

THE LEGITIMACY OF POLICE AND COURTS
AROUND THE WORLD

by

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DEDICATION

For Mom and Dad

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ABSTRACT

This dissertation analyzed global differences in the legitimacy of police and courts, employing multilevel modeling strategies to measure relationships between legitimacy and individual-level concepts including *prior victimization*, *fear of crime*, *fear of war and terrorism*, *vicarious experience*, *group identity*, *social capital*, and *moral alignment*, while accounting for the influence of national-level variation in the *homicide rate* and the *freedom score* across 47 different countries. This research examined to what extent the effects of individual-level sources of legitimacy varied between countries and whether the included national-level characteristics could explain some of this variation. In addition, supplementary analyses explored whether these relationships varied when the legitimacy of police and courts were investigated separately. Results demonstrated significant cross-national variation in the effects of nearly all included explanatory variables and provided some indication of the extent to which national-level characteristics influence these individual-level relationships. In addition, findings revealed differences between police and courts in the effects of some predictors and the extent of random variation in these effects across countries.

I. INTRODUCTION



Illustration 1: *The Questioner of the Sphinx* by Elihu Vedder

“Those in authority attempt to justify their rule by linking it, as if it were a necessary consequence, with moral symbols, sacred emblems, or legal formulae which are widely believed and deeply internalized. These central conceptions may refer to a god or gods, the ‘vote of the majority’, the ‘will of the people’, the ‘aristocracy of talent or wealth’, to the ‘divine right of kings’ or to the alleged extraordinary endowment of the ruler himself.”

– C. Wright Mills

Widespread unrest surrounding the role of police in society, protests over pandemic restrictions, political extremism, propaganda, coups, assassinations, government instability, and violent insurrections are manifestations of a continuous struggle over legitimation that lies at the heart of the relationship between citizens and state authorities. Recent demonstrations against criminal justice systems around the world are only the latest flashpoints of the perpetually controversial role inhabited by institutions of formal social control (Hamm et al., 2022; Heaney, 2020; Jurek et al., 2022; Wolfe & McLean, 2021). Endemic corruption, abuses of power, and the rise of “post-truth” politics have further intensified the state of affairs in many countries. Social media has unleashed an endless deluge of bias, misinformation, propaganda, and conspiracy theory that incessantly bombards the senses, to the point that even the educated and well-informed are beginning to doubt the stability of their long-held paradigms. Common to all these social problems is an underlying crisis in the perceived legitimacy of long-standing institutions. Many people around the world appear to be losing confidence in fundamental social structures, including systems of government, economics, science, and law.

Near the center of this semiotic maelstrom lies the relationship between citizens and criminal justice institutions. Legal authorities are common lightning rods for political volatility, with police and courts perpetually forced to bulwark the old system until finally conceding to serve the new. In the United States, the recent popularity of movements to defund or even abolish police departments is indicative of a dramatic erosion of institutional legitimacy among large segments of the population. Just like all social institutions today, the legitimacy of police and the criminal justice systems they

represent is being questioned and their roles in many countries reassessed after decades of oppressive behavior, unequal application of law, and illegitimate state violence.

To counter this erosion of public support, states and their institutions must stage elaborate symbolic rituals designed to stimulate and heighten public perceptions of legitimacy. Manning (1997) described in intricate detail the pomp and circumstance surrounding police funerals and the symbolic importance they hold in the solidification of police identity in the collective consciousness of a society. Police uniforms were introduced primarily to promote a professional image for the institution, as were military rank and insignia (Bellman, 1935). Similarly, the evolution of the courtroom from its monarchical and theocratical origins in “holding court” has preserved the role of regalia and ceremony in the elicitation of legitimacy. Courthouses are frequently designed to impose an air of intimidation on those who enter. Their towering domes and looming entrance columns evoke the grand architectural designs of antiquity and encourage deference toward the authority seated within. Judges usually sit in an elevated position, and while the powdered wigs that were long a symbol of the aristocracy are less common today, the robes worn by court officials around the world remain to inspire reverence, enhance prestige, and communicate solemnity (McLaren, 1999; Monks, 2018; Moran, 2015; Mutunga, 2014; Robson, 2021).

Ceremonial traditions of this nature demonstrate the relentless struggle legal authorities engage in over the legitimation of their professions. Authorities such as courts and police must continuously work to cultivate an image of legitimate power in the face of widespread popular discontent regarding their role in society. Legal authorities will always face this conflict due to the very nature of their role in society and the

controversial actions it necessitates. Bittner (1970) alluded to the paradoxical nature of the police role with his allegorical observation that “no amount of public relations work can entirely abolish the sense that there is something of the dragon in the dragon-slayer” (p. 7). It is this element of policing, the tendency of the role itself to require police to act in unsavory and villainous ways, to impose violence on civilians and violate the boundaries of agency and privacy, that is most in need of legitimation. The very existence of law enforcement is a precarious contradiction in social meaning, and therefore necessitates constant legitimation.

Theorists and researchers disagree over whether legitimacy is an objectively measurable characteristic of power and authority or if it exists only in the subjective perceptions of subjects, citizens, and sovereigns (Barker, 1995, 2001; Beetham, 1991; Coicaud, 2002; Hinsch, 2010; Tankebe, 2013; Tyler, 1990; Weber, 1922). Previous research on the legitimacy of legal authorities has struggled with developing a conceptualization that can be easily generalized to other countries, cultures, and contexts. While much prior study has emphasized the behavior of legal authorities themselves as the primary source of legitimacy, the relevance of police procedure within diverse international contexts is less certain. People in different countries may have vastly different conceptions of the privileges and responsibilities that should be given to legal authorities (Mazerolle et al., 2013). While the concept of legitimacy carries important implications for criminal justice in a global context, important questions remain as to the applicability of popular theories of legitimation to other countries and justice systems. This study analyzed global differences in the legitimacy of legal authorities, employing multilevel modeling strategies to examine whether and how individual-level sources of

perceived legitimacy varied by country and to what extent these relationships were influenced by national-level characteristics. Additionally, supplementary analyses explored whether these relationships varied between the legitimacy of police and the legitimacy of courts when examined as separate outcomes.

Chapter II broadly reviews the theoretical conceptualization of legitimacy as it has been understood in political philosophy, social science, and criminal justice. This chapter elaborates on what it means for an authority to claim legitimacy and for those subservient to it to ascribe legitimacy to that authority. Important distinctions between major theoretical perspectives on legitimacy, in particular between normative and empirical conceptualizations, are discussed and their relationships with the international generalizability of legitimacy theories are explored. The implications of legitimacy for criminological theory and practice are also addressed.

Chapter III focuses the discussion on the legitimacy of formal legal authorities such as police and courts, reviewing the major elements and processes underlying the legitimation of legal authorities. Legitimacy is discussed in the context of the mandate given to authorities, the symbolic importance of direct and vicarious contact, and the subjective nature of legitimacy as conditioned by group identity, moral alignment, and social capital. This chapter also describes the potential influence of country-level differences in political organization and moral framework on the perceived legitimacy of legal authorities. The concepts discussed in this chapter form the theoretical framework of the current analysis and informed explanatory variables selected for estimation.

Chapter IV outlines the approach taken in the current study, describing the research questions and hypotheses that were addressed, the data sources used, the

operationalization and measurement of concepts, and the statistical methodology that was employed. Concepts measured at the individual level included *fear of crime*, *fear of war and terrorism*, *prior victimization*, *vicarious experience*, *group identity*, *social capital*, and *moral alignment*. At the national level, models included variables capturing the *homicide rate* and the *freedom score*.

Chapter V describes the results of the multilevel analysis in detail, beginning with descriptive statistics before describing the individual steps involved in building the various models used in this analysis and summarizing the results and substantive conclusions regarding variation in the sources of legitimacy across different countries.

Chapter VI discusses the overall findings and their relation to the broader criminological literature surrounding legitimacy.

Chapter VII addresses several limitations in the current study and provides recommendations for future research before concluding with some final thoughts on the implications of these findings for criminal justice theory, research, and policy.

II. THEORIES OF LEGITIMACY



Illustration 2: *The Pleiades* by Elihu Vedder

Since the earliest days of human civilization, legitimacy has been essential to the establishment of power and authority structures. The rulers of ancient civilizations devoted considerable amounts of time, wealth, and manpower toward erecting grand structures, some practical, most ornamental, all monumental representations of supremacy and domination over the masses. Monuments convey a sense of omnipotence, giving the impression that the powers that built them are ubiquitous and eternal, beyond the reach of common people, and therefore legitimate simply by virtue of their existence. Legitimacy has consistently formed the underlying basis for systems of order and elite control, systems that are maintained through careful manipulation of cultural symbolism and meaning (Meyer & Rowan, 1977; Mills, 1959; Richards et al., 2000). The legitimacy of authority is a common theoretical thread that can be found woven throughout history,

philosophy, religion, and the social sciences. This chapter will discuss some of this theoretical lineage before introducing legitimacy as a relevant concept in modern sociological theory.

Political Philosophy

Philosophers of ancient Greece debated the concept of legitimacy at length, discerning its primary sources by analyzing norms and principles of morality and ethics. Thucydides, Plato, Aristotle, and others reasoned that strength alone could not serve as the sole foundation of legitimate state power (Beetham, 1991; Zelditch & Walker, 2003). Social systems that endure and thrive are also dependent on the consent of the governed for their political stability. Aristotle is frequently cited as having laid out one of the first known theories of distributive justice, noting that people often judge the worth of their rulers based on the fair distribution of resources, benefits, and privileges (Zelditch, 2001). The etymological root of legitimacy, derived from the Latin *lex* or *legis*, implies a legal or political connotation. Scholars have pointed to this fundamental implication when contrasting legitimacy with similar concepts such as *status* or *reputation* (e.g., Deephouse & Suchman, 2008). The term *legitimacy* appears to relate most closely to lawfulness, to acting in accordance with a set of rules. A legitimate government is therefore almost by definition a lawful government (Zelditch & Walker, 2003). But for as long as the concept has been explored, disagreement has existed over whether the rules at the heart of legitimacy are those established by formal authority itself, those imposed by informal social norms and values, or those derived from the principles of natural law (Beetham, 1991).

European philosophers during the enlightenment period rejuvenated many classical conceptions of legitimacy. Dissatisfied with monarchical rule, they drew inspiration from the democratic traditions of the ancients to propose alternative forms of social organization, some upholding traditional structures of authority and others radically challenging long held paradigms. Enlightenment thinkers appealed to the philosophical concept of *natural law* to explain the basis of morality and social order, replacing the notion of “divine rights” upon which monarchical systems traditionally drew for their legitimation. Natural laws were thought to be distinct from the laws of government, the laws of a higher power, or the laws of nature, arising instead from the human capacity for rational thought and people’s reliance on principles of reason in their interaction and organization.

Thomas Hobbes (1651) reasoned that because humans are inherently selfish, hedonistic, and power-hungry beings, there could be no security absent some form of social organization. Human existence in a “state of nature” (without government) would involve a constant struggle against others for protection of oneself and one’s property. But because humans are not only hedonistic, but also capable of reason, they rationally decide to organize into societies and governments for their collective benefit, giving up some of their individual sovereignty in return for protection against other selfish individuals. Social organization was therefore necessitated by the parameters of “human nature” and proceeded according to the unavoidable avenues and dispositions of this nature. Hobbes (1651) believed that to maintain order and guard against the deterioration of society into barbarism, states must maintain absolute power over citizens. This power structure must give the appearance of impenetrability and omnipotence, inspiring both

fear and awe in the hearts of the governed, just as the mythical sea creature evoked by Hobbes (1651) in his description of the state apparatus might frighten and astound mariners of lore. The perceived legitimacy of the civil state is paramount to the maintenance of a state of civilization, without which humanity would slide into chaotic disorder and violence (Dawson, 2017; Hobbes, 1651; Nivette, 2014). But while Hobbes (1651) was focused on the horrifying potential of too little government, other philosophers were concerned with the equally disconcerting notion of *too much* government.

John Locke (1690) contended that the existence of natural law and its place in the construction of social order also implies that human beings bear a duty to respect the *natural rights* of others. These natural rights not only place limitations on the legitimate exercise of power by state authorities, but also suggest that if governments do not act in the best interests of the governed, then citizens are entitled to revoke this power and remove or alter the government once it has violated their trust. To Locke (1690), the legitimacy of government was conditional on the performance of those functions for which it had been empowered. Primary among these was the well-being of the commonwealth and its people. Locke (1690) inferred from the principles of natural law that the power of legitimation lies with the people rather than their rulers. The equality of all men in the state of nature gives all equal capacity to judge the legitimacy of authority. If all people are created equal, then no person can derive their authority over others from an appeal to natural order. In Locke's (1690) conception of the state of nature, no person is inherently exalted, regal, or holy. All who hold power must derive that power at some point from the consent of others.

Rulers acting outside of the law and against popular consent, to Locke, are engaging in despotism and tyranny. Locke (1690) believed that the common good should dictate the right and proper course for authority, appealing to Cicero's edict of *salus populi suprema lex esto* – let the health of the people be the supreme law. Rulers who violated their allegiance to the common good were, to Locke (1690), tyrants and despots no longer worthy of allegiance and obedience. Locke (1690) defined *tyranny* as “the exercise of power beyond right” and said it exists

When the governor, however intitled, makes not the law, but his will, the rule; and his commands and actions are not directed to the preservation of the properties of his people, but the satisfaction of his own ambition, revenge, covetousness, or any other irregular passion. (p. 101)

Enlightenment thinkers clearly associated legitimate authority with the fundamental importance of *reason*, which was essentially considered an innate human faculty. However, enlightenment principles based on a standard of reasonableness break down when a society does not value the concept of rationality. Although Locke perhaps could not conceive of a government that is simultaneously legitimate and unreasonable, the wide variety of despotic regimes that have found stability throughout history irrespective of the internal logic of their systems suggest that government based on reason is only one of many possible forms. Moreover, even governments that Locke might have considered legitimate, such as those that claim to value rationality, equality, and consent, were themselves not necessarily established according to these same principles.

While many discussions of legitimacy in political philosophy focus on the contributions of Western thinkers such as these, other societies around the world clearly

developed their own systems of legitimate authority independent of Western thought. However, in a globalized academic system dominated by hegemonic Western intellectualism, philosophical principles derived from sources such as Asian spirituality and African tradition tend to be suppressed in intellectual discourse, with many discredited as archaic, irrational, and undemocratic (Connell, 2007; Jiadong, 2006; Schatzberg, 1993). Within much ostensibly international philosophical discourse, the foundational principles and paradigms of Western philosophy are still used as reference points against which indigenous systems of knowledge are measured. Even the norms of academic and scientific discourse tend to be imported from Western nations, leading philosophical development in many parts of the world to proceed according to Western terms (Jiadong, 2006; Schatzberg, 1993).

Indigenous conceptions of legitimacy around the world draw from symbolic and philosophical sources that are often incompatible with value systems forcibly introduced by colonial powers (Schatzberg, 1993). This can lead Western scholars to misunderstand the nature of legitimacy in other countries, equating legitimacy with standards of governance while ignoring the relativistic importance of culture, identity, thought, and language. Western assumptions concerning the relationship between legitimacy and rational principles are not necessarily shared by other cultures (Lawson, 1993; Schatzberg, 1993; Waldron, 1989). Historical realities in many parts of the world preclude the notion of legitimate authority based on the consent of the governed (Ellmann, 1995; Tankebe, 2008). As David Hume (1791) remarked of the conundrum inherent to any notion of a shared social contract:

Almost all the governments which exist at present, or of which there remains any record in story, have been founded originally, either on usurpation or conquest, or both, without any pretense of a fair consent, or voluntary subjection of the people. (p. 457)

The historical importance of enlightenment principles is not universal, and different societies rely on entirely separate traditions of language, imagery, and metaphor to contextualize and convey the meaning of legitimacy (Jiadong, 2006; Schatzberg, 1993; Rasmussen, 2017). In many cultures, popular definitions of legitimate power are not easily separated from values related to paternalism, spirituality, and tradition (Factor et al., 2014). The impossibility of applying the same standard of legitimacy to all nations is the basis for Weber's (1922) threefold typology of authority, of which authority based on rationality and legality is only one possible form.

Social Science

Weber (1922) wrote that “custom, personal advantage, purely affectual or ideal motives of solidarity, do not form a sufficiently reliable basis for a given domination. In addition, there is normally a further element, the belief in *legitimacy*” (p. 213, emphasis in original). All types of authority share a common need for their existence to be legitimized, but types can be characterized by different pathways to legitimacy, different approaches to what Weber (1922) called the “legitimation of domination.” Weber (1919, 1922) divided forms of authority into three distinct categories based on the primary source of their legitimacy – traditional, charismatic, and rational-legal. Although these are ideal types that rarely if ever exist in such clearly defined terms, this basic framework forms a scaffold upon which an understanding of the roots of power and authority can be

constructed. Even though Weber (1919) appeared to give more credence to the rational-legal type, theorizing that this form would be the natural outcome of societal progress, legitimacy can equally be derived from the charismatic mobilization of popular sentiment, or from historical appeals to lineage, birthright, and tradition. Power and authority can be rationally legitimate, charismatically legitimate, or traditionally legitimate. Weber (1922) asserted that “the basis of every authority, and correspondingly of every kind of willingness to obey, is a *belief*, a belief by virtue of which persons exercising authority are lent prestige” (p. 263, emphasis in original). Thus, in contrast to many Western political philosophers, Weber located legitimacy in the subjective beliefs of citizens rather than in the objective properties of institutions.

Weber (1922) also posited the use of force as central to the concept of legitimacy. Only when the use of force by authorities is considered legitimate can the authorities themselves be considered legitimate. “Ultimately, one can define the modern state sociologically only in terms of the specific means peculiar to it, as to every political association, namely, the use of physical force” (Weber, 1922, p. 1). The state’s capacity to engage in legitimized forms of violence is fundamental to the legitimation of its authority. Weber (1922) understood that “like the political institutions historically preceding it, the state is a relation of men dominating men, a relation supported by means of legitimate (i.e., considered to be legitimate) violence” (p. 2). Legitimacy is what distinguishes legal authorities from other users of violence because their discretionary use of force is backed by the power of the law. The use of violence is also what distinguishes legal authorities from other institutions and organizations, altering the nature of legitimation processes. The history of policing can be described as the struggle over the

legitimation of violence, or more accurately the legitimation of discretionary power to decide when violence is warranted (Bittner, 1970; Klockars, 1985; Laurie, 1972; Smith, 2007). The legal authority to forcefully coerce another person against their will is central to police legitimacy. Most in need of legitimation are those actions performed by authorities that would be illegal if engaged in by the citizenry.

