

Winter 2016

The Exercise of Power in Prison Organizations and Implications for Legitimacy

John Wooldredge

Benjamin Steiner

Follow this and additional works at: <https://scholarlycommons.law.northwestern.edu/jclc>

 Part of the [Criminal Law Commons](#), and the [Criminology Commons](#)

Recommended Citation

John Wooldredge and Benjamin Steiner, *The Exercise of Power in Prison Organizations and Implications for Legitimacy*, 106 J. CRIM. L. & CRIMINOLOGY (2016).

<https://scholarlycommons.law.northwestern.edu/jclc/vol106/iss1/6>

This Criminology is brought to you for free and open access by Northwestern University School of Law Scholarly Commons. It has been accepted for inclusion in Journal of Criminal Law and Criminology by an authorized editor of Northwestern University School of Law Scholarly Commons.

THE EXERCISE OF POWER IN PRISON ORGANIZATIONS AND IMPLICATIONS FOR LEGITIMACY†

JOHN WOOLDREDGE* &
BENJAMIN STEINER**

Extrapolating from Bottoms and Tankebe's framework for a social scientific understanding of "legitimacy," we argue that differences in how correctional officers exercise "power" over prisoners can potentially impact their rightful claims to legitimate authority. Given the implications of this argument for the "cultivation" of legitimacy (as discussed by Weber), the study described here focused on (a) individual and prison level effects on the degree to which officers generally rely on different power bases when exercising their authority, and (b) whether more or less reliance on different power bases at the facility level impacts prisoners' general perceptions of officers as legitimate authority. Analyses of 1,740 officers from forty-five state prisons in Ohio and Kentucky revealed significant differences in the use of coercive, reward, expert, referent, and positional power based on officer demographics, job training, and experiences, and several characteristics of the prisons themselves. In turn, analyses of 5,616 inmates of these same facilities revealed that greater

† This work was supported, in part, by grants from the National Institute of Justice (Award #2007-IJ-CX-0010) and the National Science Foundation (Award #SES-07155515). The opinions, findings, and conclusions expressed in this study are those of the authors and do not necessarily reflect those of the Department of Justice or the National Science Foundation. The authors also wish to thank Guy Harris, Brian Martin, and Gayle Bickle with the Ohio Department of Rehabilitation and Correction, and Ruth Edwards and Tammy Morgan with the Kentucky Department of Corrections for their assistance with the collection of the data for this study.

* Professor of Criminal Justice, University of Cincinnati. Please address all correspondence to John Wooldredge, School of Criminal Justice, University of Cincinnati, PO Box 210389, Cincinnati, OH 45221-0389. Contact: john.wooldredge@uc.edu; 513-556-5838.

** Associate Professor of Criminology and Criminal Justice, University of Nebraska, Omaha.

reliance on expert and positional power at the facility level coincided with inmate perceptions of officers as more fair, equitable, and competent, while greater reliance on coercive power corresponded with perceptions of officers as less fair, less equitable, and less competent. Related foci are important for enlightening discussions of the feasibility of maintaining legitimate authority in a prison setting. How officers might maintain legitimate authority is discussed in light of our specific findings.

TABLE OF CONTENTS

INTRODUCTION.....	126
I. POWER BASES AS (IL)LEGITIMATE DISPLAYS OF AUTHORITY	129
A. Power Bases Within Prison Organizations.....	130
B. Shaping Legitimacy with Different Power Bases.....	134
II. OFFICER AND PRISON EFFECTS ON THE EXERCISE OF POWER	135
III. METHODS	140
A. Samples and Data	141
B. Measures.....	143
C. Statistical Analysis	149
IV. FINDINGS AND DISCUSSION	150
A. Officer Characteristics and the Exercise of Power.....	152
B. The Influences of Officers' Experiences and Perceptions of Work	154
C. Prison Level Effects on Officers' Exercise of Power.....	156
D. Findings on the Interactive Character of Legitimacy.....	157
E. A More Nuanced Understanding of Legitimacy in Prison	159
F. Implications for Establishing Legitimate Authority in Prison ...	160
CONCLUSIONS	162

INTRODUCTION

In their call for social scientific analyses of legitimacy, Professors Bottoms and Tankebe integrated the ideas of several social and political philosophers in order to construct a theoretical framework for understanding whether government officials can claim “legitimate” authority whereby citizens recognize their right to rule.¹ An important element of this framework borrows from Professor Raz’s argument that

¹ Anthony Bottoms & Justice Tankebe, *Beyond Procedural Justice: A Dialogic Approach to Legitimacy in Criminal Justice*, 102 J. CRIM. L. & CRIMINOLOGY 119, 123–24 (2012).

differences in *how* power is exercised will influence whether power-holders maintain legitimate authority.² That is, officials who rely more generally on coercive force can only be *de facto* authorities in that they have not “secured from their audience a recognition of their right to rule.”³ Officials who exercise authority in ways that preserve the dignity and respect of citizens, on the other hand, can make valid claims to legitimate authority.⁴ We apply this framework to correctional officers’ exercise of power and the correlates of different power bases that are relevant for the cultivation of legitimacy in a prison setting.⁵

Building legitimacy in prison organizations affects not only inmate compliance with prison rules but also post-release compliance with the law more generally.⁶ Discussions of legitimacy in prison settings often focus on the importance of inmates’ perceptions of prison authority as means of promoting safety and order.⁷ Perceptions of organizational rules and the enforcers of those rules as proper and just, should reinforce the credibility of prison officials as individuals who deserve the right to govern.⁸ In turn, stronger perceptions of legitimacy should promote order and safety in the inmate population by increasing levels of inmate compliance with the rules.⁹ Consistent with this idea, prison ethnographers have observed a link between correctional officer legitimacy and prison order.¹⁰ From this perspective, how officers exert their authority over inmates is critical for shaping inmates’ perceptions of legitimacy.¹¹ For example, officers who

² See JOSEPH RAZ, *BETWEEN AUTHORITY AND INTERPRETATION* 128 (1st ed. 2009).

³ Bottoms & Tankebe, *supra* note 1, at 125–26.

⁴ See Jonathan Jackson, *On the Dual Motivational Force of Legitimate Authority* 12 (London School of Economics Legal Studies, Working Paper No. 4/2015, 2015).

⁵ MAX WEBER, *ECONOMY AND SOCIETY* 53 (Guenther Roth & Claus Wittich eds., 1st ed. 1978) (Weber’s general observation about the cultivation of legitimacy might also be applied to prison authorities.).

⁶ See Derrick Franke et al., *Legitimacy in Corrections: A Randomized Experiment Comparing a Boot Camp with a Prison*, 9 *CRIMINOLOGY & PUB. POL’Y* 89, 94 (2010).

⁷ See Tom R. Tyler, *Legitimacy in Corrections: Policy Implications*, 9 *CRIMINOLOGY & PUB. POL’Y* 127, 132 (2010).

⁸ See Bottoms & Tankebe, *supra* note 1, at 124–25.

⁹ See Anthony Bottoms, *Interpersonal Violence and Social Order in Prisons*, in *CRIME AND JUSTICE: A REVIEW OF RESEARCH*, VOL. 26 205, 253 (Michael Tonry & Joan Petersilia eds., 1999); J. Richard Sparks & Anthony E. Bottoms, *Legitimacy and Order in Prisons*, 46 *BRIT. J. SOC.* 45, 50 (1995).

¹⁰ See ALISON LIEBLING ET AL., *CAMBRIDGE INST. OF CRIMINOLOGY, AN EXPLORATION OF STAFF-PRISONER RELATIONSHIPS AT HMP WHITEMOOR: 12 YEARS ON*, at 3 (rev. ed. 2011); Sparks & Bottoms, *supra* note 9, at 58–60.

¹¹ See ALISON LIEBLING ET AL., *THE PRISON OFFICER* 128–31 (2d ed. 2011); Mike Vuolo & Candace Kruttschnitt, *Prisoners’ Adjustment, Correctional Officers, and Context*, 42 *LAW & SOC’Y REV.* 307, 319 (2008).

rely more on coercion in order to gain inmate compliance may weaken their legitimacy in the eyes of inmates whereas officers may strengthen their legitimacy who rely more on their expertise for problem solving (such as resolving conflict between two inmates by encouraging compromise) or the respect they have garnered from inmates over time.¹²

Bottoms and Tankebe argued that the “dialogic nature” of legitimacy demands an understanding of not just how subjects perceive power-holders but also how power-holders behave.¹³ As such, the study focuses on correctional officers’ perceptions of their power over inmates and the inmates’ perceptions of officers in order to assess how the exercise of power potentially impacts officer authority. A focus on correctional officers responds to Bottoms and Tankebe’s call for research on power-holders, and more specifically the “junior power-holders” who have the most contact with subjects.¹⁴

By definition, prisons are, to some degree, coercive organizations. However, Bottoms and Tankebe observed that most prison authorities prefer to refrain from the use of force.¹⁵ The famous sociologist Max Weber described how states have a monopoly on the legitimate use of force,¹⁶ but force is generally not encouraged by officials because, when it is used, “consensual authority has failed.”¹⁷ Recognizing that consent and the cultivation of legitimacy involve ongoing relationships between authorities and their subjects, and that force will be used on occasion even by legitimate governments, it is important to assess how officers exercise their authority in general as opposed to in particular instances. This is because “actions expressive of consent serve to reproduce and reinforce the legitimacy of a given set of social arrangements,” which underscores the need to reflect the *ongoing* nature of these relationships.¹⁸

In light of the paucity of empirical studies of this subject, and consistent with Bottoms and Tankebe’s call for related research, we examined both individual and prison-level influences on correctional officers’ reliance on different forms of power in Ohio and Kentucky state prisons. Given the dialogic nature of legitimacy, we also examined whether

¹² See JOHN IRWIN, *PRISONS IN TURMOIL* 22 (1980) (observing the relative ineffectiveness of coercion for gaining control over inmates at San Quentin).

¹³ Bottoms & Tankebe, *supra* note 1, at 129.

¹⁴ *Id.* at 153 (providing “front-line police and prison officers” as examples of “more junior power-holders”).

¹⁵ *Id.* at 134.

¹⁶ WEBER, *supra* note 5, at 56 (Guenther Roth and Claus Wittich eds., 1st ed. 1978).

¹⁷ Bottoms & Tankebe, *supra* note 1, at 134.

¹⁸ *Id.* at 136.

more or less reliance on different power bases at the facility level impact prisoners' general perceptions of officer legitimacy. Specifically, we examine officers' fairness, equity, and competency, all of which are important contributors to an officer establishing legitimate authority. Identifying key influences on the exercise of different forms of power and whether broader use of specific forms correspond with inmates' perceptions of officers will contribute to both theoretical and practical discussions of the feasibility of establishing legitimate authority in a prison setting.

I. POWER BASES AS (IL)LEGITIMATE DISPLAYS OF AUTHORITY

Correctional officers' claims to legitimate authority can only be valid when the organizational rules and the enforcers of those rules are proper and just—not just in particular instances, but consistently and over time.¹⁹ The continuity of interactions between officers and inmates that involve respectful treatment and preserve the dignity of inmates is necessary for establishing prison officials as individuals who deserve the right to govern.²⁰

Borrowing from Raz, Bottoms, and Tankebe's discussion of how legal authorities actually exert their power is critical for determining whether these officials have rightful claims to legitimate authority.²¹ Other prison scholars have also discussed the implications of how officers exert their authority over inmates for shaping inmates' perceptions of legitimacy,²² although Bottoms and Tankebe seem less concerned with assessing subjects' perceptions of particular instances since the behaviors themselves applied broadly and consistently define legitimate authority.²³

This discussion begs the question of what constitutes "legitimate" versus "illegitimate" displays of authority, and it is in this context we describe the importance of recognizing different power bases used by correctional officers for making this distinction. For example, officers who rely more on coercion in order to gain inmate compliance weaken their claims to legitimate authority because inmates are not willing to follow directives. Alternatively, officers who rely more on their expertise for

¹⁹ *Id.* at 125.

