One of the protesters who lost his land was Porfirio N. Talamantes, who was to become a colonel in Villa's army.⁸² In the municipality of Namiquipa (which included Namiquipa and Cruces) there were 296 adjudications from 1906 to 1910. Residents also protested to Díaz, but with no more success than their neighbors to the north in Janos. It was probably particularly upsetting to the inhabitants of this rough and independent region that two of the area's most hated jefes, Luis Y. Comadurán and Joaquín Chávez, and their families were among the largest adjudicators of municipal and ejido land in the district.⁸³ In response to this attack on the land, Namiquipa became a hotbed of revolutionary activity.⁸⁴

Other villages and pueblos in Guerrero also endured the consequences of the spreading railroad network. In Bachíniva the jefe seized ejido land adjacent to his own property.⁸⁵ Hacendado Encarnación Quesada illegally expropriated land held in common by the residents of Temosáchic. There were numerous adjudications along the path of the railroad in Temosáchic, Matachic, and Tejolocachic.⁸⁶ It was no coincidence that Guerrero became a center of unrest and revolution.

Land seizures provoked discontent elsewhere in Chihuahua as well. In Nonoava in 1910, inhabitants protested against eighty-one adjudications in that pueblo since 1906.⁸⁷ A flood of adjudications in 1908 preceded the riots in San Andrés the next year.⁸⁸ A surveying company invaded the property of the ejido of Guadalupe (Bravos District), another former military colony. Although after four years the government resolved the dispute in favor of the pueblo, the area was later a fertile recruiting ground for revolutionary soldiers.⁸⁹

The extension of the Kansas City, Mexico, and Orient line to Aldama initiated a wave of adjudications in that municipality just east of Chihuahua City, most of which occurred after 1907, when the railroad announced its plan to build an extension to Ojinaga. The greatest furor arose over the adjudication of the Bosque de Aldama, which the municipality had previously purchased at great cost from a local hacendado. With the intervention of Luis Terrazas, the conflict appeared settled in

1906, only to flare up again three years later. A dispute of a different kind erupted in 1908 at the haciendas of William Benton in San Lorenzo (Iturbide). He converted his land from staple crops to cattle breeding, in the process evicting the tenants from the property. Two years later, Benton widened the conflict when he occupied land belonging to the pueblo of Santa María de las Cuevas. Surrounding himself with a bodyguard of twenty men and a detachment of rurales, Benton ran roughshod over the inhabitants of the area. Pancho Villa later shot him. Mining speculators, spurred by the sharp increase in property values along the new railroad routes, also encroached upon municipal and ejido lands. Mining claims were registered on common lands in Temosáchic, San Carlos, Ojinaga, and Cuchillo Parado, all of which became centers of unrest and revolution.⁹⁰

Almost from its inception, the Municipal Land Law drew angry complaints of secret dealings, favoritism, nepotism, and illegal procedures. Creel had announced that the purpose of the law was to “modernize” landownership and to provide the opportunity for the lower class to buy land. He, like the Liberals before him, thought community property holding obstructed economic development. Instead, the effect of the law was to transfer communal lands into the hands of large landowners and speculators. *Jefes* gave their families and cronies preferred access to the land, easily circumventing the legal limit on adjudications by using frontmen and relatives to adjudicate property. State government memoranda through the end of 1909 urged the *jefes* to comply with the law; they were, of course, ignored.⁹¹ Adjudications continued into 1911.

CONCLUSION

Having examined the crucial factors of revolutionary fermentation in Chihuahua, we are faced with the ultimate question: how and why did these factors blend to produce a revolution in 1910? Depression, drought, and political unrest had coincided three times before, in 1877–79, 1884–86, and 1891–95. Violence had erupted, but no revolution ensued. Illegal land expropriations occurred during the 1880s, but they did not cause widespread resistance. The key differences between these instances and 1910 were in scale and intensity. The depression of 1907 was more severe than its predecessors because there were more people engaged in non-agricultural employment that were directly and adversely affected by the downturn and because the impact of the downturn was magnified since it came after a long period of rising real wages and living standards. Furthermore, the economic boom had created a middle class

whose progress was crushed by the depression. This group proved willing to articulate its disappointment and frustration. The effect of the drought was similar. The failure of three successive harvests, after two years of abundance, intensified its impact. Political oppression, too, existed to an unprecedented extent after the Terrazas' return to power in 1902. With no rivals to check them, the clan became unresponsive to other groups. Moreover, Creel's centralizing innovations conflicted with the proud tradition of local political autonomy. Creel also allowed the family's valuable and delicate relations with the unruly factions of western Chihuahua to deteriorate.