Social scientists since Weber have developed several other typologies that distinguish between legitimacy of different kinds, at different levels, and with different audiences. Theorists tend to differentiate between *general* and *specific* attitudes toward authorities (Brandl et al., 1994; Easton, 1975). General attitudes are those felt toward authorities in general, and toward the institutions and systems of law and justice that they represent. Specific attitudes are those related to people's individual encounters with specific legal authorities. Trinkner et al. (2018) observed that "there is an important distinction between tangible interactions with legal authorities and the more abstract representation of the law that permeates society" (p. 5). Similarly, differences are likely to be found between attitudes toward local, state, and federal courts (Gibson et al., 2010). Brandl et al. (1994) found that while these attitudes are connected, they appear to have an asymmetrical relationship. General attitudes tend to have a greater effect on specific attitudes than specific attitudes have on general ones. In the United States, Kochel (2018) found that general support for police tends to be stronger than specific support because "general support tends to be grounded in the ideals of policing – justice, social order, and protection – rather than derived from personal experience with police" (p. 252). These findings allude to the possibility that general and specific legitimacy may originate from different sources. While the legitimacy of specific legal authorities is likely heavily

influenced by direct experience, general legitimacy is potentially more dependent on durable factors such as perceived effectiveness, vicarious experience, moral alignment, group identity, and social capital (Cao & Wu, 2019; Chase & Thong, 2012; Coicaud, 2002; Easton, 1975; Kochel, 2018; Rothstein & Stolle, 2008; Tankebe, 2009; Smith, 2007).

An important typological distinction that informs the current study is between *empirical* and *normative* conceptions of legitimacy. Normative conceptions tend to describe legitimacy in terms of pre-defined criteria for institutions that represent ideal forms, while empirical definitions describe legitimacy in terms of measurable public support, regardless of the characteristics of institutions themselves (Anderson et al., 2005; Beetham, 1991; Easton, 1975; Hinsch, 2010; Tankebe, 2013; Tyler, 2009; Weber, 1922; Zelditch, 2001). Normative conceptions of legitimacy, associated with classical thinkers and popularized in the modern era by political philosophers such as Habermas (1975) and Rawls (1971), involve the assessment of institutions according to objective standards derived from philosophical principles. Such perspectives say very little about the subjective perceptions and beliefs of individuals and instead focus on whether institutional arrangements conform to principles such as justice, rationality, or freedom. Empirical evidence indicating approval of institutions among citizens does not make them legitimate from a normative perspective. Legitimacy is derived not from popular approval, but from adherence by institutions to overarching philosophical principles (Beetham, 1991; Gilley, 2012; Jackson & Bradford, 2019; Schuck, 2019; Worden & McLean, 2017a).

While normative theories of legitimacy express normative prescriptions in their assessments, empirical theories measure the existence of popular support without preference for one form of social organization over another (Hinsch, 2010). Empirical conceptions locate the power to legitimize authority within the subjective perceptions of citizens, rather than inferring legitimacy based on institutional devotion to philosophical standards (Hinsch, 2010; Jackson et al., 2013; Jackson et al., 2018). In an empirical sense, an institution is legitimate if it has the approval of those subject to its authority, regardless of its objective actions and characteristics. From this perspective, “to say that an institutional arrangement is a legitimate one is to make a factual claim about the subjective state of mind of particular individuals that belong to one political society” (Hinsch, 2010, p. 41). As suggested by Weber’s (1922) framework, the source of empirical legitimacy is always the people, but the determinants of people’s legitimacy evaluations and the criteria used in these evaluations can differ widely (Jackson et al., 2018; Matheson, 1987). Suchman (1995) revealed this complexity with an illuminating description of the concept: “Legitimacy is a *perception* or *assumption* in that it represents a reaction of observers to the organization as they see it; thus, legitimacy is possessed objectively, yet created subjectively” (p. 574).

Attempting to bridge the gap between the normative conceptions of political philosophy and the empirical conceptions of social science, Beetham (1991) recognized the importance of Weber’s (1922) work for the sociological understanding of political legitimacy, but rejected his threefold classification, finding this typology insufficient to explain the multifaceted nature of legitimacy in a modern global context. While the content of legitimacy may vary across societies, Beetham (1991) argued, there likely

exists a universal structure of legitimation that applies in every context. Without imposing an objective typology onto the phenomenon of legitimation, but also conceding that at least some of the power over legitimation must lie with institutions, Beetham (1991) proposed that for authorities to be legitimate they must act within prescribed rules, embody shared norms and values, and have the endorsement of citizens. These three factors – legality, normative justifiability, and recognition – are the basic elements of Beetham's (1991) model of legitimate power. Beetham (1991) contrasted liberal democracies that derive their legitimacy from popular consent with traditional systems based on heredity and custom, communist regimes centered on the collective will, religious theocracies that appeal to divine right, technocracies reliant on expertise, dictatorships based on the will of a strong leader, and fascist governments built around appeals to ethno-nationalism. To Beetham (1991), all these types share a similar underlying structure of legitimacy based on legality, justification, and recognition.

According to Beetham (1991), evaluations of power must begin with the determination that it has been obtained and exercised according to shared social norms and rules. Legality is a component of legitimacy perceptions that operates in concert with broader value systems. The most legitimate authority is that which possesses the greatest amount of overlap with people's shared values as codified in the law. Beetham (1991) considered Weber's (1922) approach to legitimacy flawed because it did not allow for a distinction between moral obligation and forced consent. Beetham (1991) located legitimacy not entirely in the subjective beliefs of citizens, but in the degree to which authorities adhere to social norms, value systems, and their own systems of law. For Beetham (1991), power is legitimate only when it can be justified according to beliefs

shared by both dominant and subordinate social groups. The justification of these shared beliefs and values constitutes the core mechanism of legitimacy. For power to be considered legitimate, it must have a valid source, be exercised in a justified manner, and serve the common interest. Beetham (1991) did not consider legality, justification, and endorsement to be constituent parts of legitimacy, but rather necessary preconditions for its existence. Legitimacy is related to the behavior of authorities only to the extent that this behavior aligns with a shared value system within a society. Legitimacy to Beetham (1991) is dependent not solely on the beliefs of citizens, as Weber (1922) suggested, but also on the intersection of value systems with the qualities and actions of authorities.

In modern criminological theory, legitimacy is commonly operationalized in terms of two related empirical constructs – the trust citizens possess in authorities and the obligation they feel to obey these authorities (Jackson & Bradford, 2019; Kochel et al., 2013; Reynolds et al., 2018; Tyler, 1990). These two items – *trust* and *obligation to obey*, form the basis of Tyler’s (1990) well-known conceptualization of legitimacy. Sunshine and Tyler (2003) defined legitimacy as “a property of an authority or institution that leads people to feel that that authority or institution is entitled to be deferred to and obeyed” (p. 514). But some have questioned the use of obligation as a direct indicator of perceived legitimacy, suggesting that while legitimacy may be sufficient to inspire a sense of obligation to obey authorities, it is not the only possible source of such feelings (Akinlabi & Murphy, 2018; Dawson, 2018; Gau, 2011; Kochel et al., 2013; Nix et al., 2019; Radburn & Stott, 2018; Reisig et al., 2014; Sparks et al., 1996).

Empirical research by Reisig et al. (2012, 2014) in Slovenia found evidence that the constituent parts of legitimacy in Tyler’s model may act differently in other nations.

A sense of obligation can arise from a multitude of sources, some based on legitimacy, others based on coercion and violence. True consent is exceedingly difficult to measure (Bottoms & Tankebe, 2012; Gau, 2011; Sun et al., 2016, 2018). People might be fearful of what will happen to them if they do not obey the law or follow the directives of police, so that feelings of obligation do not arise from moral alignment but from powerlessness, intimidation, and fear (Akinlabi & Murphy, 2018; Dawson, 2018; Kochel et al., 2013; Nix et al., 2019; Radburn & Stott, 2018; Tost, 2011). Perceived obligation to obey does not necessarily imply perceived legitimacy. According to Tankebe (2013), while some people may feel obligated to obey authority due to a belief in legitimacy, “others might say they are afraid of the costs of nonobedience, so they feel obliged, or that they are so powerless that no realistic alternative is available but to obey the existing societal authorities, however badly they might behave” (p. 105). A sense of obligation does not necessarily arise from legitimacy, and could be the result of trepidation, coercion, habit, or what Carrabine (2005) called “dull compulsion” (p. 106).

There are systems of authority that scarcely rely on legitimacy at all, instead controlling their subjects almost exclusively through force and coercion. In such systems, popular legitimacy is not required for obedience because people lack the power to mount any kind of effective resistance; in fact, their own sense of powerlessness serves as a further deterrent against disobedience or revolt (Beetham, 1991; Tankebe, 2013). But many authorities seem to have realized that a system based on consent is objectively more efficient and stable than one based on coercion and control. Nevertheless, even the most benevolent systems still rely on the threat of violence and must maintain the appearance of a steadfast willingness and capacity to support their claims to authority by

force. Authority must serve as an effective substitute for interpersonal violence if states are to make effective claims regarding their legitimacy. The provision of security is one of the most basic elements of the social contract between citizens and states (Loader & Walker, 2007). For citizens to willingly surrender the use of violence against one another for the resolution of disputes and place the charge of justice in the hands of the state, this authority must prove itself willing and able to apply force when it is necessary to maintain security. The criminal justice system and its representatives, in one form or another, are the mechanism by which states typically take on this charge.

Criminal Justice

The potential consequences of a legitimacy deficit for criminal justice institutions extend far beyond the erosion of popular support. Bobo and Thompson (2006) noted that “a legal system seen as illegitimate is a system likely to face suspicion, guardedness, and even open resistance and challenge from important segments of the citizenry” (p. 449). Legitimacy can affect people’s cooperation with legal authorities, their willingness to empower these authorities, and their general compliance with the law (Mazerolle et al., 2013; Sunshine & Tyler, 2003; Tankebe, 2013; Tyler, 1990; Walters & Bolger, 2019). The absence of legitimacy can undermine the ability of police to solve crimes and maintain order. If people believe that authorities are legitimate, they will be more likely to cooperate with police, volunteer information, report crimes, provide witness testimony, comply with court orders, and help address criminogenic conditions in their communities (Baker et al., 2014; Baird, 2001; Bottoms & Tankebe, 2012; Kochel et al., 2013; Madon et al., 2017a; Mazerolle et al., 2013; Sahin et al., 2017; Sunshine & Tyler, 2003; Tyler & Jackson, 2013). Legitimacy can also lessen feelings of contempt and defiance that

citizens might perceive during involuntary interactions with police, reducing the likelihood of police escalation (Sherman, 1993; Steiner & Wooldredge, 2018).

There is also abundant evidence of a connection between legitimacy and compliance with the law more generally (Akinlabi & Murphy, 2018; Bottoms & Tankebe, 2012; Gau & Brunson, 2010; Kane, 2005; Tyler & Jackson, 2013; Walters & Bolger, 2019). A deficit in the legitimacy of legal authorities is associated with greater support for the personal use of violence, the weakening of informal social controls, and the inhibition of pro-social legal socialization (Dawson, 2018; Levi et al., 2009; Jackson et al., 2013; Marien & Hooghe, 2011; Reisig et al., 2011; Tankebe, 2009; Tyler & Jackson, 2013; Worden & McLean, 2017b). The absence of legitimacy can make people more likely to engage in self-help to solve problems and address grievances without the assistance of police and courts. If legal institutions and authorities are not helping citizens, then citizens will quickly learn they must help themselves.

An illegitimate justice system encourages the widespread adoption of self-defense practices ranging from hardening crime targets, to carrying weapons and wearing body armor, to joining gangs or militias, to supporting or committing vigilantism and retaliatory violence (Akinlabi, 2020; Anderson, 1999; Kane, 2005; Meares et al., 2012; Messner et al., 2006; Nivette, 2016; Sampson & Bartusch, 1998; Tankebe, 2009; Tankebe & Asif, 2016). Dawson (2018) described the willingness to resort to violence in informal dispute resolution as a revocation by citizens of the Hobbesian social contract and a reclamation of their natural right to violence and retribution. Nivette and Eisner (2013) made a similar observation, in that “civil society for the most part, accepts the appropriation of violence by the state. And when the state is considered illegitimate, civil

society may reappropriate this tool to use in the course of continuous political ‘struggle’” (p. 8).

Self-reliance is not the only mechanism by which the illegitimacy of police and courts can influence crime, delinquency, and disorder. A deficit in the legitimacy of legal authorities can translate to an erosion of confidence in other social institutions. Marien and Hooghe (2011) found distrust of government institutions likely to significantly increase the likelihood of illegal behavior, noting that distrust of government can also erode the capacity of government to fulfill its basic obligations toward the public in terms of public safety, health, and welfare. Theorists have speculated that a loss of confidence in legal authorities may be a part of a larger trend of declining confidence in social and political institutions in general (Beetham, 1991; Bradford et al., 2014b; Habermas, 1975; LaFree, 1998; Nivette & Eisner, 2013). The reduced legitimacy of formal social institutions can diminish the effectiveness of informal social control mechanisms, undermining the pro-social influence of institutions such as family, education, and religion (Ferdik et al., 2013; Levi & Sacks, 2009; Newton & Norris, 1999; Nivette, 2014). The absence of perceived legitimacy in these informal institutions can lead to the breakdown of informal social control mechanisms, making direct contact with formal mechanisms such as police and courts more likely.

Institutional legitimacy can also have broader implications in terms of popular support for domestic and foreign policy beyond the realm of criminal justice, including military intervention, government welfare, education programs, scientific funding, and public health measures such as pandemic restrictions and vaccination programs (Jones, 2020; Kim, 2018; Levi et al., 2009; Lieberman, 2007). Of the scope of legitimacy as a

concept, Zelditch (2001) remarked that “it refers to the acceptance of just about anything at all as ‘right’, providing acceptance does not simply depend on gain, and it has consequences for the stability of just about any feature of social structure emergent in just about any social process” (p. 51).

Legitimacy also elicits a greater willingness among citizens to accept expansions of discretionary power and authority, including the adoption of invasive technologies and tactics. (Balko, 2013; Heen et al., 2018; Lockwood et al., 2018; Moule et al., 2019; Simmons, 2018; Sunshine & Tyler, 2003). A surplus of legitimacy may also lead citizens to be overly accepting of fraud, waste, and abuse committed by authorities in their fulfillment of their duties (Nivette, 2014). Moreover, a strong belief in the legitimacy of authorities can make the public less likely to believe stories of police and judicial misbehavior, and more likely to deny the existence of police brutality, oppressive tactics, or systemic corruption, even when presented with evidence to the contrary (Moule et al., 2019). Conversely, a legitimacy deficit may lead citizens to desire a reduction in the power granted to legal authorities and a curtailment of their mandate. Many of the underlying demands made by activists calling to defund or abolish police are centered on this type of restriction of the police mandate, as they seek to divorce issues such as mental health, homelessness, and drug abuse as much as possible from the purview of law enforcement (Piza & Connealy, 2022; Trinkner et al., 2018; Vaughn et al., 2022; Vitale, 2017). These types of boundary concerns may be even more important to legitimacy in nations with high rates of crime, ineffective legal systems, and histories of discrimination, conditions unlikely to promote a sense of confidence in authorities (Beetham, 1991; Jackson et al., 2019; Tankebe, 2009). When citizens perceive authorities

to be abusing the powers given to them, they are more likely to demand these powers are regulated, restricted, or removed entirely.

While a great amount of research has been dedicated to the question of whether society can “build a better cop,” it is more important than ever not to overstate the potential impact that such improvement can realistically have on the legitimacy of legal authorities overall (Herbert, 2006; Owens et al., 2018; Mazerolle & Terrill, 2018). Perhaps police can be trained to be more procedurally just, but whether this will significantly improve their legitimacy or that of the system they represent remains unclear. Worden and McLean (2017b) questioned the capacity of police organizations to adopt procedural justice changes, noting that maintaining the *appearance* of procedural justice is often valued more highly than creating substantive changes in officer behavior. Underlying the entire framework of procedural justice theory is the assumption that legitimacy rests in the hands of authorities themselves, that law enforcers and arbiters can steer and manage their own legitimacy by changing their tactics, approach, and image.

But despite a large amount of research indicating that legal authorities can indeed improve perceptions of their legitimacy by attending to procedural justice, the relationships between legitimacy and several other theoretically relevant factors remain unclear, especially as they exist within various social, political, and cultural contexts. The current study will examine fear of crime, prior victimization, vicarious experience, group identity, social capital, and moral alignment as potential sources of legitimacy. These influences may be especially important for individuals with little to no direct contact with police and courts. Many people rarely if ever interact in any meaningful way with legal authorities in their daily lives, and their opinions about police and courts are not so much

derived from direct encounters with these authorities as they are dependent on broader mechanisms of socialization and cultural osmosis.

Different sources of legitimacy imply different approaches to its cultivation. If the primary source of legitimacy is direct experience with legal authorities, then institutions would indeed be wise to invest in procedural justice training. But if legitimacy is influenced more by vicarious experiences, moral alignment, and social capital this would call for institutions to focus on image management, outreach, and community-oriented strategies. Additionally, if legitimacy is based primarily on effectiveness and fear of criminal victimization, then legal authorities should focus on public safety and crime control above all else. This chapter has traced the theoretical concept of legitimacy from political philosophy, discussed its development in the social sciences, and established its relevance for criminal justice studies. The following chapter will discuss theoretical frameworks underlying the conceptual sources of legitimacy included in the current study, exploring the mandate given to legal authorities, the symbolic duty that underlies the performance of justice, and the personal bonds that influence people's perceptions of authority.

III. LEGITIMACY OF LEGAL AUTHORITIES



Illustration 3: *Corrupt Legislation* by Elihu Vedder

The legitimacy of the state is intimately entwined with the legitimacy of its legal authorities. As enforcers of the law, police put force behind the will of lawmakers and sovereigns, and as arbiters of the law, courts direct this force and distribute its punishments and protection. The mandate given to these authorities includes a responsibility to effectively provide security, deliver justice, and maintain social order. The discretionary performance of this charge also carries with it a symbolic duty to represent the ideals of the state during interactions with citizens. The subjective nature of perceived legitimacy introduces further complexity to processes underlying its cultivation. The following sections will discuss conceptual sources of legitimacy relevant to the current study. First, the relationship between fear of crime, prior victimization, and the perceived effectiveness of authorities at fulfilling their mandate will be addressed. Then, discussion will turn to the symbolic duty of legal authorities and its relationship to direct and vicarious experience with police and courts. Lastly, the subjective, personal

nature of legitimacy and its relationship with group identity, social capital, and moral alignment will be explored.

The Legal Mandate – Effectiveness, Victimization, and Fear

Egon Bittner (1970) suggested that police are needed to handle circumstances involving “*something-that-ought-not-to-be-happening-and about-which-someone-had-better-do-something-now*” (p. 30). This definition indicates the inherent ambiguity of the police role and the importance of discretion – the freedom to choose the most appropriate response to a given situation. For this discretionary freedom to be accepted by the public, people must have confidence in the decisions made by legal authorities, especially when those decisions involve the use of force. In another description of the police function, Bittner (1970) asserted that “the role of police is best understood as a mechanism for the distribution of non-negotiable coercive force employed in accordance with the dictates of an intuitive grasp of situational exigencies” (p. 46). For modern systems of government to maintain order, the use of force is limited as much as possible into the hands of a small group of sovereign representatives, just as the power to arbitrate disputes and dispense justice is restricted to a formalized judicial system (Bittner, 1970; Smith, 2007). The acceptance by citizens of these limitations and restrictions requires legitimacy, and the most obvious source of this legitimacy is the belief that institutions effectively fulfill the mandates given to them (Aviv & Weisburd, 2016; Beetham, 1991; Manning, 1997; Sunshine & Tyler, 2003; Tankebe, 2009).