²⁰ *Id.* at 145.

²¹ *See id.* at 125; RAZ, *supra* note 2, at 128.

²² *See* LIEBLING ET AL., *supra* note 11; MARK LIPSKY, *STREET-LEVEL BUREAUCRACY* 57 (1st ed. 1980); LUCIEN LOMBARDO, *GUARDS IMPRISONED: CORRECTIONAL OFFICERS AT WORK* 93–94 (2d ed. 1989); Vuolo & Kruttschnitt, *Prisoners' Adjustment, Correctional Officers, and Context: The Foreground and Background of Punishment in Late Modernity*, 42 *LAW & SOC'Y REV.* 307, 319 (2008).

²³ *See* Bottoms & Tankebe, *supra* note 1, at 129.

problem solving or the respect they have garnered from inmates over time, can make rightful claims to possessing legitimate authority.²⁴ This example integrates (a) Raz's distinction between groups claiming legitimate authority although the claim is not deserved versus groups possessing a valid claim to legitimate authority,²⁵ with (b) Professor Tyler's emphasis on the impact of how authority is exercised on subjects' recognition of any claim to legitimate authority.²⁶ In other words, groups who rely on raw power to enforce rules may do so precisely because their subjects do not recognize their right to rule. On the other hand, groups that display respect for citizens and exercise authority in ways that preserve power recipients' dignity are more likely to have secured recipients' belief in their legitimate authority.

A. POWER BASES WITHIN PRISON ORGANIZATIONS

The exercise of power involves one person's ability to influence the behavior of another.²⁷ Organizational scholars have argued that employee perceptions of how their supervisors exercise power over them can positively or negatively impact job performance and satisfaction.²⁸ A parallel might be drawn to the use of power by officers over prisoners in terms of how different power bases (types of power) are linked to inmates' perceptions of authority. However, unlike the empirical literature focusing

²⁴ See generally Bottoms & Tankebe, *supra* note 1 (discussing how the use of raw power undermines legitimate authority); Jackson, *supra* note 4 (regarding the importance of preserving a subject's respect to establishing legitimate authority in the eyes of power recipients).

²⁵ See RAZ, *supra* note 2, at 128.

²⁶ Tom Tyler, *Psychological Perspectives on Legitimacy and Legitimation*, 57 ANN. REV. PSYCHOL. 375, 379 (2006).

²⁷ See John R. P. French, Jr. & Bertram Raven, *The Bases of Social Power*, in STUDIES IN SOCIAL POWER 150, 153 (Dorwin Cartwright ed., 1959); John Hepburn, *The Exercise of Power in Coercive Organizations: A Study of Prison Guards*, 23 CRIMINOLOGY 145, 145 (1985); WEBER, *supra* note 5, at 53.

²⁸ See Jerald Bachman et al., *Bases of Supervisory Power: A Comparative Study in Five Organization Settings*, in CONTROL IN ORGANIZATIONS 299, 233 (Arnold Tannenbaum ed., 1st ed. 1968); Jerald Bachman et al., *Control, Performance, and Satisfaction: An Analysis of Structural and Individual Effects*, in CONTROL IN ORGANIZATIONS 213, 225 (Arnold Tannenbaum ed., 1st ed. 1968) [hereinafter, Bachman et al., *Control, Performance, and Satisfaction*]; Paula Carson et al., *Social Power Bases: A Meta-analytic Examination of Interrelationships and Outcomes*, 23 J. APPLIED SOC. PSYCHOL. 1150, 1156 (1993); James M. Comer, *A Psychometric Assessment of a Measure of Sales Representatives' Power Perceptions*, 21 J. MARKETING RES. 221, 224 (1984); M. Afzalur Rahim, *Relationships of Leader Power to Compliance and Satisfaction with Supervision*, 15 J. MGM'T. 545, 547 (1989).

on employee satisfaction,²⁹ we do not claim that causality necessarily moves from officers' behaviors to inmates' perceptions. That is, officers may use coercion to enforce rules because inmates do not acknowledge their authority, whereas officers who refrain from force might act as such because they feel that inmates acknowledge their right to enforce prison rules. For our purpose, and consistent with Bottoms and Tankebe's discussion of the "dual and interactive character of legitimacy, which necessarily involves both power-holders and audiences,"³⁰ we believe that officers react to the inmate culture in a particular prison.

Professor Hepburn focused specifically on the exercise of power by correctional officers and adopted Professors French and Raven's five social bases of power for his investigation: legitimate (based on the officer's position in the organization), expert (cooperation based on a belief that the officer knows what is best for inmates due to their training and skills), referent (an inmate's respect for an officer leads to compliance), coercive (physical force or threat of force used in order to gain compliance from inmates), and reward power (implicit or explicit promises of certain benefits in exchange for compliance).³¹

Based on the terminology, legitimate power is most closely tied to the earlier discussion of correctional officer legitimacy. However, considering the broader concept of legitimate authority described above, the ability to exercise legitimate power is more likely a consequence of inmates perceiving officers as holding "legitimate authority" rather than an influence on these perceptions.³² Legitimate power is based on the idea that an individual will comply with an order when she perceives the supervisor as having a legitimate right to order her to act in a certain way.³³ In other words, legitimate power operates in prison when inmates perceive prison officials as individuals who deserve the right to govern.³⁴ Hereafter, the term "positional power" will be used in place of "legitimate power" so as not to detract from the larger discussion of the link between legitimacy and the exercise of power.

Outsiders might easily mistake "dull compulsion" for compliance based on positional power, where inmates do not challenge de facto

²⁹ Bachman et al., *Control, Performance, and Satisfaction*, *supra* note 28, at 225.

³⁰ Bottoms & Tankebe, *supra* note 1, at 119, 121–24.

³¹ See French & Raven, *supra* note 27, at 155–56; Hepburn, *supra* note 27, at 146–49.

³² See RICHARD SPARKS ET AL., PRISONS AND THE PROBLEM OF ORDER 84–89 (1st ed. 1996); LIEBLING ET AL., *supra* note 10, at 98–99; Bottoms, *supra* note 9.

³³ Hepburn, *supra* note 27, at 146.

³⁴ See Bottoms & Tankebe, *supra* note 1, at 160.

authorities simply because it is easier to acquiesce to the rules.³⁵ The correctional officers we observed for our study, on the other hand, seemed generally savvy to the difference between the two situations. For example, on occasion throughout the study, some officers in the higher security facilities expressed (in different ways) how certain inmates had become so dogmatic about their daily routines that they rarely question officers' directives.

A correctional officer exerts "expert power" when inmates follow directives because they believe the officer possesses some special skill or knowledge.³⁶ Based on this definition, expert power reflects the exercise of a wide range of "skills" from an officer assisting inmates in navigating their way around a unit to problem solving to resolve inmate conflicts and providing tips on how to protect their property or to avoid placing themselves in harm's way of violent predators. In this sense, the ability to exercise expert power does not mean that obedient inmates always recognize an officer's right to govern. Yet, in situations where an inmate recognizes that an officer's expertise contributes positively to his well-being, it could be argued that expert power overlaps somewhat with positional power. That is, inmates consciously place confidence in an officer to know what is in the inmates' better interest, thus deferring to the officer's position of authority.

"Referent power" operates when prisoners follow directives because they respect and admire officers.³⁷ Although this might seem naïve in a prison context, officers who are fair and impartial tend to get more respect from inmates.³⁸ Officers in Hepburn's study viewed this type of power as only moderately important in their jobs, but the potential relevance of referent power lies in the idea that, unlike all other power bases, the physical presence of an officer is not required for its effectiveness.³⁹ An implication of this idea is that an inmate might refrain from engaging in misconduct if the inmate values an officer's opinion of him or her.

Officers exercise "coercive power" when they punish or threaten to

³⁵ EAMONN CARRABINE, POWER, DISCOURSE AND RESISTANCE 38 (2004).

³⁶ Hepburn, *supra* note 27, at 148. See generally Bertram Raven, *The Bases of Power and the Power/Interaction Model of Interpersonal Influence*, 8 ANALYSIS OF SOC. ISSUES & PUB. POL'Y 1, 3 (2008) (extending Raven's general definition to correctional officers).

³⁷ Hepburn, *supra* note 27, at 149.

³⁸ See ALISON LIEBLING ASSISTED BY HELEN ARNOLD, PRISONS AND THEIR MORAL PERFORMANCE 333 (2004) [hereinafter LIEBLING, MORAL PERFORMANCE]; TERENCE MORRIS & PAULINE MORRIS, PENTONVILLE: A SOCIOLOGICAL STUDY OF AN ENGLISH PRISON 264–65 (1963); LIEBLING ET AL., *supra* note 11, at 105–11.

³⁹ See Hepburn, *supra* note 27, at 154.

punish disobedience.⁴⁰ Examples of coercive power in prison include verbal warnings, intimidation, physical punishments, and segregation.⁴¹ Organizational researchers have suggested that coercive power is “probably the only effective power when the organization is confronted with highly alienated” participants with little commitment to the goals of the organization.⁴² Although this sounds most applicable to a prison population, the unfortunate consequence is the damage coercion can inflict on inmates’ perceptions of legitimate prison authority. The use of coercion can enhance rather than diminish anger and cynicism toward the administration.⁴³ Moreover, coercion requires “constant escalation in severity and frequency of sanctions” if it is going to be used in the long term.⁴⁴ For these reasons, prison officers understand the need to use threats sparingly.⁴⁵

An officer has “reward power” when inmates perceive that the officer is capable and willing to issue particular benefits to inmates in exchange for compliance.⁴⁶ Formal rewards are limited in prison, but officers might offer informal rewards.⁴⁷ A norm of reciprocity arises where, for example, an officer may overlook an inmate’s minor rule infraction in return for that inmate not causing any problems or making sure other inmates conform to

⁴⁰ *Id.* at 147; Hayden P. Smith et al., *The Limits of Individual Control? Perceived Officer Power and Probationer Compliance*, 37 J. CRIM. JUST. 241, 242 (2009) (“Power becomes salient when an ‘inferior’ actor yields to the will of a ‘superior’ actor, and is forced to relinquish personal status, goods, or goals.”).

⁴¹ See Hepburn, *supra* note 27, at 147.

⁴² AMITAI ETZIONI, A COMPARATIVE ANALYSIS OF COMPLEX ORGANIZATIONS 13 (rev. ed. 1975); see M. Afzalur Rahim & Gabriel F. Buntzman, *Supervisory Power Bases, Styles of Handling Conflict with Subordinates, and Subordinate Compliance and Satisfaction*, 123 J. PSYCHOL. 195, 206 (1989) (concluding that subordinates’ perceptions of supervisors’ use of coercive power may not be linked to their actual use of coercive power).

⁴³ KELSEY KAUFFMAN, PRISON OFFICERS AND THEIR WORLD 62 (1988); see also Herman Aguinis et al., *Power Bases of Faculty Supervisors and Educational Outcomes for Graduate Students*, 67 J. HIGHER EDUC. 267, 289 (1996) (observing a similar phenomenon within a population of graduate students and their faculty); Shelley Johnson Listwan et al., *The Pains of Imprisonment Revisited*, 30 JUST. Q. 144, 162–64 (2013); James E. Zemanek, Jr. & Roger P. McIntyre, *Power, Dependence, and Satisfaction in a Marketing System*, 77 PSYCHOL. REP. 1155 (1995) (observing a similar phenomenon within a population of customers and manufacturers).

⁴⁴ KAUFFMAN, *supra* note 43, at 70.

⁴⁵ See LOMBARDO, *supra* note 22, at 97–100 (arguing that discretion in rule enforcement and the use of force is necessary to prevent feeding inmates’ cynicism and resistance to authority).

