

Varieties of Prison Social Order

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Abstract

Why does prison social order vary around the world? While many of the basic characteristics of prisons are similar globally, the quality and form of informal inmate organization varies substantially. This paper develops a governance theory of prison social order. Inmates create extralegal governance institutions when formal governance is insufficient. The size and demographics of the prison population explain why inmates produce extralegal governance institutions in either decentralized ways, such as ostracism, or through more centralized forms, such as gangs. Comparative analysis of Brazil, Bolivia, England, Scandinavia, and men's and women's prisons in California provide empirical support.

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The Puzzle of Global Prison Order

The quality of governance institutions is crucial in explaining why some economies develop and others do not (Acemoglu et al 2005). While the primary focus of existing research is on the quality of government-produced governance institutions, much of the governance that people rely on in both developed and developing countries is actually produced through private mechanisms (Ostrom 1990, 2005). Moreover, there is a vast amount of economic activity taking place in countries whose governments are weak and unstable (Leeson and Williamson 2009). This suggests that extralegal governance institutions play an important role in producing aggregate outcomes. However, precisely because these institutions are informal, we know less about how they function. To get around this problem, I examine the extent and form of informal institutions in prisons around the world. This affords a useful opportunity to study the extralegal governance institutions in cases that are comparable in key respects—because of the nature of a prison—while varying in important other ways, such as in the inmate demographics and the quality of formal governance provided.

Governance institutions define and enforce property rights, promote trade, and assist in the production of collective and public goods (Dixit 2009). Governance can come from both centralized governments and competing, overlapping organizations in a polycentric system (Aligica and Tarko 2013; Hooghe and Marks 2003). While the conventional wisdom identifies the government as a key provider of governance, theoretical research identifies a range of non-state mechanisms that can make self-enforcing exchange viable (Axelrod and Hamilton 1981; Dixit 2007; Kreps 1990). An important empirical literature shows how extralegal governance works in practice in both historical and contemporary settings (Benson 1989; Bernstein 1992; Ellickson 1991; Greif 1993; Leeson 2007a, 2007b, 2008, 2009; Milgrom et al 1990; Schaeffer

2008; Stringham 2015). Laboratory experiments and simulations also identify when self-governance is possible (Axelrod 1981; Ostrom et al 1992). While this work provides important insights about the mechanisms of self-enforcing exchange, I argue that studying prisons—a microcosm of politics in society—presents a novel way to understand the variation in extralegal governance institutions.

Analyzing prison social order provides several analytical advantages. The definitive characteristics of prisons are constant across cultures, legal systems, and political regimes (Giallombardo 1966, 2). For example, most inmates do not opt-in to prison life, and inmates cannot rely on the exit option as a way to achieve better outcomes (Hirschman 1970). Within a prison, inmates must intermingle. When people can choose with whom to interact, cooperative people find each other and do well, while uncooperative people do worse (Tullock 1999). In prison, the ability to self-segregate through selective coalitions, which has proven effective in other settings (Bernstein 1992; Greif 1993), is unavailable. Offenders also have less self-control and higher discount rates on average than the general population (Gottfredson and Hirschi 1990; Pratt and Cullen 2000), which make cooperation less likely (Fudenberg and Maskin 1986). Each of these is a reason to expect that prisoners will not develop cooperative self-governance institutions. The first contribution of this paper is to identify how inmates create extralegal governance institutions in the face of these limitations.

The second contribution of this paper is to explain the puzzle of why inmates create drastically different extralegal governance institutions. In Latin America, inmate groups of diverse variety wield authority, and they are sometimes the main or only source of governance. In Scandinavian countries, by contrast, informal institutions are relatively unimportant. In one Norwegian facility, inmates even share illicit drugs rather than selling them. Informal institutions

also vary within developed western countries. Organized, ethnically segregated gangs govern Californian men's prisons, but similar groups do not operate in England. This paper answers two related questions. What explains the amount of control wielded by inmates? Within that sphere of autonomy, what explains the varying degrees of centralization?

Drawing on the new institutional framework (Grief 2006; Knight 1992; North 1990; Ostrom 2005), this paper provides evidence on how formal governance institutions and inmate demographics jointly determine the size and form of extralegal governance institutions. I argue that inmates develop these institutions when the quality of formal governance is insufficient to meet inmates' needs. Decentralized mechanisms—such as ostracism—are low cost, but they are only effective in small communities where reputations are well known. When populations increase in size, centralized bodies that specialize in information transmission and enforcement provide extralegal governance more efficiently.

I analyze a series of cases, which are selected purposively to sample the range of explanatory variables (King et al 1994, 115-149; Small 2009, 13).¹ Since the quality of formal governance is crucial to explaining the existence and need for extralegal governance, I study prisons in Brazil and Bolivia that have low-quality formal governance. When prison officials do not govern effectively, inmates do. I examine prisons in the United States and England, which have moderately effective formal governance and where inmates provide a selection of governance activities. Finally, Scandinavian prisons provide quality formal governance, and inmates invest little in informal mechanisms of social control.

¹ On the use of case studies, see Boettke et al 2013; Gerring 2004; Laitin 2003; Mahoney and Goertz 2006; Poteete et al 2010.

To identify the effect of inmate demographics on the form of extralegal governance, I use a most similar systems design to analyze three examples of prison social order within and between prisons in California and England. First, I compare extralegal governance regimes in Californian men's prisons diachronically. As prison populations increased over time, the governance mechanisms transitioned from a decentralized form based on reputations to a centralized form based on gangs. Second, I use a synchronic analysis to compare the current governance regimes in Californian men's prisons and English men's prisons. The latter hold small populations and inmates rely on decentralized governance rather than gangs. Third, I compare men's and women's governance regimes. Because women's prisons have small populations, female inmates rely on decentralized governance mechanisms that are similar to what men used in the earlier era.

While analysis of comparative cases does not have the identification power found in experimental and quasi-experimental research, the historical and cross-sectional variation allow me to provide empirical support for several theoretical implications. Moreover, the detailed nature of these cases provides the opportunity to identify the mechanisms that sustain institutional outcomes (Poteete et al 2010, 35; Bennett and Elman 2006, 255). In particular, they allow for the identification of information transmission mechanisms, enforcement procedures, and the underlying causes that maintain the governance regime. These cases shed light on the specific forms that institutions take, which depend on context-specific and historical factors (Ostrom 2005, Munger 2010).