While the actual responsibilities assigned to legal systems are vast and diverse, many citizens consider the control of criminal behavior to be the primary purpose of these authorities. An institution that cannot adequately perform its most basic functions is

not likely to garner widespread confidence and legitimacy. Police and courts are charged with apprehending criminals, dispensing appropriate punishment, and maintaining public order and safety. Confidence in these institutions is influenced by how effectively citizens believe them to be satisfying this mandate. Research has consistently found people's perceptions of crime and disorder to be significantly related to their attitudes toward legal authorities (Alda et al., 2017; Boateng, 2017; Dawson, 2018; Jang et al., 2010; Kääriäinen, 2007; Sevier & Tyler, 2014; Sprott & Doob, 2009; St. Louis & Greene, 2019; Van Craen, 2013). In some societies, perceptions of procedural fairness may also be of key importance to these evaluations (Hough et al., 2013; Tyler, 1990). But in many parts of the world, proper procedure is often less vital to perceived legitimacy than the ability of these institutions to provide a sense that justice has been done. This is especially true where and when the goals of punishment reach beyond the individual offender and are aimed at upholding societal values in general (Bradford et al., 2014b; Jackson et al., 2014; Sevier & Tyler, 2014; Tankebe, 2009; Tsushima & Hamai, 2015).

Effectiveness has sometimes been omitted from conceptualizations of legitimacy due to the contention that it is a purely instrumental concern. However, Bottoms and Tankebe (2012) argued that there is a clear normative component to effectiveness, in that the perception that authorities are fulfilling the mandate given to them communicates responsiveness to the moral needs of citizens. The perceived effectiveness of legal authorities is theoretically related to people's experiences with crime and disorder. Being fearful of crime may lead to perceptions that legal authorities are not fulfilling their duty to provide security. Personal experience with criminal victimization might also erode confidence in the ability of legal authorities to provide safety. Indeed, fear of crime and

prior victimization have generally been found to be negatively associated with legitimacy, and several studies have linked these variables directly to the perceived ineffectiveness of legal authorities (Aviv & Weisburd, 2016; Brown & Benedict, 2002; Dull & Wint, 1997; Koenig, 1980; O'Connor, 2008; Singer et al., 2019; Sprott & Doob, 1997).

Research has generally found victims of crime to report more fear of crime than nonvictims. After becoming victims of crime, people tend to perceive greater amounts of vulnerability and risk both at home and in their neighborhoods (Alda et al., 2017; Orr & West, 2007; Sprott & Doob, 1997; Stafford & Galle, 1984). While these may seem to be obvious conclusions, there is some evidence that the relationship between victimization and fear of crime is more complex than it appears. Not all types of crime produce the same effect in victims, not all victims of crime respond in the same way, and not all responses by legal authorities are identical in their effect on victims (Berthelot et al., 2017; Dowler & Sparks, 2008; Dull & Wint, 1997; Koster et al., 2016; Wolfe et al., 2016). Some victims might be highly fearful following their ordeal, while others, potentially targets of less serious forms of crime, or those reassured by the actions of authorities, experience less fear (Singer et al., 2019; Van Dijk, 2015). These feelings might also be partially related to pre-existing attitudes, risk perceptions, and generalized trust. Positive contact with authorities after experiences of criminal victimization may serve to increase legitimacy in the eyes of some victims, while others might view inadequate responses by police and courts as further indication that these authorities are ineffective at fulfilling their mandate (Dull & Wint, 1997; Reisig & Strohshine, 2001).

Different attitudes among victims might also simply be related to these individuals being more likely to have had direct experience with legal authorities.

International research has uncovered further complexity in relationships between prior victimization, fear of crime, and attitudes toward legal authorities in different countries (Alda et al., 2017; Koenig, 1980; Nalla & Gurinskaya, 2020; Nivette, 2016; Singer et al., 2019; Tankebe, 2009; Van Dijk, 2015). There is also evidence that prior victimization can sometimes influence the effects of other variables, such as procedural justice, on perceived legitimacy (Aviv & Weisburd, 2016; Singer et al., 2019; Wolfe et al., 2016). Victims often encounter legal officials while at their most vulnerable, altering the dynamics of the interaction and the expectations of police behavior. The degree to which officials are sensitive to the physical and emotional needs of victims during such encounters likely has great bearing on subsequent attitudes toward these authorities (Aviv & Weisburd, 2016; Orr & West, 2007; Rosenbaum et al., 2005; Singer et al., 2019; Wolfe et al., 2016).

Even for those without personal experience with criminal victimization, general concerns about crime and disorder can greatly influence perceptions of legal authorities. In low-security environments, expectations for authorities may be especially focused on effective crime control and order maintenance. Perceived insecurity resulting from concentrated poverty, social disorganization, and low collective efficacy can have negative effects on citizen attitudes toward police and courts (Frimpong et al., 2019; Kane, 2005; Kochel, 2018; Sprott & Doob, 2009; Zahnow et al., 2019). Signs of physical and social disorder such as graffiti, property deterioration, loitering, panhandling, and drug abuse can similarly undermine the perceived effectiveness of legal authorities (Cao

et al., 1996; Wilson & Kelling, 1982). The salience of crime and disorder in the minds of citizens is likely to affect their expectations of legal authorities. Citizens may be more tolerant of unjust police behavior when they feel unsafe in their homes and neighborhoods (Armaline et al., 2014; Frimpong et al., 2019; Kochel, 2018; Martin & Bradford, 2019; McDonald, 2015; Skogan, 2009). Fear of crime can influence the scope of the mandate given to legal authorities as well as the criteria by which people evaluate the performance of these institutions (Beetham, 1991; Dawson, 2018; Koster et al., 2016; Sampson & Bartusch, 1998; Vaughn et al., 2022).

Depending on contextual factors, citizens in different countries may assess the effectiveness of legal authorities in different ways (Boateng, 2017; Chamlin & Cochran, 2006; Dawson, 2017; Jang et al., 2010; Kääriäinen, 2007; Mazrolle et al., 2013; Thomassen, 2013; Zahnow et al., 2019). In parts of the world where rates of crime are high and institutions less capable of providing security and stability, procedural concerns such as fairness and respect may be less relevant than effectiveness at controlling crime, dispensing justice, and maintaining order. Research has found effectiveness to have a greater or comparable influence on legitimacy than procedural concerns in a variety of nations, including Australia (Hinds & Murphy, 2007), South Africa (Bradford et al., 2014a), Ghana (Tankebe, 2009), and China (Sun et al., 2016, 2018). Additionally, international research has found crime rates, especially rates of violent crime, to be negatively correlated with police legitimacy at the national level (Dawson, 2017; Nivette & Eisner, 2013). Although the relative importance of effectiveness in other countries compared to alternative sources of legitimacy such as procedural justice is widely debated in the literature (e.g., Kochel et al., 2013), most research seems to point to

perceived effectiveness as a crucial influence on the legitimacy of legal authorities that can vary greatly depending on social context.

Beyond localized concerns with neighborhood-level crime and safety, general anxieties related to national-level threats posed by war and terrorism can also influence perceptions of legitimacy. In the weeks and months following the 9/11 terrorist attacks, Americans tended to express an unusually high degree of support for “first responders” including police (Sunshine & Tyler, 2003). Citizens that reside in nations that experience frequent armed conflicts, social unrest, or terrorist attacks may similarly express higher levels of confidence and trust in legal authorities (Brown & Benedict, 2002; Jonathan, 2010; Jonathan-Zamir & Weisburd, 2013; Madon et al., 2017a; Shakhrai, 2015). According to Sunshine and Tyler (2003), “research suggests that during times of strife and difficulty, people become more focused on the effectiveness of police performance and less concerned about issues of process and rights” (p. 522).

Interestingly, Banjak-Corle and Wallace (2020) found that directly experiencing a terror attack was not significantly related to attitudes toward police, but frequent exposure to *news* about terrorism did have a relationship to these same attitudes. The authors concluded that “news portrayals, and not direct experiences themselves, are particularly influential for public attitudes” (Banjak-Corle & Wallace, 2020, p. 13). As these findings indicate, people’s opinions do not have to be based on empirical evidence to have relevance for their attitudes toward legal authorities. Public knowledge of crime, justice, and national security issues are largely acquired through broadcast, print, and social media (Dowler, 2003; Roche et al., 2015; Sela-Shayovitz, 2014). Citizen perceptions of crime can be very different from the reality, fear of terrorism and war can

dramatically differ from actual risk, and beliefs about the effectiveness of authorities to address these problems do not necessarily mirror their actual impact (Dowler, 2003; Orr & West, 2007; Stafford & Galle, 1984). To a very real extent, many people's perceptions of the effectiveness of legal authorities are not as dependent on direct knowledge as they are on vicarious experience.

The Symbolic Duty – Direct and Vicarious Experience

As perhaps the most ubiquitous representatives of state authority and power, police and courts fulfill an integral symbolic duty for society (Bradford, 2014; Chambliss, 1979). Because they are the legal authorities with the most frequent and direct contact with the public, they carry the mantle of legitimacy for the entire system of law and government (Beetham, 2013; Boateng, 2018; Loader & Walker, 2007; Sevier & Tyler, 2014; Trinkner, 2018; Walter & Bolger, 2019). This symbolic responsibility is suggested by Van Maanen (1978) in describing the so-called “asshole” – a type of symbolic assailant that is particularly aggravating for police because it threatens the legitimacy of their role:

When a police officer approaches a civilian to issue a traffic citation or to inquire as to the whys and wherefores of one's presence or simply to pass the time of day, he directly brings the power of the state to bear on the situation and hence makes vulnerable to disgrace, embarrassment, and insult that power. (Van Maanen, 1978, p. 11)

The vulnerable nature of this responsibility necessitates careful presentational management, especially when coming into direct contact with citizens. To a certain degree, legal officials humanize the leviathan of state authority, providing a recognizable

face to bear the brunt of popular indignation. But behind the veneer of the individual police officer, judge, or prosecutor lies the generalized, impersonal, and uncaring might of state power. Police and courts play an integral role in the communication of people's relationship with the state, their position in society, their identity, and their worth (Bradford, 2014; Herbert, 2006; Mazerolle et al., 2013; Orr & West, 2007; Tyler & Blader, 2003). In addition to ensuring their own effectiveness at fulfilling the mandate, legal authorities must pay careful attention to the management of a symbolic identity that inspires a sense of confidence and trust among citizens. Facing pressure to meet expectations and overcome negative publicity, legal institutions go to great lengths to maintain a positive public image.

This image, for police perhaps drawing from August Vollmer's notion of police professionalism and for many courts from British common law procedure, aims to provide the public with the impression that these authorities act according to a code of honor, that they adhere to a chain of command, and that they are accountable both to superiors and to the public (Baum, 2006; Bellman, 1935; Chase & Thong, 2012; Gibson et al., 2010; Hamm et al., 2017; Hastie, 1973; Johnston, 2018; Manning, 1997; McDonald, 2015; Monks, 2018; Simpson, 2019; Tyler & Jackson, 2013). In many ways, Vollmer's influential movement toward police professionalization was an effort to reinforce the *legitimacy* of police, both by increasing their effectiveness at fighting crime, and perhaps more importantly by bolstering their appearance as a well-managed organization (Bellman, 1935; Douthit, 1975; Smith, 2007; Uchida, 1993).

These legitimation efforts can reach far beyond traditional forms of crime control. Tyler and Jackson (2013) noted that the goals of legal authorities increasingly include

“the desire to motivate willing cooperation” and the “importance of public engagement in communities in efforts to build social, political, and economic vitality” (p. 78). Even reforms that amount to superficial changes and symbolic gestures that may not dramatically alter specific police behavior can still have a positive impact on general perceptions of policing and thereby rekindle popular support (Chase & Thong, 2012; Loader & Walker, 2007; Manning, 2010; Smith, 2007). Image management becomes especially vital to achieving these goals when the laws being enforced are unpopular. Community resentment toward legal authorities necessitates public outreach and the appearance of accountability and reform. But the nature and success of these efforts can depend on the legal authority in question and the groups this authority most directly impacts. Regardless of the source of discontent, protecting the image of legal authorities, an activity that Manning (1997) termed “presentational strategies” and Goldsmith (2010) called “repair work,” is a crucial element of the role inhabited by police and courts.

Image management is especially vital for police and courts because of the potential for violence that hangs over even the most ostensibly legitimate interaction between citizens and legal authorities. “Non-compliance with police instructions will always risk violence, and if the policed do not comply through the mechanism of legitimacy they will be coerced, ultimately at the end of a gun” (Jackson et al., 2020, p. 19). The paradox of using violence to achieve peace contributes to the contamination of the police role, the “taint” referred to by Bittner (1970). While some may argue that authorities only resort to the use of force when legitimacy itself has failed, the *potential* for violence, along with the knowledge that its use is the inevitable consequence of resistance, underlies every interaction with citizens. Violence and legitimacy are separate

mechanisms of social control, but for legal authorities they are intimately related. As much as legal authorities might try to seem like regular members of the community, their ability to impose state sanctioned lethal force differentiates them from most other organizations as well as from the majority of citizens (Herbert, 2006; Jackson et al., 2020; Manning, 1980; Smith, 2007).

Legal authorities must go to great lengths to manage their image because of the alienation that results from this arrangement. Each encounter is a potential source of differential association and reinforcement; every interaction is a learning experience for all parties involved. For citizens, being treated fairly and with respect by authorities communicates a sense of inclusion and social status, making them feel like participants rather than pariahs (Bradford, 2014; Jackson & Sunshine, 2007; Radburn & Stott, 2018; Tyler, 1990). For authorities, encountering resistance and defiance from citizens can contribute to the social distance that these officials feel from citizens, perpetuating a cycle of estrangement (Jurek et al., 2022; Mourtgos et al., 2022; Smith, 2007; Terrill & Paoline, 2015; Wilson, 1968).

The importance of image management for legal authorities during their encounters with citizens is revealed by the substantial amount of research focused on the concept of procedural justice as one of the primary sources of legitimacy. The origins of procedural justice theory are frequently attributed to early research on conflict resolution and courtroom procedures (Thibaut et al., 1974; Thibaut & Walker, 1978), but contributions to our current understanding of the concept have come from a wide range of academic sources, including behavioral and organizational studies (Brockner et al., 2000; Clark & Wilson, 1961; Cohn et al., 2000; Leventhal, 1980; Pillai et al., 2001; Rahim et

al., 2001), political science (Beetham, 1991; Coicaud, 2002; Easton, 1975; Parsons, 1963), social psychology (Barrett-Howard & Tyler, 1986; Morris & Leung, 2000; Tost, 2011), childhood development (Gold et al., 1984; Hicks & Lawrence, 1993; Shaw & Olson, 2014), and research on community attitudes toward police (Albrecht & Green, 1977; Bridenball & Jesilow, 2008; Frank et al., 2005; Stoutland, 2001; Wilson, 1968). Searching for ways to improve the public image of police and courts, criminologists applied the concept of procedural justice to explain perceptions of direct encounters between citizens and legal authorities (Casper et al., 1988; Leventhal, 1980; Lind & Tyler, 1988).

Influential work on police legitimacy by Tyler (1990) broadly defined procedural justice as “the fairness of the procedures through which the police and the courts exercise their authority” (p. 284). Legitimacy, according to procedural justice theory, is derived primarily from the way authorities conduct themselves during their interactions with citizens. Assessments of procedural fairness in Tyler’s (1990) seminal framework are primarily based on two elements: *quality of decision making* and *quality of treatment*. These can be further divided into four distinct aspects: allowing citizens a voice in interactions, treating citizens with dignity and respect, making neutral decisions, and possessing trustworthy motives. These four aspects – *voice*, *respect*, *neutrality*, and *trust* – form the crux of Tyler’s procedural justice model (Figure 1).

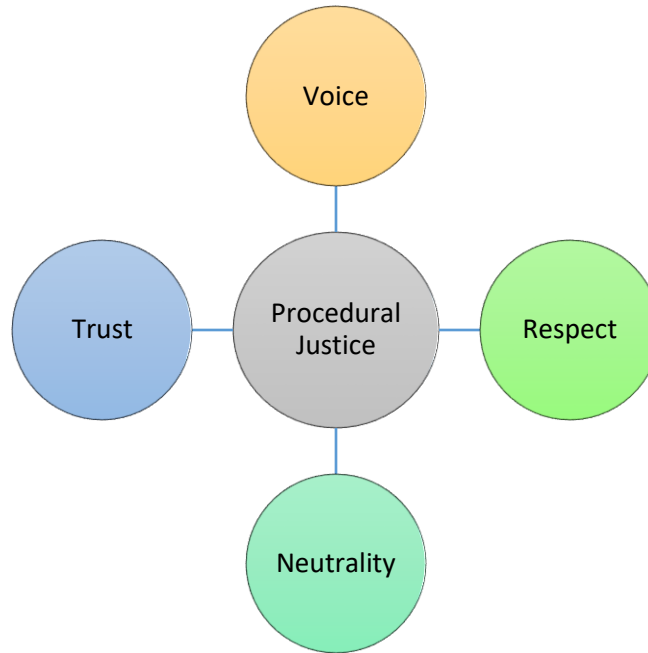


Figure 1: Tyler's procedural justice model

This model can be described as a “process-based” conception of legitimacy built upon the idea that processes tend to be more important to people’s perceptions of legitimacy than outcomes. According to Tyler’s (1990) framework, legitimacy is derived primarily from procedural rather than instrumental sources. This means that interactions between authorities and citizens can be perceived as legitimate even when the outcomes are negative or when disputes and problems are left unresolved. While the perceived effectiveness of legal authorities is still relevant to legitimacy, its importance is secondary to perceptions of procedural fairness. When citizens perceive that their input is valued and received by officials, then they are more likely to believe in the legitimacy of law enforcement. Further, when citizens perceive police to have trustworthy motives, to be neutral in their interactions with citizens, and to treat people with respect, they are more likely to perceive police to be legitimate (Tyler, 1990). The elements of voice, respect, neutrality, and trust are central to modern procedural justice theory. The main

conclusion of Tyler's body of work is that people form their assessments of legal authorities based largely on the extent to which these authorities are perceived to behave in accordance with the norms of procedural justice.