⁴⁶ See Hepburn, *supra* note 27, at 147–48.

⁴⁷ *Id.*

the rules.⁴⁸ This informal practice can easily become the means by which officers maintain stability and order,⁴⁹ yet it is not considered effective in the long run.⁵⁰ Several problems can arise from the use of reward power including limited available rewards (e.g., officers can recommend inmates for more popular job assignments but those jobs are in short supply),⁵¹ the use of illegitimate rewards (such as overlooking rule violations),⁵² and unequal distributions of rewards (overlooking rule violations for one inmate but not another even though both exhibit similar levels of compliance).⁵³

B. SHAPING LEGITIMACY WITH DIFFERENT POWER BASES

It is immediately apparent that some of these power bases are more consistent with legitimate authority than others.⁵⁴ The use of expert, referent, and positional power is more consistent with furthering procedural justice, mutual respect, and preserving power recipients' dignity, and, Tyler argues, the establishment of procedural justice is a necessary precursor to individuals' perceptions of legitimate authority.⁵⁵ Moreover, drawing regularly from these power bases might lead subordinates to more readily accept and follow organizational rules by promoting a less confrontational environment.⁵⁶ The exercise of coercive and reward power, by contrast, might reflect a power-holder's inability to effectively rely on their expertise, the respect garnered from inmates, or simply their position in the prison bureaucracy for gaining the cooperation of subordinates. Regarding coercive power, Raz characterized individuals who use force as de facto authorities because reliance on force suggests that subjects are unwilling to comply otherwise and therefore do not recognize the power-holders' right

⁴⁸ *Id.* at 148.

⁴⁹ See VICTOR HASSINE, *LIFE WITHOUT PAROLE* 117, 117–20 (3d ed. 1999); Richard McCleery, *Communication Patterns as Bases of Systems of Authority and Power*, in *THEORETICAL STUDIES IN SOCIAL ORGANIZATION OF PRISON* 49, 61 (Richard Cloward ed., 1st ed. 1960); GRESHAM SYKES, *THE SOCIETY OF CAPTIVES* 56 (1st ed. 1958); LOMBARDO, *supra* note 22, at 99.

⁵⁰ See Aguinis et al., *supra* note 43, at 289 (observing a similar phenomenon within a population of graduate students and their faculty); Hepburn, *supra* note 27, at 159–61; Smith et al., *supra* note 40, at 243. See generally Zemanek & McIntyre, *supra* note 43 (observing a similar phenomenon within a population of customers and manufacturers).

⁵¹ See SYKES, *supra* note 49, at 50.

⁵² See Richard Cloward, *Social Control in Prison*, in *PRISON WITHIN SOCIETY* 78, 94–95 (Lawrence Hazelrigg ed. 1968); KAUFFMAN, *supra* note 43, at 55.

⁵³ KAUFFMAN, *supra* note 43, at 54.

⁵⁴ See RAZ, *supra* note 2, at 128.

⁵⁵ Tyler, *supra* note 26, at 379.

⁵⁶ See Carson et al., *supra* note 28, at 1156; Rahim & Buntzman, *supra* note 42, at 197–98; Raven, *supra* note 36, at 14.

to govern.⁵⁷ In a prison setting, another drawback to consider is that reliance on coercion and rewards can contribute to resistance and learned helplessness (respectively) when used illegitimately.⁵⁸ Inmates may come to expect rewards for good behavior and may only follow rules when rewards are possible. Also, a continued use of force will likely enhance an inmate's disrespect for prison authorities.⁵⁹ Greater use of reward power or coercive power might therefore reflect illegitimate authority.

Organizations are social groups that exist for the purpose of achieving a particular set of goals and are characterized as maintaining the power to bring about desired goals.⁶⁰ Prison organizations, specifically, exist to implement punishment and rehabilitation, and the primary responsibilities of officers toward these ends include the maintenance of custody, security, and control.⁶¹ Relative to more "egalitarian" organizations, power relationships in a prison are obviously more extreme due to the responsibilities of officers and the unique emphasis on managing large offender populations.⁶² As such, the underlying threat of coercion is ever-present in a prison environment.⁶³ Power is exclusively in the hands of prison officials and, when non-violent methods for gaining the compliance of inmates fail, officials can resort to physical force.⁶⁴ The challenge facing prison staff, therefore, is to effectively manage inmates without having to rely on coercion and rewards in order to establish their legitimacy in the eyes of prisoners.

II. OFFICER AND PRISON EFFECTS ON THE EXERCISE OF POWER

To our knowledge, there are only a handful of extant studies on how correctional officers exercise power over inmates and the possible influences on those choices, and there are no published studies of both

⁵⁷ See RAZ, *supra* note 2, at 128.

⁵⁸ See Lynne Goodstein et al., *Personal Control and Inmate Adjustment to Prison*, 22 CRIMINOLOGY 343, 346–48 (1984).

⁵⁹ See KAUFFMAN, *supra* note 43, at 62.

⁶⁰ See AMITAI ETZIONI, MODERN ORGANIZATIONS 3 (1964).

⁶¹ John Wooldredge, *State Corrections Policy, in POLITICS IN THE AMERICAN STATES* 297 (Virginia Gray, Russell Hanson, & Thad Kousser eds., 10th ed. 2012).

⁶² See McCleery, *supra* note 49, at 49–50; SPARKS ET AL., *supra* note 32, at 33–34.

⁶³ See JOHN IRWIN, THE WAREHOUSE PRISON: DISPOSAL OF THE NEW DANGEROUS CLASS 65 (1st ed. 2005); Donald R. Cressey, *Prison Organizations, in HANDBOOK OF ORGANIZATIONS* 1023, 1038 (James March ed., 1965); SPARKS ET AL., *supra* note 32, at 34–47.

⁶⁴ See CHARLES THOMAS & DAVID PETERSEN, PRISON ORGANIZATIONS AND INMATE SUBCULTURES 37–38 (1st ed. 1977).

officer and prison-level effects on these choices.⁶⁵ Related studies in the area of policing are also relatively rare, and policing scholars have only recently developed analogous bi-level frameworks for understanding both police officer and neighborhood effects on the quality of police-citizen interactions and how officers exercise authority.⁶⁶ In the prison context, the ability and willingness of correctional officers to rely on certain power bases more than others may be rooted in their personal characteristics, training, and on-the-job experiences with co-workers and inmates as well as the prison environment in which they work.⁶⁷

Personal characteristics such as an officer's sex might influence the exercise of power if men tend to be more aggressive (on average) compared to women and more apt to rely on force or the threat of force to gain compliance among inmates.⁶⁸ Also, given the disproportionate numbers of African-American and Latino inmates in prisons today, White Anglo officers may be less sympathetic or tolerant towards minority inmates relative to other (minority) officers,⁶⁹ possibly leading to less reliance on expert and referent power. Age, experience, and a supervisory rank over other officers are other factors that could impact the choice of power bases,⁷⁰ if older and more experienced officers are better able to rely on their expertise for problem solving or on the respect they may have developed over time as a result of treating inmates consistently and in a non-confrontational manner.⁷¹ Being in a supervisory position might also reflect job competence gained through this experience.⁷²

⁶⁵ See, e.g., Ben Crewe et al., *Staff-Prisoner Relationships, Staff Professionalism, and the Use of Authority in Public- and Private-Sector Prisons*, 40 LAW & SOC. INQUIRY 309, 314–18 (2015); Alexander Ibsen, *Ruling by Favors: Prison Guards' Informal Exercise of Institutional Control*, 38 LAW & SOC. INQUIRY 342, 345–47 (2013); James W. Marquart, *Prison Guards and the Use of Physical Coercion as a Mechanism of Prisoner Control*, 24 CRIMINOLOGY 347, 349–50 (1986); Stan Stojkovic, *Social Bases of Power and Control Mechanisms Among Correctional Administrators in a Prison Organization*, 14 J. CRIM. JUST. 157, 158–59 (1986); Hepburn, *supra* note 27, at 145.

⁶⁶ See Stephen D. Mastrofski et al., *Predicting Procedural Justice in Police–Citizen Encounters*, 43 CRIM. JUST. & BEHAV. 119, 120–15 (2015).

⁶⁷ See Hepburn, *supra* note 27, at 150.

⁶⁸ See LIEBLING ET AL., *supra* note 11, at 72.

⁶⁹ See Dana Britton, *Perceptions of the Work Environment among Correctional Officers: Do Race and Sex Matter?*, 35 CRIMINOLOGY 85, 90 (1997).

⁷⁰ See Ben Crouch & James Marquart, *The Guard in a Changing Prison World*, in THE KEEPERS 5, 36 (Ben Crouch ed., 1980); see also IRWIN, *supra* note 12, at 57; LOMBARDO, *supra* note 22, at 94; Hepburn, *supra* note 27, at 150.

⁷¹ See Hepburn, *supra* note 27, at 157, 160.

⁷² See LOMBARDO, *supra* note 22, at 94 (discussing the role of experience, not rank, for gaining job competence (“personal legitimacy”); this is still noted here because experience and promotion are intuitively linked in bureaucratic organizations such as prisons).

An officer's training might also be relevant for shaping his or her orientation towards inmates.⁷³ Higher education may make some officers more tolerant of individual differences, and proper training (or perceived "adequate" training) might provide officers with more viable options when problem solving and dealing with more resilient prisoners.⁷⁴

Cartwright argued that a supervisor's choice of power is influenced heavily by their perceptions of those they manage.⁷⁵ For correctional officers, their perceptions of the overall level of inmate compliance with their directives, the frequency with which they are threatened by inmates, and their general feelings of safety could impact their tolerance for dealing with prisoners in a more progressive, fair, and consistent fashion.⁷⁶ Although not a perception per se, the frequency of contacts with inmates could influence an officer's perceptions of inmates in either a positive or a negative way, depending on the quality of these interactions.⁷⁷ More frequent interaction helps to lessen social distance,⁷⁸ possibly influencing an officer's willingness to refrain from using coercion and rewards while relying more on their training and expertise for dealing with resistant prisoners.

Also related to an officer's orientation towards inmates and job competence is how she perceives co-workers and the work environment. Co-worker support (assistance with tasks and problem solving, affirmation by peers) has been found to promote correctional officer well-being,⁷⁹ and

⁷³ See IRWIN, *supra* note 12, at 57; LOMBARDO, *supra* note 22, at 44–45.

⁷⁴ See LIEBLING ET AL., *supra* note 11, at 148–50 (discussing the role of officer training); LOMBARDO, *supra* note 22, at 42, 44–45. *But see* Hepburn, *supra* note 27, at 157 (finding that an officer's education was irrelevant for predicting the use of most power types and more education actually corresponded with *less* use of "expert" power).

⁷⁵ See Dorwin Cartwright, *Influence, Leadership, Control*, in HANDBOOK OF ORGANIZATIONS 1, 40 (James March ed., 1965).

⁷⁶ See Marquart, *supra* note 65, at 66 (describing specific situations where noncompliant and / or threatening inmates are dealt with by force).

⁷⁷ See JOHN T. WHITEHEAD, BURNOUT IN PROBATION AND CORRECTIONS 77 (1989); Eric G. Lambert et al., *Exploring the Relationship Between Social Support and Job Burnout Among Correctional Staff*, 37 CRIM. JUST. & BEHAV. 1217, 1232 (2010); Wilmar B. Schaufeli & Maria C.W. Peeters, *Job Stress and Burnout Among Correctional Officers*, 7 INT'L J. STRESS MGMT. 19, 35 (2000).

⁷⁸ See Eric D. Poole & Robert M. Regoli, *Alienation in Prison: An Examination of the Work Relations of Prison Guards*, 19 CRIMINOLOGY 251, 266 (observing that "[I]apses of fraternization are likely to be met with distrust by inmates"); *see also* Ben M. Crouch & Geoffrey P. Alpert, *Sex and Occupational Socialization Among Prison Guards: A Longitudinal Study*, 9 CRIM. JUST. & BEHAV. 159, 172 (1982) (finding that different genders have different tolerance levels for inmates over time, which has implications for the differences between female and male officers in their social interactions with inmates).