Depression, crop failure, and political oppression furnished critical ingredients for revolutionary discontent, but the massive and unparalleled assault on the land after 1905 ignited the fire of revolution. The people of the former military colonies, hardest hit by the onslaught, were tough and independent; they owned guns and horses. They, like their fathers and their grandfathers, had fought for decades against hostile Indians to obtain and keep their land; they were not about to lose it without resisting. In 1910 and 1911, it was these people, like Porfirio Talamantes, Toribio Ortega, and Pascual Orozco, who provided the military leadership of the Revolution, joining with allies among the middle class and unemployed workers to overthrow the Terrazas-Creel regime.

NOTES

Note: Unless otherwise indicated, all newspaper articles (e.g., *El Correo*) appear on page 1.

1. Several fine studies examine these factors: Francisco R. Almada, *La Revolución en el Estado de Chihuahua*, 2 vols. (Chihuahua: Biblioteca del Instituto Nacional de Estudios Históricos de la Revolución Mexicana, 1964) and *Vida, proceso, y muerte de Abraham González* (México: Biblioteca del Instituto Nacional de Estudios Históricos de la Revolución Mexicana, 1967); William H. Beezley, *Insurgent Governor: Abraham González and the Mexican Revolution in Chihuahua* (Lincoln: University of Nebraska Press, 1973); and Michael C. Meyer, *Mexican Rebel: Pascual Orozco and the Mexican Revolution, 1910–1915* (Lincoln: University of Nebraska Press, 1967).
2. Mark Wasserman, "Oligarchy and Foreign Enterprise in Porfirian Chihuahua, Mexico, 1876–1911" (Ph.D. dissertation, University of Chicago, 1975), pp. 14–153.
3. Mark Wasserman, "Foreign Investment in Mexico, 1876–1910: A Case Study of the Role of Regional Elites," *The Americas* (in press).
4. "The Mexican Revolution from the Publication of the Plan of San Luis Potosí, October 6, 1910 to June 7, 1911." Monograph no. 4, U.S. National Archives, Record Group 76, Records of the United States and Mexican Claims Commission, Suitland, Maryland, pp. 37–38.
5. Wasserman, "Oligarchy," pp. 14–58.
6. Almada, *Revolución*, 1:27–36; Francisco R. Almada, *Gobernantes de Chihuahua* (Chihuahua: Talleres Gráficos del Gobierno del Estado, 1929), pp. 116–18.
7. *El Correo de Chihuahua* (Chihuahua City), 31 May 1907.
8. Almada, *Revolución*, 1:23–24; Chihuahua, México, *Periódico Oficial del Estado de Chihuahua*, 3 Mar. 1894, p. 1 (hereafter, *Periódico Oficial*); Chihuahua, México, Secretaría de Gobierno, Sección Estadística, *Anuario Estadístico del Estado de Chihuahua*, 1907

