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The Organization of Hacienda Labor during the Mexican Revolution: Evidence from Yucatán*

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Beginning in 1914, Yucatecan revolutionary governors promulgated a series of decrees that liberated and regulated labor on henequen haciendas. The first of these decrees banned debt peonage, immediately weakening the pre-revolutionary labor regime, which was based on a mixture of paternalism and coercion. Using census and hacienda data, we show how hacendados and workers adapted to institutional changes and market shocks, allowing output and investment to increase after the Revolution. While there was considerable continuity in the methods of contracting before and after the Revolution, market participants exhibited agility in shifting among multiple contractual forms.

Al comienzo de 1914, los gobernantes revolucionarios yucatecos promulgaron una serie de decretos que liberaban y regulaban la mano de obra en las haciendas de henequén. Los primeros de estos decretos prohibían la deuda de los peones, lo que debilitaba inmediatamente el régimen de trabajo prerevolucionario, basado en una mezcla de paternalismo y coerción. Mediante el uso de censos e información sobre las haciendas, mostramos cómo los hacendados y los trabajadores se adaptaron a los cambios institucionales y a los golpes del mercado, y cómo permitieron el incremento de la producción y la inversión tras la revolución. Aunque hubo una continuidad

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considerable en los métodos de contratación antes del movimiento armado, los participantes en el mercado mostraron agilidad para trasladarse entre múltiples formas contractuales.

Key words: Mexican economic history, Mexican Revolution, Yucatán, labor mobility, henequen, Maya, peasants, debt, Salvador Alvarado, haciendas.

Palabras clave: historia económica mexicana, Revolución mexicana, Yucatán, movilidad de la mano de obra, henequén, maya, campesinos, deuda, Salvador Alvarado, haciendas..

I. Introduction

When Porfirio Díaz was ousted as president of Mexico in 1911, the country's most important agricultural export was not coffee, sugar, or cotton, but a fiber that was extracted from the long leaves of the henequen plant. This fiber was used in the United States and Canada to produce binder twine, an important input for the McCormick binder. Henequen was grown in the state of Yucatán, far from the initial revolutionary action, on plantations that employed hundreds of workers and harvested millions of leaves per year.

Prior to the Revolution, hacendados in Yucatán used many different mechanisms, both coercive and noncoercive, to keep workers on the haciendas. These mechanisms involved subsidized food, loans, *milpas* (corn fields), medical assistance, aid to the elderly, corporal punishment, and bounty hunters to apprehend fleeing peons.¹ An analysis of loans given by hacendados to resident workers on one large henequen hacienda, Itzincab Cámara, shows that a majority of the loans were used to pay for marriages and to settle Maya workers. The loans, along with the administration of marriage and baptism sacraments, helped to strengthen social and cultural ties between workers and hacendados, supporting an environment of wage and workforce stability (Alston, Mattiace, and Nonnenmacher 2009). After the Revolution, however, the paternalistic and coercive mechanisms that tied workers to the hacienda had to be supplemented or replaced with other forms of contracting. The labor and anticlerical policies instituted by the revolutionary governors undermined the economic, social, and cultural underpinnings of pre-revolutionary labor relations. What followed was a period of experimentation during

1. Joseph (1986, 55) estimates that there were 125,000 debt peons in Yucatán in 1910.

which hacendados and Maya workers sought to rebuild their relationships within a new institutional context.²

Examining the historical literature on Yucatán during our time period, most scholars focus on General Salvador Alvarado, who was appointed by President Carranza and served as the state's governor from March 1915 to February 1918. Little attention has been paid to two earlier revolutionary governors, also appointed by Carranza: Colonel Eleuterio Ávila (September 1914–January 1915) and General Toribio de los Santos (January 27, 1915–February 12, 1915). In part, this lack of attention to Ávila and de los Santos is because of their short terms in office. However, although Ávila was in power for only four months, he was the one who initiated a campaign against powerful Catholic Church clergy and outlawed debt peonage.³

Taking the measure of the Revolution's legacy in Yucatán has been quite difficult, given the paucity of micro-level data. Historical documents disintegrate rapidly in Yucatán's harsh climate. The remaining data are housed largely in private collections and are not open to the public. In fall 2007, a collection of hacienda books from Itzincab Cámara, a large henequen hacienda located in the heart of the henequen zone surrounding the city of Mérida, became publicly available. We rely extensively on data from this hacienda to answer our questions regarding labor relations in Yucatán after the Revolution. Additionally, we use hacienda books from Hacienda Misnebalám, also located in Mérida's henequen zone.⁴

Our main contribution in this paper is to track how institutional and economic changes associated with the Mexican Revolution shaped labor relations on haciendas in Yucatán. Using hacienda-level data, we show that Ávila's ban on debt peonage marked the end of a period of remarkable stability and had an immediate and significant impact on labor relations. Alvarado's market-oriented reforms continued the transition to a freer labor regime. We show that these reforms allowed workers of all ages to exit the haciendas, even while output and investment continued to rise. This is the empirical puzzle at the heart of our research: how did hacendados and workers

2. Following the work of North (1990, 3), we define institutions broadly as "the humanly devised constraints that shape human interaction."

3. Chacón (1985, 249–250) argues that although the Alvarado administration was responsible for undermining the church, Ávila was the one who promulgated the Revolution's first anticlerical measures.

4. The Itzincab Cámara archives are located at the CIESAS-Sureste (Center for Research and Advanced Study in Social Anthropology) in downtown Mérida and the Misnebalám archives are located at the Autonomous University of Yucatán's (UADY) Regional Studies Center, also located in Mérida's center.

reorganize their labor relations in a period of intense henequen production when workers were no longer tied to the hacienda through cultural, economic, and legal means? Drawing on data from our case studies, we argue that workers and hacendados reconstructed their labor relations in several different ways. Some workers remained on the hacienda as traditional resident workers. Others moved to nearby towns to join groups of transient workers who contracted with haciendas in the region. Hacendados also imported central Mexican workers in an attempt to replace the lost resident workforce.

Throughout the market turmoil, continuity in labor relations persisted. During the 1910s, no new contractual form, such as sharecropping, supplanted the two traditional contracting methods.⁵ The form of the original paternalistic relationship between the hacendado and workers also seemed to persist. A core group of skilled workers stayed on haciendas after 1914. Hacendados might have honored the implicit contract that they had made with workers prior to the Revolution: workers would provide a lifetime of faithful work in return for paternalism.

In Section II, we describe the revolutionary reforms in Yucatán, beginning with Ávila's abolition of debt peonage in 1914. We also describe the principal socioeconomic reforms enacted under the Alvarado regime and examine historians' views on the meaning and consequences of these reforms. Section III provides an overview of labor mobility in the regions surrounding our two hacienda case studies and provides evidence that hacendados were optimistic about the continued strength of the henequen export market immediately after the Revolution. In the final section, we use the record books of our primary case study, Itzincab Cámara, to provide a chronological overview of changes in turnover rates and the mix of labor contracts.

II. Revolution and Institutional Change

The ouster of President Porfirio Díaz in May 1911 ushered in a period of extraordinary tumult throughout Mexico that lasted more than a decade. Certainly, the level of violence and upheaval differed significantly over time and across regions, but no area of Mexico was untouched. In the state of Yucatán, the Porfiriato (1876–1911) coincided with an enormously lucrative export trade in henequen. After the invention of the McCormick binder in the United States in 1878, the demand for henequen skyrocketed, and virtually 100 percent of

5. See Alston and Higgs (1982) for analysis of contractual change after the U.S. Civil War.

Yucatán's "green gold" was exported to the United States (Evans 2007). Henequen production was controlled by some thirty interconnected Yucatecan families, the so-called *Casta Divina* (Divine Caste), headed by the Montes-Molina families. Economic and political power were tightly interwoven in Yucatán during these years; for example, Olegario Molina, elected governor in 1902 and cabinet minister under President Díaz, was also the state's largest plantation owner and the owner of the state's henequen export house.