⁷⁹ See Francis E. Cheek & Marie Di Stefano Miller, *The Experience of Stress for*

so it might also promote healthier (less coercive) interactions between officers and inmates. Similarly, less stressful work environments might promote more positive officer orientations toward inmates. Work stress in general can generate problems with mental well-being and job performance,⁸⁰ potentially interfering with an officer's ability to gain the compliance of inmates without resorting to coercion or bribes. Related to a stressful work environment is the existence of "role conflict," which officers sometimes face due to the seemingly contradictory goals of security and treatment in prison.⁸¹ While role problems might promote stress among officers,⁸² they might also contribute to an officer's frustration with the job because the pursuit of multiple goals demands greater use of discretion in decision making and is inconsistent with the formal regulations that officers are trained to follow.⁸³ A greater willingness to use coercive tactics with inmates might be a manifestation of job frustration.

In addition to individual officers' characteristics and perceptions of their work environment, a number of factors related to the physical features of the prison environment might also be relevant for understanding how officers choose to exercise their authority. Factors considered here include population risk, size, whether a facility houses women or men, and architectural design.⁸⁴

Correction Officers: A Double-Bind Theory of Correctional Stress, 11 J. CRIM. JUST. 105, 119 (1983); Francis T. Cullen et al., *The Social Dimensions of Correctional Officer Stress*, 2 JUST. Q. 505, 510 (1985); Maureen F. Dollard & Anthony H. Winefield, *A Test of the Demand-Control/Support Model of Work Stress in Correctional Officers*, 3 J. OCCUPATIONAL HEALTH AND PSYCH. 243, 251 (1998); Susan Philliber, *Thy Brother's Keeper: A Review of the Literature on Correctional Officers*, 4 JUST. Q. 9, 19 (1987); Benjamin Steiner & John Wooldredge, *Individual and Environmental Sources of Work Stress Among Prison Officers*, 42 CRIM. JUST. BEHAV. 800, 809–10 (2015); Lambert et al., *supra* note 77, at 1229; Schaufeli & Peeters, *supra* note 77, at 32.

⁸⁰ See PETER FINN, ADDRESSING CORRECTIONAL OFFICER STRESS: PROGRAMS AND STRATEGIES 16–17 (NATIONAL INSTITUTE OF JUSTICE, U. S. DEP'T OF JUSTICE 2000); CATERINA SPINARIS ET AL., NAT'L INST. OF CORR., POSTTRAUMATIC STRESS DISORDER IN UNITED STATES CORRECTIONS PROFESSIONALS: PREVALENCE AND IMPACT ON HEALTH AND FUNCTIONING 20 (2012); Steiner & Wooldredge, *supra* note 79, at 814.

⁸¹ Donald Cressey, *Contradictory Directives in Complex Organizations: The Case of the Prison*, 4 ADMIN. SCI. Q. 1, 14 (1959); Cullen et al., *supra* note 79, at 508; Schaufeli & Peeters, *supra* note 77, at 34.

⁸² LIEBLING ET AL., *supra* note 11, at 64–67.

⁸³ See Cullen et al., *supra* note 79, at 508.

⁸⁴ See generally BENJAMIN STEINER, MAINTAINING PRISON ORDER: UNDERSTANDING CAUSES OF INMATE MISCONDUCT WITHIN AND ACROSS OHIO CORRECTIONAL INSTITUTIONS (NATIONAL INSTITUTE OF JUSTICE, U.S. DEP'T OF JUSTICE 2007) (although not tied specifically to correctional officers' use of power, the author provides a discussion of how these and other prison level factors might influence the behaviors or attitudes of both inmates and officers).

A possible link between the risk, including custody level, of an inmate population and how officers exercise their power has been discussed by many prison scholars,⁸⁵ although empirical relationships have yet to be assessed owing to the relatively small numbers of prisons examined in related studies.⁸⁶ Yet, the risk and custody level of an inmate population can shape work stress among officers and tensions between officers and inmates,⁸⁷ potentially affecting the exercise of power. Higher custody levels might coincide with greater use of coercion and rewards to achieve inmate compliance if these inmate populations are generally more resistant to legal authority, as reflected in the length and severity of their criminal histories. It may also be more difficult for officers to develop respect among higher risk inmates or to build inmates' confidence in officers as effective supervisors, and it may be easier for officers in these environments to rely on bribery or more coercive means.

The size of a facility's population might also shape officers' management strategies given that larger and possibly more crowded prisons might introduce greater management difficulties.⁸⁸ Regarding organizations in general, an employee's ability to effectively communicate with others might weaken in larger organizations with greater social density,⁸⁹ potentially weakening his or her ability to effectively supervise others. For prison organizations in particular, officers working with larger populations could face greater difficulties in communicating effectively with inmates as well as fellow officers, potentially creating greater uncertainty about their work. Greater uncertainty combined with greater anonymity and emotional detachment could make it easier for some officers to rely more on coercive or reward power if officers in these environments are less likely to focus on the potential long-term gains of more positive communications and interactions with inmates.

The idea of environmental threats to an officer's ability to manage inmates might also be extended to whether a prison houses women or men,

⁸⁵ See Crouch & Alpert, *supra* note 78, at 167–70; Hepburn, *supra* note 27, at 159.

⁸⁶ See Hepburn, *supra* note 27, at 150–51.

⁸⁷ See Cullen et al., *supra* note 79, at 508–09.

⁸⁸ See Scott D. Camp et al., *The Influence of Prisons on Inmate Misconduct: A Multilevel Investigation*, 20 JUST. Q. 501, 506 (2003); John Wooldredge et al., *Considering Hierarchical Models for Research on Inmate Behavior: Predicting Misconduct with Multilevel Data*, 18 JUST. Q. 203, 208 (2001).

⁸⁹ See Andrew D. Szilagyi & Winford E. Holland, *Changes in Social Density: Relationships With Functional Interaction and Perceptions of Job Characteristics, Role Stress, and Work Satisfaction*, 65 J. APPLIED PSYCHOL. 28, 29 (1980) (reviewing empirical studies which suggest adverse effects of greater social density on work performance and satisfaction, particularly in contexts where “interpersonal communications” are necessary).

assuming female inmate populations are generally less serious in terms of their criminal risk assessments.⁹⁰ In other words, conflicts between officers and inmates may be fewer or less apt to develop into physical confrontations in facilities for women, enabling officers to more effectively communicate with inmates and to nurture legitimacy without falling back on coercion or bribery.

Aside from the composition of inmate populations, the structural environment of a prison might also impact management strategies.⁹¹ For example, linear (“telephone pole”) designs with celled housing can be more sterile working environments relative to campus style designs with primarily dormitory housing.⁹² The latter designs appear to be the least restrictive environments for officers, and those working in less restrictive environments may gain a greater sense of control over their work space. By contrast, officers in more sterile environments (which are often older facilities with other structural limitations) may feel more anonymous and detached from co-workers overall.⁹³

III. METHODS

The study described here responds to Bottoms and Tankebe’s call for research on “junior power-holders” who have regular contact with power recipients.⁹⁴ Our framework began with a discussion of the different ways in which correctional officers exercise their power over prisoners and the relevance of these different methods for facilitating or inhibiting the establishment of legitimate authority.⁹⁵ This section was intended to underscore the importance of identifying both individual and prison-level factors that might influence how officers exercise power over inmates, potentially influencing the establishment of legitimate authority, and the second part of our framework focused directly on these possible influences. The empirical analysis described here relates in large part to the second

⁹⁰ See BARBARA BLOOM ET AL., NAT’L INST. OF CORR., GENDER-RESPONSIVE STRATEGIES: RESEARCH, PRACTICE, AND GUIDING PRINCIPLES FOR WOMEN OFFENDERS 77 (2003).

⁹¹ Richard Wener, *Effectiveness of the Direct Supervision System of Correctional Design and Management*, 33 CRIM. JUST. BEHAV. 392, 407 (2006).

⁹² Robert G. Morris & John L. Worrall, *Prison Architecture and Inmate Misconduct: A Multilevel Assessment*, 60 CRIME & DELINQ. 1083, 1085 (2014).

⁹³ See Karin Beijersbergen et al., *A Social Building? Prison Architecture and Staff-Prisoner Relationships*, 62 CRIME & DELINQ. 843, 850 (2016).

⁹⁴ See Bottoms & Tankebe, *supra* note 1, at 153, 161.

⁹⁵ See generally RAZ, *supra* note 2, at 128 (applying to correctional officers the author’s argument that differences in *how* power is exercised will influence whether power-holders maintain legitimate authority).

discussion in our framework. Also, consistent with Bottoms and Tankebe's discussion of the "dialogic nature" of legitimacy and the importance of focusing on reciprocal relationships between power-holders and power recipients, the study also included a prison level analysis of the correspondence between officers' reports of how they exercise power and inmates' perceptions of officer legitimacy (specifically, officers' fairness, equity, and competence).⁹⁶ It is important to treat the findings from the second analysis as more exploratory, however, due to limits of cross-sectional data in addition to the focus on aggregated perceptions at the prison level (described below). To be clear, Bottoms and Tankebe's dialogic approach to an understanding of power-holders' legitimacy involves assessing the dynamic nature of legitimacy in terms of how power-holders and subjects necessarily react to each other.⁹⁷ As they argue, this demands assessing authority relationships over time in order to appreciate the evolution of truly legitimate authority.⁹⁸ Nonetheless, the second analysis is important for establishing a valid connection between what officers report and what inmates observe.

A. SAMPLES AND DATA

The data examined here was compiled from a broader study of factors influencing inmate crime and victimization, and official responses to related incidents in Ohio and Kentucky prisons.⁹⁹ Data collection began in August 2007 and was completed in December 2008. The states of Ohio and Kentucky were deliberately selected for the study based on geographic proximity to the principal investigators in conjunction with the number and diversity of facilities across the two states. Survey and official data on officers and inmates in addition to official data on facilities were compiled from all forty-two state operated confinement facilities in Ohio and Kentucky and the three privately operated facilities in Ohio.¹⁰⁰

⁹⁶ See Bottoms & Tankebe, *supra* note 1, at 129.

⁹⁷ *Id.* at 166.

⁹⁸ *Id.*

⁹⁹ See generally STEINER, *supra* note 84. The author discusses the Ohio study only because the original grant focused exclusively on Ohio; Kentucky was subsequently added based on extra available resources. There is no project report with a discussion of Kentucky, although the differences in sample designs are described in this article.

¹⁰⁰ The three private facilities for adults in Kentucky were excluded per the wishes of the Kentucky Department of Correction (KDOC). Prison camps, mental health units, reception units, and youthful offender units were excluded due to unmeasured structural and managerial differences between those units and the primary facilities in which they existed. Prison camp inmates at Ohio State Penitentiary were included for reasons dictated by the larger project.

Systematic random samples of correctional officers were selected from lists of officers and sergeants provided by the forty-five facilities. We selected 36% samples in the Ohio prisons because of an initial plan to draw at least one-third of all officers across all shifts, with an anticipated response rate of 50%, and available funds permitted increasing these proposed samples by 3%. The Ohio portion of the study was completed before Kentucky, and the remaining available resources permitted systematic random selection of 100 officers per facility in Kentucky, or all officers if there were fewer than 100 employed at a facility. Samples ranged from 19 to 178 officers per facility for a total of 3,857 individuals across both states. The total target sample was reduced to 3,710 officers due to transfers, firings, resignations, and leaves of absence.