A substantial amount of support exists for Tyler's (1990) procedural justice model of legitimacy. Research conducted in many countries has found that procedural concerns tend to have a stronger influence on perceived legitimacy than instrumental concerns such as effectiveness (Hough et al., 2013; Kochel et al., 2013; Martin & Bradford, 2019; McLean et al., 2018; Reisig & Lloyd, 2009; Rice & Piquero, 2005; Sparks & Bottoms, 1995; Sunshine & Tyler, 2003; Terrill & Paoline, 2015; Trinkner & Cohn, 2014; Trinkner et al., 2018; Tyler et al., 2014; Van Damme et al., 2015; Wolfe & Piquero, 2011). Being treated in a procedurally just manner by authorities tends to leave a more positive impression, even if a ticket was written or a crime left unsolved (Lee et al., 2019; Mazerolle et al., 2012; Murphy et al., 2008; Sahin et al., 2017). Procedural justice has also been shown to reduce anger, defiance, and resistance to police commands and court orders (Mazerolle et al., 2013; Walters & Bolger, 2019). Experimental research has found that the implementation of procedural justice practices is associated with more positive citizen attitudes toward authorities and a greater likelihood of voluntary cooperation, at least within the context of relatively routine encounters such as traffic stops (Mazerolle, 2012; Murphy et al., 2008; Sahin et al., 2017).

However, it should be noted that these same strategies may not be as practical or effective when employed in hostile confrontations between police and citizens, nor may these same conceptualizations of proper procedure hold true in all countries and contexts (Akinlabi & Murphy, 2018; Bottoms & Tankebe, 2012; Mazerolle et al., 2013; Sun et al.,

2016, 2018; Tankebe, 2009). Procedural justice research has in the past been criticized for relying heavily on data collected in the United States and other Western countries (Murphy & Cherney, 2012; Reisig et al., 2014; Sato et al., 2016). According to Bradford et al. (2014a), “with a handful of exceptions, procedural justice effects have been identified in relatively wealthy societies with stable and well-established police services and generally Peelian policing ideologies” (p. 248). There remains vast disagreement about what procedural justice looks like in different countries and how much of the variation in legitimacy between countries can be attributed to differences in procedure (Boateng et al., 2016; Bottoms & Tankebe, 2012; Cao & Zhao, 2005; Dawson, 2018; Liu, 2019; Mazerolle et al., 2013; Radburn & Stott, 2018; Reisig et al., 2014; Sun et al., 2016, 2018; Tankebe, 2009; Terpstra & Van Wijck, 2021; Trinkner, 2019).

Theories of procedural justice have also been challenged for exhibiting bias toward democratic forms of governance, tautologically establishing the criteria for legitimacy in democratic terms and ignoring the ideological relativism of the concept. Critics have argued that the applicability of the procedural justice model to non-Western cultures and societies is limited and requires adjustment to account for contextual differences (Akinlabi & Murphy, 2018; Bottoms & Tankebe, 2012; Mehozay & Factor, 2017; Sun et al., 2016, 2018). Some scholars maintain the existence of a universal legitimization *process* or *structure*, although the specific contents may vary between nations (Beetham, 1991; Reisig et al., 2014). International research has produced mixed results regarding the importance of procedural justice for legitimacy in other nations (e.g., Bottoms & Tankebe, 2012; Hough et al., 2013; Reisig et al., 2014; Sun et al., 2016, 2018). For example, while Sun et al. (2018) noted that some elements of Tyler’s model

were supported by their analysis of Chinese data, they recommended that “future research needs to develop culture-specific measures to further elaborate Tyler’s process-based model of policing” (p. 455). This simple suggestion for future study understates a larger ongoing debate over conceptualization and measurement. Scholars are undecided as to whether procedural justice (and legitimacy) should be studied using subjective “culture-specific” measures or objective universal measures. The desire to construct a model of legitimation that is universally applicable is often at odds with the conceptualization of legitimacy as a subjective, empirical property rather than an objective, normative standard.

In a recent study of routine traffic stops in the Netherlands, Terpstra and Van Wijck (2021) found no significant relationship between police behavior during traffic stops and citizen perceptions of police, indicating that attitudes toward legal authorities are likely too durable to be greatly influenced by a single encounter. Pre-existing attitudes derived from prior experience, interactions with parents and peers, and media consumption are prone to have a large influence on how interactions with police and courts are perceived by citizens (MacCoun, 2005; Roche et al., 2015; Terpstra & Van Wijck, 2021). Even if people’s evaluations of their individual interactions with authorities are heavily influenced by perceptions of procedural justice, more general perceptions of legitimacy likely stem from broader origins than personal experience alone. Attitudes toward authorities are not solely dependent on how these authorities behave – they are also influenced by sources such as vicarious experience, group identity, social capital, moral alignment, and perceived effectiveness. These other influences are particularly important for the large number of individuals without any direct experience

with legal authorities (Brandl et al., 1994; Mazerolle et al., 2013; Mehozay & Factor, 2017).

In one of the most well-known modifications of Tyler's framework, Bottoms and Tankebe (2012) called for a different kind of approach to the study of legitimacy, arguing that the process of legitimation is better understood as a *dialogue* between holders of power and average citizens subject to that power. Tyler's (1990) definition, according to Bottoms and Tankebe (2012) specifies the concept of legitimacy as overly dependent upon citizens' *reactions* to the exercise of authority. It is equally important, say Bottoms and Tankebe (2012), to focus on the process by which authorities make *claims* to their own legitimacy and adapt their methods according to public reactions. Those who hold power attempt to give the impression that they are justified in the possession of this position and privilege (Barker, 2001). Those subservient to authority react to these claims, conferring legitimacy with their consent or withholding it with their defiance (Beetham, 1991). Only considering one side of this dialogue will not provide a complete picture of the legitimation process. From the dialogical perspective, legitimacy is not a solid state; it is a complex, perpetual process of semiotic call and response (Bottoms & Tankebe, 2012; Mazerolle et al., 2013).

In a subsequent article, Tankebe (2013) advocated combining the concepts of *procedural fairness*, *distributive fairness*, *lawfulness*, and *effectiveness*, not just as indicators of legitimacy, but as elements of legitimacy itself (Figure 2). Tankebe (2013) defined legitimacy as "the right to exercise power" and noted the large amount of conceptual confusion surrounding this concept, which is frequently conflated with related but distinct concepts such as "trust" and "obligation to obey." Describing this

conceptualization, Jackson and Kuha (2016) noted that “procedural justice does not activate status, respect, and identification, which then generates legitimacy, according to Tankebe. Procedural justice (or at least the belief that police are procedurally fair) *is* legitimacy” (Jackson & Kuha, 2016, p. 25, emphasis in original).

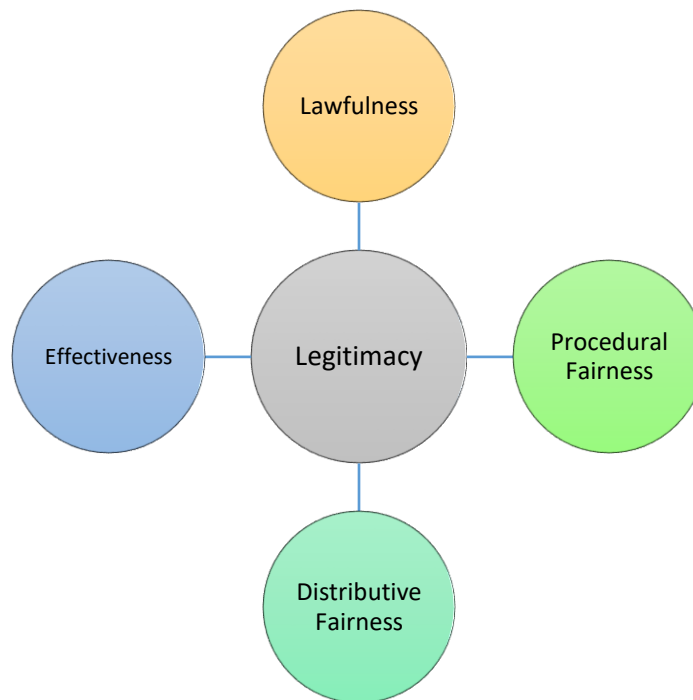


Figure 2: Tankebe's legitimacy model

Both Tyler's (1990) and Tankebe's (2013) conceptions of legitimacy heavily emphasize the behavior of legal officials during their encounters with the public. But rather than proposing procedural fairness as antecedent to legitimacy, Tankebe's (2013) model locates this concept as an element of legitimacy itself. Distributive fairness is included within this model of legitimacy as well, again not as a cause, but as a fundamental component, implying that legal authorities can only be considered legitimate when they are perceived to distribute their benefits, impositions, arbitrations, and intrusions in an equitable manner.

In addition, Tankebe's (2013) model incorporates the concepts of *lawfulness* and *effectiveness* as key elements of legitimacy. When people perceive legal authorities to be acting in accordance with the law and when there is sufficient accountability for misconduct, legitimacy will be increased. When people perceive legal authorities to be effectively fulfilling their mandate, legitimacy is likely to increase as well. Incidents of corruption, brutality, and other abuses of power coupled with the absence of oversight and accountability can dramatically reduce the perceived legitimacy of authorities. (Kääriäinen, 2007; Punch & Gilmour, 2010; Tankebe & Asif, 2016; Vito et al., 2011).

The great variety of criminal justice systems around the world and the diversity of organizational forms within a single country can produce widely varied impressions of the fairness, lawfulness, and effectiveness of these systems (Akinlabi, 2020; Jang et al., 2010; Lowatcharin & Stallman, 2019; Sun et al., 2018). Different justice systems have entirely different mandates, protocols for oversight and accountability, organizational structure, standards of conduct, and civil rights concerns. Tankebe (2013) himself specified that the elements of this legitimacy model were "some of the likely main contents of the dimensions of police legitimacy *in a liberal democracy*" (p. 107, emphasis added). The applicability of this conceptual model internationally remains a matter of academic debate.

In a confirmatory factor analysis of survey data from the United States and Ghana, Tankebe et al. (2015) found empirical support for a four-dimensional legitimacy construct composed of procedural justice, distributive justice, effectiveness, and lawfulness. However, this approach to measurement has been criticized for falsely assuming that factor analysis alone can determine whether these elements are indeed

legitimacy itself, rather than merely indicating that they are highly correlated with each other (Jackson & Kuha, 2016). Legitimacy might not have the same meaning in different social contexts, nor comprise the same elements or be derived from the same sources. Tankebe's (2013) model has been criticized for essentially imposing a normative definition of legitimacy, denying the possibility that what constitutes legitimate authority might vary dramatically between societies.

In other words, while Tankebe's (2013) use of confirmatory factor analysis (CFA) can assess the underlying dimensionality of the items, their combined meaning of "legitimacy" has been imposed *a priori* rather than derived from analytical results (Jackson & Kuha, 2016). According to Trinkner (2019), within Tankebe's (2013) framework, "there is no distinction between legitimacy itself and the process by which an entity becomes legitimated" (p. 7). The applicability of the model when incorporating subjective, localized, and indigenous definitions of fairness, lawfulness, and effectiveness remains a source of contention.

Despite these criticisms, other researchers (e.g., Sun et al., 2018) have continued to draw similar inferences from the application of CFA in different social contexts and persisted with the conclusion that because these four elements are highly correlated this means that they are constituent parts of legitimacy. The empirical strategy used by Tankebe (2013), Sun et al. (2018), and others to arrive at this conclusion is, according to Jackson and Bradford (2019), incapable of making this determination. They argued that Sun et al. (2018) imposed their own definitions of legitimacy and did not adequately account for the possibility of cultural relativity (Jackson & Bradford, 2019). The fact that these four elements were found to form a common factor does not imply that this factor

can be called legitimacy. Sun et al. (2018) had merely imposed their preconceived definition of legitimacy as comprised of these four elements. While this type of analysis may indicate whether these four elements form a single factor, it reveals nothing about whether this factor can be called legitimacy.

Another conceptual and measurement issue encountered by previous research is the problem of capturing *perceived* procedural justice compared to *actual* procedural justice. Most research in this area relies on the self-reported views of individuals and does not take the extra investigatory step of objectively measuring the procedures used by legal authorities (Radburn & Stott, 2018; Trinkner et al., 2018). Within both Tyler's (1990) and Tankebe's (2013) frameworks, the key to legitimacy lies not in altering the *perceptions of citizens*, but in altering the *behavior of legal officials* through supervision, training, oversight, and an organizational realignment toward norms of procedural and distributive justice, lawfulness, and effectiveness. These perspectives maintain that process and behavior are major sources of attitudes toward police and that these attitudes can be changed if legal authorities' process and behavior are changed (Mazerolle et al., 2013; Mazerolle & Terrill, 2018; Owens et al., 2018).

However, it is debatable to what extent individual interactions with legal authorities can affect people's lasting perceptions of these entities. Perceptions of criminal justice authorities develop over time, with frequent interactions having a cumulative effect on perceived legitimacy (Kochel, 2017; Oliveira et al., 2020; Smith, 2007). In communities where contact with police is more common, these accumulated experiences can have dramatic effects on local attitudes toward police. Many police-citizen interactions involve discretionary forms of police behavior that are often not part

of any formal process and provide limited opportunity for citizens to contest mistreatment by police. This includes police stops for questioning, investigatory vehicle stops, pat-downs, checkpoints, and other types of searches (Gau & Brunson, 2010). While some research on community policing and police legitimacy has found that positive contacts with police can significantly improve public perceptions of police legitimacy (e.g., Peyton et al, 2019), these results contradict other findings, for example by Skogan (2006), that *any* involuntary police contact, even when ostensibly “positive,” tends to negatively affect perceptions of police.

According to Skogan’s (2006) “asymmetry hypothesis,” even seemingly benevolent interactions with police cannot outweigh the effects of negative encounters and general perceptions. While some studies have found support for this hypothesis (e.g., Rosenbaum et al., 2005), it remains unclear if changes to officer behavior during police-citizen interactions can significantly improve attitudes, or if any contact is inherently negative contact, as Skogan (2006) has suggested. One notable experimental study of police behavior during traffic stops found that procedural justice positively influenced citizen perceptions of the *stop* but did not significantly affect their perceptions of police more generally (Sahin et al., 2017). These results align with other findings that have indicated the near impossibility of altering a person’s long-held “durable perceptions” of legal authorities with a single positive encounter (e.g., Oliveira et al., 2020; Skogan, 2006).

The potential impact of the procedural justice paradigm on police training, tactics, and behavior as its prescribed reforms become more widespread remains unclear. Even if such interventions do not have an immediately positive effect on perceptions of police,

they may contribute to a broader cultivation of police legitimacy over time. The formulation of procedural justice as central to the process of legitimation implies that direct experience with police and courts will have the greatest effect on public perceptions, potentially overriding preexisting attitudes toward legal authorities. Tyler (2001) noted that extant literature at the time indicated that “those members of the public with personal experience with the police or courts focus more heavily on issues of quality of treatment” (p. 234). This suggests that procedural justice is most important for perceived legitimacy to those who have direct experience with authorities. These and similar findings have been called into question by more recent research indicating that the influence of individual encounters with police and courts on general attitudes toward legal authorities is not as strong as previously thought (e.g., Orr & West, 2007; Sahin et al., 2017; Skogan, 2006; Terpstra & Wijk, 2021). For individuals without direct contact, other factors such as perceived effectiveness, vicarious experience, group identity, moral alignment, and social capital likely have a greater influence.

Because many citizens have little to no direct contact with legal authorities during their lives, direct experience is likely not the only, or even the primary, source of attitudes toward these authorities (Forrest, 2021; Zahnow et al., 2019). For many people, perceptions derived from vicarious sources are likely to have a larger influence (Bridenball & Jesilow, 2008; Chermak et al., 2005; Intravia et al., 2018; Rosenbaum et al., 2005; Smith, 2007). The vicarious effect of police misconduct and brutality has been noted in studies conducted in the United States and many other nations (Akinlabi, 2020; Kochel, 2017; Levi et al. 2009; Miethe et al., 2019; Skogan, 2006; Tankebe, 2009; Weitzer & Tuch, 2005). Similarly, the relaying of vicarious experiences with courts,

incidents of judicial misconduct, or media depictions of controversial court rulings can all influence people's opinions of these authorities (Bobo & Thompson, 2006; Chermak et al., 2005; Gibson et al., 2010; Sevier & Tyler, 2014). A single high-profile instance of perceived injustice has the potential to damage the relationship between citizens and police, impeding crime control and leading to even worse outcomes for communities (Kochel, 2017). Responding to this deficit in legitimacy, authorities might double down on crime control and attempt to maintain citizen confidence based on effectiveness, an approach that may be sufficient to rekindle belief in legitimacy in the short term. In some contexts, however, this deficit will necessitate further outreach and image management to repair the moral and ethical rift between citizens and legal authorities (Bradford et al., 2014b; Kochel, 2017).

General perceptions of legal authorities can affect how specific interactions with these authorities are perceived by citizens, making identical actions interpretable in any number of ways depending on people's preconceived notions of police and the justice system (Smith, 2007). As Gau and Brunson (2010) noted, "police actions do not necessarily have to *be* unfair for people to perceive them as such" (p. 259). Negative media depictions of police violence or judicial misconduct can undermine public perceptions of legitimacy, leading citizens to interpret all behavior by legal authorities through a critical lens (Akinlabi, 2020; Chermak et al., 2005; Dowler, 2003; D'Souza et al., 2018; Gibson et al., 2010; Roche et al., 2015). Positive depictions of authorities can have the opposite effect, clouding the judgements of citizens and leading to a tendency to interpret behavior by legal authorities as benevolent and justified (Van Craen, 2013). The same imagery can elicit a wide range of perceptions of legal authorities in the minds of

different individuals. Differences in pre-existing conceptualizations of authority derived from legal socialization, group identity, moral alignment, social capital, perceived effectiveness, and direct experience likely explain some of this variation (Hawdon, 2008; Hinds, 2007; Murphy, 2017; Nihart et al., 2005; Nivette et al., 2020; Orr & West, 2007; Rosenbaum et al., 2005; Smith, 2007).

Nevertheless, if the popular narrative surrounding criminal justice is based on a fundamentally flawed understanding of the proportionality of police violence and punitive sentencing, legitimacy is likely to be unaffected by any attempt to improve the behavior of legal officials. Similarly, if people are frequently exposed to sensationalized media coverage of violent crime, they will be less likely to perceive authorities as effective no matter what effect police and courts may have on actual crime rates.

Findings published in academic research articles are often interpreted by news media without a complete understanding of the importance of denominators to the implications of results (Tregle et al., 2019; Van Craen, 2013; Zimring, 2017). Media misinterpretations of the scientific research process and a tendency to highlight findings that confirm preconceived assumptions or generate web traffic can have dramatic effects on public opinion about crime and justice issues. Media depictions of crime, law enforcement, and justice also contribute to group identity, trust, and moral alignment, concepts which themselves have nuanced implications for the legitimacy of legal authorities (Baranauskas, 2022; Intravia et al, 2018; Miethe et al., 2019; Roche et al., 2015).