The Revolution came relatively late to Yucatán. Not only was the state located far from the center of power in Mexico City, but also the plantation society, created by the dominance of a single export crop, dampened peasant rebellion by tying peasants to their hacendado patrons through coercion, debt, and paternalism (Alston et al. 2009; Peniche 2010; Wells and Joseph 1996).⁶ Notwithstanding the influence of hacendados and their conservative allies in government, by 1914 unrest in the Yucatecan countryside threatened to upset the established social order. Allen Wells and Gilbert Joseph (1996) detail several uprisings around the state, specifically in the Hunucmá district and Progreso. While President Huerta's appointed governor, Prisiliano Cortes (March 1913–July 1914), did not hesitate to use overt repression and coercion to contain the unrest, his continuing power rested on the viability of Huerta's government, which was overthrown by Carranza's forces in July 1914. Despite its distance from Mexico City and its reputation as one of the country's last oligarchic redoubts, Yucatán could not avoid being drawn into revolutionary politics; events occurring in Mexico City were to have profound effects on the state. Upon assuming power in July 1914, Carranza quickly sought to extend his power base throughout the republic by appointing allies as state governors, and on September 9, 1914, Colonel Eleuterio Ávila became governor of Yucatán. Carranza kept a particularly close eye on political events, as tax revenues and

6. Muckraking journalists like John Kenneth Turner ([1910] 1984) described Maya workers as living in slave-like conditions, and their texts have been widely read among scholars and the general population, largely defining the current popular conception of labor conditions during that era. Although hacendados used various means to keep peasants tied to the haciendas, the specifics depended on individual hacendados as well as on workers' ethnicity. For example, President Díaz sent several thousand Yaqui to work on Yucatán's henequen plantations in 1908 after the Federal Army brutally suppressed a rebellion in Yaqui territory in northern Mexico. The subsequent treatment of the Yaqui in Yucatán was particularly harsh. See Padilla Ramos (1995) for a comprehensive treatment of the Yaqui experience in Yucatán and Alston et al. (2009) and Peniche (2010) for discussions of how debt and paternalism were used to tie peasants to haciendas.

forced loans from Yucatán helped finance his government. In order to remain in Carranza's favor, it was imperative for Yucatán's governors to keep henequen export revenues high (Joseph 1988, 8).

As Carranza's appointee, Governor Ávila was ordered to establish those reforms that had already been implemented in the rest of Mexico (Chacón 1985, 249; Eiss 2002, 107). During his first weeks in office, Ávila legally ended debt servitude, abolished restrictions on labor mobility, and outlawed corporal punishment and forced marriage.⁷ Scholars have argued that Ávila's initial radicalism was not followed up with efforts at implementation. Indeed, historians suggest that many of these reforms were watered down almost immediately (Aboites 1985, 66; Peniche 2010, 184). Wells and Joseph (1996, 271) point out that less than two weeks after the reforms regarding labor mobility were promulgated, Ávila issued a circular to the local military commanders stating that servants had to "specify the locale where they would reside, which is restricted to other estates or towns in Yucatán." In addition, peons could not leave estates without first giving the patron fifteen days warning. Yucatecan historian Edmundo Bolio (1967, 81) argues that the second decree effectively negated the redemptive reach of the first.

Paul Eiss (2002) also argues that after outlawing debt peonage Ávila almost immediately began to place limits on the decree, circumscribing and limiting worker freedom. Specifically, he points to a number of incitement (*cobecho*) cases brought by Ávila's government against workers who actively encouraged their fellows to flee haciendas. He notes that Ávila's government was initially quite aggressive in publicizing the decree among workers, sending government officials to haciendas to read the decree to workers in both Spanish and Maya.⁸ Eiss argues that Ávila sought to transform labor relations on haciendas—freeing workers from the grip of Porfirian "slavery"—while at the same time sending a strong message to workers that the liberation he envisioned was not to be radical, but gradual and ordered (Eiss 2002).

7. Eiss (2002, 109) notes that decrees abolishing debt peonage occurred in several other Mexican states around the same time and argues that Carranza ordered the issuance of a decree ending debt servitude in Yucatán.

8. Ávila's government hired Yucatecan scholar and Mayanist Santiago Pacheco Cruz to translate the decree into Maya, and it appeared in the conservative *Revista de Yucatán* on September 20, 1914 (Eiss 2002, 110). Interestingly, Eiss notes that the newspaper's editor, Carlos Menéndez, referring to the decree, declared the importance of "publicity, publicity, and more publicity" and called for the designation of Maya-speaking government agents to disseminate it throughout the countryside (112).

Although historians credit Alvarado with undermining the power of the Catholic Church, Ávila was the one who initiated the anticlerical campaign. On October 4, 1914, three weeks after abolishing debt peonage, Ávila decreed that all foreign priests had eight days to leave the state (Cantón 1943, 105). Ramón Chacón (1985) notes that the archbishopric of Yucatán, which employed ninety-eight priests (50 percent of whom were Spaniards), lost almost half its clergy through these deportations. As a constitutionalist, Ávila saw the clergy as extensions of the oligarchy and, as such, a serious obstacle to the government's revolutionary agenda. Ávila justified the expulsion of foreign priests not only because they were foreigners, but also because their politics were "prejudicial to the interests of the state" (quoted in Chacón 1985, 250).⁹ Similar to the watering down of the decree abolishing debt peonage, however, Ávila's commitment to anticlericalism waned after the initial decrees, becoming more conciliatory (250–251).

Over the course of Ávila's four months in office, the governor increasingly distanced himself from Carranza's Revolution and strengthened his ties to the *Casta Divina*.¹⁰ Although hacendados had initially considered Ávila to be an enemy, the consensus historical view is that hacendados were sad to see him go in January 1915, when Carranza replaced him with General Toribio de los Santos (Aboites 1985; Chacón 1982).

In his short term as governor, historians suggest that de los Santos seemed to be much more committed to reform than Ávila and thereby more of a threat to the planter class. Wells and Joseph (1996, 275) argue that de los Santos "breathed new life into Ávila's moribund peonage decree, rescinding all the riders that had previously nullified its impact and outlawing the system of payment in scrip that underwrote the hacienda store." In addition, de los Santos mandated an eight-hour work day and required planters to both finance the creation of rural schools and ensure that peasants had sufficient time to attend them. If this were not enough to alienate the planter class, Carranza sent teams of propagandists to Yucatán to assist in the revolutionary project. These propagandists saw the planter class as the

9. On November 13, 1914, a law was passed that outlawed religious practices deemed to be unhygienic, such as taking cadavers to churches to hold religious services, kissing sacred images, and using holy water.

10. Ávila and Carranza disagreed strongly over several issues, chief among them payments from Yucatán to finance revolutionary forces fighting in other parts of the country, the removal of some officials Carranza disliked, and Carranza's order to conscript Yucatecans to serve in his army (Chacón 1982, 180; Aboites 1985, 66; Wells and Joseph 1996, 272–274).

chief obstacle to revolutionary reform and publicly denounced its members as “degenerate” (Chacón 1982, 188). De los Santos’s government lasted only a few short weeks, however. An internal revolt, led by General Ortiz Argumedo and supported by middle- and upper-class *yucatecos*, toppled a government that the planters considered detrimental to their interests. Notwithstanding his conservative politics, Argumedo attempted to negotiate with the central government. These attempts met with no success; Carranza’s response to Argumedo was to send General Salvador Alvarado, who had been serving as military commander of the southern state of Chiapas, to depose the counterrevolutionary leader.

On March 19, 1915, Alvarado swept into Mérida after easily defeating Argumedo’s forces. Alvarado, like so many other revolutionary leaders, was a *norteño*; he was born in Sinaloa and raised in the state of Sonora. Alvarado’s time in office was marked by dramatic shifts in the social, economic, and political realms.¹¹ His term also coincided with historically high prices for henequen, which financed his ambitious social and political agenda.

Historians concur that Alvarado instituted major changes in Yucatán’s socioeconomic and political realms by greatly strengthening the power of the state vis-à-vis the oligarchy. At the macro level, Alvarado’s reforms shook the foundations of Yucatecan society, politics, and economy. Indeed, the revolutionary reforms Alvarado introduced in Yucatán are considered to be among the most progressive in the country during this period. Historians strongly agree that Yucatán was unique in terms of the top-down and dominant role played by bourgeois reformist leaders. In many states, such as Morelos, the role of popular mobilization was significant in shaping regional and local politics in these years.¹² In contrast, popular mobilization did not play a significant role in Yucatán largely because of the power of henequen haciendas and a captive workforce.¹³

11. On the national level, this period is marked by relative autonomy for state governors (that is, revolutionary leaders did not have the control over their appointed governors as they would after 1925). Aboites (1985, 68) notes that Yucatán under Alvarado became one of the most important bastions of Constitutionalism in the country.