Officer surveys were placed in envelopes with a description of the study and request for voluntary consent to participate, and a postage paid return envelope. These envelopes were placed in the officers' mail. Follow-up surveys were distributed to non-respondents. These procedures resulted in comparable response rates within each state (50% overall) and 1,740 usable surveys for the analysis.¹⁰¹ A response rate of 50% approximates the norm for related studies of correctional officers.¹⁰² All cases were weighted inversely to the probability of an officer's selection in their facility, and weights were normalized. The Ohio sample was representative on sex, race / ethnicity, rank, and length of service. This sample was slightly older, however, than the target population ($X = 42.4$ versus $\mu = 41.3$). The Kentucky sample was representative on sex, race / ethnicity, and rank. The population parameters for length of service and age were unavailable from the Kentucky Department of Corrections and could not be compared to the sample estimates for these variables.

The analysis of inmates' perceptions of officers was made possible by selecting random samples of inmates from the forty-five facilities. Electronic lists of all inmates in each facility permitted the use of simple random sampling. These lists were provided by either the Ohio Department of Rehabilitation and Corrections (ODRC) or the Kentucky Department of Corrections (KDOC) just a few days before each site visit. The size of each facility sample varied based on the wishes of each state's Department of Corrections (DOC) and of the wardens of the Kentucky facilities.¹⁰³ Only

¹⁰¹ Whereas the response rate across all officers was 0.50, the *average* response rate across the forty-five *facilities* was 0.530 with a standard error of 0.021.

¹⁰² See Hepburn, *supra* note 27, at 150–51.

¹⁰³ ODRC dictated two sample sizes based on facility. We were approved to select 130 inmates from each of eleven facilities targeted for a longitudinal study, and 260 inmates from each of the other facilities. The goal was to obtain at least 100 inmates per facility in

inmates who had served at least six months in the same facility by the survey date were sampled to ensure ample exposure to prison staff for informing inmates' responses to our questions. Random sampling yielded 7,294 inmates, but this number decreased to 6,997 inmates after excluding those who were unavailable at the time of our visit.¹⁰⁴

The inmate survey participation rate was 83% but dropped to 81% after removing surveys without responses to key questions, yielding 5,640 usable surveys for the analysis.¹⁰⁵ As with the officer samples, all cases were weighted inversely to their odds of selection in each facility. Weighted samples were not significantly different from the corresponding inmate populations in terms of age, sex, race, committing offense, number of prior incarcerations, sentence length, and time served (based on population parameters provided by ODRC and KDOC).

B. MEASURES

Table 1 provides a description of all measures for the analysis of officers' power bases. The outcome measures were derived from ten survey items tapping the five different power bases, with two items per type. The specific wording of each item is presented in table 1 with responses scaled from 1 (strongly disagree) to 4 (strongly agree). Five of the ten items reflect Hepburn's (1985) original wording for each power base, and we added one additional item per type in order to capture the slightly broader definition of each power base. A Confirmatory Factor Analysis (CFA) was conducted in *Mplus* 6.0¹⁰⁶ to test our hypothesized factor structure of five latent variables reflecting the five power bases. These findings are discussed in the next section although it is important to note at this point that the factor structure was supported with some minor modifications to the residual variances of some of the ten items (i.e., we allowed a handful of

the first group, and at least 200 inmates per facility in the second. Kentucky sample sizes were dictated by wardens and drawn after data collection in Ohio. We requested 200 inmates per facility based on project resources, and wardens adjusted these numbers based on actual populations and staff resources. This led to target samples of 200 inmates ($N=4$ prisons), 180 ($N=3$), 175 ($N=1$), 160 ($N=1$), 150 ($N=2$), 125 ($N=1$), and 100 ($N=1$). The last two samples were restricted because one facility was a work release facility, and the other prison housed primarily offenders with mental health issues.

¹⁰⁴ Inmates were unavailable because they were released / transferred, posed a safety risk, were on a visit, in the infirmary, or were out to court during data collection (Ohio=163; Kentucky=134).

¹⁰⁵ Some inmates did not receive a pass to complete the survey although we located most of them and offered them the opportunity to participate. Any inmate had the right to refuse participation.

¹⁰⁶ See LINDA MUTHÉN & BENGT MUTHÉN, *MPLUS*, USER'S GUIDE 51–96 (6th ed. 1998–2010).

non-zero residual correlations in order to improve model fit). Also, we were able to use Restricted Maximum Likelihood estimation with conventional standard errors (MLR) rather than Maximum Likelihood estimation with standard errors robust to non-normality (MLM) because of the non-skewed distributions of the items, as revealed by the kurtosis values close to 0.0 (all absolute values less than 1.0).¹⁰⁷ In other words, it was not necessary to treat these scales as categorical.

¹⁰⁷ See BARBARA BYRNE, *STRUCTURAL EQUATION MODELING WITH MPLUS: BASIC CONCEPTS, APPLICATIONS, AND PROGRAMMING* 99, 124 (1st ed. 2012).

Table 1*Description of Officer and Facility Measures*

	Range	Mean	SD
Level-1: Correctional Officers			
($n_1 = 1,740$)			
<u>Power Bases</u>			
Coercive			
Inmates typically do what I ask them to because they fear disciplinary actions (C1)	1 - 4	2.61	.82
Inmates typically do what I ask them to because I can apply pressure or penalize them for not cooperating (C2)	1 - 4	2.37	.92
Reward			
Inmates typically do what I ask them to because I have the ability to influence when they are released (REW1)	1 - 4	1.53	.79
Inmates typically do what I ask them to because I can give them special help or benefits (REW2)	1 - 4	1.60	.73
Referent			
Inmates typically do what I ask them to because they want my respect (REF1)	1 - 4	2.60	.84
Inmates typically do what I ask them to because they want my approval (REF1)	1 - 4	2.27	.80
Expert			
Inmates typically do what I ask them to because of my skills and experience (E1)	1 - 4	2.92	.74
Inmates typically do what I ask them to because they think I know what is best for them (E2)	1 - 4	2.21	.77
Positional			
Inmates typically do what I ask them to because they believe I have the authority to tell them what to do (P1)	1 - 4	2.89	.71
Inmates typically do what I ask them to because I am fair (P2)	1 - 4	3.45	.59

	Range	Mean	SD
<u>Officer Characteristics</u>			
Male	0 - 1	.77	.42
White Anglo	0 - 1	.82	.38
Associates Degree or higher	0 - 1	.19	.39
Years of service in DOC	0 - 47	9.20	6.94
Supervise officers	0 - 1	.07	.25
<u>Officer Experiences and Perceptions</u>			
# inmates (in general) talk with face to face on a typical shift?	0 - 30	19.12	11.98
# times threatened by inmates in past month	0 - 10	1.10	2.43
I usually feel safe on my shift	1 - 4	3.10	.66
Inmates do what you tell them to do	1 - 4	2.99	.76
I have received training on how to perform my required tasks	0 - 1	.63	.48
I am proud to work with the staff in this unit	0 - 1	.75	.43
Co-workers' support (5-item factor)	-2.4 - 1.7	.00	1.00
Work stress (6-item factor)	-2.2 - 2.5	.00	1.00
Role problems (4-item factor)	-1.5 - 1.8	.00	1.00
Level-2: Facilities ($n_2 = 45$)			
Average custody level across inmate population	1 - 4	1.97	.68
Facility for women	0 - 1	.06	.04
Linear design with primarily cells	0 - 1	.07	.25
Inmate population on day of survey	119-3000	1360	831

Most of the measures of officer characteristics do not need elaboration except for supervise officers, which taps whether an officer was in charge of overseeing other officers. Also noteworthy is that an officer's age was left out of the model due to collinearity with years of service in DOC. We also selected the latter over an officer's years of service in the current facility because the two measures correlate at .88 (r), and years spent in DOC captures years as an officer at other prisons (which could be relevant for an officer's reliance on certain power bases).

The first two items tapping "officer experiences and perceptions" (listed in table 1) are counts. The measure "# inmates (in general) talk with on a typical shift" was capped at thirty due to the heavily skewed distribution of cases beyond this value. Similarly, "# times threatened by

inmates in past month” was capped at ten for the same reason. The next two items in the table reflecting inmate compliance and safety were each measured with the same Likert scale used for the outcome measures. The indicators of officer training and pride with co-workers are binary (0 = no; 1 = yes).

The last three measures in the sub-section of “experiences and perceptions” in table 1 are factors derived from several survey items. Each of the scales is similar to those used by Cullen et al. (1985). “Co-workers’ support” is a five-item scale (Cronbach’s alpha = 0.70) including the following items: I generally receive help from my co-workers when I ask for it; My co-workers volunteer to help handle problems when they come up; I receive compliments from my co-workers when I have done my job well; My co-workers often blame one another when things go wrong (reverse coded); Most of my co-workers do their fair share of the work.¹⁰⁸ “Work stress” is a six-item scale (Cronbach’s alpha = 0.80) including the following survey items: I often feel tense or anxious on my shift; My job frequently makes me very frustrated; I usually don’t have much to worry about on my shift (reverse coded); I am generally pretty calm on my shift (reverse coded); I usually feel under a lot of pressure on my shift; and Many aspects of my job can make me upset at times. Finally, “role problems” is a four-item scale (Cronbach’s alpha = 0.69) including the following: The rules and policies for officers in this facility are not very clear; There are so many people telling me what to do that I am not sure who is in charge; It is often unclear who has the authority to make a decision; and The administrative staff and my supervisor are generally on the same page regarding how policies should be applied (reverse coded).

Given our use of multi-level modeling (described below), the number of independent variables that could be included in the facility level (level-2) model was limited due to the degrees of freedom available for an analysis of 45 prisons. The facility level measures displayed in table 1 were selected from a much larger pool of available measures. Criterion for inclusion in the model consisted of theoretical relevance (first and foremost) in conjunction with statistically significant zero-order relationships with at least two of the outcome measures. A facility’s “average custody level” was computed as the average of inmates’ custody scores in each facility. These individual scores are determined by each state’s DOC, where inmates are classified as either (1) minimum, (2) medium, (3) close, (4) maximum,

¹⁰⁸ See HAIR ET AL., *MULTIVARIATE DATA ANALYSIS* 137 (6th ed. 2006) (stating that values of alpha equal to or greater than 0.7 are generally preferred, but values above 0.6 are acceptable, especially when analyzing reliabilities of scales made up of only a handful of items).

or (5) administrative maximum custody. A four-category scale was created by collapsing categories (4) and (5) due to the relatively small numbers of inmates in (5).¹⁰⁹ The average of the four-category scale was then computed.

“Inmate population” is the total head count of inmates in each facility on the day of the survey. Regarding the dichotomous measure of “facility for women” (0 = no; 1 = yes), there were no co-ed facilities in the sample, so this measure reflects prisons housing women only. Finally, the dichotomous measure of “linear design with primarily cells” (0 = no; 1 = yes) reflects any design with corridors of cells instead of more “open” pods with cells surrounding the full or a partial perimeter. Examples of “linear designs” include a telephone pole design, catwalks with cells facing each other, and tiered designs with cells facing a wall.

Many more facility measures were considered for the level-2 model, including indicators of inmate deviance (number of fights during the previous month, number of attempted escapes, proportion of inmates in disciplinary housing), victimization levels (proportion of inmates victimized by physical assaults during previous six months, proportion victimized by thefts), wardens’ perceptions of adequate resources for a safe environment, facility design aside from “linear with cells” (campus style with primarily cells, campus style with primarily dorms, and linear design with primarily dorms), design capacity, ratio of inmates to capacity on survey day, ratio of officers to inmates on survey day, indicators of physical disorder, and noise levels. Some of these were also significant predictors of at least two outcomes but were dropped because of overlap with the measures included in conjunction with a more peripheral relevance to the topic (e.g., wardens’ perceptions of safe environments).¹¹⁰

Regarding the facility level analysis of inmates’ perceptions of officer legitimacy, a latent dependent variable was created with CFA from four inmate survey items measured on Likert scales. These items included “[o]verall, the correctional officers here do a good job,” “[t]he correctional officers are generally fair to inmates,” “[c]orrectional officers treat me the same as any other inmate here,” and “[c]orrectional officers treat some inmates better than others (reverse coded).”¹¹¹ Table 2 provides a description of these items.