- (Chihuahua: Imprenta del Gobierno, 1908), p. 181 (hereafter, Chihuahua, *Anuario*, with appropriate date).
9. Chihuahua, *Anuario*, 1907, pp. 181–82; Francisco R. Almada, *Diccionario de historia, geografía y biografía chihuahuenses*, segunda edición (Chihuahua: Universidad de Chihuahua, Departamento de Investigaciones Sociales, Sección de Historia, n.d.), pp. 322–23.
 10. This debate began in *El Correo* on 9 June 1906 and continued through September. Silvestre Terrazas was a distant relative of Luis Terrazas.
 11. *El Correo*, 16 and 23 March 1907.
 12. *Ibid.*, 2 and 30 March 1907.
 13. The best account of the Banco Minero affair is that of Robert L. Sandels, “Silvestre Terrazas, the Press, and the Origins of the Revolution in Chihuahua” (Ph.D. dissertation, University of Oregon, 1967), pp. 136–54; I. J. Bush, *Gringo Doctor* (Caldwell, Idaho: The Caxton Printers, 1939), p. 165.
 14. *El Correo*, 20 May 1908, p. 4; 9 and 10 Apr. 1908.
 15. *Ibid.*, 25 Nov. 1905; Chihuahua, *Ley Reglamentaria para la Organización de los Distritos del Estado* (Chihuahua: Imprenta del Gobierno, 1904); *El Correo* 4 Feb. 1907.
 16. See, for example, *El Correo*, 25 Aug. 1906, p. 2 and 26 May 1908.
 17. Meyer, *Pascual Orozco*, pp. 14–15. Antonio Alderete and others to Governor Luis Terrazas, 18 Aug. 1903, Flores Magón Correspondence, Folder 3B, Silvestre Terrazas Papers, Silvestre Terrazas Collection, Bancroft Library, Berkeley, Calif. (hereafter, STC). *El Correo* 27 Nov. 1909, p. 4; 11 Aug. 1910, pp. 2–3; 3 Aug. 1909; 28 Jan. 1908; 29 Jan. 1908, p. 2.
 18. *El Correo*, 19 Feb. 1909; 26 Feb. 1909, p. 2; 7 Apr. 1909, p. 2; 29 Apr. 1909; 19 May 1909; 1 Oct. 1909; 2 Dec. 1909; 26 Apr. 1907; 24 Apr. 1909; 27 Nov. 1910, p. 2; 5 Feb. 1909; 1 July 1910, p. 4; 19 May 1910; 23 Nov. 1910; Almada, *La Revolución* 1:177.
 19. *El Correo*, 19 Oct. 1908; 1 Jan. 1910; 3 and 10 Aug. 1910; 14 May 1909; 5 Oct. 1910, p. 3; 2 Sept. 1910, p. 2; 30 May 1909.
 20. Chihuahua, México, Gobernador, *Informe leído el 16 de septiembre de 1904 por el Gobernador del Estado de Chihuahua C. Enrique C. Creel en la apertura de sesiones ordinarias del XXIV Congreso correspondiente al segundo año de su ejercicio* (Chihuahua: Imprenta del Gobierno, 1904), p. 13.
 21. *El Correo*, 23 Nov. 1908, p. 2; 12 Oct. 1904; 5 Mar. 1909; 11 Aug. 1909, p. 2; 14 Aug. 1909; Meyer, *Pascual Orozco*, p. 17.
 22. Francisco R. Almada, *Juárez y Terrazas: aclaraciones históricas* (México: Libros Mexicanos, 1958), p. 464; Chihuahua, *Anuario*, 1908, p. 167.
 23. Almada, *La Revolución* 1:81; Sandels, “Silvestre Terrazas,” pp. 164–65.
 24. *Ibid.*
 25. *El Correo*, 5 Sept. 1908, pp. 5–6; 20 Dec. 1905.
 26. Bush, *Gringo Doctor*, pp. 165–66.
 27. *El Correo*, 10 Mar. 1909.
 28. *Periódico Oficial*, 4 Apr. 1909, pp. 2–3. *El Correo*, 30 and 31 Mar. 1909; 2 Apr. 1909. *El Paso Times*, 1 Apr. 1909.
 29. Meyer, *Pascual Orozco*, p. 14.
 30. Friedrich Katz, “Labor Conditions on Haciendas in Porfirian Mexico: Some Trends and Tendencies,” *HAHR* 54 (Feb. 1974):1–47; Robert C. West, *The Mining Community in Northern New Spain: The Parral Mining District, Ibero-Americana* No. 38 (Berkeley: University of California Press, 1949); Friedrich Katz, ed., *La servidumbre agraria en México en la época porfiriana* (México: SepSetentas, 1976).
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 32. Wasserman, “Oligarchy,” pp. 154–220, provides an economic history of Chihuahua. For a discussion of the effect of boom and bust economic cycles on society see Mancur Olson, “Rapid Economic Growth as a Destabilizing Force,” *Journal of Economic History* 23 (Dec. 1963):529.