The evidence for these cases comes from the extensive literature in global prisons research. The types and sources of evidence are varied, including ethnography, interviews,

archival evidence, and reports from governmental and non-governmental organizations.² The resources and experience needed to adequately understand a specific prison system has led scholars in this field to specialize narrowly. Most research therefore focuses on an individual prison or prison system. This paper takes on the challenge outlined in Lacey (2011), which advocates drawing on thick descriptions of particular prison systems to conduct a broader, comparative analysis. This is the first paper to use a single theoretical framework to explain wide-ranging findings on extralegal governance in global prisons.

Governance Theory of Prison Social Order

The focus in comparative prison studies has been on explaining levels of punitiveness across criminal justice systems (D'Amico and Williamson 2015; Lacey 2008; Lacey 2011; Lacey and Soskice 2013). This paper instead addresses what sort of *informal* institutions an inmate lives under once he or she arrives at prison.

The two main frameworks that scholars use to understand prison life have limitations that prevent them from addressing comparative questions. The “importation theory” focuses on the values and beliefs that inmates held prior to incarceration (Irwin and Cressey 1962). Prison order is explained by studying offenders’ neighborhoods, beliefs, and broader social conditions. Much of the evidence, however, does not support this approach. There are sometimes rapid changes in

² Despite important recent advances, there remains much debate about how to understand and measure the concept of governance (Agnafors 2013; Fukuyama 2013). Logan (1993) suggests specific quantitative measures of prison performance. Unfortunately, developed countries do not systematically collect these and the informality of extralegal governance means that the data do not exist.

prison order, with little apparent causal change from outside of prison (Dias and Salla 2013). Likewise, research finds different social orders at prisons where its residents come from the same or similar communities (DiIulio 1987). These results suggest that the importation theory is underdetermined and not suitable for comparative analysis.

The second framework focuses on the “pains of imprisonment” felt by inmates from losing access to security, autonomy, heterosexual relationships, family, and resources (Sykes 1958). From this perspective, the key to understanding prison life is to understand the prison environment. The most extreme position in this tradition is the pure functionalist approach, which argues that the nature of a total institution means that any perceived differences are relatively unimportant in the homogenizing face of institutionalization (Drake et al 2014, 4). If this is true, then there is no variation in the extent of deprivation, so it cannot explain the variation in prison order (King et al 1994, 146-147). Likewise, if there is a “universal prisoner identity” then this cannot explain different prison experiences (Phillips 2012a). The pains of imprisonment are thus typically treated as exogenous, and sometimes invariant, factors.

To make this framework more analytically powerful, I integrate insights from the new institutional literature to endogenize the pains of imprisonment. In particular, the quality of formal governance institutions and inmate demographics determine the importance and form of extralegal governance institutions. Taken together, these determine prison outcomes.

Inmates in all prisons demand governance. Staff members and formal procedures are one major source (DiIulio 1987). However, even when formal governance is available inmates often provide key governance institutions themselves. They do so for several reasons. First, on the margin, inmates wish to be safer. Prison populations are comprised of people who are most willing to act opportunistically, and inmates invest resources to avoid victimization (Bowker

1980; Toch 1992).³ Second, the communal nature of prisons gives rise to externality problems and the need to allocate common resources (Kaminski 2004; Phillips 2012a; Trammell 2012; Ugelvik 2014). Externalities arise when inmates make excessive noise or when hygiene and bodily functions affect other inmates. Conflicts occur over insufficient access to common resources, such as telephones, televisions, and use of recreation facilities.

Third, inmates require extralegal governance because officials do not facilitate economic activity. Many inmates desire prohibited goods, such as alcohol and drugs (Kalinich and Stojkovic 1985). Inmates cannot rely on prison officials to protect the contraband involved or to secure transactions. As one Brazilian inmate explains, “if I sell a rock of crack and the guy doesn’t cough up, I got no judge to complain to or promissory note to claim” (Varella 1999, 141). The better is formal governance, the less inmates will rely on extralegal governance.⁴

The scale and scope of the illicit economy influences the importance of extralegal governance. If inmates have no desire to trade contraband with each other, then they will not incur the cost of producing market governance. As the benefits of trade increase, inmates invest more to capture those gains (Demsetz 1967). However, even when benefits from social cooperation exist, inmates will only use markets when the benefits of doing so exceed the costs (Coase 1937). Nonmarket alternatives may be preferable. Inmates will therefore have less

³ Violence often results because inmates cannot observe other’s violence capacity (Gambetta 2009, 78-110).

⁴ The level of formal governance might be affected both by external socio-political factors (Lacey and Soskice 2013; Lessing 2015) and by strategic interactions with inmates. These issues, however, are beyond the scope of this paper, and I treat formal governance here as given.

demand for extralegal governance when there are fewer benefits from market activity or when nonmarket alternatives are preferred.

Extralegal governance institutions can take different forms. History provides many examples of successful decentralized governance regimes that rely on reputation and the threat of ostracism (Benson 1989; Bernstein 1992; Greif 1993; Milgrom et al 1990; Ellickson 1991). In these cases, bilateral and multilateral punishment regimes deter opportunism at low cost. However, for such systems to work, populations have to be sufficiently small for people to identify others' reputations. If individuals cannot do so, then the threat of boycott does not provide deterrence.

In large populations, decentralized enforcement costs rise. Bilateral boycott is less effective when there are many alternative trading partners. Multilateral boycott fails when it is not possible to identify a person's reputation. Larger communities are less tightly-knit and there is more disagreement about what constitutes appropriate behaviour. Larger and more diverse communities face the free-rider problem in providing the public good of enforcement (Alesina et al 1999; Habyarimana et al 2007).⁵

This inability to scale-up leads many scholars to believe that centralized organizations, like states, are needed to provide governance in larger communities (North 1990). Important work by Gambetta (1993) and Varese (2001; 2011) shows that mafia groups also operate in

⁵ This does not imply that disputes cannot be resolved informally in large communities, just that it will be more difficult. Recent research shows how the family lineage of clans (Xu and Yao 2015) and even mass education campaigns (Blattman et al 2014) can enhance the effectiveness of informal institutions.

places where state-produced governance is unavailable or ineffectual. Organized criminal groups often perform protective roles in the absence of government (Varese 2010).