¹⁰⁹ A potential drawback to collapsing these two groups is that “maximum security” classification is based on risk whereas “administrative maximum security” classification reflects administrative needs.

¹¹⁰ Results from the analysis of these empirical relationships with the outcome measures are available upon request from the first author.

¹¹¹ CFI/TLI = 0.97; RMSEA/SRMSR = 0.03.

Table 2*Description of Inmate Perceptions of Officer Legitimacy*

	Range	Mean	SD
Level-1: Inmates ($n_1 = 5,616$)			
<u>Perceptions of Officer Legitimacy</u>			
Overall, the correctional officers here do a good job.	1 - 4	2.48	.93
The correctional officers are generally fair to inmates.	1 - 4	2.42	.91
Correctional officers treat me the same as any other inmate here.	1 - 4	2.54	.95
Correctional officers treat some inmates better than others (reverse coded).	1 - 4	1.74	.83

The second analysis also involved multi-level modeling (see below), but the inmate level variables are not described here because they served strictly as control variables.¹¹² The independent variables of interest to this part of the study included facility level averages of the latent “power base” variables described above. As for the analysis of officer power bases as outcomes, we were able to use MLR for the analysis of officer performance due to the non-skewed distribution of the outcome.

C. STATISTICAL ANALYSIS

Multi-level modeling was used because of the research design with officers and inmates nested within prisons.¹¹³ Generalized linear modeling in *Mplus* 6.0 was used for the analyses of both officer power bases and inmates’ perceptions of officers, following our earlier observation regarding the non-skewed distributions of these outcome measures.

¹¹² Descriptions of these variable distributions are available upon request from the first author. Statistical controls included an inmate’s age, sex, race, marital status at time of survey, employment status prior to incarceration, whether an inmate had a high school diploma, gang membership prior to incarceration, drug use in month before arrest, incarcerated for a violent offense, prior incarceration in prison, security risk level, number of months served in facility, number of hours in education classes per week, number of hours at work assignment per week, number of hours in recreation per week, victim of theft during last six months, victim of assault during last six months, and whether an inmate was confronted by correctional staff for a rule violation during the last six months.

¹¹³ Compiling data for two different states demanded consideration of nesting prisons within states for the analysis. This procedure was deemed unnecessary based on an analysis of random effects at the state level to determine whether the inmate and facility effects varied significantly between Ohio and Kentucky. The absence of any significantly varying effects allowed us to pool the two samples.

For the analysis of power bases as outcomes, unconditional (null) models revealed significant between-prison variance in each outcome ($p < .01$), indicating that it would be worthwhile to estimate level-2 effects on officers' use of power. Random coefficients models were then estimated in order to identify the inmate level (level-1) effects that varied significantly across prisons. The significantly varying slopes ($p < .05$) were kept as random in the final models, whereas all other level-1 effects were fixed. All level-1 measures were grand mean-centered to control for compositional differences in officer samples across prisons that might have been linked to between-prison differences in the outcomes. The next stage of this analysis involved estimating the full multi-level models with both level-1 and level-2 predictors included. Level-1 model intercepts were treated as random at this stage, and level-2 effects on these intercepts ("intercepts-as-outcomes") reflected prison effects on the adjusted mean levels of officers' exercise of power across the forty-five prisons (i.e., "adjusted" once controlling for compositional effects derived from the level-1 predictors).

The analysis of inmate perceptions of officer legitimacy also involved multi-level modeling, but only to control for compositional differences across prison facilities in the inmate level factors noted earlier. Therefore, the latent variable tapping officer legitimacy was entered as a level-1 dependent variable in these models, and the facility level portion of each model treated the average of officer legitimacy for each facility as the level-2 dependent variable. The level-2 independent variables consisted of facility level averages of the officer "power base" measures, as described above.

IV. FINDINGS AND DISCUSSION

The univariate descriptives in table 1 reveal the relative distributions of the ten survey items comprising the five outcome measures of officer power bases. On average, correctional officers claimed to rely on coercive power to the same extent as they rely on referent and expert power. This is somewhat surprising given the less desirable connotations of coercive power relative to the two other types. On the other hand, officers rely on these three types more than they claimed to rely on reward power, which ranked the lowest of all five bases examined.¹¹⁴ Officers claimed to exercise positional power to a larger degree than any other form.¹¹⁵

The CFA of these ten survey items revealed that all items loaded

¹¹⁴ See Hepburn, *supra* note 27, at 154.

¹¹⁵ See *id.*

significantly on five separate factors, as hypothesized (CFI/TLI = 0.98; RMSEA = .046; SRMSR = 0.26). However, there were some important modifications made to the CFA in order to meet the criteria of CFI/TLI > 0.95 and RMSEA/SRMSR < 0.05 for good model fit.¹¹⁶ These included allowing the following pairs of residual co-variances to maintain non-zero positive correlations (see table 1 for abbreviations): P2 with E1, P2 with REF1, E2 with both REF1 and REF2, and REW2 with both C1 and C2; and allowing the following pairs to maintain non-zero negative correlations: P1 with C1, and P2 with both REW1 and REW2. Oblique rotation was used for the CFA. These findings led us to use the latent variables identified from the CFA as outcomes in the multivariate bi-level models. Table 3 displays the bi-level GLS models of officer power bases.

¹¹⁶ See Byrne, *supra* note 107, at 68–69, 72–73 (discussing these fit criterion and reasons for relying on the CFI and RMSEA statistics over chi-square for assessing model fit with large samples).

Table 3
Bi-level Models of Officers' Exercise of Power (MLR Estimates Reported)

	Coercive power		Reward power		Expert power		Referent power		Positional power	
	B	s.e. _β	B	s.e. _β	β	s.e. _β	B	s.e. _β	β	s.e. _β
Level-1: Correctional Officers (n_i = 1,740)										
<u>Officer Characteristics</u>										
Male	.14*	.07	.13**	.03	-.01	.03	-.11*	.04	-.03	.03
White Anglo	-.01	.05	-.14*	.06	-.14**	.05	-.10*	.05	-.05	.05
Associates Degree or higher	.06	.05	-.02	.05	-.02	.04	.04	.05	.05	.05
Years of service in DOC	-.01**	.003	.00	.002	.01**	.003	.00	.003	.005*	.002
Supervise officers	.34**	.09	.21**	.08	.19**	.06	.12	.08	.29**	.06
<u>Officer Experiences and Perceptions</u>										
# inmates (in general) talk with face to face on a typical shift?	.00	.02	-.01	.01	.02*	.01	.04*	.02	.03*	.01
# times threatened by inmates in past month	-.00	.01	.00	.01	.00	.01	-.02*	.01	-.02**	.007
I usually feel safe on my shift	.09	.08	.12**	.04	.02	.04	.18**	.06	.10	.06
Inmates do what you tell them to do	.20**	.07	-.02	.05	.20**	.03	.31**	.05	.36**	.04
I have received training on how to perform my required tasks	-.02	.04	.03	.04	.04	.03	.07	.04	.07*	.03
I am proud to work with the staff in this unit	-.003	.04	.03	.03	.01	.02	-.00	.03	.09**	.03
Co-workers' support (5-item factor)	.04	.02	.00	.03	.06**	.02	.04	.02	.04	.03
Work stress (6-item factor)	.01	.03	.04*	.02	-.02	.02	.01	.02	-.03	.02
Role problems (4-item factor)	-.06*	.03	.00	.02	.03*	.01	-.01	.02	-.02	.02
Level-2: Facilities (n_j = 45)										
Average custody level	.06*	.03	.04	.06	-.01	.03	-.01	.05	-.03	.04
Facility for women	-.07	.09	.09	.05	-.13	.08	.22**	.08	-.05	.06
Linear design with primarily cells	.17**	.04	.03	.11	.05	.07	-.08	.08	-.01	.04
Inmate population on day of survey	.00**	.00	.00	.00	.00	.00	.00	.00	.00	.00
Proportion between-facility variance explained	.40		.30		.23		.50		.51	
Root Mean Square Error of Approximation	.04		.02		.03		.02		.03	

Notes: ** = p < .01; * = p < .05.

A. OFFICER CHARACTERISTICS AND THE EXERCISE OF POWER

An officer's sex coincided with significantly more or less reliance on coercive, reward, and referent power, with males more likely than females to use coercive and reward power, and females more likely than males to rely on referent power. This finding suggests that male officers might rely more heavily on less desirable forms of power relative to female officers, assuming that coercive and reward power are the least preferable from the standpoint of establishing officer legitimacy from an inmate's perspective. The opposite sex effect on the use of referent power suggests that the use of coercive and reward power might vary directly at the expense of referent

power (as opposed to expert and positional power).

An officer's race / ethnicity was also significant for predicting reliance on a few different types of power. That is, White Anglo officers were less likely to rely on expert power, referent power, and reward power relative to African-American and Latino officers. Given the disproportionate over-representation of minority inmates across prisons in both states, some of these differences in power bases may reflect greater tolerance and greater respect displayed by minority officers toward minority inmates.¹¹⁷

There is no evidence to suggest that higher levels of education mattered for shaping officers' preferences, although years of service were relevant.¹¹⁸ Specifically, officers with more service relied significantly less on coercive power while relying more on expert and positional power. Coercive power may vary at the expense of expert and positional power when considering the amount of time officers have worked within their state's DOC.¹¹⁹ More experience appears to be relevant for reducing an officer's reliance on coercive tactics while increasing reliance on his expertise as well as inmates' confidence in his authority as each develops over time.¹²⁰ Therefore, experience in the system as opposed to higher education might be more important for shaping the exercise of power and ultimately strengthening officer legitimacy.

Findings for an officer's supervisory status revealed significantly more reliance on expert and positional power among supervisors, which may be expected given that officers are more likely to be promoted to these positions based on their expertise and judiciousness, but also significantly more reliance on coercive and reward power. The absence of a significant effect on referent power, however, suggests that supervisors may have been generally inclined to simply agree with each of the statements capturing more textbook methods of gaining compliance short of actually commanding inmate respect, perhaps due to less time spent in the types of interactions with inmates that are more common among line officers. Although not absolutely certain, we are inclined to believe that these particular findings are artifacts of a difference between supervisors and line officers in their interpretations of "acceptable" versus "preferred" power bases.

¹¹⁷ This suggestion follows logically from the significant link between officer race and efficacy with inmates, and the fact that minorities are over-represented in prison. *See* Britton, *supra* note 69, at 97, 102.

¹¹⁸ *See* LOMBARDO, *supra* note 22, at 94; Crouch & Marquart, *supra* note 70, at 100.

¹¹⁹ *See* Hepburn, *supra* note 27, at 157.

¹²⁰ *See* LOMBARDO, *supra* note 22, at 94.

B. THE INFLUENCES OF OFFICERS' EXPERIENCES AND PERCEPTIONS OF WORK

Officers who interacted with more inmates on a typical shift perceived that they were more likely to gain inmate compliance due to their expertise, the respect they command from inmates, and from their authority as officers. More interactions with inmates should lessen social distance between officers and inmates,¹²¹ possibly strengthening an officer's confidence to rely on their training and expertise for dealing with resistant inmates while also granting more opportunities for officers to earn inmates' respect. The latter might also be facilitated by the nature of the prison environment where news of particular incidents between inmates and staff are widely known in the population.¹²² While this still leaves open the question of whether more interactions directly impact both officer expertise and the respect they garner from inmates, these findings suggest that face-to-face contacts with more inmates is potentially important for demonstrating and establishing officers as legitimate authorities.