33. Wasserman, "Oligarchy," pp. 244–51.
34. E. A. H. Tays, "Present Labor Conditions in Mexico," *Engineering and Mining Journal (EMJ)* 84 (5 Oct. 1907):620–24.
35. Thomas D. Edwards, U.S. Consul, Ciudad Juárez, to Assistant Secretary of State, 28 Aug. 1908, U.S., National Archives, General Records of the Department of State, Record Group 59, Numerical File, 1906–1910, Case no. 13911/83–84; Lewis A. Martin, U.S. Consul, Chihuahua City, to Assistant Secretary of State, 31 Oct. 1908, USNA, RDS, RG 59, Num. File, 1906–1910, Case no. 15600/6.
36. *EMJ* 83 (2 Feb. 1907):223. *Mexican Herald*, 9 Aug. 1908, p. 4.
37. Clark, "Mexican Labor," pp. 466–522.
38. El Colegio de México, Seminario de la Historia Moderna de México, *Estadísticas económicas del porfiriato: fuerza de trabajo y actividad económica por sectores* (México: El Colegio de México, n.d.), p. 11.
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40. *El Correo*, 27 July 1906; 1 Aug. 1906; 31 July 1906; 4 Aug. 1904, p. 4; 16 Mar. 1907; 5 Sept. 1907, p. 4; 10 Sept. 1907, p. 4. *Mexican Herald*, 2 Mar. 1907, p. 4; 3 Aug. 1907.
41. *El Correo*, 10 Dec. 1906; 15, 21, and 28 Oct. 1907. *Mexican Herald*, 4 Nov. 1907, p. 2; 26 Oct. 1907, p. 5; 7 Nov. 1907, p. 10; 13 Dec. 1907, p. 11; 18 Dec. 1907, p. 11; *EMJ* 84 (28 Dec. 1907):1237; A. Van Zwaluwenberg, "Mexico," *EMJ* 85 (4 Jan. 1908):68–69. *Mexican Herald*, 14 June 1908, p. 11; 21 Mar. 1908, p. 11; 16 Sept. 1906, p. 4; 2 Mar. 1907, p. 3; 25 Nov. 1907, p. 11; 6 and 13 Jan. 1908; 23 Jan. 1908, p. 5; 27 Aug. 1908, p. 3; 24 Jan. 1908, p. 3. *El Correo*, 19 Feb. 1907.
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43. *El Correo*, 27 Oct. 1909.
44. Page W. Christiansen, "Pascual Orozco: Mexican Rebel," *New Mexico Historical Review* 36 (Apr. 1961):99.
45. *El Correo*, 24 Dec. 1908, pp. 1 and 4.
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50. Chihuahua, *Anuario*, 1905, p. 75; 1906, pp. 216–17; 1907, p. 130; 1908, p. 171; 1909 p. 210.
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55. U.S., Department of Commerce and Labor, *Commercial Relations of the United States*