A governance vacuum is therefore necessary, but not sufficient, for the emergence of a centralized governance institution. If governance is absent but the community can rely on less costly decentralized mechanisms, then centralized mechanisms will not emerge (Leeson and Rogers 2012). When information transmission is possible at low cost, then boycott mechanisms create a credible threat and provide deterrence.⁶

Even when inmates have a demand for centralized governance, someone must have the information and incentive to produce it. Because governance has public goods attributes, it is more likely to be undersupplied privately (Landes and Posner 1975). Moreover, key actors may prefer to shape institutions in a way that benefits themselves disproportionately rather than to maximize social welfare (Knight 1992). I identify two ways in which inmates bundle public good provision with private benefits. First, inmates have an incentive to create extralegal governance institutions when they are residual claimants to assets that appreciate when governance improves. Ownership of durable goods provides a strong incentive because it increases the relevant time horizon. However, an inmate must own the asset before providing the governance to benefit from the price increase. If not, then the price of governance will have already been capitalized into the price of the asset. This mechanism creates incentives to produce public goods, but it is limited because an inmate without assets has no reason to provide governance.

⁶ The quality of formal governance and extralegal governance are not necessarily independent. For example, high-trust Scandinavian countries may have both higher-quality formal and extralegal governance. I control for this in my analysis of United States and England.

A second mechanism that leads inmates to govern *social* activity is when it creates a cross subsidy that increases the private benefits of *economic* activity.⁷ If producing governance in one set of interactions makes market activity possible, then inmates who wish to trade will have an incentive to provide it. The benefits of market activity, rather than the price of a particular asset, incentivize public good provision. As a result, even inmates with no desire to participate in the underground economy can still receive governance in social affairs.

This discussion implies several empirical predictions. (1) When formal governance is ineffective, inmate-produced governance will become more important. (2) When formal governance is effective, informal governance will be less important. (3) Inmates will only rely on markets to allocate goods when the benefits exceed the costs of creating and regulating markets. (4) Small populations will rely on decentralized institutions to produce extralegal governance. (5) When populations are large, the efficient form of extralegal governance will be more centralized. (6) There must be a private incentive for individuals to provide governance. In the next two sections, studies of prison social order provide empirical support for these implications.

Variation in Formal Governance

Ineffective Formal Governance

In Brazil, the amount and quality of resources provided through official means is extremely limited. Inmates often have little access to health care, food, and shelter (Inter-American Commission on Human Rights 2011). Severe overcrowding is widespread. Inmates lack clean

⁷ This is similar to the classic stationary bandit mechanism (Olson 1993) except that instead of maximizing tax revenue, inmates produce public goods to the extent that it maximizes their private economic gain.

water, soap, and showers. A recent report found that a quarter of facilities did not have mattresses for all inmates and about two-thirds of prisons did not have hot water or towels and toiletries (Conselho Nacional do Ministério Público 2013, 65). Prisons are poorly built and in decay.

Brazilian prisons are chronically understaffed. In 2015, there was roughly one prison officer for every nine inmates. Furthermore, many employees who officially work in custodial roles actually perform administrative tasks, and there is a high level of absenteeism (Mariner 1998, 100). As a result, there are often far fewer staff members overseeing inmates. For example, in Rio Grande do Norte prison, three guards oversaw 646 prisoners (Mariner 1998, 102). At a jail in Rio de Janeiro, there were only six officials responsible for 1,405 inmates (Darke 2013a, 275). At another Brazilian prison, five officers administered a population of 4,200 prisoners (ibid).

In surveying the literature on Latin American prisons, Darke and Karam (2014, 10) identify numerous forms of inmate governance. These include *directivas* (directors) in Bolivia; the *cabos/delegados de pabellón* (heads/dormitory delegates), *jefes de patio o pasillo* (heads of patio or corridor)/*gremio* (management), and *polipresos* (inmate police) in Venezuela; the *nueva mafia* (new mafia) in Honduras; *delegados* (delegates) in Peru; the *comités de orden y disciplina* (committees of order and discipline) of Guatemala; the “cellblock bosses” of Mexico; the “internal chiefs” of Colombia; the *capataces* (foremen) of Paraguay, and the *limpiezas* (cleaners) of Argentina. These findings offer aggregate-level support for the claim that low-quality formal governance correlates positively with extralegal governance.

A former Brazilian prison doctor explains the importance of the governance produced by the *faxinas* (cleaners). He explains, “[they] were the backbone of the prison. Without understanding their organization, it is impossible to comprehend the day-to-day events, from the

ordinary moments to the most exceptional ones (Varella 1999, 109). They played a prominent role in regulating trade. The doctor reports, “the cleaners were absolutely fundamental in keeping internal violence in check. If an inmate didn’t honour a debt, his creditor couldn’t knife him without first consulting the pavilion leader, who would listen to both parties and set a deadline for the resolution of the situation. Before this time was up, woe was the creditor who dared attack a debtor” (Varella 1999, 112). Even the notorious *Primeiro Comando do Capital* (PCC) prison gang has created inmates courts to adjudicate disputes, and their use has coincided with a dramatic fall in violence (Dias and Salla 2013; Denyer Willis 2015; Lessing 2015).

Research on Brazilian jails by criminologist Sacha Darke documents the importance of inmate-governance on a daily basis (Darke 2013a, 2013b, 2014). Inmates, whose authority staff and other inmates acknowledge, sometimes administer Brazilian jails capably. They can play a key role in maintaining the physical structure of the facility. They also gain the compliance of other inmates through voluntary assent.

In one Brazilian jail, prisoners outnumbered the staff by ten to one (Darke 2013b, 18). They lived in cells comprising two wings, a general wing and a segregation wing (for inmates who would be unsafe in the general population). Each cell had an inmate leader, called the *representante de cela* (cell representative) and each of the two jail wings had a *representante geral* (general representative) (Darke 2014, 58). Officials did not select representatives—the inmates did. For a representative to keep his position, he had to satisfy his responsibilities, and inmates held them accountable. According to Darke (2013a, 277), the representatives “owe their position to the confidence of the *coletivo* [the collective] as much as to other prisoner representatives” (Darke 2013a, 277).

Representatives oversaw the work of about 45 inmate trustees. They were in charge of cleaning the jail, cooking and distributing meals, making repairs, serving as porters, and provided medicine, cooking utensils, toiletries, and bedding and clothing. Inmates also built furniture, fixed fans, and repaired police cars (Darke 2014, 60).

Inmates organized mutual-aid efforts. They welcomed new inmates, helped them find a place to sleep, and provided essentials like food, toiletries, medicine, and the prison uniform. Cell representatives also collected items left by departing prisoners, which they gave to needy inmates (Darke 2013a, 277; Darke 2014, 64). In North American prisons, by contrast, it is rare for inmates to play such an active role in administrative and custodial activities (Birkbeck 2011, 315).