The Personal Bond – Identity, Morality, and Society

Theories of legitimacy have been criticized for erroneously assuming the inherent validity of criminal justice systems without considering how these systems are historically embedded within larger social hierarchies based on race, class, gender, and other group identities (Armeline et al., 2014; Beetham, 1991; Radburn & Stott, 2018; Tankebe, 2008). Procedural justice theory suggests that to be considered legitimate, legal authorities must act in a fair and just manner. But some of Tyler's (1988) earliest findings emphasized that the way citizens subjectively *perceive* the actions of legal authorities strongly influences citizen evaluations, regardless of the objective reality of these actions. These subjective perceptions can be greatly influenced by factors such as group identity, social capital, and moral alignment. (Antrobus et al., 2015; Hawdon, 2008; Herbert, 2006; Luo et al., 2019; Radburn & Stott, 2018; Smith, 2007; Terpstra & Van Wijck, 2021; Trinkner, 2019; Tyler et al., 2000).

While some researchers maintain that the relationship between procedural justice and legitimacy is largely invariant across individuals and groups (e.g., Lind et al., 1997; Sargeant et al., 2015; Sunshine & Tyler, 2003; Tyler & Huo, 2002; Wolfe et al., 2016; Zahnw et al., 2019), a substantial amount of research suggests that procedural justice is of varying significance to legitimacy based on a person's orientation toward the group represented by legal authorities (Blumer, 1958; Bobo & Hutchings, 1996; Bridenball & Jesilow, 2008; Drakulich et al., 2019; Factor et al., 2014; Gerber et al., 2017; Gibson et al., 2010; Lockwood et al., 2018; Madon et al., 2017b; Martin & Bradford, 2019; Moule et al., 2018; Swain, 2018; Tankebe, 2009). The groups to which a person belongs and the hierarchical positions of these groups relative to legal authorities appear to moderate the

effect of procedural justice on perceived legitimacy in many contexts. The more that people possess a sense of belonging to the “in-group” represented by police and the criminal justice system, the more likely they are to evaluate these authorities based on shared moral values such as fairness and justice. Individuals and groups who do not possess this identity might be more likely to prioritize factors such as effectiveness, or have different standards by which they assess fairness, justice, and proper procedure (Ashforth & Gibbs, 1990; Bradford et al., 2014b; Coicaud, 2002; Factor et al., 2014; Hurwitz & Peffley, 2005; MacCoun, 2005; Madon et al., 2017b; Mazerolle et al., 2013; Murphy & Cherney, 2012; Radburn & Stott, 2018; Tankebe, 2009; Zahnw et al., 2019).

Even if the effect of procedural justice does not vary across individuals and groups, the importance of other sources of perceived legitimacy may still exhibit a great deal of variation. In some contexts, other influences might rival procedural justice in their effect on the perceived legitimacy of legal authorities (Antrobus et al., 2015; MacCoun, 2005; Tankebe, 2009). Additionally, groups may have different criteria for the legitimacy of within-group relationships compared to between-group relationships. For those who do not feel part of the group represented by legal authorities, procedural justice is potentially much less relevant to perceived legitimacy. Research has even found evidence that procedural justice can have a negative effect on the perceived legitimacy of legal authorities if it is viewed as a manipulative, condescending distraction from more salient issues (Ashforth & Gibbs, 1990; Herbert, 2006; MacCoun, 2005; Murphy, 2017).

Standards of “fairness” and “justice” are not universal, and different groups may evaluate procedural justice and the legitimacy of legal authorities based on entirely different criteria. Not all members of society agree on how law and order should look,

how legal officials should behave, and what behavior deserves the attention of the justice system. Different groups can have radically different interpretations of the mandate given to legal authorities and the boundaries around its discretionary enforcement. It is therefore difficult to definitively conclude that procedural justice is a universal source of legitimacy, at least in the rigid formulation presented by Tyler (1990). People can belong to and identify with many groups, all with different positions in the social hierarchy and different relationships with authority. The only way to understand legitimacy as it is subjectively perceived by citizens is through an intersectional approach that accounts for a multitude of social identities.

The presence of police or the involvement of the courts in people's lives can take on very different symbolic meanings depending on their group identities (Smith, 2007). Individuals belonging to marginalized social groups might perceive the same objective reality of law enforcement differently than members of more privileged groups. Historical patterns of bias and discrimination, carried forward into unequal protection and enforcement of the law, can threaten the legitimacy of legal institutions among marginalized groups for generations (Bobo & Thompson, 2006; Tankebe, 2008). Moreover, if people belong to a group or otherwise possess an identity that they believe is the target of differentially oppressive or brutal treatment by authorities, confidence in these authorities is much less likely (Baker et al., 2015; Bradford, et al., 2014a; Dario et al., 2019; Murphy, 2021; Rothstein & Stolle, 2008; Trinkner et al., 2018; Tyler & Blader, 2003). Belonging to a disadvantaged racial or ethnic group, for example, is often associated with more negative perceptions of police, while belonging to a dominant racial group can have positive effects on people's perceptions of police if the values of this

group are seen as being protected and upheld by the criminal justice system (Blumer, 1958; Cheurprakobkit, 2000; Engel, 2005; Gau & Brunson, 2010; Heen et al., 2018; Hurwitz & Peffley, 2005; Lloyd et al., 2020; Novak & Chamlin, 2012; Nuño, 2018; Rice & Piquero, 2005; Sampson & Bartusch, 1998; Weitzer & Tuch, 2005). These differences can also affect indirect impressions of police, with members of different minority groups perceiving the same vicarious retellings or publicized incidents in very different ways (Intravia et al., 2018; Kochel, 2017; Moule et al., 2018).

Manning's (1997) definition of the "impossible mandate" imposed upon police referred to the fact that the various responsibilities and expectations of legal authorities are often incompatible with one another, especially when attempting to address diverse and often conflicting group norms. The mandate given to police and courts comes with an understanding of reciprocation. If some groups feel that authorities are not upholding their end of the bargain, they may revoke some of the privileges and immunities extended to these entities. For example, the introduction of "broken windows" policing approaches targeting low-level offenses and disorder created serious problems for the perceived legitimacy of police among the subsection of the public most affected by these policies (Gau & Brunson, 2010; Wilson & Kelling, 1982). The concept of "disorderly conduct" is highly subjective and open to the discretionary situational interpretation of police officers (Armaline et al., 2014; Gau & Brunson, 2010). The criminalization of public order violations does not always appeal to the same general sense of morality as more serious and violent crimes.

Order maintenance often involves the enforcement of external definitions of order and group-specific concepts of peace and security not shared by every member of the

community (Armeline et al., 2014; Radburn & Stott, 2018). While some residents may welcome increased police scrutiny in their neighborhoods, others may feel that police are too frequently interfering in their daily lives (Armeline et al., 2014; Hawdon et al., 2003; Bobo & Thompson, 2006; Levi & Sacks, 2009; Schuck, 2019; Vitale, 2017). It is also worth noting that many of those with whom law enforcement interact most frequently and oppressively are rarely included in survey research or consulted at community meetings. The difficulties associated with order maintenance policing indicate how people's expectations and perceptions of behavioral aspects of law enforcement can depend on the amount of social distance present between their group and the group represented by the justice system (Braithwaite, 2003; Kelling & Coles, 1998; Murphy & Cherney, 2012; Wilson, 1968).

The broader group identity represented by legal authorities is that of the nation-state itself (Sargeant et al., 2015; Schwartz et al., 2012). Legal authorities are mechanisms of the state apparatus, and the symbolic identity of police and courts is often intertwined with the imagery of nationalism and patriotism. In the United States, the police role became increasingly melded with patriotic symbolism in the decades following the 9/11 attacks (Sunshine & Tyler, 2003). The popularity of a mock American flag with the traditional color scheme replaced with black and white separated by a "thin blue line" representing police is another example of how closely connected these symbols have become in the minds of many Americans (Wolfe & McLean, 2021). Even if unintentional, the choice by many professional athletes to protest police brutality by kneeling for the national anthem at sporting events further cemented this symbolic connection. To many Americans, disrespecting the flag and disrespecting the police have

become one and the same, and individuals with strong patriotic beliefs likely also express more support for law enforcement in general (Schatz & Lavine, 2007; Wolfe & McLean, 2021).

This connection between national identity and support for law enforcement is by no means unique to the United States. Many countries, especially those of an authoritarian nature, draw on the symbolic power of patriotism to aid in the legitimization of their legal authorities (Bradford, 2016; Brudny & Finkel, 2011; Cherney & Murphy, 2013; Fauve, 2015; Günay & Dzihic, 2016; Machura et al., 2019; Ortmann, 2009; Pratt, 2007; Sargeant et al., 2015; Von Soest & Gauvogel, 2017). The more the police role becomes entwined with nationalism, the more opposition and criticism of police will be perceived as unpatriotic. The use of nationally recognized symbols, rituals, and ceremonies by police serves to engender public legitimacy by appealing to the national identity and patriotism of citizens (Schatz & Lavine, 2007). National identity therefore tends to be associated with more positive attitudes toward authorities, so long as these authorities exhibit a strong connection with the symbolic mythologies of the nation-state (Barker, 1995; Bleaney & Dimico, 2016; Bradford, 2014; Radburn & Stott, 2018). The political values people hold are likely to influence their opinions about legal authorities, although this can depend on the degree to which criminal justice is politicized in a society (Beetham, 1991; Stack & Cao, 1998; Swain, 2018). Importantly, stark political division regarding the role of legal authorities in society may itself be a potential detriment to legitimacy. As Goldsmith (2005) noted, “wherever policing is experienced as partisan in nature, generalized trust in the police is unlikely” (p. 456).

Related to but distinct from group identity, the amount of social capital possessed by individuals, communities, and groups is another important source of perceived legitimacy. Social capital for individuals most frequently refers to the amount of trust they have in others and the extent to which they are active in group associations, such as clubs, leagues, or congregations (Putnam, 2000). At the group level, social capital can refer to community cohesion, collective efficacy, and political mobilization (Hawdon, 2008; Zahnow et al., 2019). Social capital can determine the nature of people's relationships with authorities, and the amount of social capital individuals can access is often associated with the groups they belong to and the social position of these groups (Alda et al., 2019; De Zuniga et al., 2019).

Individuals, groups, and communities with higher social status and more social capital may be better able to translate their dissatisfaction with authorities into changes in policy and law, thereby increasing their own perceptions of legitimacy. Those who possess greater access to social networks, a better grasp of dominant social norms, and a propensity for trust and cooperation tend to have more positive attitudes toward legal authorities (Cao et al., 1996; Hamm et al., 2017; Putnam, 2000; Rothstein & Stolle, 2008). Social capital is theorized to increase trust in the justice system “because it familiarizes citizens with the way in which institutions work and provides them with ways to influence policy, but also because by increasing involvement and cooperation, it facilitates the implementation of policy” (Van Craen, 2013, p. 1046). A generalized sense of trust in other people is considered the primary element of social capital that facilitates involvement in community networks and associations and promote collective efficacy

(Cao & Wu, 2019; Hawdon, 2008; Hu et al., 2019; Newton & Norris, 1999; Putnam, 2000).

Tankebe (2019) suggested that “the notion of ‘cooperative social relations’ can be understood in two ways: generalized ‘horizontal’ cooperation among citizens and institutions or ‘vertical’ cooperation as in support by citizens for legal institutions” (p. 1390). Social capital is one indicator of horizontal cooperation, while legitimacy might be said to represent vertical cooperation. These forms of cooperation are distinct but interrelated. Possessing a predisposition toward generalized trust makes individuals more likely to have positive attitudes toward legal authorities. Generalized trust can also cause interactions with the law to proceed more smoothly and the actions of authorities to be assessed less critically by citizens (Hamm et al., 2017). For people without any direct experience with legal authorities, generalized trust potentially has a larger effect on perceived legitimacy than more immediate variables such as procedural justice.

Social capital is directly tied to the ability of community members to petition legal institutions for redress of grievances. These opportunities usually take the form of complaint systems whereby citizens can formally log their discontent and community meetings where members of the public are able to voice their concerns directly (Stelkia, 2020). However, these concerns, whether submitted in writing or voiced in person, often appear to citizens to go unaddressed (Cheng, 2020). There is a clear imbalance within communities as to which voices are given more credence and respect by authorities, which concerns are taken seriously, and which grievances are dismissed. Simple measures of the occurrence or frequency of police community meetings may not capture the nuances of how effective these meetings are at enhancing legitimacy among citizens

(Cheng, 2020). The more open and accessible are the communication channels between citizens and police, the more community social capital can be channeled into productive dialogue. It is not a foregone conclusion that greater social capital will always and everywhere be associated with more positive attitudes toward authorities. In the absence of open communication, social capital may in fact undermine legitimacy when communities band together in collective resistance against legal authority (Hu et al., 2019). When community bonds are forged in opposition to perceived oppression by legal authorities, the resulting collective efficacy does not tend to bolster the legitimacy of these authorities.

The relationship between social capital and legitimacy can vary widely depending on national context. Commonly used measures of social capital can have different meanings and implications in different cultural contexts (Boateng, 2018; De Zuniga et al., 2019; Kääriäinen, 2007; O’Loughlin, 2004; Tausch, 2016; Tsushima & Hamai, 2015). For example, in China, cooperation with authorities has been found to be dependent on people’s cultivation of what Hu et al. (2019) called “public spirit.” However, associational membership and other traditional measures of social capital take on a very different meaning in the Chinese context, as they do not necessarily imply a fully voluntary decision to participate in such activities and associations (Hu et al., 2019). Cultural differences of this nature complicate predictions regarding the relationship between social capital and legitimacy in different countries. Measures of social capital are sometimes difficult to separate from identification with the superordinate group represented by legal authorities, as well as from the perception of moral alignment with

these authorities, especially when analyzing the diversity of interrelated beliefs and identities around the world.

Closely related to group identity and social capital, moral alignment is another subjective source of the legitimacy of legal authorities. Importantly, morals alone do not promote cooperation with police or compliance with the law, it is when these morals are perceived to be aligned with police and consistent with the law (Beetham, 1991; Gilley, 2009; Tost, 2011). Legal authorities acting in ways or upholding laws that are inconsistent with people's moral convictions threatens the legitimacy of these authorities in the eyes of these citizens (Jackson et al., 2020; Levi et al., 2009; MacCoun, 2005; Meares et al., 2012; Reisig et al., 2014; Tankebe, 2009; Thomassen, 2013; Tyler, 2009). More broadly, legitimacy is partly based on perceptions that authorities are maintaining *moral* order, delivering *moral* justice, and fulfilling a *moral* mandate. Moral alignment can lead authorities to be perceived as morally effective, irrespective of their actual influence on crime and safety. (Bottoms & Tankebe, 2012; Factor et al., 2014; Jackson & Kuha, 2016; Jackson et al., 2018; Kelling & Coles, 1998; Mazerolle et al., 2012; Tost, 2011; Van Craen, 2013). Jackson and Sunshine (2007) asserted that "trust and confidence in the police are shaped not by sentiments about risk and crime, but by evaluations of the values and morals that underpin community life" (p. 214).

Perceptions of corruption within legal institutions can undermine the symbolic image of these authorities as protectors of moral order. The role of legal authorities is already on tenuous moral ground due to the "tainted" nature of its discretionary use of force (Bittner, 1970; Punch, 2009). Perceived corruption and lawlessness can erode what little legitimacy remains in these institutions by damaging the moral framework

underpinning the existence of legal authority itself (Jackson et al., 2014; Kääriäinen, 2007; Kochel et al., 2013; Levi et al., 2009; Punch & Gilmour, 2010; Tankebe et al., 2016; Vito et al., 2011). Corruption and lawless behavior at the institutional level can pollute the symbolic identity of legal authorities and contaminate grand narratives of law and order that form the moral foundation of criminal justice systems. Perceptions of corruption are commonly found to be negatively associated with the perceived legitimacy of authorities, and perceived corruption in any institution is likely to reduce the perceived legitimacy of related institutions (Bradford, 2016; Jackson et al., 2020; Levi et al., 2009; Punch, 2009; Reisig et al., 2014; Thomassen, 2013; Tyler, 2009). However, greater connection to the group identity represented by legal authorities might also attenuate the negative effects of perceived corruption on legitimacy, perhaps making corrupt behavior more tolerable as long as it does not threaten this association (Bradford, 2016).

The specific content of moral frameworks and the influence of these frameworks on perceived legitimacy can vary greatly between individuals, groups, and societies (Benedict et al., 2000; Jackson et al., 2011; MacCoun, 2005; Maskály et al., 2019; Mehozay & Factor, 2017; Taylor et al., 2015; Taylor & Lawton, 2012; Tyler et al., 2000). The diversity of value-systems around the world suggests a variety of moral influences on legitimate authority. Many international studies have concluded that while the process of legitimation may exhibit universal similarities, the content and mechanisms of that process depend on social, political, legal, and historical context and can vary widely across countries and cultures (e.g., Boateng, 2018; Cao & Zhao, 2005; Coicaud, 2019; Hough et al., 2013; Jackson & Bradford, 2019; Jang et al., 2015; Morris, 2015; Nivette, 2014; Stack & Cao, 1998; Sun et al., 2016, 2018). Such findings provide support for the

type of theoretical framework suggested by Beetham (1991), in which legitimacy is not based on adherence by authority to normative political standards but is instead derived from alignment between the qualities of authority and the moral frameworks underlying a particular social order.

Mehozay and Factor (2017) examined the diversity of value systems around the world and attempted to measure the relative orientation of various countries in terms of the core normative values held by their citizens. In their cross-national analysis of over two dozen European countries, the authors distinguished between four types of value system present in their sample of European nations – *religious-traditional*, *liberal*, *republican-communitarian*, and *ethno-national* (Mehozay & Factor, 2017). While not directly part of the interaction or dialogue between citizens and legal authorities, these core cultural values and deeply embedded worldviews might set the stage for more performative sources of legitimacy such as effectiveness and procedural justice. The moral framework through which citizens interpret the actions of legal authorities has great bearing on the way legitimacy is perceived. One important question raised by the debate between normative and empirical perspectives on legitimacy is to what extent legitimacy and its sources are inseparable from democratic value systems (Beetham, 1991; Coicaud, 2002; Gilley, 2012; Hinsch, 2010). While ostensibly measuring empirical conceptualizations of legitimacy, many studies that focus on procedural justice tend toward normative definitions of proper procedure that rely on democratic values such as fairness and equality. However, not all societies necessarily expect these procedural characteristics from their authorities, nor does legitimacy necessarily align to democratic norms.

Arising from international academic discourse is a growing understanding of legitimacy as a multilevel phenomenon that must be understood in terms of the complex interaction between higher-level variation and individual-level differences (Beetham, 1991; Boateng, 2018; Jackson & Bradford, 2019; Jang et al., 2015; Morris, 2015; Nivette, 2014; Stack & Cao, 1998; Sun et al., 2018). The specific actions by authorities that contribute to or detract from legitimacy are likely not universal. Researchers must be mindful not to impose imported measures on populations with very different conceptions of justice, law, and authority (Bottoms & Tankebe, 2012). Societies can have very different definitions of these concepts, and nations may place different boundaries around the mandate given to legal authorities, which could be expansive in some countries but restrictive in others (Hathazy, 2013; Mekouar, 2017; Way & Levitsky, 2006). Additionally, different group identities, moral frameworks, and social dynamics in different cultures are likely to produce substantial international variation in attitudes toward criminal justice authorities.