12. Knight (1991) notes that Morelos and Yucatán occupy polar opposites on the spectrum of popular mobilization and top-down mobilization.

13. Knight (1991) underscores the top-down character of Alvarado’s revolution in his description of the administration’s land reforms: “this reform had a top-down quality: it required state organization and exhortation; it encountered not only predictable landlord opposition but also a degree of popular apathy (or caution); and it proved—in places—to be fragile and reversible” (89). Wells and Joseph, however, warn against exaggerating descriptions of Alvarado’s revolution as top-down and

Upon entering office, Alvarado sought to liberate peons from the *Casta Divina*, whom he viewed as feudal oligarchs and for whom he seemed to have an almost visceral dislike. One of Alvarado's most sweeping reforms was in the area of labor. On December 11, 1915, Alvarado promulgated a labor law that established the legal foundations to protect the rights of workers and to regulate employer-worker relations. The law was extensive; it established labor contracts for work projects, set minimum wage standards and maximum work hours, regulated the conditions under which women and children were employed, required that health standards be met in business establishments and industries, provided for worker indemnification in the event of accidents, granted labor the right to strike, supported the unionization of laborers, created boards of conciliation (at the district level) and the Tribunal of Arbitration to resolve conflicts between labor and capital, and established the Department of Labor to enforce the labor law. During Alvarado's time in office, judicial cases tended to be resolved in favor of workers, who were able to provide ample testimony that they suffered harsh conditions on haciendas (Chacón 1985, 411).

Examining Alvarado's reforms from the vantage point of Hunucmá, a small town located in the henequen zone about twenty miles northwest of Mérida, Eiss (2010a) argues that they were more of a governmental mechanism for social and political control than a means to liberate Maya peasants. The revolutionary state under Alvarado functioned as a new kind of *patrón*—kinder and gentler, perhaps, than previous bosses—but equally committed to keeping henequen export markets functioning smoothly. Keeping hacienda exports steady required an orderly and disciplined workforce. In Eiss's view, Alvarado saw the people—in whose name he spoke—“as an object of control and governance rather than as an insurgent political subject” (122). When conflict begins to increase in Hunucmá in late 1915, Eiss argues that Alvarado dealt with this conflict through “tepid propaganda” (that is, educating workers to see that the state was acting in their best interest), on the one hand, and repression at the hands of government military commanders in the region, on the other.

Although there is some disagreement regarding the extent to which Alvarado's reforms liberated Mayan peasants, historians agree

imposed. Although Alvarado's arrival and subsequent policies were decisive in breaking the oligarchy, they say, “General Alvarado found a host of ready supporters for his bourgeois revolutionary project among the campesinos, workers, intelligentsia, and petty bourgeoisie when he arrived in the peninsula in March 1915” (1996, 286).

that Alvarado was resolute in his determination to free them from personal vices.¹⁴ In the autobiography detailing his years as governor, Alvarado (1918) describes his goals in messianic terms, stating that he “wanted the Revolution to be a purifying act, extirpating all social blemishes [*lacras*] and extinguishing all vices” (76). Alvarado’s crusades against alcohol and prostitution were consistent with his belief in the Victorian values of hard work, personal discipline, and self-control.¹⁵ Alan Knight (1994) describes Alvarado—along with most revolutionaries associated with the Constitutionalist faction—as governing according to a “developmentalist ethic,” which “advocated the material advancement of Mexico by changing the values of Mexicans” (Fallaw 2002, 40). Feudalism needed to be wiped out, but the henequen plantation would stay. Under Alvarado’s reforms, peons would be converted into responsible rural workers (Joseph 1986, 126).

Consistent with his developmentalist ethic, Alvarado was a strong proponent of education. For Alvarado, the liberation of the Maya was inextricably tied to education. Joseph (1986, 107) describes Alvarado as a true liberal in this area; for Alvarado, education—not the expropriation of property—was a key to solving Yucatán’s pressing social and economic problems. During his term, Alvarado (1918, 49) claimed to have founded over 1,000 rural schools, which he believed would benefit not only workers, but also hacendados as well, resulting in a more able and skilled workforce. Educational reform also overlapped with Alvarado’s political goals as rural schoolteachers became missionaries for the regime’s revolutionary goals. Chacón (1982) notes that “a main responsibility of the rural teachers was to raise the political consciousness of the workers and undermine the authority of the planter class” (445).¹⁶

14. According to Chacón (1982, 234), Alvarado was influenced by the writings of the Scotsman Samuel Smiles, whom he read avidly. In his works, Smiles enshrined the basic Victorian values associated with the “gospel of work” and was an advocate of material progress based on individual enterprise. Observers at the time, among them Martín Luis Guzmán, renowned chronicler of the Mexican Revolution, described Alvarado as somber, sober, and unwaveringly dedicated to his work. He did not joke or smile much and had theories and ideas about everything.

15. For detailed treatment of Alvarado’s campaign against alcohol, see Fallaw (2002).

16. Rural schoolteachers were not the only state-sponsored missionaries spreading the word about Alvarado’s social causes. Hundreds of state workers fanned out into the countryside, diffusing information and building support for Alvarado’s policy initiatives (Chacón 1982, 445).

The creation of rural schools also dovetailed with Alvarado's anticlerical campaigns; in his autobiography, he says explicitly that the founding of lay schools was a key part of his work to "de-fanaticize the pueblo" (Alvarado 1918, 58). Alvarado, and the rationalists who served in his administration, saw the Catholic clergy as perpetuators of ignorance and fanaticism among the populace, qualities that they believed served the interests of the oligarchy (Chacón 1982, 262). Under Alvarado's watch, some of the most anticlerical policies in revolutionary Mexico were promulgated. In September 1915, the governor ordered all churches closed and forced those priests living outside Mérida to reside in the capital.¹⁷ As part of his educational program, many churches were converted into public schools.¹⁸ In January 1916, the government ordered military commanders to make an inventory of all religious artifacts housed in the churches of their respective districts and to transport the valuable objects to the state treasury office in Mérida for safekeeping. To permanently weaken the church's position, the new state constitution of January 1918 limited the number of priests who could offer mass in Yucatán to six.¹⁹

In the area of land reform, Alvarado's accomplishments were limited. Alvarado saw most of the henequen haciendas as small properties, given the size of haciendas in the north of the country (Joseph 1988). Yet, in late 1915, the governor issued a radical land reform decree, which would have had a significant impact on henequen haciendas had it been implemented. Carranza, however, was vehemently opposed to the decree, ultimately declaring it unconstitutional. Taking the measure of land reform across Alvarado's three years in office, Jeffrey Brannon and Eric Baklanoff (1987) argue that although Alvarado distributed some land to landless peasants, henequen haciendas were "hardly affected." They suggest that Alvarado was wary to touch haciendas because of his "intention to stabilize and modernize the industry, not to disrupt the existing production organization" (50).

17. Chacón (1985) notes that months later these measures were followed by orders that forced native-born priests into exile: "Reportedly, by 1916 only a few priests had official permission to remain in the state" (255).

18. The anticlerical policy that caused most consternation among hacendados was the seizure of the archbishop's palace and the decision to convert it to a state normal school in the summer of 1915 (Chacón 1985, 254).

19. Chacón (1982) argues, however, that during his last year in office Alvarado's initial radical anticlericalism had subsided. By May 1917, for example, the cathedral and several churches were allowed to hold religious services on a regular basis. Churches that had been closed and turned into public schools were allowed to reopen, as long as a suitable alternative space for a school was found.

If the state was to play a large role in the pursuit of social goals under Alvarado's watch, it would also intervene extensively in the economic realm. Alvarado understood his economic reforms to be closely linked to his social and political goals. In his view, the state was the only entity that could effectively mediate between the interests of the capitalist and the popular classes. From the start, he saw the elimination of feudalism and the ushering in of market-driven capitalism as his central goal. In terms of economic reforms, Alvarado sought both to stimulate henequen production and to expand state power over those same haciendas. Soon after assuming office, Alvarado moved quickly to seize the railroads (on March 26, 1915) and then reinvigorated the *Comisión Reguladora* (Regulatory Commission), a state agency that had been largely ineffective in controlling henequen exports before Alvarado took control of it. Once in control of the railroad system, Alvarado forced producers to sell their henequen exclusively to the *Reguladora*, resulting in restricted output and higher prices.