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56. *El Correo*, 18 Sept. 1909; *Periódico Oficial*, 25 July 1909, p. 22 and 23 Jan. 1910, p. 5.
 57. Beezley, Abraham González, pp. 16–17.
 58. Meyer, Pascual Orozco, pp. 15–18.
 59. Sandels, "Silvestre Terrazas," pp. 75–76; Document entitled "Bienes Pertencientes al Suscrito en Chihuahua, México," in the Silvestre Terrazas Papers, STC.
 60. Almada, *La Revolución* 1:153; *El Correo*, 3 Sept. 1904, p. 3.
 61. Meyer, Pascual Orozco, p. 23; *Periódico Oficial*, 30 May 1909, p. 21; Chihuahua, *Anuario*, 1907, p. 153.
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 63. Almada, *La Revolución*, 1:153; Chihuahua, *Anuario*, 1905, p. 41; Chihuahua, *Anuario*, 1907, pp. 145, 148, 165–73.
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 70. Almada, *La Revolución*, 1:96–106.
 71. U.S., *Commercial Relations*, 1901, p. 468 and 1902 1:505.
 72. Wasserman, "Oligarchy," pp. 266–71.
 73. See John Coatsworth's pioneer study, "Railroads and Concentration of Land Ownership in the Early Porfiriato," *HAHR* 54 (Feb. 1974):48–71 for a discussion of the potentially explosive impact of railroad construction.
 74. Chihuahua, México, Gobernador, *Mensaje del Gobernador* (Chihuahua, n.p., 1888).
 75. Max L. Moorhead, *The Presidio: Bastion of the Spanish Borderlands* (Norman: University of Oklahoma Press, 1975).
 76. William A. DePalo, Jr., "The Establishment of the Nueva Vizcaya Militia during the Administration of Teodoro de Croix, 1776–1783," *New Mexico Historical Review* 48 (July 1973):223–50; Ralph A. Smith, "The Fantasy of a Treaty to End Treaties," *Great Plains Journal* 12 (Fall 1972):26–51.
 77. Smith, "Fantasy," pp. 43–45.
 78. Chihuahua, México, *Ley Sobre Medida y Engenación de Terreños Municipales* (Chihuahua: Imprenta del Gobierno, 1905).
 79. México, Departamento Agrario, Dirección de Terreños Nacionales Diversos, Expediente 37 X 5, Junta Directiva de los Vecinos de Cuchillo Parado to Secretario de Fomento, 10 Jan. 1903, cited in Friedrich Katz, "Peasants in the Mexican Revolution of 1910," in Joseph Spielburg and Scott Whiteford, eds., *Forging Nations: A Comparative View of Rural Ferment and Revolt* (East Lansing: Michigan State University Press, 1976), pp. 89–120.
 80. *El Correo*, 1 and 24 July, 1909.
 81. México, Departamento Agrario, Dirección de Terreños Nacionales Diversos, Expediente 75-1407, Porfirio Talamantes, as representative of the Inhabitants of Janos, to President Díaz, 22 Aug. 1908, cited in Katz, "Peasants," p. 99.

82. *El Correo*, 18 May 1909, p. 2 and 8 June 1909; Armando B. Chávez M., "Diccionario de los Hombres de la Revolución en Chihuahua" (unpublished ms., n.d.), p. 268.
83. Chihuahua, *Anuario*, 1908, pp. 47–103, lists all of the adjudications of municipal land from 1905 through 1908; Chihuahua, *Anuario*, 1909, pp. 83–90 covers 1909; *Periódico Oficial*, 4 Oct. 1906, pp. 21–23 and 9 Apr. 1908, p. 36.
84. Francisco Mendoza, *Chihuahua Revolucionario, Opiniones y Comentarios* (Ciudad Juárez: Imprenta Fábrica de Sillos de Cama, 1921), pp. 22–23.
85. Reply of Governor Terrazas to the Complaint of the citizens of Bachíniva, Distrito Guerrero, Flores Magón Correspondence, File no. 3B, Silvestre Terrazas Papers, STC.
86. *El Correo*, 20 Apr. 1910, p. 4; 14 June 1910, p. 4; 17 Mar. 1910; 30 Oct. 1910, p. 3. *Periódico Oficial*, 21 Apr. 1907, pp. 28–29.
87. *El Correo*, 19 Aug. 1909, p. 4; 18 Feb. 1910, p. 3.
88. According to the *Anuarios*, there were forty-five adjudications of municipal land in the fifteen months before the riot.
89. *Periódico Oficial*, 30 Dec. 1906, pp. 4–6 and 23 July 1908, p. 4.
90. *El Correo*, 20 Nov. 1909; 13 Oct. 1905; 12 May 1908; 19 Aug. 1909, pp. 2–3; 21 Apr. 1910, p. 3; 23 July 1910; 6, 7, and 8 June 1910; 22 July 1910, p. 4; *Periódico Oficial*, 13 Aug. 1908, p. 17; 20 Sept. 1908, p. 15; 4 Mar. 1909, p. 23; 13 Jan. 1910, pp. 24–25; 17 Feb. 1910, pp. 15–18.
91. *Periódico Oficial*, 14 Oct. 1908, p. 5; 15 Mar. 1909, p. 14.