Trustees were also in charge of key security responsibilities. They handcuffed and escorted inmates through the prison. Trustees searched the facility for contraband. They ensured that everyone was in their cell when required and that they were not excessively loud (Darke 2013b, 18-19). Inmates conducted end-of-visit strip searches and the evening inmate count. In addition, officials rarely entered the cellblocks and mainly communicated with inmates through the representatives. In North American prisons, by contrast, it is rare for inmates to play such an active role in administrative and custodial activities (Birkbeck 2011, 315).

When the prison director was not on site, the representatives were in charge of security, including carrying keys to the cellblock (Darke 2013b, 19). A representative explains, “We try to do everything to avoid confusion... to maintain calm for everyone” (Darke 2013a, 280). Prison officials’ main concern was that the prison was quiet and orderly. According to Darke (2013b, 19), the “director explained that so long as the wing remained quiet and no one was seriously

hurt, what happened on the wings was ‘their business.’” In short, when officials did not administer or govern the prison fully, inmates filled the gap.

In Bolivia, the San Pedro Prison offers an even more extreme challenge to inmate self-governance (Skarbek 2010b). Guards restrict access to the facility and prevent escape, but do almost nothing else. Officials provide no rehabilitation services and only a minimal amount of low-quality food (Baltimore et al 2007, 24; Organization of American States 2007, 54). The prison—designed to hold 250 inmates—now holds more than a thousand (Organization of American States 2007, 49). According to the National Lawyers Guild, inmates “have complete freedom of movement within the prison,” and they conclude that San Pedro Prison is “essentially self-governed” (Baltimore et al 2007, 23).

The primary source of extralegal governance is elected representatives of eight different housing sections (Young and McFadden 2003, 80; Estefania 2009). Each section has committees responsible for resolving disputes and disciplining residents. Sections sometimes have multiple leadership positions, including treasurer, disciplinary secretary, culture and education secretary, sports secretary, and health secretary. To run for election, an individual must have resided in the prison for at least six months, have an unmortgaged cell, and no debt (Young and McFadden 2003, 279).

When a new inmate arrives, he must purchase or rent his own cell (Baltimore et al 2007; Organization of American States 2007, 52). Housing quality varies, and prices range from several hundred to several thousand dollars (U.S. Department of State 2001; Baltimore et al 2007, 23). The most inexpensive housing consists of bare six-by-nine-foot rooms with few amenities. Ownership of a cell exists for the duration of a prisoner’s sentence. Purchasing a unit requires payment of a non-refundable fee, typically 20% to 25% of the purchase price, to the

housing section (Young and McFadden 2003, 82). The fee is supposed to “cover section expenses such as maintenance, administration, cleaning, renovations and the occasional social event such as the Prisoners’ Day party every September, when the section delegates cooked a barbecue and hired a band for the inmates” (Young and McFadden 2003, 81).

A record keeping forum certifies the legitimacy of ownership claims. Each owner has a property title that describes the cell, its location, the previous owner, and the purchase price (Young and McFadden 2003, 82). The owner retains the original title, but many people also give a copy to the housing section register. To transfer a title, inmates sign a purchase contract in the presence of the housing section delegate, who verifies the transaction, stamps the contract with the section’s official seal, and collects the section fee.

The National Lawyers Guild reports that, “[e]ach section has the feel of a neighborhood or even a small village with its own courtyard plaza and shops. The committee in charge of each section manages the section, repairing the sidewalks or painting the walls. Each ‘*directiva*’ sets an assessment charge for prisoners in the section and each committee is responsible for its own budget. Inmates pay for all services” (Baltimore et al 2007, 23). Purchasing a cell provides access to that section’s amenities, which sometimes includes billiard tables and sponsored inter-sectional soccer tournaments (Baltimore et al 2007, 24; Estefania 2009).

There is a free-market within the prison. According to a former resident, inmates cannot rely on prison officials “for anything, not even to maintain the buildings, so everything that needed to be done or bought was done or bought by the prisoners themselves” (Young and McFadden 2003, 133-134). One inmate explains, “not everyone likes the food in the canteen, so we sell snacks and sandwiches here for inmates and for their families when they come to

visit...With the money I make, I pay my rent and keep a few bolivianos for cigarettes” (Estefania 2009).

Inmates own and operate grocery stores, restaurants, food stalls, barbershops, butcher shops, carpentry services, and a copying center (Baltimore et al 2007, 23; Estefania 2009). The economy includes “cooks, painters, restaurateurs, carpenters, electricians, cleaners, accountants and doctors. There were *artesanos* who sold their artwork and tiny handicrafts—such as paintings and figurines—to visitors...Basically, anything you wanted done or anything you wanted to buy, you could, and if they didn’t have it, someone could get it in for you for a small commission” (Young and McFadden 2003, 134).

Some inmates’ families live with them. Bolivian law allows children under the age of six to do so, but officials have not evicted families with older children (Organization of American States 2007, 55). In 2009, there were about 200 children living in the prison (McFarren and Poslu 2009). Inmates operate a parent’s association. The association president explains, “If anything happens, we call a meeting, and [the prisoner responsible is] immediately punished...It is more secure in here than out there” (Llana 2007). One mother explains, “everything depends on the parents, how we organise to protect and take care of the children” (Shahriari 2014). If inmates are fighting and a child enters the area, the inmates must stop immediately (Young and McFadden 2003, 90–91). A former resident told me, “That’s one of the most important rules. I saw it happen myself. Mid-fight, they stopped, held their positions when a child went past, then continued belting each other when the child had passed.”

Inmate governance creates order in several ways. First, because inmates are the residual claimants to their cells and housing section and can sell their home when they leave the prison, they have an incentive to improve them. The nicer and safer the housing section, the more a

resident's cell is worth. Second, the ability for an inmate to alter and secure his environment (such as installing a lock on a door) strengthens property rights. This in turn increases the return to engaging in productive activity. Third, the ability to participate in productive economic activity raises the opportunity cost of engaging in predatory behavior. Positive-sum interactions eclipse zero-sum interactions. Finally, the presence of different housing sections introduces a degree of competition and exit that might create incentives for inmates to discover optimal local public good provision (Tiebout 1956; Stringham 2015).

In both the Brazilian and Bolivian facilities, the formal governance provided is insufficient to meet inmates' needs. In response, inmates alleviate poverty and disorder by creating alternative mechanisms of social control. These informal governance structures are not ideal, but they are a rational response to the lack of formal governance.