For example, Jackson et al. (2020) found that while perceived procedural justice was a very strong predictor of normative alignment with police in Brazil, attitudes toward police violence were not, indicating that people in different social contexts might define proper procedure in fundamentally different ways. A person's conception of justice may include the avoidance of violence, but it may also hinge on the imposition of violence. Jackson et al. (2020) referenced the unstable political history found in Brazil, where forms of governance shifted between authoritarianism and democracy several times over the 20th century, to explain why citizens might adopt different standards of proper procedure. Coicaud (2019) similarly remarked on the paradoxical legitimization strategies

employed by authoritarian regimes in Chile, Argentina, and Uruguay in the management of a superficially democratic image, both internally and among the global community of nations.

Legal authorities in countries with colonial pasts possess histories that are closely intertwined with legacies of slavery and oppression, undermining their legitimacy among minority groups (Ellmann, 1995; Jackson et al., 2020; Nivette & Eisner, 2013; Power & Cyr, 2009; Tankebe, 2008). Divisive histories of oppression and domination eat at the foundations of legitimacy and fragment social support for legal authorities in many parts of the world. Boateng et al. (2016) attributed lower levels of police legitimacy among a sample of South Korean citizens to the historical context of law enforcement in the Korean peninsula. They noted that “the brutally violent tactics of suppression employed by the police during the period of Japanese control left a deep antagonism toward the police force among South Korean citizens” (Boateng et al., 2016, p. 292). These examples are indicative of the complexity in applying universal standards to nations with widely diverse historical, cultural, and political contexts.

While all of the elements of legitimacy as defined by theorists such as Tyler (1990) and Tankebe (2013) perhaps matter to some extent across circumstances, the degree to which they matter is likely to depend on context. The relevance of conceptual sources of legitimacy such as procedural justice, distributive justice, effectiveness, lawfulness, vicarious experience, group identity, or social capital might depend entirely on the moral framework within a society from which the specific meaning of these concepts is derived. The importance of history cannot be understated, with some countries able to rely upon traditional structures to establish the legitimacy of legal

authorities, and others having no such historical foundation to build upon, or one that has been rendered unreliable by historical oppression and injustice (Bleaney & Dimico, 2016; Boateng et al., 2016; Bradford et al., 2014a; Hamilton et al., 1995; Jackson et al., 2020).

Accounting for the complex influence of political differences on the legitimacy of legal authorities around the world is already a daunting endeavor; it is made even more difficult when attempting to identify the diverse historical and cultural influences that may also play a role. A nation's historical and cultural context can influence all aspects of social organization, affecting vital processes related to socialization and the production of social capital that can then influence attitudes toward legal authorities (Bleaney & Dimico, 2016; Rothstein & Stolle, 2008). For example, research by Wang et al. (2019) found attachment to cultural values highly predictive of attitudes toward police among Chinese youth. Their findings indicated that traditional Chinese cultural values, rooted in Confucian ideals of harmony, respect, and collectivism, were associated with more positive views of police among juveniles. Conversely, juveniles more exposed to "Western popular culture" (which according to the authors promotes the undesirable ideals of materialism, capitalism, and individualism) were found to hold more negative opinions of police (Wang et al., 2019). Although an outlier in legitimacy research, the perspective offered by Wang et al. (2019) indicates that criminologists should be mindful not to assume that a Western understanding of legitimacy is generalizable to all cultural settings. While all societies may ultimately desire peace and harmony, the legitimate means to achieve these ends can take on very different forms.

In democratic societies, the mandate for legal authorities is thought to arise from the will of the people, expressed through the democratic system. The democratic ideal is

a system of justice based on consent rather than coercion. How people think and feel about legal authorities is an integral part of this process, at least according to the democratic paradigm (Anderson, 2005). From this point of view, the importance of procedural concerns for legitimacy appears reasonable. However, much debate in the research literature on legitimacy is focused on the generalizability of these concepts to different social, political, and cultural contexts and whether legitimacy as commonly conceptualized is inseparable from democratic values and forms of governance (Beetham, 1991; Coicaud, 2002).

Many consider the popular support for authorities found under non-democratic regimes to not qualify as “true” legitimacy, deriving its existence instead from a sort of “false consciousness,” or “dull compulsion” (Akinlabi & Murphy, 2018; Carrabine, 2005; Tankebe, 2013). Certain features of authoritarian states may make such societies incompatible with Tyler’s legitimacy model, or at least make accurate measurement of its indicators prohibitively convoluted (Jang et al., 2015; O’Loughlin, 2004; Sun et al., 2018). Citizens living under oppressive authoritarian regimes may be less likely to voice criticism, even on an anonymous survey, either due to fear of retaliation by the state or because of an ingrained acceptance of the necessity to submit to authority, reasons that bear little resemblance to Tyler’s conceptualization of legitimacy. Additionally, perceived legitimacy among citizens of authoritarian regimes may be “artificially” high because of cultural emphasis on a collective social orientation and the filtration of negative news about legal authorities by powerful regimes, leading to a “false” sense of confidence in these institutions (Cao et al., 2012).

While this is one potential explanation, it is debatable whether the notion of “artificial” confidence fits within an empirical conceptualization of legitimacy. By suggesting a normative definition of “legitimate” confidence and claiming that those in non-democratic societies hold “artificial” beliefs, these researchers are imposing a prescriptive judgement. A more empirical perspective would allow for the legitimacy of non-democratic regimes as well, as suggested by Dawson (2017):

An undemocratic or even a despotic regime could theoretically enjoy a high level of state legitimacy as a result of multiple factors...including the effectiveness of the state’s public relations campaign (i.e., propaganda), the control of information, the state’s ability to promote development, security, international standing, and/or to achieve other desirable outcomes. (p. 554)

In reviewing extant research on police legitimacy, Sun et al. (2018) found that non-democracies are generally excluded from the literature because social, cultural, and political differences are thought to create entirely different contexts for the exercise of legitimate power. Their findings indicated that “in non-Western, nondemocratic countries where cultures, sociopolitical settings, crime rates, and police systems are different from Western democracies, the dynamics of police-public relations, the formation of police legitimacy, and the influence of procedural justice may be quite distinct” (Sun et al., 2018, p. 457).

Even within more democratic societies, confidence and trust in authorities is far from assured. Many have noted the existence of a greater number of “critical citizens” in democratic societies and the important role played by the healthy skepticism of a free press (De Zuniga et al., 2019; Gilley, 2012; O’Loughlin, 2004). Additionally, confidence

in authorities can vary greatly across democratic societies depending on factors such as partisan polarization, corruption, and crime rates (Anderson et al., 2005; Hough et al., 2013; Jang et al., 2015; Punch & Gilmour, 2010). Police operating under ostensibly democratic forms of government are perhaps more likely to be held accountable for their misbehavior or ineptitude, meaning that perceived corruption and effectiveness may be more relevant to police legitimacy in democratic societies (Mauk, 2019). The relationship between legitimacy and democratic forms of government remains unclarified, with different perspectives making highly divergent claims about the structural requirements of legitimate authority (Beetham, 1991). Continued comparative study of legitimacy across countries and greater theoretical clarity in the specification of concepts and relationships are needed to better conceptualize this association.

This chapter has reviewed theoretical frameworks underlying several potential sources of the legitimacy of legal authorities. The first section discussed the importance of the mandate given to legal authorities and its relationship with perceived effectiveness, prior victimization, fear of crime, and fear of war and terrorism. Then the importance of image management related to people's direct and vicarious experience with legal authorities was explained in terms of the representative symbolic duties inherent to these institutions. Lastly, the highly subjective nature of legitimacy as it is perceived among different group identities, levels of social capital, and moral alignments both within and across countries was addressed. With this theoretical background in mind, the following chapter will proceed to describe the research questions, hypotheses, data sources, variables, and proposed analyses involved in the current study.

IV. CURRENT STUDY

This study analyzed the influence of theoretically relevant individual- and national-level factors on the perceived legitimacy of legal authorities in 47 different nations. This research aimed to contribute to the body of literature on legitimacy while addressing current debates surrounding the generalizability of theorized sources of legitimacy within different social contexts. Tyler's (1990) model proposed procedural justice as the primary source of legitimacy, whereas Tankebe's (2013) framework suggested that procedural fairness is a component of legitimacy itself. Both models located the procedural behavior of authorities as central to the cultivation of legitimacy, regardless of the fact that many people have little to no direct experience with the behavior of legal authorities over the course of their lives. In addition, international application of procedural justice models can often tend toward normative prescriptions for appropriate behavior on the part of authorities. It is important to allow for the possibility that what is considered procedurally just behavior by authorities may not be the same everywhere. The current study proposed a model of perceived legitimacy that did not include measures of perceived justice or fairness, instead focusing on concepts more likely to remain relevant for individuals without direct experience with legal authorities, and potentially across a wider range of social, political, and cultural configurations.

Based on the preceding theoretical analysis of their mandate to provide safety and security, their symbolic duty in relation to the state, and the subjective nature of their relationship with society across groups, power structures, and moral ideologies, this model included seven conceptual sources of legitimacy for legal authorities. These

concepts were *prior victimization, fear of crime, fear of war and terrorism, vicarious experience, group identity, social capital, and moral alignment* (Figure 3). Importantly, these concepts were not specified as constituent elements of legitimacy, but rather as some of its potential sources in different social contexts. Legitimacy itself remains conceptually ethereal and difficult to define in universally consistent terms, perhaps only existing within the confluence of several factors and manifesting itself through various configurations across diverse social contexts.

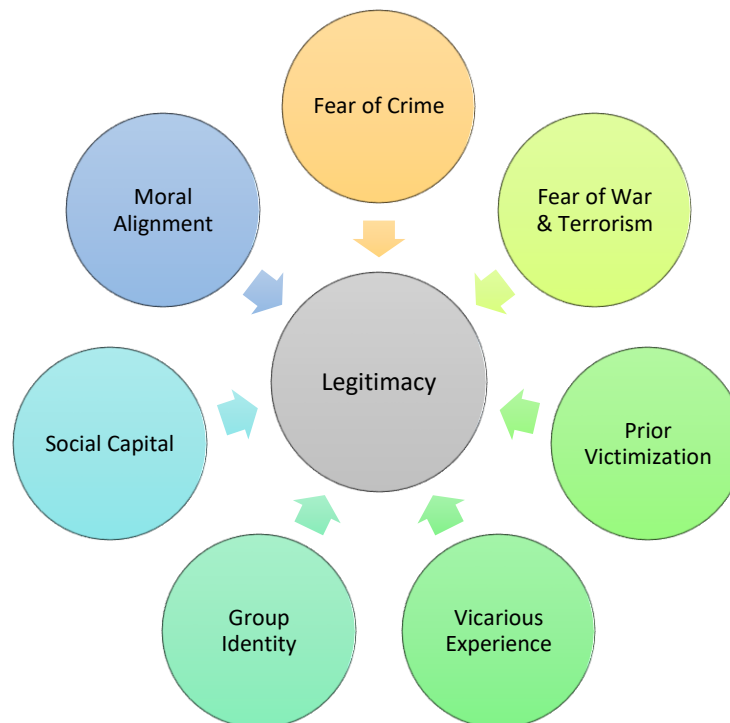


Figure 3: Current legitimacy model

Research Questions and Hypotheses

The current study examined to what extent these individual-level sources of legitimacy varied in significance and strength across countries and what effect national-level characteristics had on this variation. In addition, the possibility was explored that these relationships varied between different types of legal authority, in this case between

police and courts. People in different countries may have vastly different conceptions of the privileges and responsibilities given to legal authorities, potentially evaluating the legitimacy of these authorities based on different criteria, or on the same criteria to different degrees (Mazerolle et al., 2013). The concept of legitimacy carries important implications for criminal justice in a global context, and questions remain as to the applicability of popular theories of legitimation to other countries (Beetham, 1991; Coicaud, 2019; Mazerolle et al., 2013; Tankebe, 2009). Three primary research questions were addressed by this research. First, to what extent do the sources of legitimacy vary in their effects across different countries? Second, what country-level characteristics might explain some of this variation? Third, are these relationships the same for different types of legal authorities?

Based on these research questions, the current study focused on three interrelated hypotheses. First, that the individual-level sources of legitimacy for legal authorities vary in their effect across different countries. Second, that characteristics at the national level can explain some of this variation. And third, that these relationships differ between types of legal authorities, in this case between police and courts. These hypotheses are restated below.

Hypothesis 1: Individual-level sources of legitimacy vary in their effects across countries.

Hypothesis 2: Some of this variation can be explained by national-level characteristics.

Hypothesis 3: These relationships at both levels differ between police and courts.

The following paragraphs briefly reiterate the primary sources of perceived legitimacy included in the current study, while also explicitly stating secondary hypotheses associated with these concepts. These concepts all possessed hypothesized relationships with perceived legitimacy based on extant research, but the primary hypotheses in this study were more focused on the existence of variation in these relationships across countries, the influence of national-level characteristics on this variation, and differences in these relationships between police and courts.

In general, prior research suggests that those who have recently experienced criminal victimization, are more fearful of crime, less fearful of war and terrorism, have more negative vicarious experience with authorities, do not identify strongly with the group represented by authorities, possess low social capital, and do not perceive authorities as morally aligned with their own values will tend to perceive legal authorities as less legitimate. Conversely, those who have no recent experience with victimization, less fear of crime, more fear of war and terrorism, less negative vicarious experience, do identify strongly with the group represented by authorities, possess high social capital, and perceive authorities as morally aligned with their own values will tend to perceive legal authorities as more legitimate. These conceptual relationships were discussed in detail in the preceding chapter and are restated briefly in the following paragraphs. The simplicity of these hypotheses, however, obscures the potential for complex variation and interaction across different national contexts.

Measures of *prior victimization* and *fear of crime* were hypothesized to be *negatively* related to the legitimacy of legal authorities. Such crime-related variables are frequently cited as important instrumental sources of legitimacy (Boateng, 2017; Jang et

al., 2010; Koenig, 1980; St. Louis & Greene, 2019; Sunshine & Tyler, 2003; Tankebe, 2009; Weitzer & Tuch, 2005) and it has been argued that even these ostensibly instrumental sources contain moral elements vital to their influence on the legitimization process (Bottoms & Tankebe, 2012; Coicaud, 2002). Prior research suggests that crime victims and those fearful of crime are less likely to perceive legal authorities as effectively providing safety and security, and therefore less likely to perceive them as legitimate (Alda et al., 2017; Aviv & Weisburd, 2016; Brown & Benedict, 2002; Dawson, 2018; Dull & Wint, 1997; Kääriäinen, 2007; Manning, 1997; O'Connor, 2008; Orr & West, 2007; Reisig & Stroshine, 2001; Sevier & Tyler, 2014; Singer et al., 2019; Sprott & Doob, 1997; Stafford & Galle, 1984; Van Craen, 2013). The relationship between fear of crime and legitimacy is related to the perceived effectiveness of authorities at fulfilling their mandate, a relationship itself dependent on the parameters of the mandate given to authorities and the extent to which these authorities are held responsible for public safety and security. The degree to which citizens associate their own fear of criminal victimization with a lack of police presence, ineffective criminal investigation, improper court procedure, or lax punishment of offenders is likely to vary depending on the localized expectations citizens have for these authorities (Armeline et al., 2014; Kochel, 2018; Tankebe, 2013; Skogan, 2009).

Related to but distinct from fear of crime, concerns over national-level security issues such as war and terrorism can also influence people's perceptions of legal authorities, but due to differences in the symbolic nature of these fears, the direction of this relationship may differ from that between legitimacy and crime-related variables. Measures of *fear of war* and *fear of terrorism* were hypothesized to be *positively* related

to the legitimacy of legal authorities, as generalized support for law enforcement has been found to increase in the wake of major terrorist incidents and other forms of instability (Banjak-Corle & Wallace, 2020; Brown & Benedict, 2002; Jonathan, 2010; Jonathan-Zamir & Weisburd, 2013; Sela-Shayovitz, 2014; Sunshine & Tyler, 2003). This contrasts with the hypothesized directional influence of fear of crime on legitimacy, as prior study suggests that high-profile incidents of violent crime appear related to less positive perceptions of authorities, while high profile incidents of terrorism seem to inspire support for authorities (Banjak-Corle & Wallace, 2020; Jonathan-Zamir & Weisburd, 2013; Sunshine & Tyler, 2003). This effect may also differ depending on whether the national threat is from war or terrorism, although there is little indication from previous research that these effects would not both be positive so long as the threat is perceived to be external to national identity.

While vicarious experience in general could result in either positive or negative feelings toward legal authorities, the variable included in this study explicitly referred to *negative* vicarious experience due to its use of the word “interfere.” Therefore, *vicarious experience* was hypothesized to be *negatively* related to the perceived legitimacy of these authorities. Even in the absence of direct experience with police, the degree to which law enforcement agencies are perceived to be unjustly interfering in people’s private lives, imposing forms of “alien rule” upon communities, or “over-policing” certain forms of behavior can severely erode people’s confidence in police (Armeline et al., 2014; Levi et al., 2009; Schuck, 2019; Weitzer & Tuch, 2005). Additionally, perceptions that courts are either over- or under-punishing offenders, contributing to racially biased systems of mass incarceration, engaging in politically biased activity, or insufficiently prosecuting police

misconduct can negatively influence people's confidence in the justice system (Bobo & Thompson, 2006; Casper et al., 1988; Gibson et al., 2010). Many citizens acquire such perceptions vicariously, either from acquaintances or media depictions, rather than from personal experience with legal authorities. These vicarious experiences can have a strong cumulative effect over time and take on differential importance depending on proximity to the source (Skogan, 2006). High-profile incidents of police brutality or judicial misconduct can have a "ripple effect" both within close-knit communities and more broadly through media coverage (Akinlabi, 2020; Kochel, 2017; Tyler & Jackson, 2013; Weitzer & Tuch, 2005). Vicarious experiences with legal authorities have been found to have at least as much influence on perceptions of legitimacy as direct encounters (Akinlabi & Murphy, 2018; Kochel, 2017; Skogan, 2006).

As discussed in the previous chapter, the groups that individuals identify with can strongly impact their attitudes toward legal authorities (Blumer, 1958; Braithwaite, 2003; Lind & Tyler, 1992; Trinkner, 2019). Belonging to the "in-group" represented by the justice system is generally thought to be associated with better treatment by authorities and more positive attitudes toward law enforcement (Martin & Bradford, 2019; Murphy & Cherney, 2012). The current study included measures of national pride and national identity that served as indicators of attachment to the superordinate group represented by legal authorities. Based on extant research, strong feelings of *national pride* and *national identity* were hypothesized to be *positively* associated with the legitimacy of legal authorities (Bradford, 2014; Bradford et al., 2020; Loader & Walker, 2007; Radburn & Stott, 2018; Reynolds et al., 2018; Schatz & Lavine, 2007).