Threats to officers and their perceptions of job safety were significantly linked to the use of referent and positional power, whereas fewer threats and perceptions of safer environments coincided with greater reliance on referent power. These findings are consistent with the idea that less threatening environments might promote an officer's ability to exercise referent power, and they reinforce Cartwright's more general observation about organizational power and how a supervisor's choice of power is influenced heavily by her perceptions of those she manages.¹²³ We must also recognize the possibility that, given the cross-sectional survey data examined, officers who fail to command inmates' respect might also behave in ways that provoke more threatening environments, although there were no significant empirical relationships between these independent variables and an officer's use of coercive power. Fewer inmate threats also coincided with greater reliance on positional power, consistent with the findings for referent power, although officers who perceived safer environments were actually more likely to rely on reward power. This last finding might be a consequence of opportunity, where a safe environment is a necessary prerequisite for officers to rely on favors as incentives for inmates to comply with the rules, but this idea cannot be tested directly with our data.

An interesting dichotomy emerged in the findings for officers' perceptions of inmate compliance, where officers who perceived greater

¹²¹ See Poole & Regoli, *supra* note 78, at 266.

¹²² See Bottoms & Tankebe, *supra* note 1, at 123.

¹²³ See Cartwright, *supra* note 75, at 41.

compliance were significantly more likely to rely on expert, referent, and positional power (as predicted), but were also more likely to rely on coercive power (a counterintuitive finding). Both sets of findings, however, could reflect a different causal structure for inmate compliance. Specifically, the observation related to coercive power could simply reflect inmates' reactions to the threat of force, where causality actually moves from officer threat to inmate compliance. Similarly, but for a different group of officers, greater compliance might nurture officers' abilities to rely on their expertise, the respect they command from inmates, and from their authority as officers. This duality can only be tested with different data and is left for future research. Nonetheless, the findings for expert, referent, and positional power are important because they demonstrate either (a) how the ability of officers to draw from these power bases is fed by inmates' compliance, or (b) how the exercise of these forms of power can significantly improve compliance.

Officers who claimed that they received adequate training on their job tasks were also more likely to rely on positional power, although these perceptions were unrelated to any other power base. Nonetheless, more experience may enhance an officer's authority status among inmates, not to mention its relevance for shaping an officer's orientation towards inmates.¹²⁴ Consistent with perceived training, greater pride with co-workers also coincided with greater use of positional power. Although intuitive, the absence of any other significant effect of co-worker pride on the remaining four power bases suggests that the effective performance of power-holders does not necessarily depend on their *esprit de corps*.¹²⁵

Greater support from co-workers was significantly linked to greater use of expert power only. Similar to the results for job training and staff pride, this finding is in the predicted direction but modest considering that co-worker support was unrelated to the other four power bases. Overall, aspects of officer–inmate interactions (face-to-face contacts, inmate compliance with versus threats to officers, and job safety) appear more relevant for shaping officer power bases compared to organizational and peer support (training, staff pride, and co-worker support). This general theme downplays the importance of officer subcultures relative to officer–inmate interactions for influencing how officers exercise their authority over prisoners.

Work stress was no more relevant than staff pride and co-worker

¹²⁴ See LOMBARDO, *supra* note 22, at 48.

¹²⁵ See Steve Herbert, *Tangled Up in Blue: Conflicting Paths to Police Legitimacy*, 10 THEORETICAL CRIMINOLOGY 481, 491 (2006) (discussing how police officers' feelings of "honor" impact their use of force with citizens).

support for predicting an officer's exercise of power, where the only significant finding involved a greater reliance on reward power among officers enduring greater work stress. An officer's role problems were slightly more relevant for shaping some of these outcomes, although the two significant effects were not in the predicted directions. That is, officers scoring higher on the scale of role problems were significantly more likely to report relying on expert power, and significantly less likely to report reliance on coercive power. Given that these models statistically controlled for training and job safety, it is feasible that, these other factors being equal, officers who choose to adopt particular power bases might actually have more conflict with their superiors. Additional research is needed to identify whether the exercise of certain forms of power might actually shape role problems and conflict with superiors.

C. PRISON LEVEL EFFECTS ON OFFICERS' EXERCISE OF POWER

Despite the significant zero-order effects of the four prison level factors on many of the outcomes examined, controlling for compositional differences in the level-1 measures through grand mean-centering served to render the vast majority of these level-2 effects nonsignificant. Even so, there are two important observations about these higher-order effects. First, officers working in facilities for women were significantly more likely to perceive a greater reliance on referent power, even after controlling for the sex composition of the workforce. Considering that female inmates are generally more communal than male inmates, perhaps because women are more prone to seek connections with others in order to define their self-worth,¹²⁶ it is possible that officers are better able to garner respect from female inmates over time that favorably impacts the quality of interactions between officers and female inmates.

Second, officers working with higher risk populations (average custody level) were generally more likely to rely on coercive power, consistent with the idea that more dangerous populations might lead officers to ultimately fall back on methods for gaining compliance that are ineffective for promoting inmates' perceptions of officer legitimacy.¹²⁷ The causal direction of this relationship, however, remains in question and cannot be estimated precisely without longitudinal data. That is, do officers

¹²⁶ See CANDACE KRUTTSCHNITT & ROSEMARY GARTNER, MARKING TIME IN THE GOLDEN STATE: WOMEN'S IMPRISONMENT IN CALIFORNIA 124–126 (Albert Blumstein & David Farrington eds., 1st ed. 2005); Emily M. Wright et al., *Gender-responsive Lessons Learned and Policy Implications for Women in Prison: A Review*, 39 CRIM. JUST. BEHAV. 1612, 1622 (2012).

¹²⁷ See Hepburn, *supra* note 27, at 159.

fall back on a greater use of coercion because inmates initially display less respect and greater cynicism, or do a lack of respect and greater cynicism follow greater use of coercion at the expense of other methods to gain compliance? It might be more realistic to assume that both processes occur within a cycle of reactions to each group's behavior. The same logic also applies to situations where officers are more likely to rely on referent, expert, or positional power where inmates in certain environments (e.g., lower security) are more likely to perceive officers as legitimate authority regardless of how officers behave initially, resulting in less conflict between the two groups and enabling officers to rely more on these other forms of power.

Architecture and population size were relevant for predicting the use of coercive power, where officers in prisons with linear designs and primarily cells, as well as officers working with larger inmate populations, were generally more likely to perceive greater use of coercive power. Even when controlling for the significant impact of custody level on this same outcome, these aspects of the work environment might generate a more coercive response by officers when dealing with inmates. Scholars have suggested that an employee's ability to effectively communicate with others might weaken in larger organizations with greater social density,¹²⁸ and this could lead some officers to rely more on force and less on diplomacy in their interactions with inmates. Specific to prisons, officers working with larger populations may often face greater uncertainty about their work. Future research is needed to more closely investigate whether larger populations and more restrictive designs somehow inhibit officers from choosing more benevolent approaches to gaining inmate compliance.

D. FINDINGS ON THE INTERACTIVE CHARACTER OF LEGITIMACY

As previously described, the second part of our study involved a facility level analysis of the correspondence between officers' self-reported power bases and inmates' perceptions of officer legitimacy. Only the empirical relationships of interest are presented here even though they were derived from bi-level models controlling for compositional differences in inmate populations across facilities, as previously described.¹²⁹ Again, and in contrast to the more rigorous analyses of officer and facility effects on officers' exercise of power, findings from this next stage of the study

¹²⁸ See Szilagyi & Holland, *supra* note 89, at 28–29 (reviewing empirical studies which suggest adverse effects of greater social density on work performance and satisfaction, particularly in contexts where “interpersonal communications” are necessary).

¹²⁹ All level-1 estimates and model statistics are available upon request from the first author.

should be treated as exploratory since they reflect facility level relationships based on cross-sectional data.

Evidence emerged providing support for the idea that higher levels of officers' perceived use of coercive power coincided with significantly lower levels of inmates' perceptions of officer legitimacy (i.e., less likely to agree that officers are fair, equitable, and do a good job).¹³⁰ This finding is consistent with Bottoms and Tankebe's argument, described earlier, in addition to Tyler's broader argument that the use of coercive power can weaken individuals' beliefs that the rules and decisions of authorities are in some way right or proper and ought to be followed.¹³¹

Support was also found for the idea that higher levels of officers' perceived use of expert power corresponded with significantly higher levels of inmates' perceptions of competence, fairness, and equity.¹³² Professor Schaffer discussed the importance of political authorities' demonstrations of expertise for legitimizing their positions in traditional and modern societies.¹³³ Finally, and most compelling, support was found for the idea that greater perceived use of positional power by officers was significantly related to more favorable perceptions by inmates¹³⁴ and underscores the argument that fairness in treatment can effectively build confidence in the eyes of offenders regarding rule enforcers as proper and just.¹³⁵

These findings are noteworthy, particularly those for positional power, because each one reflects an empirical relationship between officer survey items and inmate survey items. In other words, how officers perceive their use of power seems compatible with inmates' perceptions of officers. Of course, it is important to study these types of relationships at the individual level simply because most prisons include officers with different orientations toward their work.¹³⁶ Short of committing the ecological fallacy, we recognize that these facility level findings should only be treated as encouraging for future research at the individual level.

¹³⁰ $b = -0.50$; $se_b = 0.20$; $p < .05$; $n_2 = 45$.

¹³¹ Bottoms & Tankebe, *supra* note 1, at 125; see Morris Zelditch, *Processes of Legitimation: Recent Developments and New Directions*, 64 SOC. PSYCHOL. Q. 4, 5 (2001); Tyler, *supra* note 26, at 376.

¹³² $b = 0.61$; $se_b = 0.20$; $p < .05$; $n_2 = 45$.

¹³³ See Simon Schaffer, *In the Know*, in 16 LONDON REV. BOOKS 17, 17–18 (1994).

¹³⁴ $b = 0.60$; $se_b = 0.21$; $p < .05$; $n_2 = 45$.

¹³⁵ See Bottoms & Tankebe, *supra* note 1, at 121.

¹³⁶ As demonstrated time and again by prison scholars such as Crewe, Liebling, Sparks, and colleagues, cited *infra*.

E. A MORE NUANCED UNDERSTANDING OF LEGITIMACY IN PRISON

Our contextualized analysis of correctional officers' perceived use of power across prison settings demonstrates the fruitfulness of focusing on the exercise of authority by "junior power-holders" in order to provide a richer understanding of legitimacy in a prison setting.¹³⁷ That is, when considering the officials who have the most contact with power recipients, not only do we gain an appreciation for the influences on their actions that constitute barriers to effectively establishing legitimate authority, we also see how some of these factors are beyond their control (i.e., organizational training, prison security level, physical environment, and size of the inmate population). Applied to other settings more generally, the external influences on the behaviors of junior power-holders are equally as salient (if not more so) for discussions of legitimacy relative to understanding the orientations and actions of their superiors who interact far less with their constituents.¹³⁸ Hence, an understanding of legitimacy and its feasibility might incorporate a more substantive focus on the extent to which junior power-holders' methods of exercising their authority over power recipients is shaped by factors outside their control. In a prison context, based on our findings, such factors might include larger offender populations, more serious offender populations, and more sterile physical environments. Downplaying the role of contextual effects creates an illusion of free will in the exercise of power that outsiders, including academics, impose on the behaviors of government officials. Specific to prison organizations, and consistent with Raz's study, prison contexts that necessarily shape greater use of coercive force by officers are likely to undermine an administration's ability to "secure from their audience a recognition of their right to rule."¹³⁹ On the other hand, a context that allows officers to exercise authority in ways that preserve the dignity and respect of inmates can facilitate an administration's valid claim to legitimate authority. Liebling's descriptions of prison contexts that shape the moral performance of prison staff, particularly those that coincide with more respectful inmate-officer relations, are potentially applicable in this regard and move beyond the prison level factors examined here.¹⁴⁰

This focus also highlights the challenges to ceasing the cycle of officer coercion and inmate cynicism that exists once officers come to rely on

¹³⁷ Bottoms & Tankebe, *supra* note 1, at 161.