Effective Formal Governance

Scandinavian prison governance differs from Latin America in several ways.⁸ First, their prison systems have a larger number of smaller prisons, with each facility usually holding fewer than 100 inmates (Pratt 2008, 120). Norway's largest prison holds only several hundred inmates, and the facility is separated into housing areas of roughly fifty prisoners (Mjåland 2014, 339). By comparison, the prisons in Latin America and California (see below) regularly hold thousands of inmates. The average number of people in a prison in Norway, Sweden, and Denmark is 88, 73, and 70. Small prisons are easier for officials to monitor and control.

These prisons also have a larger proportion of staff members relative to inmates. In Swedish male prisons, for example, the inmate-to-staff ratio is 1:1 (Pratt 2008, 120). These jobs

⁸ On Scandinavian prisons generally, see Mathiesen 1965; Ugelvik 2014.

attract high-quality employees. Working in a prison is seen by the community as honourable work. Staff members are trained well. In Norway, for example, officers get two years of training at full salary (Pratt 2008, 120). It is also common that prisoners have a voice in formal decision-making.

Scandinavian prisons also offer better material conditions. Their prisons are clean and quiet. Inmates rarely have a cellmate, and most cells have a television. Many housing units include a shared kitchen where inmates prepare their own meals. Inmates work full-time jobs or receive an education at zero expense (Pratt 2008, 121). In a low-security prison in Sweden, some inmates work outside the prison and return at night. If inmates are running late on their return, “they can telephone ahead and a meal will be left out for them” (Pratt 2008, 122-123). Inmates at Norway’s largest prison have a gym and can take spinning classes (Ugelvik 2014, 124). Many Scandinavian prisons have solarium facilities so that inmates with little access to sunlight do not suffer vitamin D deficiencies (Pratt 2008, 122).

Even in closed prisons (those holding the most serious offenders), many facilities have communal entertainment areas and kitchens. Low security inmates in open prisons can leave the prison to purchase food at near-by stores. Pratt (2008, 122) reports that the prison food “seemed nutritious and generous, with ample servings provided. There was no attempt to ration, for example, how much bread, sugar and sauce each prisoner was allowed to have, as happens in some of the Anglo-American jurisdictions.” Plenty of inmates are still dissatisfied with the quality of the food (Ugelvik 2014, 134-137), but compared with the poverty of Latin American prisons, they fare better.

These prisons lack the elaborate inmate produced governance institutions found in Latin America. Effective formal governance means that inmates do not need to produce their own.

Moreover, because inmates have access to substantial resources, they do not have a demand for markets, and thus market regulation. There is no evidence of anything like the economic activity or the inmate-governance found in Brazil and Bolivia.

When inmates have conflicts in Scandinavian prisons, they are resolved in decentralized ways. Based on his ethnographic work, Ugelvik (2014, 107) identifies ostracism as the key mechanism. Norwegian inmates ostracize each other for two reasons. First, some inmates are considered genuinely evil or dangerous (like mass murderer Anders Breivik). Second, inmates shun those who do not adapt well to prison. This includes inmates who are overly nervous, whine excessively, or act pitifully (Ugelvik 2014, 213-218). Unlike Latin America, there are no inmate courts or housing sections to create explicit rules and to enforce compliance. Inmates apply social sanctions in a decentralized manner and at their own discretion.

When inmates desire contraband, they do not necessarily rely on markets. Kristian Mjåland's (2014) ethnographic study of illicit drug use at Norway's Kollen prison reveals that inmates get drugs through reciprocal sharing arrangements. One resident summarizes the relationship: "you have to give in order to get" (Mjåland 2014, 343). Another resident explains, "it's also a kind of duty...That people expect you to do it because they would have" (Mjåland 2014, 345). As Mjåland (2014, 344) explains, "the most striking feature of the 'culture of sharing' is its inclusiveness. As long as prisoners contribute by reciprocating for the drugs they receive, they are part of the sharing culture."

The characteristics of the community explain why inmates rely on sharing instead of markets. First, staff members are actually the major source of drugs. The facility provides two types of opioid (buprenorphine and benzodiazepines) to residents as part of a treatment regime. Staff members break the tablets into smaller pieces and place them under the prisoner's tongue to

dissolve. Staff members monitor this process closely. Despite these precautions, prisoners are often still able to smuggle undissolved pieces of the drug back to their housing area.

Residents are partly willing to give up some of their smuggled drugs because the dosage is excessive. Even though one 8mg tablet of buprenorphine can allegedly affect up to thirty prisoners, the average daily dose given to residents is actually 18mg (Mjåland 2014, 341). Many of the prisoners “claimed that their doses were far too high, and that they easily could take less buprenorphine without suffering withdrawal symptoms, especially if they also snorted some of the buprenorphine they hid away, or if they took a full dose every other day” (Mjåland 2014, 341-342).

In this environment, markets are undesirable. Markets improve efficiency by eliminating the need to identify a double coincidence of wants. However, in this instance, temporal barter is more efficient because of the nearly uniform demand for opioids. Furthermore, since officials provide the supply—which was reported to be dispensed daily and in steady quantities (Mjåland 2014, 345)—higher prices are not needed to increase the quantity supplied.

Delinquent debts, a common source of conflict, are also avoided by relying on sharing. One inmate explains that debt problems do not arise, “you can’t get into debt here, it’s impossible, that would never happen. If anybody says so, it’s nonsense, I have never heard of it” (Mjåland 2014, 342-343). Sharing eliminates the need for mechanisms to make debt available and to resolve problems that arise as a result.

The demographic characteristics of the housing unit facilitate cooperation. Treatment areas have small populations, typically with two housing units that hold 20 to 30 inmates and whose residents (all male) are between the ages of 25 and 45 (Mjåland 2014, 339-340). All of the

prisoners were Ethnic Norwegians who lived in a nearby city, and many of the “prisoners knew each other from previous sentences or from the local drug scene” (Mjåland 2014, 340).

The small population makes it is easy for residents to keep track of who shares and who does not. The confined living environment makes it low cost to monitor who goes for treatment at what times. The fact that they all receive the same drug makes reciprocity easier because quantities are comparable. Because residents know each other, and have ties outside of prison, ostracism is effective. Each of these reasons suggests that the cost of market activity exceed the benefits, so inmates rely on reciprocity and sharing.⁹

Variation in Inmate Demographics

Latin American and Scandinavian countries differ in ways that might drive the divergence in inmate institutions. Using a most similar systems design (Przeworski and Teune 1970, 31-46), this section studies the United States and England. Both are developed Western countries with common law legal traditions, and the latter has imported many of the penal practices and criminal justice policies implemented in the former (Newburn 2002). Despite these similarities,

⁹ One limitation of this analysis is that we cannot determine whether the absence of inmate governance is primarily because officials have met inmates’ needs or also because state capacity is sufficient to prevent inmate-governance from arising. It might be that inmates have no need to govern the acquisition and allocation of food, for example, but that officials are also effective enough to prevent significant illicit activity from taking place. The extent of sharing of drugs suggests it is not entirely the latter.

variation exists in how inmates govern themselves in California and England, in both men's and women's prisons.