Social capital has been found to increase the ability of individuals to effectively influence social institutions such as police and the justice system (Newton & Norris, 1999; Putnam, 2000; Van Craen, 2013). As a result, *social capital* was hypothesized to be *positively* related to the legitimacy of legal authorities. The current study included two measures of social capital – trust in others and voluntary association. Both have been used as measures of social capital in prior research and have been found to exhibit a positive association with the legitimacy of legal authorities (Cao & Wu, 2019; Newton & Norris, 1999; Putnam, 2000; Rothstein & Stolle, 2008; Van Craen, 2013).

The extent to which people perceive themselves to be morally aligned with police and the justice system is also hypothesized to have a positive relationship with the perceived legitimacy of these institutions. The greater an individual's sense that authority figures are aligned with normative, ethical, and moral standards, the more likely they will be to have confidence in the institutions they represent (Beetham, 1991; Coicaud, 2002; Jackson & Sunshine, 2007; Kelling & Coles, 1998; Mazerolle et al., 2012; Punch & Gilmour, 2010; Tyler, 2009). If people believe that authorities are acting in the common interest of society and abiding by their own standards of lawfulness, they will be more likely to perceive these authorities as legitimate (Gilley, 2006; Jackson et al., 2020; Levi et al., 2009; Reisig et al., 2011). Two measures of moral alignment were included in the current study – perceived corruption and importance of democracy.

Existing literature suggests that individuals who perceive higher levels of corruption in their country tend to have less confidence in legal authorities (Jackson et al., 2014; Kochel et al., 2013; Levi et al., 2009; Punch & Gilmour, 2010; Tankebe et al., 2016). *Perceived corruption* was therefore hypothesized to be negatively related to the

legitimacy of legal authorities. The hypothesized relationship between importance of democracy and legitimacy was more complex. In democratic societies, strong democratic values may be conducive to moral alignment with legal authorities, but in autocratic and authoritarian societies, these same values may be associated with defiance of authority and disillusionment with legal institutions (De Zuniga et al., 2019). *Importance of democracy* was therefore hypothesized to be *positively* associated with legitimacy in countries with higher freedom scores, but *negatively* associated with legitimacy in countries with lower freedom scores. This cross-level interaction effect, along with others that were investigated by the current study, are discussed at the end of this section.

The current study also included several theoretically relevant demographic control variables measuring *age, sex, level of education, marital status, unemployment, and urban/rural residence*. Research to date has produced mixed evidence regarding the relationship between age and legitimacy. Some have noted that perceived legitimacy appears to increase with age, with older individuals perhaps more likely to possess social bonds, identities, and values that align with police and courts (e.g., Brown & Benedict, 2002; Hurst & Frank, 2000; Reisig & Parks, 2000). Other findings have indicated that perceived legitimacy might decline with age, possibly resulting from an accrual over time of vicarious experience, awareness of injustice, and cynicism toward the law (e.g., Fagan & Tyler, 2005; Worden & McLean, 2017a). In addition, the effect of age may not be constant across countries, as a variety of sociohistorical factors can affect the perceptions of legal authorities among members of different generations and age groups (Boateng, 2018; Ferdik et al., 2013; Hinds, 2007; McLean et al., 2018; Nivette et al., 2020; Reisig et al., 2011, 2012; Reynolds et al., 2018).

Sex and gender have also been shown to influence people's attitudes toward legitimacy, although findings are mixed and differences are rarely found to be very large (Dario et al., 2019; Kääriäinen, 2007; Morris, 2015; Reynolds et al., 2018). Similarly mixed results have arisen when studying the relationship between education and legitimacy. While some studies have determined higher levels of education to be associated with lower levels of legitimacy (e.g., Jang et al., 2010; Stack & Cao, 1998), this relationship is likely to vary depending on national differences in educational systems, cultural meanings of education, and school curricula (Boateng et al., 2016; Hinds & Murphy, 2007; Luo et al., 2019; Sunshine & Tyler, 2003; Weitzer & Tuch, 2005). Marriage has in general been found to exhibit a positive association with the legitimacy of legal authorities, but it can sometimes be difficult to parse the effects of being married in isolation from other potential influences such as age, sex, education, social class, social bonds, and social capital, especially when considering variation across different countries (Boateng, 2018; Cao & Wu, 2019; Cao & Zhao, 2005; Kääriäinen, 2007; McLean et al., 2018; Stack & Cao, 1998). Unemployment was hypothesized to place individuals outside of the social in-group represented by police and therefore be negatively associated with legitimacy, as opposed to other employment statuses captured by this WVS variable that did not involve full-time employment but are nonetheless accepted as valued social roles (Boateng, 2018; Cao & Wu, 2019; Kääriäinen, 2007; Martin & Bradford, 2019; Mazerolle et al., 2013; McDonald, 2015; Reisig & Parks, 2000; Tankebe, 2009). As with marriage, it was suspected that unemployment was acting as a proxy measure for attachment to conventional society and personal investment in

conformity, but the specific meaning and implication of these social bonds remained likely to vary substantially between countries.

Differences in the perceived legitimacy of legal authorities have also been found between residents of urban compared to rural locations. While rural communities are often no less diverse in terms of opinions toward police and courts, there is evidence that urban and rural citizens have unique needs and expectations of authorities that must be taken into consideration for legal authorities to be considered legitimate (Benedict et al., 2000; Taylor et al., 2015). Urban and rural communities may also differ in terms of the prevalence and incidence of interactions with police and the frequency of justice system involvement in people's private lives (Gau et al., 2012; Taylor & Lawton, 2012). Different relationships between urban and rural segments of society in different countries may lead to further complexity in this relationship. Whereas much research conducted in Western nations has found urbanites on average more likely to possess negative attitudes toward police, evidence exists that the direction of this relationship is far from universal. Research conducted by Sun et al. (2013) found that residents of rural areas in China were less likely to report satisfaction with police than urban residents. The authors pointed to the absence of competency and integrity among rural police in China, widespread misconduct, and poor overall performance in combatting crime and resolving disputes as potential reasons for these differences (Sun et al., 2013).

Controlling for these demographic variables, the current study tested the aforementioned hypotheses by using international datasets to construct a series of multilevel regression models. This analysis was primarily focused on variation in the effects of these individual-level explanatory variables across countries, as well as the

potential for cross-level interaction with national-level characteristics to explain some of this variation. Models also included two measures hypothesized to explain such variation at the national level – the *freedom score* and the *homicide rate*. For purely analytical purposes, a country's freedom score was hypothesized to be positively related with legitimacy at the individual level, a prediction consistent with traditional normative conceptualizations of legitimacy, but perhaps less compatible with subjective, empirical notions of legitimacy (Anderson et al., 2005; Beetham, 1991; Coicaud, 2002). The homicide rate was hypothesized to be negatively associated with individual-level legitimacy (Chamlin & Cochran, 2006; Dawson, 2017, 2018). In addition, these national-level variables were hypothesized to interact with several relationships at the individual level, potentially explaining at least some of the variation in these effects across countries.

For example, importance of democracy was hypothesized to have a more positive association with legitimacy in more democratic countries, and a less positive (or even negative) association with legitimacy in less democratic countries. When a nation's freedom score is high and authorities are perceived to embody democratic values, importance of democracy is likely to have a positive effect on legitimacy. Conversely, authorities in low-freedom countries may be seen as failing to embody democratic values and symbolic duties, and therefore not likely to inspire confidence among those who value democracy. In addition, the freedom score was hypothesized to interact with other variables in the model, potentially offering some explanation for variation in their relationships with legitimacy across different countries.

The other national-level predictor included in this analysis, the homicide rate, was also hypothesized to influence several relationships at the individual level, in particular those related to prior victimization, fear of crime, and vicarious experience. In countries with higher homicide rates, police interference in the private lives of citizens (as this variable is measured) may be more tolerable because of different priorities, expectations, and boundaries surrounding the police mandate (Boateng, 2018; Radburn & Stott, 2018; Tankebe et al., 2015).

To summarize, the current study was informed by three central research questions: (1) To what extent do the sources of legitimacy for legal authorities vary in their effect across different countries; (2) what effect do country-level characteristics have on this variation, and (3) are these relationships the same across countries for different types of legal authorities? These research questions suggested the following three broad hypotheses. First, that the individual-level influence of *fear of crime*, *fear of war and terrorism*, *prior victimization*, *vicarious experience*, *group identity*, *social capital*, and *moral alignment* on the legitimacy of legal authorities varies across countries. Second, that the included national-level measures of the *freedom score* and the *homicide rate* will explain some of this variation. Third, that these relationships vary between types of legal authorities, in this case between police and courts. The following sections discuss data sources and sampling strategies in detail before beginning a full discussion of measures and statistical methodology.

Data and Sample

This analysis used Wave 7 of the World Values Survey (2017-2021), as a source for individual-level demographic and attitudinal data. Fieldwork for the seventh wave began in mid-2017, with the World Values Survey Association (WVSA) first releasing these data to the public in July of 2020. Subsequent revisions have corrected numerous errors and completed data for some countries. This analysis will use version 2.0.0 of the Wave 7 dataset, released in July 2021, that included data for two additional countries – Canada and Singapore. The collection of data for Wave 7 is still ongoing and aims to eventually include more nations, but this initial release contains data from 51 different countries spread across all inhabited continents on Earth. The current analysis omitted data from four countries (China, Egypt, Macau, and Puerto Rico) because of missing data on key variables. The final sample was determined through listwise deletion of cases without valid data on all variables. After listwise deletion, viable data were available for 61,648 individual cases in 47 different countries. National-level data were obtained from two ancillary sources: Freedom House and the United Nations Office on Drugs and Crime (UNODC).

The World Values Survey (WVS), started in 1981, is a global research project aimed at measuring people's values and attitudes around the world. Whenever possible, the WVS employs a rigorous methodology involving full probability sampling of national populations aged 18 years and older. Researchers attempt to access lists and registries of all households or voters in a country to build a national sample. When local conditions preclude such an approach, or make the cost of such endeavors prohibitively high, WVS methodology allows for the application of nationally representative random sampling

procedures based on a multi-stage stratified selection of territories within a country.

These multi-stage sampling techniques begin with the selection of primary sampling units (PSUs), corresponding to regions, territories, and cities, before then proceeding to the simple probability selection of subjects within each PSU (Haerpfer et al., 2020).

Depending on the specific conditions endemic to each country, other sampling designs are allowed after being subjected to a rigorous approval process by WVSA investigators. National teams can determine whether local peculiarities related to geography, administration, urbanization, and the availability of statistical data require adaptation of the sampling model, provided it still meets existing WVSA requirements. These requirements include coverage of all residents, not just citizens, of a country that are aged 18 years and older. Once the minimum required sample size for the 18 and up population is obtained, investigators can lower the minimum age limit. This means that the final sample includes some respondents that are 16 or 17 years old. WVSA requirements also specify that the final sample obtained by researchers should be representative and should reflect the distribution of gender and age in the general country population. The minimum acceptable sample size for most countries included in the WVS is 1200, but a smaller sample size of 1000 was allowed for nations with a population of less than 2 million. In addition, WVS investigators are advised to collect larger samples of at least 1500 respondents from countries with large and widely distributed populations, such as Russia, China, Brazil, and the United States (Haerpfer et al., 2020).

After procuring an adequate sample size in each country, WVS investigators administer a common questionnaire that has been translated into local languages. This

questionnaire measures a wide range of values, attitudes, and beliefs regarding gender, family, religion, poverty, education, health, security, culture, tolerance, trust, social institutions, justice, moral principles, corruption, accountability, risk, migration, and national security (Haerpfer et al., 2020). Suggestions for survey items for each wave of the WVS are solicited from social scientists around the world, and less valuable concepts and measures are dropped in subsequent waves to make room for more relevant ones. After being translated into various national languages, the questionnaire is whenever possible translated back into English to verify the accuracy of question wording. The translated questionnaire is also pre-tested to identify problematic translation issues, and problematic or inapplicable items may be omitted in certain situations, with approval of the WVSA.

The primary method of data collection utilized by WVS investigators is a face-to-face interview at the respondent's home or place of residence. Most answers are recorded using either computer-assisted personal interview (CAPI), or pen-and-paper personal interview (PAPI) techniques. In some cases, other techniques are justified to better access respondents who are unreachable for a face-to-face interview, including computer-assisted web interviews (CAWI), computer-assisted telephone interviews (CATI), and postal interviews. In the final sample (as of December 2020), 56% of interviews have been conducted using CAPI, 31% of interviews used PAPI, 8% used CAWI, 5% were postal interviews, and 0.2% used CATI techniques (Haerpfer et al., 2020). Investigators make every effort to increase response rate, following up numerous times on their initial sample of respondents. In countries using a full probability sampling design, no replacements are allowed, and sampled respondents are contacted repeatedly before being

recorded as non-responses. WVS data are anonymous and publicly available free of cost. This dataset has been a popular source of attitudinal data for international research for decades and is widely considered reliable and representative (Haerpfer et al., 2020).

An index variable measuring each nation's "freedom score" was obtained from the 2020 Freedom House annual global report on political rights and civil liberties. This report is produced each year by a body of internal and external analysts, including members of academia, think-tanks, and human rights groups. Analysts draw from a wide range of sources, including news articles, academic studies, reports from non-government organizations, professional contacts, and local research, to arrive at a proposed score for each nation. These scores are then presented, discussed, and defended by analysts at a series of review meetings. The final product represents the consensus view of the entire team of analysts. The 2020 edition of this report is based on data collected during 2019 covering 195 countries. The methodology used by Freedom House is derived from the United Nations Universal Declaration of Human Rights and based on the premise that the same standards of "freedom" can be applied to all nations (Repucci, 2020).

The index is designed to assess the rights and freedoms of individuals rather than the performance or characteristics of governments, as codified legal guarantees do not always translate to the lived experiences of individuals. Operating under the assumption that political rights and civil liberties can be infringed by state and non-state actors alike, Freedom House places an emphasis on measuring the implementation and fulfillment of rights, rather than claims made by state actors. The Freedom House index is based on 10 indicators of political rights and 15 indicators of civil liberties, each scored on a scale from 0 to 4. Countries can score up to 40 points on political rights and up to 60 points on

civil liberties, for a total possible score of 100. Indicators capture the state of the electoral process; political pluralism and participation; functioning of government; freedom of expression and belief; associational and organizational rights; rule of law; personal autonomy; and individual rights. For a complete list of measures included in the Freedom House index, see Appendix B.

The homicide rate for each country was obtained from the United Nations Office on Drugs and Crime (UNODC). The UNODC collects crime data from national authorities around the world through the annual United Nations Crime Trends Survey (UN-CTS). This survey captures incidents of victimization as reported to authorities and recorded by official crime statistics, and the instrument has been revised in recent years to be consistent with the International Classification of Crime for Statistical Purposes (ICCS). Sources of crime data used by the UN-CTS include national statistical offices, police departments, and government agencies, as well as global organizations such as the World Health Organization (WHO), Pan-American Health Organization (PAHO), and the International Criminal Police Organization (INTERPOL). A detailed account of the specific data sources tapped for each nation can be obtained from the website dataunodc.un.org.

Dependent Variables

The perceived legitimacy of legal authorities was measured using an additive index comprising two ordinal WVS items, one measuring *confidence in police* and the other *confidence in courts*. These two items were part of a series of questions asking how much confidence respondents had in a variety of organizations and institutions (see Appendix A). Supplementary analyses were also conducted using the original confidence

measures as endogenous variables in separate multilevel binary logistic regression models. This section addresses the operationalization of legitimacy as the primary endogenous variable of interest in the current study. First, the use of confidence as an indicator of legitimacy and the combination of variables into an index is justified. Then, the operationalization of legitimacy as a continuous variable will be examined and the decision to conduct supplementary analyses of the individual confidence measures will be discussed.

There exists a sizeable amount of conceptual disagreement surrounding the appropriate operationalization and measurement of legitimacy (Boateng, 2018; Bradford & Jackson, 2010; Cao & Wu, 2019; Hamm et al., 2022). Gau (2011) noted that “it is exceedingly difficult to devise valid measures for constructs that exist only in people’s minds and can be colored by things like past experiences and personal characteristics” (p. 496). Conflict between normative and empirical perspectives on legitimacy makes the establishment of a definitional and operational consensus exceedingly difficult (Hinsch, 2010). How people think about police and legal authorities is complicated, and studies frequently confound a variety of indicators under the label of legitimacy. The wide assortment of research into legitimacy and procedural justice reveals a complex constellation of interrelated concepts (Mazerolle et al., 2013; Van Craen, 2013). These include terms such as compliance, cooperation, confidence, consent, effectiveness, satisfaction, trust, and obligation (Mazerolle et al., 2013).

Depending on the legitimacy model being applied, many of these factors might be understood either as antecedents of legitimacy, as its constituent elements, or as its effects, leading to conceptual confusion in comparative study. For example, St. Louis &

Greene (2019) measured police legitimacy as “the perceived success of police activities,” which would seem to indicate a greater connection to instrumental concerns regarding police effectiveness. Treating legitimacy as synonymous with instrumental concerns such as effectiveness has clear implications for its presumed association with normative factors such as trust. Drawing a similar distinction between the concepts of satisfaction and trust, Van Craen (2013) recommended that researchers “reflect on the question whether the concept of ‘satisfaction’ (which mainly implies an evaluation of a past or the present situation) and the concept of ‘trust’ (which mainly implies a belief concerning what is going to happen in the future) may be mixed up” (Van Craen, 2013, p. 1053). Frimpong et al. (2019) also made note of these conceptual irregularities, commenting that “there has been continual slippage with the use of terms such as confidence, trust, and satisfaction to express public opinion about the police” (p. 140). Similarly, Taylor and Lawton (2012) observed that “investigated components [of police legitimacy] have included overall liking for, trust of, confidence in, and satisfaction with the local police as well as satisfaction or dissatisfaction resulting from specific interactions with the police” (p. 414). Ongoing debate in the criminological literature regarding the appropriate operationalization and measurement of legitimacy has yet to offer a clear solution to this empirical conundrum (Cao & Graham 2019, Jackson & Bradford, 2019, Sun et al. 2016, 2018, 2019; Trinkner 2019). Regarding this lack of clarity, Zelditch (2001) remarked:

There appears to be no unique dependent variable associated with legitimation processes, except that legitimacy is always a matter of voluntarily accepting that something is ‘right’, and its consequence is always the stability of whatever structure emerges in the process. (p. 40)

Beyond such ostensibly direct measures of legitimacy, studies have also inferred its existence using proxy indicators derived from models such as those suggested by Tyler (1990) and Tankebe (2013), including obligation to obey, normative alignment, lawfulness, procedural justice, distributive justice, and effectiveness (Hamm et al., 2022). In Tyler's (1990) popular model, legitimacy is operationalized as some combination of trust in and obligation to obey authorities. But the formulation of obligation to obey as an indicator of legitimacy may conceal whether power gives authority its legitimacy or whether legitimacy gives authority its power. The interpretation of a sense of obligation to obey legal authorities as an indication of perceived legitimacy has been criticized for implying moral alignment where it does not necessarily exist (Akinlabi & Murphy 2018; Tankebe 2013, Tost, 2011; Tsushima & Hamai, 2015). Obligation resulting from normative alignment is difficult to distinguish from obligation arising from powerlessness and coercion. Tyler (2003) himself questioned the universal applicability of obligation to obey as a measure of legitimacy, noting that "if the social structure is viewed as fundamentally unfair by particular people or groups, then their willingness to comply might be regarded as a 'false consciousness' – that is, as a willingness that should be discouraged" (p. 285).