During his time in office, Alvarado sought to make peace with *henequeneros* willing to cooperate with him; Alvarado understood well the importance of keeping output steady in order to finance his policy reforms in other areas. Three examples suffice to illustrate Alvarado's interest in maintaining a robust henequen export sector: 1) his announcement in October 1916 of a government-subsidized program to recruit workers from central Mexico to work on henequen haciendas to deal with labor shortages (Chacón 1982, 363); 2) his issuance of a circular in December 1916 declaring henequen a form of "public wealth," making it illegal to cut immature henequen plants and ordering workers to leave a minimum of twenty to twenty-five leaves on the plants they cut (Eiss 2010b, 70); and 3) his publication in 1917 of a labor code that, although ensuring workers' right to form unions and to organize strikes, authorized only those strikes whose object was to "achieve equilibrium between the diverse factors of production, harmonizing the rights of labor with those of capital."²⁰

In sum, historians are mixed in their assessment of Alvarado. While most would agree with Joseph's (1986, 102) description of Alvarado as a "bourgeois revolutionary," some scholars, like Bolio (1967), see his

20. With respect to the 1917 Labor Code, Eiss (2010b) argues that it represented the zenith of state officials in enforcing labor discipline. He notes that "the código's provisions regarding an eight-hour workday were applicable only to workers paid on a daily wage, or *jornal*, but not to the majority of henequen workers, who would still be employed by a task rate according to 'custom'" (70–71).

reforms as far-reaching and liberationist. Other historians are more critical. From the left, Eiss (2010b) argues that Alvarado did not go far enough and views the governor as primarily interested in controlling and subduing Mayan peasants. From the right, liberal reformists such as Gonzalo Cámara Zavala (1947) critique Alvarado for taxing hacendados too heavily and allowing the state to grow too powerful. Reactionary newspapers of the time, such as *El Demócrata* and *El Hombre Libre*, reported on Alvarado's reforms with deep bitterness and satire.²¹

When Alvarado finished his term in 1918, the Revolution in Yucatán took a more radical turn. Agrarian activist, Socialist Party president, and future governor (1922–1924), Felipe Carrillo Puerto was the single most influential politician in Yucatán from 1918 until his death on January 3, 1924. Before assuming the governorship in January 1922, Carrillo Puerto exercised a great deal of influence during the administrations of Carlos Castro Morales (1918–1920) and Manuel Berzunza (1920–21). As president of the Socialist Party, Carrillo Puerto urged Castro Morales to deepen the revolutionary reforms begun under Alvarado, such as strengthening workers' rights and keeping wages high (Joseph 1988, 166). At the same time, Castro Morales was under intense pressure from President Carranza, who was determined to put a brake on Yucatán's Revolution, particularly on its more radical elements. Carranza was extremely wary of the rural activism of the Socialist Party's Resistance Leagues, begun by Carrillo Puerto during the Alvarado administration (171).

Despite Carrillo Puerto's influence on Yucatecan politics after 1918, no major change in policy occurred in the area of labor relations from 1918 to 1922. In part, this slowdown can be attributed to Carranza's deliberate attempts to block reform, particularly reform that he believed would jeopardize the productivity of henequen haciendas. Pressure from Mexico City to limit reform diminished after Carranza's death, but low henequen prices severely constrained the state's ability to achieve socialist revolutionary goals during Berzunza's term as governor. When Carrillo Puerto took office in early 1922, however, he moved ahead with plans for significant land reform despite low prices for henequen and violent political turmoil between Liberal and Socialist Party factions.

Looking broadly at the result of revolutionary change across Mexico, Knight (1985) suggests that even while large haciendas prospered, the Revolution measurably altered life on the haciendas. Given

21. *El Demócrata* (Mérida), May–Dec. 1917; *El Hombre Libre* (Mérida), May–Dec. 1917.

the lack of hacienda-level data, the degree to which life on haciendas in Yucatán changed as a result of the Mexican Revolution is an open question. In the next sections, we examine labor relations and labor mobility in Yucatán during these revolutionary times, focusing on two henequen haciendas located in the heart of the henequen zone.

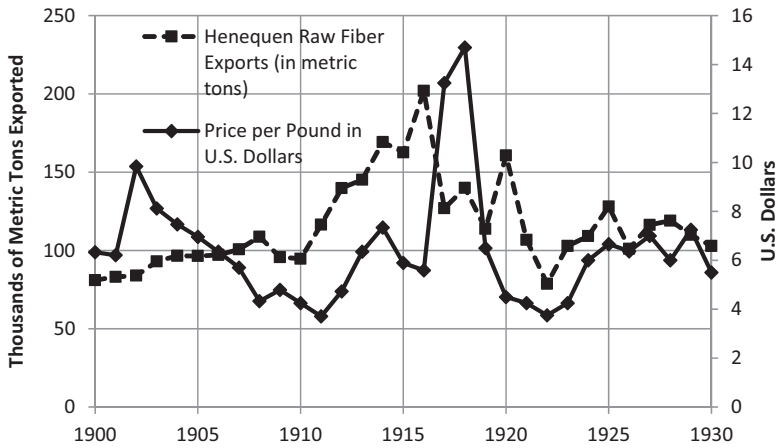
III. Market Changes and Population Movement

The political changes that began with Ávila's short term as governor significantly altered the ways in which workers and hacendados could interact. While policies and markets were in a state of flux, the production of henequen rose after the Revolution came to Yucatán, culminating in the "all-time henequen bonanza" of 1918 (Joseph 1988, 142). Macro-level trends show workers moving away from the haciendas and toward the towns at the same time that output increased. Data from our two case studies, Hacienda Itzincab Cámara and Hacienda Misnebalám, provide more detail concerning the movement of workers and show that hacendados were optimistic about the future of the industry.²² In this section, we lay out the puzzle of how increasing output and expectations for future growth could be consistent with improved workers' rights and a shrinking hacienda population. In the next section, we provide answers to this puzzle by tracking employment, turnover rates, and mobility at our case study.

Prices, Output, and Investment

Even with the political and economic uncertainty of the 1910s, Yucatán remained a mono-crop economy, as the viable alternative agricultural outputs of corn, sugar, and cattle were much less profitable than henequen. Figure 1 shows the boom in henequen exports and prices during the 1910s. Exports hit their peak two years after Ávila's governorship and declined thereafter owing to Alvarado's restriction of supply to the world market. The price spike in 1917–1918 was due to this restricted supply and an increased demand due to World War I. Both prices and exports were low after 1918. With the end of World War I, world markets reopened, allowing the stockpiles of fiber that had accumulated during the war to hit the world markets.

22. These two haciendas are the only ones whose records are currently available to the public. Itzincab Cámara is located to the south and Misnebalám to the north of the city of Mérida. Although both are solidly within the henequen zone, they are roughly thirty miles apart and drew from different local labor pools.



SOURCE: For data on henequen raw fiber, see Brannon and Baklanoff (1987, 142); for henequen price per pound, see Joseph (1988, 45 and 142).

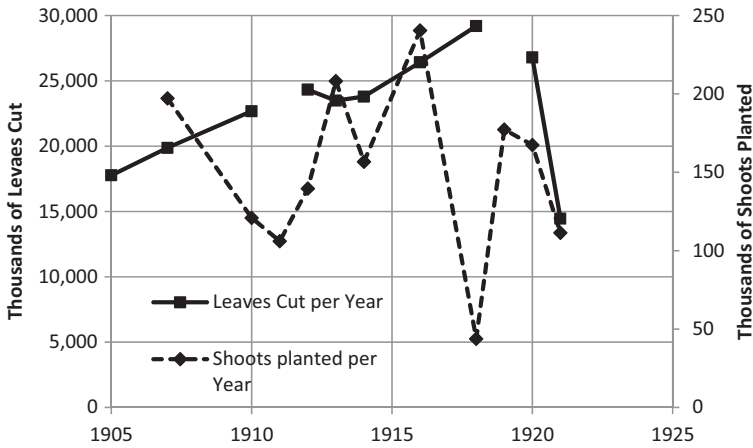
Figure 1. Henequen Exports and Prices, 1900-1930.