¹³⁸ *Id.* at 153.

¹³⁹ *Id.* at 126 (quoting RAZ, *supra* note 2, at 128).

¹⁴⁰ See LIEBLING, MORAL PERFORMANCE, *supra* note 38, at 469–70 (underscoring the potential relevance of climate factors such as the social structure of inmates and officers for a more in-depth understanding of officer-inmate relations).

coercion precisely because inmates do not acknowledge them as legitimate authority. Although prisons are to some extent coercive organizations,¹⁴¹ prison administrators recognize the importance of avoiding physical and verbal coercion whenever possible even though the use of force, on occasion, is inevitable. Shrewd power-holders recognize the need to avoid habitual exercise of coercive power lest it results in a complete breakdown of consensual authority.¹⁴² Therefore, studies of what enhances the exercise of referent, expert, and positional power at the expense of coercion and reward power will not only highlight the limits to free will among junior power-holders, thus incorporating these considerations into theoretical discussions of legitimacy, but will also provide insight into the feasibility of capitalizing on factors within the control of officials for counterbalancing the limits on choice of power.

F. IMPLICATIONS FOR ESTABLISHING LEGITIMATE AUTHORITY IN PRISON

Bottoms and Tankebe argued that the “dual and interactive character of legitimacy” demands analysis of both power-holders’ and subjects’ behaviors and perceptions.¹⁴³ This approach should provide a more complete understanding of legitimacy and how it is established and maintained over time.¹⁴⁴ To this end, our study falls short in two respects including the absence of (a) a longitudinal research design capturing the potentially dynamic nature of this process, and (b) an individual level analysis of inmates’ perceptions of officers’ exercise of power. Nonetheless, the study provides an important step in this direction by shedding light on potential facilitators and barriers to the cultivation of legitimacy in a prison setting by focusing on both officer and prison level influences on how officers choose to exercise their authority. As such, this study responds to Bottoms and Tankebe’s call for related studies on the actions of “junior power-holders,” given their more direct contact with subjects, and whether their behaviors are consistent with the cultivation of legitimate authority.¹⁴⁵ The ability to establish legitimate authority in prisons is central to their safety and order, to the extent that legitimacy contributes to inmates’ compliance with prison rules, and is also potentially relevant to reducing recidivism in as much as criminogenic behavior during

¹⁴¹ See Hepburn, *supra* note 27, at 145.

¹⁴² See WEBER, *supra* note 5, at 56.

¹⁴³ Bottoms & Tankebe, *supra* note 1, at 119–20.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at 119–20.

incarceration is linked to the same behavior after release.¹⁴⁶

This type of research is also a necessary element to distinguishing inmate compliance grounded in “dull compulsion” from compliance based on officer characteristics and behaviors,¹⁴⁷ which prison scholars have observed can vary substantially across officers as well as prison settings.¹⁴⁸ Many of the officers we talked with recognized situations when inmates who were more structured in their daily schedules often complied with directives simply out of routine and without much thought. Based on our observations of these officers over an extensive time period, they appear to have a very good general understanding of why inmates comply with or resist their orders, which is why the survey items tapped general behaviors as opposed to specific instances. This observation is also consistent with the facility level findings described above regarding significant correspondence between officers’ self-reported power bases and inmates’ perceptions of officer fairness and competence.¹⁴⁹

Overall, findings suggest that both officer and prison-level factors are relevant for predicting how officers exercise their authority, implying that even the best intentions by officers can be undone, depending on the setting. Specifically, assignments to higher risk populations (based on sex and custody level), to larger populations, and to facilities with older architectural designs might contribute to greater reliance on coercive power while making it more challenging for officers to garner respect among inmates. Given the individual level findings, however, it appears that the challenge might be met with considerations of particular attributes of officers and their experiences. Bottoms and Tankebe alluded to the relevance of officer population composition to the subject, and here we found a link between power bases and an officer’s sex and race.¹⁵⁰ For example, if female and minority officers are less prone to use coercion and rewards while being more prone to relying on their expertise and the respect garnered from inmates, then pursuing these types of hires could have a favorable effect for the cultivation of legitimacy. An officer’s tenure in the position is also relevant for less reliance on coercion and more on expertise, suggesting that incentives to reduce the turnover of the custodial workforce

¹⁴⁶ See Benjamin Steiner, *Measuring and Explaining Inmate Misconduct*, in *THE OXFORD HANDBOOK OF PRISONS AND IMPRISONMENT* (forthcoming) (John Wooldredge and Paula Smith eds., Oxford Handbooks Online 2016).

¹⁴⁷ CARRABINE, *supra* note 35, at 38.

¹⁴⁸ See BEN CREWE, *THE PRISONER SOCIETY* 105 (2009); LIEBLING, *MORAL PERFORMANCE*, *supra* note 38, at 333–66; Sparks et al., *supra* note 32, at 203.

¹⁴⁹ CARRABINE, *supra* note 35, at 36–38.

¹⁵⁰ See Bottoms & Tankebe, *supra* note 1, at 163.

could contribute to more pervasive legitimate authority in prison.

Perhaps more difficult to control are officers' experiences with inmates themselves, although these interactions seem to matter much more than possible organizational and peer influences. This is not to say that the latter are irrelevant, given that better training, stronger *esprit de corps*, greater co-worker support, and fewer role problems were linked to either greater reliance on positional or expert power as well as less reliance on coercive power. However, both the prevalence and magnitude of effects reflecting officer-inmate interactions were greater by comparison (i.e., number of inmates an officer interacts with on a regular basis, inmate compliance versus threats, and job safety). This observation might be somewhat intuitive because the exercise of authority requires interaction, and we did not examine these relationships longitudinally which leaves open the possibility that the exercise of more humane forms of power is what generates such things as more frequent inmate contacts, compliance (versus threats), and job safety. Future longitudinal studies will be better able to identify the causal structure of these relationships and whether they are non-recursive. On the other hand, our findings do suggest possible benefits of corrections administrators placing heavier priorities on training and staff morale.

CONCLUSIONS

The relevance of our analysis of officer and prison-level effects on how officers exercise power over inmates lies in the implications of different power bases for shaping the legitimacy of rule enforcers. Following Bottoms and Tankebe's call for research on the actions of "junior" power-holders who interact most often with citizens and offenders (such as police and correctional line officers), the bulk of our analysis focused on bi-level effects on correctional officers' perceptions of how they manage inmates.¹⁵¹ This analysis was followed by a more exploratory analysis of how officers exercise power might be relevant for shaping inmates' perceptions of officer legitimacy. Overall, we found considerable evidence that the choice of power bases is influenced by a number of factors at both the officer and prison level, and many of these might be manipulated in order to cultivate legitimacy in a prison setting. Given the findings from our facility-level analysis of empirical links between different power bases and inmates' perceptions of officers, efforts to improve legitimacy in prisons by altering officers' reliance on particular power bases seem worthwhile.

¹⁵¹ See *id.* at 161.

Related to the last point, a contribution of our study to theoretical discussions of legitimacy and its cultivation in a prison setting lies in highlighting influences on junior power-holders' exercise of authority that are beyond their control, some of which are contextual (i.e., facility design as well as the size, sex, and security risk of a facility's population). Although not limited to contextual effects (i.e., an officer's training and years of service were also relevant while operating outside the control of the individual officer), these types of findings underscore how the seemingly discretionary behaviors of officers are dictated to some extent by their organizational environments. Returning to the point above, this recognition should inspire discussions of hypothetical micro and macro influences on officers' reliance on certain power bases and the feasibility of altering factors outside their control for lessening reliance on coercive power and, in turn, for cultivating legitimacy in a prison setting.

More specific to our empirical findings, the first part of our study revealed that officer characteristics and work experiences as well as prison characteristics are relevant for shaping the exercise of power, but personal characteristics appear to matter more than work experiences which, in turn, are more relevant than prison context. Regarding background factors, officers claimed to adopt more progressive and less restrictive approaches to gaining inmate compliance when they were female, minority, and had worked longer for the state's DOC. Amount of education did not matter, and results for supervisory status (comparing supervisors to line officers) were mixed. This summary is very general, however, given some of the nuances in findings for some predictors across all five outcomes.

Findings for officers' work experiences and perceptions were not as clear-cut although aspects of officer-inmate interactions (face-to-face contacts, inmate compliance with versus threats to officers, and job safety) appear more relevant for shaping officer power bases compared to organizational and peer support (training, staff pride, and co-worker support). There is evidence to suggest that perceptions of greater on-the-job safety, more face-to-face interactions with inmates, greater inmate compliance, and fewer threats by inmates were more conducive to officers reporting the use of expert, referent, and positional power. On the other hand, the amount of training received, perceptions of job stress, role problems, and co-worker pride and support were less relevant in that each factor was a significant predictor of only one of the five outcomes.

Facility level effects appeared comparable in importance to the indicators of organizational and peer support at level-1, with each level-2 factor predicting only one of the five outcomes. Nonetheless, all four of these effects are theoretically intuitive, where officers relied more on

referent power in prisons for women versus more on coercive power in larger and higher-risk populations as well as in facilities with older architectural designs (i.e., linear designs with primarily cells instead of dormitories).

Not all of these findings translate into realistic policy implications, although our findings imply some possible benefits to enhancing the training of officers and staff morale (encompassing staff pride as well as support among co-workers and between line officers and administrators) for enabling officers to rely more on expert and positional power while reducing reliance on coercive power. More effective policies might also focus on improving job safety as well as officer retention, given that greater perceived safety was linked to the use of referent power, while more years of experience coincided with less reliance on coercive power and greater reliance on expert and positional power. Efforts to hire more women and minorities might also help at the officer level, as female officers were more prone to exercising referent power while less prone to using coercion and offering rewards, and minority officers (African-Americans and Latinos) were more likely to rely on expert and referent power. Structural factors at the prison level are a bit more difficult to manipulate, however, given state budget constraints to reduce prison populations and build newer prisons,¹⁵² an inability to control the sex of inmate populations, and the challenges to altering risk classification in ways that would reduce officers' reliance on coercive power.¹⁵³ Additional research is needed to test the validity of these observations, particularly in regard to Bottoms and Tankebe's preference for longitudinal research¹⁵⁴ in conjunction with studies of both power-holders and their subjects' perceptions and behaviors. Moreover, prison level factors must be explored in greater detail given the limited sample size and number of predictors examined.

The facility level analysis of empirical links between officers' use of different forms of power and inmates' perceptions of officer legitimacy produced evidence favoring Bottoms and Tankebe's dialogic approach to understanding legitimate authority. Despite the limits of this segment of our study, these observations are encouraging for future research that can incorporate a longitudinal component at the individual level. As a potential guide for related research, here we found that officers who claimed to exercise more expert power or positional power were more likely to work in prisons where inmates generally perceived officers more favorably.

¹⁵² See Wooldredge, *supra* note 61, at 288, 290.

¹⁵³ See John Wooldredge & Benjamin Steiner, *A Macro Level Perspective on Prison Inmate Deviance*, 17 PUNISHMENT & SOC'Y 230, 248 (2015).

¹⁵⁴ See Bottoms & Tankebe, *supra* note 1, at 166.

Alternately, officers who self-reported greater reliance on coercive power were more apt to work in prisons where inmates maintained more negative perceptions of officers' authority. If other empirical studies reinforce this conclusion, then focusing on what influences the exercise of power among correctional officers should enlighten discussions of the cultivation of legitimacy in a prison setting. The feasibility of building legitimacy in this context has been demonstrated previously and holds promise for improving inmates' compliance with the law, both before and after release.¹⁵⁵

¹⁵⁵ See Franke et al., *supra* note 6, at 189.