This section compares (1) Californian men's prisons in recent and historical periods, (2) Californian men's and women's prison in the present, (3) and men's prisons in California and England in the present. The historical and cross sectional evidence suggests that extralegal governance becomes centralized only when populations are sufficiently large that reputation-based governance is ineffective.

Californian Men's Prisons over Time

The extralegal governance institutions in men's prisons in California have changed substantially over time (Skarbek 2014).¹⁰ From the first half of the twentieth century to the present, inmate-governance switched from a decentralized form to a highly centralized one. Inmate life is now regulated by ethnically-segregated organized prison gangs.

Prior to the 1960s, inmates relied on a system of norms known as the "convict code" (Irwin and Cressey 1962; Irwin 1980). The code prohibited disruptive behaviour, such as lying, stealing, and defaulting on a debt. To the extent that an inmate adhered to these unwritten norms, he would have the support of his peers. Being in good standing meant mutual support and less likelihood of victimization. Deviations from the norm were punished in a decentralized manner through gossip, ostracism, withholding of peer support, and violence in varying degree (Irwin 1980). The convict code was not explicit or intentionally created, and its enforcement was not organized or monitored by a centralized body. Inmates formed only loose groups, which had

¹⁰ On prisons in the United States, see important studies by Sykes 1958; Jacobs 1977; Fleisher 1989; Irwin 1980; DiIulio 1987; Trammell 2012.

neither mutually-exclusive nor permanent membership. Unlike gangs in later periods, the individual's reputation was the key focus of the informal system.

This governance regime failed because of changes in the inmate demographics (Skarbek 2012; 2014, 32-42). The prison population grew from a few thousand inmates to nearly 180,000 in 2006. In this setting, it was costly to obtain information about an individual's reputation. As prison populations grew, there was an increase in the frequency of inmate violence, reflecting the failure of the norms to govern. As a response to this violence, inmates created gangs for protection. Today, officials acknowledge the prominent role played by gangs. In a television interview, then-warden of San Quentin prison admits, "the Department of Corrections has pretty much given over control of the general populations to gangs" (MSNBC 2007).¹¹

Prison gangs' main function is to provide extralegal governance. Everyone in prison must affiliate with a group. Prison gangs, and broader ethnic and racial cliques, are the most important such groups. They operate as a community responsibility system, such that all members of a group are responsible for each other member's actions and obligations. For example, if one group member cannot repay a debt, the group itself is held responsible. The gang might pay the debt for their member, or force the indebted member to work it off for the other gang, perhaps by attacking another inmate. Often, the gang will assault their member to the extent that it satisfies the gang that is owed. The reputation of the group, more than the individual, is what determines social status.

Gang leaders exert tremendous pressure within the group—where they know each member personally and have low costs of monitoring behaviour—to ease relations with other

¹¹ I was told the same in my own interviews with prison staff, former inmates, and prison gang leaders in California.

groups. In large populations, impersonal exchange and social interactions are made easier because an inmate needs only to know the reputation of the group rather than each person's reputation. Gangs issue written rules, maintain records on disruptive inmates, and administer questionnaires to new inmates (Skarbek 2014, 75-95). Gang leaders communicate with gang members in other prisons to identify which inmates are in good standing. Inmates in bad standing are punished. Information transmission is more centralized than in the convict code era. These groups provide governance in what inmates refer to as "gang politics."

Criminologist Rebecca Trammell has done extensive work on the California prison system (Trammell 2009, 2012). A former inmate explained to her how gang leaders adjudicate conflict, "so here's the deal, you got old guys like me who have been in prison forever and have shot-callers do their job, keep peace and run the action. That's why we have shot-callers so when a couple of idiots get into it in the yard, instead of letting them kill themselves, the shot-caller goes out and works it out" (Trammell 2012, 47). Another inmate explains, "when I first got to prison, I said some shit to this white guy and the next thing I know, I'm told to make it right with him...At first I thought, you gotta be kidding me. No way am I going to tell this guy that I'm sorry. Then they told me that I have no choice. That's the rule, you do what you're told...Okay, so I made things right" (Trammell 2009, 766).

Another subject explains the process of self-policing. He says, "If one of my guys is messing up then we either offer him up to the other guys or we take him down ourselves. Like I had a guy that ran up a big drug debt...and I had to turn him over to them. They took him to a cell and really beat the shit out of him. We had to do it. If not, then everyone fights which is bad for business and bad for us" (Trammell 2009, 763-764).

One subject explains why gangs have an incentive to resolve conflicts. He says, “we don’t fight in a riot and stuff unless we have to, it’s too dangerous. We’ll go into lockdown...If I’m locked down, then I’m not working. You can make some serious bank in prison and shot-callers hate it when you’re in lockdown” (Trammell 2009, 762). Officials respond to fights and riots by locking down entire cell blocks and all members of the racial groups involved. Because this reduces their ability to profit in the underground economy, gang leaders have an incentive to provide the public good of governance.

This system operates effectively in a large population because it is organized along group lines. Gangs require permanent and mutually-exclusive affiliations because fleeting and overlapping memberships would obscure which group is responsible for a particular inmate. Racial segregation provides a low cost way for strangers to identify an inmate’s affiliation. Both of these promote the efficacy of a community responsibility system, and makes social cooperation possible. In a small population where people’s identities are known, these mechanisms are not needed.