Prices remained low, in part, because of an increase in the supply of fiber coming from a worldwide boom in production, particularly from East Africa (Evans 2007, 198–199).

Since henequen is a long-lived crop, hacendados' expectations, not just for the current year, but for the next two decades, affected the planting of shoots. Our primary case study, Hacienda Itzincab Cámara, provides a snapshot of hacendados' expectations. During the period of our sample, the hacienda cut an estimated 17 to 29 million henequen leaves per year, producing an estimated 440,000 to 900,000 kilos of henequen fiber per year. Henequen plants begin to produce in their seventh year, but not until their tenth year do they become fully productive. At that point, somewhere between eight and fifteen leaves are cut off the plant three times per year (Wells 1985, 132–33). Assuming the lower bound estimate of eight leaves per cutting, a total of 24 leaves can be cut each year, and the hacienda, therefore, had between 700,000 and 1.2 million harvestable henequen plants. If a typical plant's productive lifespan lasted 10 years, then between 70,000 and 120,000 shoots needed to be planted per year in order to sustain the size of the hacienda.²³

Figure 2 shows the number of *pencas* (henequen leaves) cut and the number of *bijos* (shoots) planted per year on Itzincab Cámara.

23. This is an upper bound estimate given the choice of twenty-four leaves per year and the ten-year lifespan. Most plants provided a limited yield prior to their tenth and after their twentieth years.



SOURCE: Itzincab Cámara Archives.

Figure 2. Leaves Cut and Henequen Shoots Planted per Year on Itzincab Cámara.

Data on henequen shoots are not recorded prior to 1907, but the record from 1907 through 1916 shows considerable optimism on the part of the hacienda owners.²⁴ Itzincab Cámara was expanding throughout the early years of the Revolution and invested in additional capacity. In 1914, the year that debt peonage was outlawed, the number of shoots planted dropped, but in 1916, 240,500 shoots were planted, an all-time record.²⁵ The year 1918 is a clear anomaly, but the shortfall in plantings was likely owing to the family’s expansion of another property, Texan, to which Itzincab Cámara sent 162,000 shoots in 1919. We conclude that hacienda owners were optimistic about the future of the industry, even in this period of institutional and market uncertainty. When the Revolution banned the traditional methods of contracting, hacendados needed to quickly find alternative means to attract workers to the hacienda.

Labor Mobility

Scholars and travelers have written extensively about the working conditions on henequen haciendas during the long boom period. The majority of these accounts focus on Maya debt peons, who often

24. The number of shoots planted was summed throughout the year and is recorded from the final *semanario* (weekly activity report) in December of each year.

25. Unfortunately, the record book from 1915 is so damaged that only the records from the first few weeks of the year are legible.

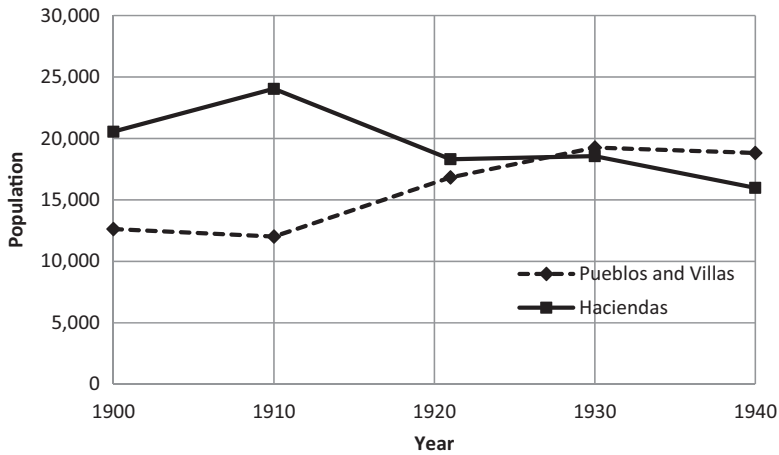
labored under onerous conditions (Arnold and Frost 1909; Baerlein 1914; and Turner [1910] 1984). Attention has also been focused on the importation of enslaved Yaqui Indians from Sonora beginning in 1905 and on the Koreans who were brought to the state as indentured servants in 1907.²⁶ Experiments in drawing workers from abroad included Koreans, Cubans, Chinese, and Italians. The practice of importing henequen workers continued in the revolutionary period. In his memoir, Alvarado (1918, 118–19) claims that the Regulatory Commission brought 19,000 immigrant workers to the state in one year to work on the haciendas.

Whereas our most detailed information comes from our case studies, data from the Mexican census indicate that haciendas in Yucatán were experiencing similar trends in employment. The census provides the sizes of all population places, including pueblos and haciendas (Cantillo 1912; México, Dirección General de Estadística 1905, 1925, 1934, 1943). Itzincab Cámara is located in the municipality of Tecoh in the *partido* (district) of Acanceh. Misnebalám is located in the *partido* of Mérida. The census lists Itzincab Cámara as having 367 residents and Misnebalám as having 168 residents in 1910. The average hacienda in these two *partidos* had a population of 132 in 1900, 155 in 1910, and 110 in 1921. During the henequen boom, the distribution of workers shifted; smaller haciendas lost workers, shut down, or were absorbed into larger haciendas, while larger haciendas grew. Focusing on the largest haciendas, those with more than 300 residents, highlights the rise and decline of the resident population. The total population in the two *partidos* living on haciendas of more than 300 residents was 7,224 in 1900; 9,933 in 1910; and 5,639 in 1921. Most large haciendas followed a similar pattern, growing from 1900 to 1910 and shrinking from 1910 to 1920.

As shown in Figure 3, the overall decline in the hacienda population of the two *partidos* from 1910 to 1920 was mirrored by increases in the populations of pueblos and villas. In 1900 and 1910, the average pueblo and villa in the two *partidos* had 600 residents, but the average population increased to 842 by 1921.²⁷ The decline in

26. Labor scarcity was endemic in Yucatán beginning in the 1880s and continuing through World War I. Beginning in 1905, Yaqui were imported to the Yucatan as henequen workers. Joseph (1988) notes that from 1907–1910, close to 16,000 deported Yaquis were available to the expanding henequen plantations (66). Federal authorities believed that the best way to subdue the Yaqui was to separate them from their homelands—the Mayo and Yaqui river valleys in Sonora.

27. Combined, Acanceh and Mérida had 20 pueblos and villas in 1910. The population of the capital city, Mérida, was 43,630 in 1900; 62,447 in 1910; and 79,225 in 1921.



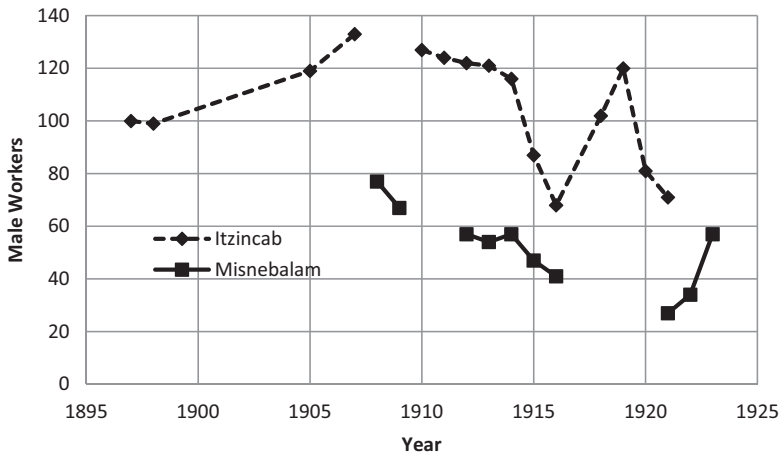
SOURCES: México, Dirección General de Estadística (1905, 1925, 1934, 1943) and Cantillo (1912).

Figure 3. Total Population of Haciendas and Pueblos in Acanceh and Mérida, 1900-1940.

hacienda population and the increase in pueblo population from 1910 to 1920 were partially due to the end of the henequen boom but, more importantly, were because of the change in the legal status of workers on haciendas and the changes in contracting between workers and hacendados.

We now turn to hacienda-level population data, which provide evidence that the decline in hacienda population accelerated after 1914, signaling a permanent shift in the character of labor relations. To help illustrate the changing labor relations on the haciendas, we categorize workers into two broad groups: resident workers and transient workers. Residents were listed on the record books of the hacienda by name or by task, whereas transient workers generally contracted with the hacienda through an intermediary and were listed as a group. Workers came from one of five ethnic groups: Maya from Yucatán, *mexicanos* (central Mexican workers), Yaqui, Chinese, and Korean. The exact year that the population of the haciendas began to decline is unclear from the census data but can be seen in the individual records of the haciendas. Figure 4 shows the number of resident workers listed on the *semanarios* of Itzincab Cámara and Misnebalám.²⁸ On both haciendas, a downward trend in the size of

28. In order to keep the data consistent, we report the week in which the maximum number of workers is listed in a given year. The size of the sample from Itzincab

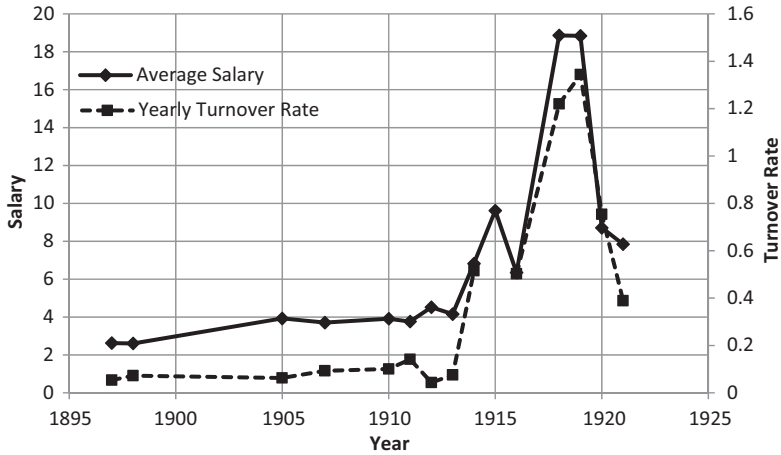


SOURCES: Itzincab Cámara Archives, Hacienda Ochil Museum (for Itzincab Cámara's 1914 record book) and Misnebalám Archives.

Figure 4. Maximum Number of Male Resident Workers on Itzincab Cámara and Misnebalám.

the resident workforce began after 1907 and accelerated, particularly on Itzincab Cámara, with the end of debt peonage in 1914. Figure 4 also shows a rebound in hacienda population after 1916; however, we will argue that the workers who came to the hacienda in the late 1910s had very different relationships with the hacendados than the pre-revolutionary workers. Because of the greater detail in the data, we analyze the changing labor relations on Itzincab Cámara in the next section.

Cámara varies from year to year. For some years, the record books are missing or too damaged to use, and for some years, we only sampled a portion of the data. For 1897, 1905, 1907, 1910–1914, and 1916, we have all fifty-two weeks. For 1918, 1920, and 1921, we have fourteen, twelve, and thirty-eight weeks, respectively, evenly sampled throughout the year. From Misnebalám, we have sampled between two and ten weeks from the years 1908–1909, 1912–1916, and 1921–1923. The data from Itzincab Cámara are much richer than those from Misnebalám. On Misnebalám, workers' names are not recorded, but tasks and wages for different duties are. On Itzincab Cámara, the workers' daily tasks and wages are listed by name on the *semanarios*, allowing us to track workers over time. The record books have the workers' names preprinted with additional names handwritten through 1916. After 1916, all names are handwritten every week. To stay consistent, we chose to count all workers whose names are in the *semanarios* as being "resident" workers, whether their names were printed or written in by hand.



SOURCES: Itzincab Cámara Archives and Hacienda Ochil Museum (1914).

Note: For 1916, we only use wages after the currency revaluation in June in order to avoid the effects of hyperinflation. For 1915, only the January entries are legible.

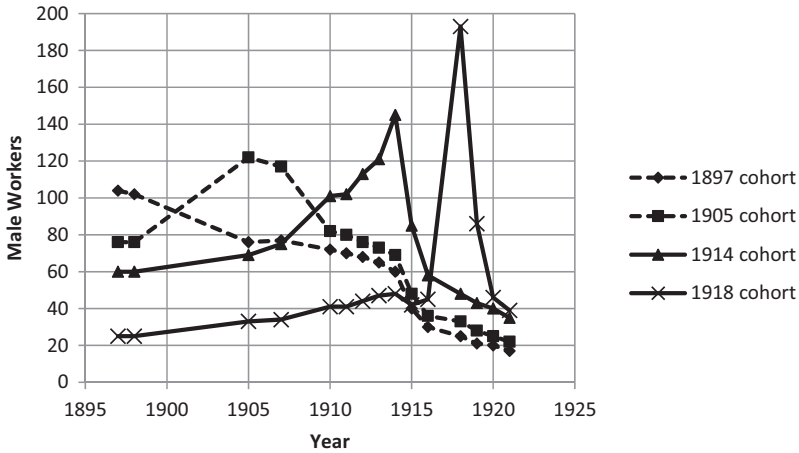
Figure 5. Yearly Turnover Rate and Average Weekly Salary of Male Resident Workers on Itzincab Cámara.

IV. Revolution and Labor on Itzincab Cámara

To keep production levels steady following the Revolution, hacendados nimbly switched among several sources of labor and several types of contracts with workers. Although not identical, the evidence from Itzincab Cámara and Misnebalám suggests that hacendados across the henequen zone responded similarly to market and institutional shocks. Because the record books of Itzincab Cámara are much richer in detail, we investigate that hacienda’s actions more closely in this section. Itzincab Cámara responded to the abolition of debt peonage, Alvarado’s initiatives, and the spike and crash in export prices by substituting transient labor for resident labor (1914–1915), importing central Mexicans to the hacienda as a replacement resident workforce (1916–1918), and finally downsizing the resident workforce and relying more heavily on transient labor (1919–1921).

September 1914: Ávila’s Initial Decree

Governor Ávila’s decree ending debt peonage in September 1914 began the transformation of Itzincab Cámara from a workplace of stability to one of flux. Because the record books of the hacienda list resident workers by name, we can track how the decree and other macro changes affected the workforce. Figure 5 provides an overview



SOURCE: Itzincab Cámara Archives and Hacienda Ochil Museum (1914).

Figure 6. Resident Male Workers on Itzincab Cámara by Cohorts.

of yearly labor turnover on the hacienda from 1897 to 1921.²⁹ Prior to the Revolution, the workforce was quite stable. Workers were either born on or recruited to the hacienda and mostly stayed put. Some workers were listed as fugitives, some left after paying off their debts, and some, mostly skilled specialists, were listed on the record books for only a week or two. But the bulk of the workforce was born and died on the hacienda. Beginning in 1914, the turnover rate rises to historic levels. The stability of the turnover rate prior to 1914 and its sharp rise in 1914 support our claim that Ávila's decree was a turning point in labor relations.

In Figure 6, we show the population of Itzincab Cámara for four cohorts of workers.³⁰ For instance, the peak of the line marked 1905 shows the total number of workers (122) who were on the hacienda at some point in 1905. Of those 122 workers, 76 were already working on

29. The turnover rate is calculated as the number of people who worked at some point during the year on the hacienda but were not on the hacienda in the last period of the sample, divided by the average number of people working on the hacienda over the course of the year, that is, $turnover\ rate = separations/average\ workforce$. The turnover rate is calculated by using four observations from each year. When possible, we sample the population once each quarter on nonholiday weeks. Data are missing for the years 1898–1904, 1906, 1908–1909, 1915, and 1917.

30. We count the total number of workers who were paid for work at some point during the year as part of the cohort.

the hacienda in 1897 and 22 remained working in 1921.³¹ Prior to the Revolution, there was a natural decline in cohort residency after each base year. The acceleration of exit for all three pre-revolutionary cohorts from 1914 through 1916 shows that these years marked a significant shift in labor relations for all workers on the hacienda.