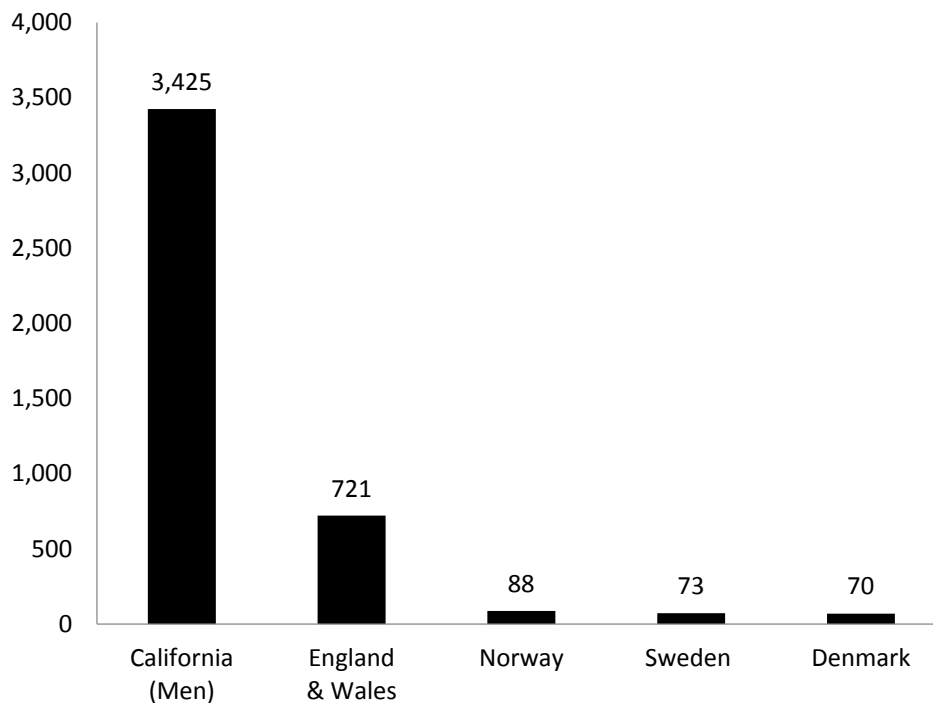
In large prison populations, the collective reputation of the gang substitutes for the individual’s reputation. Groups self-police their own members and regulate interactions with other inmates (akin to Fearon and Laitin 1996). This helps explain why large men’s prison systems, like those in California and Texas, have more serious prison gang problems than do smaller prison systems, like Wyoming or Vermont. In these environments, centralized governance is more effective.

English Men's Prisons

Men have not always formed gangs in California prisons, but since factors other than the size of the prison population have changed over time, the transition from decentralized to centralized governance might be attributed to alternative causes. For example, if the war on drugs was the primary cause of the rise of prison gangs, then even if California had a small prison population, prison gangs would still exist. One way to control for confounding variables is to look at prison social order in a comparable country that still has a relatively small prison population, such as England.

In June 2015, England and Wales operated 122 prisons. They held an average of 721 inmates (Figure 1). Forty prisons held 500 or fewer people, and the largest prison held only 1,671 inmates (HM Prison Service 2015). By comparison, the average prison population in California's 32 men's prisons is 3,425. The California prison with the smallest population (1,918 inmates) is larger than the largest prison in England and Wales (1,671 inmates). The average Scandinavian prison holds far fewer.

Figure 1: Average Prison Population



Source: California Department of Corrections and Rehabilitation; HM Prison Service; World Prison Brief.

Consistent with the governance theory, studies of men’s prisons in England find that prison gangs are unimportant—and in many facilities, do not even exist.¹²

Sociologist Coretta Phillips has conducted extensive research in English prisons (Phillips 2012a, 2012b). Her study of inmate life at the Rochester Young Offenders’ Institution and the Maidstone prison in Southeast England shed light on the question of governance. Both facilities hold about 600 inmates. The Maidstone prison is a closed prison for medium security inmates, and it is divided into four residential and one segregation housing unit.

¹² On prisons in the United Kingdom, see Sparks et al 1996; Liebling 2004; Harvey 2007; Crewe 2009.

Based on a three year study, Phillips finds no evidence for anything like the gangs that operate in California. She explains, “there appears to be no recognizable equivalent of the organized US gang in either Rochester or Maidstone prisons. Prisoners were unequivocal in denying the presence of organized gangs” (Phillips 2012a, 56). Her informants explain (Phillips 2012a, 56), “there’s definitely not a gang scene going on.” Another reiterates that, “it’s not really like there’s a gang that runs the prison or some bullshit like that,” and one asks, “where you heard of this gang thing?, I don’t know nothing about that.”

Instead, inmates govern themselves through decentralized mechanisms. Like the convict code era in California, an inmate’s individual standing is crucial. An inmate’s status depends on his crime, sentence, physical prowess, and success in the underground economy (Phillips 2012a, 56). These are the same factors that determined a person’s status in California during the convict code era. Also, like California prisons prior to gangs, the underground economy in these prisons is populated only by sole proprietors (Phillips 2012a, 56). For these mechanisms to work, prison populations have to be sufficiently small for other inmates to know other people’s reputations.

When conflict occurs, there are no gang leaders to gather the facts and adjudicate the problem. There is no community responsibility system in place. Instead, inmates view these issues as individual-level conflicts. One subject explains that if “two people had a fight, it’s just a fight, that’s all it is and it’s done with...It really isn’t a gang thing” (Phillips 2012a, 56). In California, by contrast, a fight between individuals affiliated with different groups would automatically make it a group-level conflict between all members (Trammell 2012, 49).

Like both men’s prisons in California before gangs and women’s prisons today (see below), English inmates associate loosely with others, including sometimes acquaintances who they knew before incarceration (Phillips 2012a, 57; Crewe 2009; in California, Irwin 1980).

These loose affiliations lack the hallmark characteristics of prison gangs (Skarbek 2014, 8-9). They do not require mutually exclusive, restrictive, and permanent membership. They do not exist into perpetuity or have a corporate entity. They are not centralized, top-down authority structures. Each of these organizational characteristics is advantageous only in settings where information about an individual's reputation is difficult to ascertain and where communities are responsible for its members.

Even when friends do support each other in disputes or fights, the inmates do not view it as a collective responsibility in the way that gangs do. Phillips (2012a, 59) quotes one of her subjects, "I wouldn't call them gangs but, you know, I come here and I know boys from my estate, you know, and if I see them start fighting and people join in I'm going to join in." She describes these dynamics as "loose collectives" with no internal organization (Phillips 2012a, 51). When populations are small enough that it is possible to keep track of others' actions, then decentralized governance works well. In these English prisons, which are small and house inmates who share social ties in the community, the centralized extralegal governance created by gangs is not worth the cost.

California Women's Prisons

While extralegal governance in men's prisons no longer resembles the decentralized system that existed during the era of the convict code, social order in Californian women's prisons still does.¹³ Women's prison populations are still small. At the start of the prison boom in 1981, there were only about 1,400 female inmates in the state (compared to nearly 27,000 male inmates). By

¹³ On female prisons, see classic work by Ward and Kassebaum 1965; Giallombardo 1966 and 1974; Owen 1998; Kruttschnitt and Gartner 2005; Trammell 2012.