Looking more closely at the weeks surrounding Ávila's ban on debt peonage, 112 workers are listed as residents of the hacienda during the week of September 14, 1914. Twenty-nine of those workers had left by the next week and an additional fourteen had left by the end of the year. This exit was unprecedented in the history of the hacienda. Departing workers were not only the young or the temporary. Fifty-nine workers from the 1897 cohort remained on the hacienda in the week of September 14, 1914. Twelve of those workers left by the next week, and an additional nine workers left by the end of the year. Ávila's decree encouraged young and old workers alike to leave, and its impact on Itzincab Cámara extended beyond the two weeks that historians claim.

The unprecedented exit from the hacienda was accompanied by an unprecedented increase in wages. In addition to the turnover rate, Figure 5 tracks the average weekly wage of workers.³² Between 1905 and 1913, wages were steady, but they more than doubled between 1913 and the beginning of 1915. The average wage for all workers rose 33 percent from the week of June 8, 1914, to the week of September 14, 1914, and rose an additional 49 percent by the end of the year. Young, unmarried workers (recorded as *muchachos*) received the largest percentage increases in 1914. The typical *muchacho* earned 1.2 pesos during the week of June 8, 1.8 pesos during the week of September 14, 3.5 pesos during the week of September 21, and 5.25 pesos during the week of December 28—a staggering 337 percent increase in wages for the second half of the year. Even with

31. Much of the increase in population in 1905 was because of the arrival of Korean workers. These workers had indenture contracts and were free to leave the hacienda after four years.

32. From 1905 through 1914, resident Maya workers earned from \$0.33 to \$0.40 per 1000 leaves cut and workers cut a uniform number of leaves. Other workers, such as the Yaqui or transient labor, had piece rates that hovered around those of resident workers, but which varied more over time. For instance, prior to the Revolution, the range of salary paid to outsiders for weeding was between \$0.31 and \$0.77 per *mecate*. With the start of the revolutionary period, both resident and transient workers faced changing piece rates over time and were not recorded as producing a uniform level of output. Different groups of transient workers were often paid different piece rates during the same week, perhaps due to bargaining power and perhaps due to the difficulty of the work.

the substantial pay increase, 32 percent of the *muchachos* left the hacienda from the week of September 14 through the end of the year, a rate only slightly lower than the overall exit rate.

While wages were increasing rapidly, loans that were traditionally used to keep workers on the hacienda disappeared. Itzincab Cámara's records document a steady stream of cash given to workers for wedding, baptism, hospital, and funeral expenses during the first two-thirds of 1914, but only one entry is recorded after September 14. The elimination of loans was accompanied by the disappearance of formal Catholic services at the local level. According to ecclesiastical records from Tecoh, no church wedding was recorded between March 20, 1915, and May 20, 1920.³³ Because the financing of Catholic marriage ceremonies was an important part of the relationship between workers and the hacendado, this ban eliminated one important means by which workers were tied to the hacienda (Alston, Mattiace and Nonnenmacher 2009). This pattern suggests that hacendados began to rely on steep pay increases to keep young workers on the hacienda after the traditional method of using loans to finance marriage and settlement was no longer available, a strategy that was only partially successful.

1915–1916: The Alvarado Model, Worker Mobility

Whereas Ávila's decree of 1914 ended debt peonage and led to significant numbers exiting the workplace, Alvarado's policy of encouraging social change through worker mobility kept the workforce in a state of flux. On Itzincab Cámara, that flux resulted in greater reliance on transient labor. These laborers did not work the rasping machine, the tram system, the baler, the steam engine, or any other machinery in the factory; instead, they did field work: harvesting leaves, weeding, planting new fields, and cutting firewood. Although factory work was always done by resident workers of the hacienda, field work was done by a mix of resident and transient workers, a mix that changed with market conditions.³⁴

33. While church weddings disappeared, civil records indicate that the number of marriages recorded in Tecoh during the revolutionary period was similar to the number held in pre-revolutionary times. For example, sixty-seven marriages were recorded in Tecoh in 1913; fifty-one in 1914; sixty-one in 1915; seventy in 1916; and sixty-three in 1917. The Church of the Latter Day Saints provided access to the civil and parish records.

34. Some factory workers were paid a daily wage, with workers doing similar jobs making the same wage, whereas others were paid by the task. Field workers were always paid on a task-rate basis. Prior to the Revolution, the recorded output and pay of

From the earliest available records, Itzincab Cámara contracted with transient workers. In some cases, the records refer to the transient laborers as *gente de fuera* (outsiders) or to nearby pueblos, such as Ticul, Timucuy, or Tecoh, but, in most cases, there is no specific mention of worker origin.³⁵ After 1914, many more groups of transient workers are listed on a typical *semanario*. For instance, for the week of April 3, 1916, ten different groups are paid: Koreans, Chinese, six groups with named foremen, and two unspecified groups.³⁶

Koreans are an example of laborers who worked on the hacienda under different contracts. Koreans first arrived on Itzincab Cámara as indentured servants in 1905, and the peak number of resident Korean workers is listed in 1907.³⁷ Their indenture contract ended after four years, and during 1910, about twelve Koreans worked on the hacienda under two foremen.³⁸ After 1911, no Koreans are listed in the accounting books until they reappear on October 26, 1914. Under Korean overseers, they worked steadily through July 1918. During this time, these workers mostly cut leaves and, during some months, were the primary laborers doing this grueling work. We hypothesize that the pattern of exit and return that we see with the Korean workers also occurred with Maya workers who left the hacienda after September 1914.

Given the paucity of alternative employment, workers had to return to the haciendas to find employment. A more experienced worker with the ability to lead a work crew or a foreman from a nearby village acted as the intermediary between the hacienda and the workers. This foreman was paid a commission to ensure that the workers performed their jobs adequately.³⁹ Our hypothesis that peons returned to their former haciendas as transient workers is supported by Luis Aboites (1985). Writing about Espita, Yucatán, Aboites (1985, 76)

field workers had tremendous uniformity, whereas after the Revolution, output per worker varied more.

35. All of these pueblos are within twenty-five miles of Itzincab Cámara. In the *semanario* dated January 4, 1915, transportation is paid for sixty-six workers to do “*distintos trabajos*” (different jobs) on the hacienda.

36. Also in 1916, two groups of workers from Tecoh are mentioned (Tecoh Yucateco and Tecoh Mexicano). In 1918, two groups are mentioned as being from Ticul and workers from Tecoh are noted in the records in 1916, 1919, and 1920.

37. An attempt to renew the indenture contract with the Korean workers failed in 1909 (Paredes 1997).

38. The foremen are Pac Kuc Chan and Quin Che San. The former was listed as a worker on the hacienda in 1907.

39. The record books often explicitly record a commission of between 2 and 6 percent of the combined pay of the workers to the *capataz* (foreman). In some cases, foremen were previously listed as workers on the hacienda.

notes that after the Revolution, peons began to leave the haciendas slowly, given the loss of paternalism and the uncertainty of life outside the haciendas. In the case of Espita, the young were the first to leave, but the first place ex-peons who left the hacienda would often go for work was to the haciendas where they once lived. Older, single men stayed, as did the Maya overseers (*mayocoles de confianza*). Those who stayed accepted the overseers' offers of increased salary and better treatment.

Lee Alston, Shannan Mattiace, and Tomas Nonnenmacher (2009) argue that the forms of contracting adopted in the pre-revolutionary period, in part, solved the monitoring problems associated with henequen production. Workers in the fields cut leaves, weeded, and performed other tasks in situations where monitoring costs were high. Loans and other forms of paternalism elicited loyal-like behavior and reduced monitoring costs. Although we have no direct evidence of the high monitoring costs of transient labor on Itzincab Cámara after the Revolution, monitoring cost was an issue elsewhere in Yucatán. Eiss (2010b) summarizes a series of complaints about labor written to the chief of the Department of Labor in December 1916:

[Transient workers] insisted on higher pay when ordered to cut leaves at a greater distance from roads or rail lines, requiring them to spend more time and energy carrying rolls of leaves to their destination. When unsatisfied with task rates, they over-cut the most accessible plants, hence increasing the leaves they could cut each day. They submitted rolls of leaves with five or ten fewer leaves than the one hundred leaves encargados expected, thus lightening their load and making their supervisors believe they had cut more leaves than they actually had. The weakened authority of administrators and encargados made workers more daring than ever before, and the rising cost of living in revolutionary Yucatan lent them greater desperation. (66)

Given his need to keep henequen output steady, it is unsurprising that Alvarado issued the December 1916 circular declaring henequen to be "a form of 'public wealth,' and setting out measures for its defense" (70). Overcutting plants, carelessness with young shoots, and general shirking were exactly the kinds of monitoring problems that the pre-revolutionary contracting schemes had solved through paternalistic and coercive measures. Hacendados turned to the state to solve these monitoring problems but also sought to improve their bargaining position over Maya workers by importing a new source of labor.

1916–1921: Entry and Exit of Central Mexican Workers

After relying heavily on transient labor in 1915 and early 1916, new resident workers were brought to the hacienda in an attempt to

re-create the size and stability of the pre-revolutionary workforce. By importing non-Maya workers, by 1918, the size of the residential workforce was comparable to its size prior to the Revolution. The new workers, however, differed significantly from their pre-revolutionary predecessors in their origin and fluidity of employment. The experiment of a large residential workforce based largely on non-Maya workers ended in early 1919, and the hacienda returned to relying heavily on transient labor.

Governor Alvarado announced a program for importing central Mexican labor in October 1916, but workers with non-Maya names already began to appear on the hacienda earlier in the year. For instance, in late January, workers with the surnames *Andrade*, *Castro*, *Espadas*, *Pérez*, and *Ortiz* (among others) appear on the hacienda for the first time.⁴⁰ The early non-Maya mostly did factory work, but by 1918, workers with non-Maya names were doing a significant portion—between one-third and one-half—of the cutting of leaves. The other work of cutting was done by Korean and Chinese transient laborers, with little mention of Maya work gangs from nearby pueblos.

Newly imported resident workers were likely to leave the hacienda after a very short period. For instance, Figure 6 shows that of the 193 workers who were listed on the record books of the hacienda in 1918, only 45 were listed in 1916 and only 46 were listed in 1920. This pattern is mirrored in Figure 5, which shows the turnover rate on Itzincab Cámara in excess of 120 percent in 1918 and 130 percent in 1919, compared to an average turnover rate of 9 percent from 1897–1913. With few bonds to link these new workers to the hacienda, they left in great numbers.

As shown in Figure 5, the high turnover rate in 1918 and 1919 made hacendados desperate for labor. Alvarado's policies of restricting henequen exports during the war caused prices to spike. At the same time, workers were given more freedom to leave the hacienda, and central Mexican workers, who had no cultural ties to hacendados, entered the workforce. When World War I ended in November 1918, henequen prices began to drop sharply. As international maritime channels reopened, so did the global market for sisal fiber, thus lowering the demand for henequen from Yucatán. Wages on Itzincab Cámara fell from 26 pesos in July 1919 to 7 pesos per week in January

40. In the pre-revolutionary period, the workers on Itzincab Cámara were fairly homogenous. For instance, in June 1914, 41 percent of the 128 workers on the hacienda had the last names of May, Chan, or Chim. In July 1918, after central Mexican workers entered the workforce, only 18 percent of the 74 workers had those surnames.

1920. In 1919, the central Mexicans left the hacienda in droves. In January, 128 workers resided on the hacienda, but only 50 workers remained in December. By the end of 1919 and continuing through the end of our data set in 1921, the size of the resident workforce was much smaller than in the pre-revolutionary period and transient workers cut most of the leaves on the hacienda. These workers were identified as being Korean and Chinese, from nearby pueblos, and led by foremen. Notably, at the end of 1919, of the 50 resident workers on the hacienda, 20 had worked on the hacienda in 1897. This core group of long-time residents was born into and worked in a labor regime described by many as slavery, stayed through emancipation and the turmoil that surrounded it, and persisted as the core workers on the hacienda over 20 years later.

Taking stock of the changes in income during the revolutionary era in Yucatán is a difficult task. The evidence suggests that workers' real wages were higher after the Revolution. For instance, in 1905, workers earned an average of 3.93 pesos per week and paid 3.75 pesos per carga of corn. During the week of October 2, 1916, workers earned an average of 9.2 pesos per week and paid 4.2 pesos per carga of corn.⁴¹ We do not know whether workers received the same levels of paternalism after the Revolution as they did before, but the record books of Itzincab Cámara indicate that the hacienda continued to act as a rudimentary provider of insurance to resident workers after the Revolution, including medical care, gifts, small loans, and payments to the elderly, widows, and the sick. In some cases, the records indicate a gift to non-Maya, such as aid to *mexicanos ancianos* (elderly central Mexicans), but it is likely that most aid went to the resident workforce. The persistence of a core group of resident workers and the continuation of nonmonetary perks indicates that labor relations between some workers and the hacendado continued to develop within a paternalistic setting.

V. Conclusion

By their very definition, revolutions are tumultuous events that reconfigure countries' social, economic, and political systems. Mexico's Revolution, the first social revolution of the twentieth century, was no exception. Even in Yucatán, one of the most conservative, oligarchical

41. Wages and prices were very steady in 1905. After 1914, both varied considerably and corn prices are recorded only sporadically in the hacienda's records. We compare wages to corn prices because those prices are both listed and because much of the workers' salary was spent on basic foodstuffs.

regions of Mexico, the old order was ousted and reforms were enacted in virtually every social sphere. During the Porfiriato, which coincided with the advent of the henequen export industry, wages and employment were remarkably stable. That environment of stability was dramatically altered with the arrival of the Revolution. While there is considerable scholarly work on revolutionary Yucatán, until recently, very little information has been available at the hacienda level. Therefore, we knew little about how hacendados and workers on the state's many henequen haciendas kept output high in an era of newly found mobility for workers.

Based on data from two haciendas in the heart of the henequen zone, we find that the abolition of debt peonage by Governor Ávila in September 1914 had an immediate and significant impact on worker mobility and marked a new era in labor relations. On Itzincab Cámara, 38 percent of the workforce left between the week of September 14, 1914, and the end of the year. Hacendados raised wages considerably in order to maintain the workforce. As workers continued to leave, hacendados relied more heavily on transient labor, shifting their relationships with workers who had previously been residents to a more market-based setting. When hacendados failed to attract enough local labor onto the hacienda, they turned to importing workers from central Mexico. However, without the traditional mechanisms of tying labor to the hacienda, these workers turned over at extremely high rates. On the other hand, our data from Itzincab Cámara suggest that despite the tremendous flux in workers during the revolutionary period, a small, but persistent, group of residents remained on the hacienda.

The story we tell here suggests that flux and dynamism were the order of the day regarding labor relations on henequen haciendas in revolutionary Yucatán. Revolutionary governors encouraged that flux through social reforms that tilted the power dynamic toward the worker, compared to conditions in Porfirian Mexico. Our story also suggests, however, that paternalism persisted on henequen haciendas and some Maya resident workers continued to work for their old patrons, despite the dramatic shifts in worker mobility occurring around them. Revolutionary governors, including Alvarado, were careful not to reform the henequen sector too dramatically in order to safeguard the revenue from this valuable export.

This uneasy balance between change and stability is illustrated in a government circular issued in January 1916, during the heart of the transformation to a more free labor regime. In the circular, the government laid out the duties of workers and their options for voicing their dissatisfaction with their employers. Alvarado wanted to help

agricultural workers improve their material well-being, but only through the use of market forces and only in ways that would allow for the continued production of henequen. While a worker possessed “the liberty and rights of an independent citizen,” workers did not have the right to “accept only the tasks that please them, which would harm the interests of the finca.” The circular went on to state that, “If a worker does not like the tasks the encargado assigns him, and if he finds such treatment unacceptable, he is quite free to leave the finca and find another place to work with better conditions and pay” (Eiss 2010b, 66). The data from Itzincab Cámara and Misnebalám suggest that workers chose to exercise their newfound freedom to exit the haciendas, leading to significant shifts in the composition of the workforce, particularly compared to the stability of the pre-revolutionary period. Yet, the paternalism of the old order did not disappear, illustrated by the persistence of Maya resident workers on Itzincab Cámara. Indeed, nothing would ever be the same in Yucatán after the Revolution, but not everything was different.

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