2015, there were only about 5,400 female inmates (compared to more than 100,000 male inmates). Like men's prisons prior to the 1950s, these relatively small communities make it easier to know an individual's reputation. As a result, decentralized governance should be effective. In fact, female prison social order today looks similar to the convict code system that existed in men's prisons prior to the increase in prison population.

Instead of forming gangs, many female inmates create prison "families" (Giallombardo 1966; Owen 1998; Trammell 2012; Trammell et al 2015). Each woman typically takes on a traditional role, such as the mother or father. Families are comprised of only a few women. They mentor and support new and young inmates. They "promoted the norm of civility. They believed that young girls who entered prison were in dire need of mentoring and mothering...Of course, making families also meant that they must discipline these girls to 'set them straight'" (Trammell 2012, 36). Families "taught new inmates the norms of prison...At the end of the day, no one wanted chaos" (Trammel 2012, 37). The most common way that women resolve social conflict is by ostracism and gossip. One woman also explains, "It's more about catfights and throwing words around. They yell back and forth at each other. Not a lot of violence, no stabbings" (Trammell 2012, 97).

These families resemble key aspects of the social order in men's prisons prior to gangs. Membership in a prison family is not permanent, and the affiliation doesn't continue once an inmate has been released. Women do not segregate themselves by race (Kruttschnitt and Gartner 2005; Owen 1998; Trammell 2012, 53; Trammell et al 2015, 8). They are loose and overlapping. Unlike prison gangs, prison families do not rely on extensive written constitutions or have formal procedures for regulating the community (Skarbek 2010a, 2011). One woman tells Trammell, "Women don't form gangs...it's not like the guys. We don't let it get out of hand. The men, they

are all about gang banging. We're not into it" (Trammell 2012, 54-55). One woman explains, "If anything happens, if there's any conflict, then you get with your homegirls from your areas...there's more of a formal system with the men; they assume their roles and they know their positions. With women, it's not like that" (Trammell 2012, 56). The community responsibility system in men's prisons place a high degree of importance on the authority of shot callers who adjudicate disputes. By contrast, no such leaders emerge among women (Trammell 2012, 57). Social control is enforced in a decentralized fashion.

Despite similar levels of formal control found in Californian men's and women's prisons (Trammell 2015), the extralegal governance of women's prisons remains decentralized, much like the sharing system of the Norwegian prison, English inmates, and the convict code era of men's prisons. In small communities, gossip and ostracism are implemented at low cost. Because they are effective, there is no need to incur the costs associated with creating centralized mechanisms. Community responsibility, permanent and exclusive membership, racial segregation, and explicit information transmission mechanisms are only necessary in large populations, and we do not observe these characteristics in small prison settings.¹⁴

Conclusion

The political consequences of incarceration are substantial. Imprisonment represents the state's most extreme restriction on a person's liberty. In addition to excessive prison use, in many countries, minorities are represented disproportionately in prison. For example, the state and

¹⁴ Gender is an obvious confounding variable. To control for this, we would want to see if large female prisons lead to the formation of gangs. However, no such prisons currently exist so this is not possible to test.

federal male imprisonment rate in the United States is 904 per 100,000 residents, but for Hispanic and black males the rate rises to 1,134 and 2,805 per 100,000 residents (Carson 2014, 9). When inmates return to the community, prison influences come with them. Some inmates build criminal networks and social capital that increases post-release criminality (Bayer et al 2009; Lerman 2013). Gangs that rise to power behind bars wield tremendous influence on the outside (Denyer Willis 2015; Lessing 2015; Skarbek 2011). Incarceration weakens the foundations of democracy by undermining trust in the government and reducing civic engagement (Weaver and Lerman 2011). For these reasons, it is crucial that we understand the causes of extralegal governance in prison. Their effects are felt far beyond prison walls.

In this paper, I develop a governance theory of prison social order to explain the variation in informal institutions. Through analysis of prisons in Brazil, Bolivia, England, Scandinavia, and men's and women's prisons in California, I advanced two main claims. First, the importance of extralegal governance depends on the quality of formal governance provided. Second, given a need for extralegal governance, the form that the regime takes depends on the size of the prison population. In small prisons, inmates produce extralegal governance through decentralized mechanisms like ostracism. In large prisons, inmates create centralized, organized groups to govern the community. These centralized bodies facilitate impersonal exchange and ease social interactions. Space constraints limit a more in-depth analysis of each case, but the evidence and broader literature provide consistent support for the theoretical implications.

The governance theory also sheds light on out-of-sample cases. For instance, the Soviet Gulags sometimes had large prison populations, but no prison gangs. This apparent contradiction to the theory is resolved by looking at the way formal governance operated. Officials were oppressive rather than negligent, so inmates had no significant autonomy and thus no demand for

extralegal institutions. There was severe poverty, but unlike Brazil, the overwhelming force of the state prevented inmates from developing markets and extralegal governance to cope.

Similarly, this theory helps explain the Los Angeles county jail's dorm for gay and transgender inmates. The general population area of the jail is the largest jail facility in the country, and gangs wield substantial power there. Yet, that is not the case in the gay and transgender dorms within the jail, where there are no gangs. Because of the politically sensitive nature of these dorms, officials provide high-quality governance. These dorms are also comprised of small, homogenous populations (about 100 inmates per dorm). These inmates have higher levels of recidivism, so inmates who arrive at the dorm are often met by "familiar and even friendly faces" (Dolovich 2012, 1046). Inmates can more easily know each other, so they rely on decentralized governance mechanisms instead of gangs.

These two examples suggest that the institutional approach is sufficiently analytical to explain novel cases. While studies of prison social order have mostly been the domain of sociology and criminology, the new institutional approach used in political science offers a novel and important advance in the theoretical and empirical understanding of life behind bars. The nature of a prison itself also provides a fertile context to study conflict processes, state capacity, governance, and other key areas in political science.

In a classic article, Ostrom et al (1992) demonstrated that self-governance is possible. We know less, however, about its robustness. This paper contributes new evidence to the debate about the comparative robustness of governance regimes (Pennington 2011). Past work on private governance focuses on communities with strong religious and cultural ties, ethnic homogeneity, and comprised of the wealthy and elite. These are not representative cases. These examples are "best case" scenarios for extralegal governance, so focusing on them biases our

estimate of its effectiveness more generally. In contrast, prison presents something closer to a “worst case” scenario. Prison populations are comprised of a biased agent type, forced to interact with each other, with no exit options, and sometimes living in desperate poverty. Nevertheless, this paper shows that inmates can develop effective (albeit far from ideal) solutions to the problem of order, and these solutions take diverse forms. Extralegal governance is not only possible, but robust to significant difficulties.

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