The current study avoided complications involved with the use of obligation to obey and focused instead on another common measure of legitimacy – confidence in legal authorities. Confidence is frequently used as an indicator of legitimacy in sociological and criminological research. A meta-analysis by Mazerolle et al. (2013) found the most commonly used endogenous variables in studies of legitimacy to be satisfaction with and confidence in legal authorities. They concluded that satisfaction and

confidence are “well-established constructs in the research literature and arguably the most tangible of all of the direct outcomes in the legitimacy policing literature” (Mazerolle et al., 2013, p. 265).

Confidence is admittedly an imperfect indicator of legitimacy, as it remains conceptually unclear if *confidence* has the same meaning as *trust*, especially when translated into different languages. If confidence and trust are conceptually interchangeable, then confidence in legal authorities can be useful as an indicator of legitimacy, however, the meaning of this variable depends on the conceptual model being applied. In Tyler’s model, trust is one of the elements of legitimacy itself, therefore, if “confidence” is synonymous with “trust,” then variables measuring confidence in police and confidence in courts can be considered valid indicators of legitimacy. In Tankebe’s model, trust is not considered a constituent part of legitimacy, which means that trust in authorities influences or is influenced by legitimacy. From this perspective, if “confidence” is taken to mean “trust,” then these dependent variables cannot act as direct measures of legitimacy. Confidence might also be understood in terms of the amount of faith people have in authorities to control crime, deliver justice, and keep communities safe. This instrumental definition of confidence is more closely related with *effectiveness*, rather than with more normative concerns such as procedural justice and fairness. A person may have confidence in police and courts simply because they believe these authorities are satisfactorily fulfilling their mandate, without any consideration for their behavior toward citizens.

Translating and administering the WVS questionnaire in different languages may lead to additional conceptual confusion, as the specific meaning of the word *confidence*

could vary depending on the native language of the respondent. Despite the great effort by WVS researchers to make these measures as universally comparable as possible, the potential remains that differences in meaning across languages introduce error into models using these data. For example, the WVS translation of *confidence* in the German language is the word *vertrauen*, which has the same meaning as *trust*. The German word *zuversicht*, meaning *optimism*, may more accurately capture the English meaning of confidence. This discrepancy was noticed only because the author is familiar with the German language, and there are likely similar peculiarities of translation to be found among other languages. These issues notwithstanding, measures of institutional confidence contained in the WVS has been used numerous times by other researchers, and therefore these variables will hopefully allow for sufficiently valid comparative analysis, regardless of any conceptual differences in translation.

It is also worth noting that many dictionary sources list *confidence* and *trust* as synonyms, which may be further indication that these should be considered interchangeable concepts in survey research. However, other common synonyms for confidence include words like *assurance*, *conviction*, *belief*, *faith*, *support*, and *loyalty*, clearly implying a wide range of potential meanings and implications, even within a single language. Although there is much focus in the research literature on the conceptualization and measurement of legitimacy in different cultural contexts, very little attention seems to be given to these kinds of linguistic and translation issues.

International research on the subject of legitimacy should strive to reduce translation issues and ensure that the meaning of concepts such as confidence, trust, and obligation are comparable across nations and cultures. The specific meaning of

confidence to an individual could be based on perceptions of procedural or distributive justice, on perceptions of police effectiveness at maintaining order and providing security, or on perceptions of these authorities' alignment with the fundamental norms and values of a society. For the purposes of this study, the dependent variable *confidence in legal authorities* will be understood as an indicator of respondents' overall attitudes toward police and courts, attitudes which could arise from both instrumental and normative concerns. By combining variables measuring *confidence in police* and *confidence in courts* into a single index, the current analysis attempted to increase the reliability of this dependent variable as a measure of the legitimacy of legal authorities across countries.

The combination of these variables was not without theoretical merit. Evidence exists of a considerable “spill-over” effect between attitudes toward legal institutions (e.g., Albrecht & Green, 1977; Alda et al., 2019; Baker et al., 2014). People's attitudes toward police and courts are likely closely related to each other, although the possibility that legitimacy in these institutions might have different sources in different social contexts remains largely unexplored. Attitudes toward police are likely part of a larger cluster that includes feelings toward other criminal justice institutions such as courts and corrections, as well as attitudes toward institutions and the law in general. Perceptions of legitimacy are part of larger value systems, which often makes solutions focused only on police ineffective because they lack impact on the larger set of attitudes surrounding the criminal justice system (Albrecht & Green, 1977).

Questions also remain as to whether legitimacy is best understood as a binary or as a continuous variable. Is legitimacy something that either exists or does not exist, a

property of an institution or not a property, a sentiment of the people or not a sentiment? Or does it exist on a continuum, and the more legitimacy possessed or professed, the more power and privilege is conferred? Worden and McLean (2017a) clarified that:

For social psychological theory, legitimacy – trust – is a continuous variable: differences in degree matter, and those differences are manifestations primarily of differences in the procedural justice with which police act. For institutional theory, legitimacy is by and large a binary variable: organizations that are legitimate survive, and those that lose legitimacy cease to exist. (p. 502)

This conceptual distinction has important implications for the measurement of legitimacy, as in the choice to dichotomize ordinal variables capturing such attitudes (e.g., Levi et al., 2009; Schuck, 2019; St. Louis & Greene, 2019). Several researchers have previously contended that ordinal confidence variables, such as those contained in the WVS and similar international datasets, should be converted into binary variables to reduce the potential for translation error, redundancy, and subjective interpretations of meaning (e.g., Boateng et al., 2016; Jang et al., 2015; Morris, 2015). However, there is no clear evidence that statistical research using ordinal measures is advantaged by collapsing data in this fashion, rather than by creating index variables or analyzing items in their original forms.

Collapsing an ordinal variable into fewer categories may obscure moderate attitudes toward legal authorities, giving the impression of polarization when many, if not most, opinions are closer to the middle. The current study avoided this practice and utilized continuous and ordinal measures of confidence in legal authorities. Ordinal variables measuring confidence in police and confidence in courts were combined to

form a continuous index for the primary analysis. Supplementary analyses utilized more common binary variables to explore whether the influence of explanatory variables differed between confidence in police and confidence in courts.

The dependent variable in the current study was a continuous index variable created by adding respondents' scores on two separate items, one measuring *confidence in police* and the other *confidence in courts*, both of which were four-category ordinal scales (0 = none at all; 1 = not very much; 2 = Quite a bit; 3 = A great deal). Respondents scored zero points if they responded "none at all" for *both* confidence in police and confidence in courts, six points if they responded "a great deal" for *both* items, and a combination of points for responses in between.

Use of an additive index rather than individual items was advantageous for several reasons. Index variables comprising multiple items are generally thought to measure theoretical constructs more reliably (Spector, 1992). A continuous index variable also enables the use of linear regression and allows for more precise interpretation of variation in the underlying conceptual continuum. The reliability coefficient (Cronbach's alpha) for this index was $\alpha = .79$, which provided some indication that these items displayed similar response patterns and captured elements of the same underlying factor (Gliem & Gliem, 2003; Taber, 2017). However, critics have noted the inadequacy of Cronbach's alpha as the sole indicator of index reliability and have recommended supplementing alpha with additional measures (McNeish, 2017; Sijtsma, 2009; Taber, 2017).

It is worth noting that critical analyses of this statistic tend to find that it represents the "lower bound" of reliability, especially when assumptions that are

foundational to Cronbach's alpha are violated, as in this case with the inclusion of ordinal scale items rather than continuous measures. Although technically incongruous with assumptions underlying the alpha statistic, results are likely to be underestimations of the "true" reliability of the created index (McNeish, 2017). Therefore, this relatively high alpha score was taken as evidence that these items were on average capturing part of the same interrelated factor. Additional factor analyses further indicated that both confidence in police and confidence in courts loaded strongly onto a single factor, with both items displaying loadings over 0.6. These initial analyses appeared to indicate that these variables were both tapping into some shared underlying sentiment. This shared factor was considered a measure of overall confidence in legal authorities and served as the primary indicator of legitimacy in the current study. This combined index was treated as a continuous measure, allowing for the use of mixed models while maintaining a linear approach to regression and interpretation.

The results of these reliability tests and factor analyses should not, however, be taken as evidence that confidence in police and confidence in courts are conceptually identical. A high Cronbach's alpha score between these items is not evidence of unidimensionality (Sijtsma, 2009; Taber, 2017). People's attitudes toward police and courts are likely not always identical and, even more problematic for the current analysis, might be more dissimilar in some countries than in others. A comparison of the aggregated frequency distributions presented below indicated that while citizens of some countries may be relatively alike in terms of how they think of police compared to how they think of courts, those of other countries appear to display more divergent distributions of attitudes toward these separate institutions. Supplementary analyses were

therefore conducted to explore relationships between predictor variables and separate binary outcome variables capturing *confidence in police* and *confidence in courts*.

While the combination of items measuring perceptions of police and perceptions of courts into a single measure is not uncommon in the research literature (e.g., Tyler, 2006; Tyler & Huo, 2002), many have cautioned that conflating these two attitudes might risk obfuscation of their unique causes and effects (e.g., Baker et al., 2015; Meares et al., 2012; Sprott & Doob, 2009). It could be the case that people compartmentalize their attitudes toward different social institutions, evaluating each on different criteria and not allowing the actions of one to affect the legitimacy of another (Dawson, 2017; De Zuniga et al., 2019). This possibility presents a difficulty for research that combines attitudes toward police and courts into a single measure. The primary analysis in the current study was based on such an index variable and assumed that attitudes toward police and courts were similar and derived from similar sources. This assumption is far from a certainty and the implications of this discrepancy inspired supplementary analyses of these variables as separate outcomes.

These analyses therefore examined the same multilevel models using binary measures of *confidence in police* and *confidence in courts* as endogenous variables. However, multilevel modeling with dichotomized dependent variables presented its own set of unique problems. These difficulties are addressed in the methodology and discussion sections. The following tables summarize means, standard deviations, and distributions of variables measuring *police legitimacy* by country (Table 1), *court legitimacy* by country (Table 2), and the combined index variable *legitimacy* (Table 3).

Table 1: Frequencies, distributions, and mean levels of police legitimacy, by country

Country	N	Mean	SD	% None at all (0)	% Not very much (1)	% Quite a lot (2)	% A great deal (3)
Andorra	942	1.88	0.75	5.52	17.83	59.55	17.09
Argentina	807	1.08	0.84	26.15	44.73	23.92	5.20
Australia	1,516	2.10	0.72	2.64	13.46	54.75	29.16
Bangladesh	1,038	1.44	0.96	17.73	36.51	29.87	15.90
Bolivia	1,773	0.84	0.79	36.21	48.67	10.38	4.74
Brazil	1,294	1.46	0.94	20.87	23.65	44.36	11.13
Canada	3,997	1.80	0.78	5.83	24.74	52.69	16.74
Chile	741	1.42	0.85	13.63	40.62	35.63	10.12
Colombia	1,498	1.16	0.90	20.76	54.47	12.35	12.42
Cyprus	741	1.63	0.95	13.36	30.90	35.49	20.24
Ecuador	1,104	1.58	0.90	12.23	33.61	38.04	16.12
Ethiopia	1,120	1.59	0.97	17.05	25.00	40.09	17.86
Germany	1,210	2.11	0.63	1.24	10.91	63.31	24.55
Greece	1,081	1.84	0.80	6.38	22.39	51.80	19.43
Guatemala	1,000	0.84	0.68	30.80	56.10	11.60	1.50
Hong Kong	1,989	1.69	0.76	6.64	29.16	52.89	11.31
Indonesia	3,059	1.88	0.84	4.58	28.24	41.88	25.30
Iran	1,405	2.27	0.83	4.77	10.60	37.58	47.05
Iraq	1,027	1.69	1.08	19.08	22.01	29.50	29.41
Japan	808	1.99	0.66	2.10	15.59	63.37	18.94
Jordan	1,073	2.64	0.68	2.33	4.47	19.66	73.53
Kazakhstan	891	1.84	0.80	5.50	25.14	49.49	19.87
Kyrgyzstan	1,040	1.42	0.92	18.85	32.21	37.50	11.44
Lebanon	1,173	1.65	0.95	11.94	33.08	33.16	21.82
Malaysia	1,311	1.69	0.79	5.72	34.78	44.62	14.87
Mexico	1,613	0.81	0.90	46.50	32.05	15.56	5.89
Myanmar	1,198	1.58	0.94	17.20	22.54	45.58	14.69
N. Zealand	662	2.26	0.67	0.91	9.97	51.81	37.31
Nicaragua	1,166	1.04	1.01	35.16	39.28	11.58	13.98
Nigeria	1,152	0.93	0.96	41.67	31.86	18.58	7.90
Pakistan	1,641	1.21	1.10	36.99	19.99	27.67	15.36
Peru	1,266	0.95	0.89	36.65	37.36	20.22	5.77
Philippines	1,192	2.12	0.77	1.59	19.55	44.13	34.73
Romania	705	1.47	0.97	18.87	30.35	35.46	15.32
Russia	1,295	1.45	0.91	17.61	31.51	39.31	11.58
Serbia	839	1.23	0.86	21.45	39.93	32.30	6.32
Singapore	1,855	2.11	0.63	1.19	11.75	62.10	24.96
S. Korea	1,245	1.57	0.67	4.58	38.88	51.16	5.38
Taiwan	1,184	1.99	0.67	2.96	14.44	63.34	19.26
Tajikistan	1,106	2.21	0.82	4.34	12.03	42.31	41.32
Thailand	1,164	1.60	0.82	9.02	35.05	43.04	12.89
Tunisia	1,025	1.46	0.89	13.85	40.10	32.39	13.66
Turkey	2,133	2.19	0.78	3.89	11.39	46.41	38.30
Ukraine	841	1.22	0.84	22.71	37.34	35.43	4.52
U.S.A.	2,422	1.82	0.81	6.40	24.03	50.66	18.91
Vietnam	1,150	2.16	0.62	1.74	7.04	64.70	26.52
Zimbabwe	1,156	1.51	1.02	19.64	30.02	30.36	19.98
Total	61,648	1.65	0.94	13.73	27.02	40.03	19.21

Table 2: Frequencies, distributions, and mean levels of court legitimacy, by country

Country	N	Mean	SD	% None at all (0)	% Not very much (1)	% Quite a lot (2)	% A great deal (3)
Andorra	942	1.57	0.82	11.15	30.57	48.20	10.08
Argentina	807	0.87	0.76	34.45	45.85	18.09	1.61
Australia	1,516	1.71	0.80	6.79	30.67	47.16	15.37
Bangladesh	1,038	2.00	0.82	5.68	16.67	49.52	28.13
Bolivia	1,773	0.82	0.79	37.11	48.73	9.53	4.62
Brazil	1,294	1.42	0.97	23.03	23.34	41.65	11.98
Canada	3,997	1.65	0.76	6.71	32.05	50.59	10.66
Chile	741	1.16	0.80	20.78	47.64	26.59	4.99
Colombia	1,498	0.91	0.77	28.70	58.01	7.01	6.28
Cyprus	741	1.55	0.88	12.69	33.74	39.68	13.90
Ecuador	1,104	1.29	0.87	19.75	38.95	33.61	7.70
Ethiopia	1,120	1.72	0.93	12.32	23.84	42.77	21.07
Germany	1,210	1.93	0.74	3.22	21.16	55.12	20.50
Greece	1,081	1.60	0.81	10.08	30.71	48.20	11.01
Guatemala	1,000	0.80	0.70	35.10	51.70	11.70	1.50
Hong Kong	1,989	2.02	0.71	2.11	18.15	55.66	24.08
Indonesia	3,059	1.98	0.84	3.69	24.75	40.99	30.57
Iran	1,405	2.00	0.94	10.46	12.95	42.28	34.31
Iraq	1,027	1.37	1.10	28.14	27.17	24.05	20.64
Japan	808	2.06	0.65	2.23	11.76	64.23	21.78
Jordan	1,073	2.24	0.93	6.80	14.17	27.68	51.35
Kazakhstan	891	1.82	0.83	6.85	24.58	48.26	20.31
Kyrgyzstan	1,040	1.22	0.92	24.81	36.35	30.38	8.46
Lebanon	1,173	1.27	0.85	16.62	49.28	24.64	9.46
Malaysia	1,311	1.77	0.79	4.04	33.26	44.70	18.00
Mexico	1,613	0.82	0.91	46.00	32.05	16.06	5.89
Myanmar	1,198	1.58	0.95	17.45	22.95	43.82	15.78
N. Zealand	662	1.91	0.77	4.08	22.36	52.27	21.30
Nicaragua	1,166	0.98	0.97	36.36	41.51	10.38	11.75
Nigeria	1,152	1.37	0.96	20.49	36.11	29.51	13.89
Pakistan	1,641	1.71	1.08	20.11	16.64	35.41	27.85
Peru	1,266	0.53	0.76	60.66	28.36	8.21	2.76
Philippines	1,192	2.06	0.79	2.60	20.47	45.39	31.54
Romania	705	1.27	0.95	24.68	34.33	30.35	10.64
Russia	1,295	1.39	0.91	19.31	33.05	37.14	10.50
Serbia	839	1.05	0.81	26.82	45.17	24.43	3.58
Singapore	1,855	2.04	0.67	1.62	15.69	59.89	22.80
S. Korea	1,245	1.62	0.69	5.54	32.93	55.18	6.35
Taiwan	1,184	1.54	0.79	10.73	32.69	48.65	7.94
Tajikistan	1,106	2.18	0.81	3.53	14.83	41.23	40.42
Thailand	1,164	1.94	0.84	4.73	24.74	42.44	28.09
Tunisia	1,025	1.45	0.92	15.61	38.05	31.71	14.63
Turkey	2,133	1.94	0.82	6.28	18.05	50.54	25.13
Ukraine	841	0.86	0.84	39.12	38.88	18.31	3.69
U.S.A.	2,422	1.62	0.77	7.06	34.85	47.44	10.65
Vietnam	1,150	2.20	0.58	0.78	6.35	64.70	28.17
Zimbabwe	1,156	1.51	0.99	19.03	28.72	34.86	17.39
Total	61,648	1.57	0.94	15.10	29.38	38.68	16.85

Table 3: Mean legitimacy of legal authorities, by country (combined index)

Country	N	Mean	SD
Andorra	942	3.45	1.40
Argentina	807	1.95	1.39
Australia	1,516	3.82	1.26
Bangladesh	1,038	3.44	1.55
Bolivia	1,773	1.65	1.38
Brazil	1,294	2.88	1.69
Chile	741	2.58	1.42
Colombia	1,498	2.07	1.44
Cyprus	741	3.17	1.67
Ecuador	1,104	2.87	1.51
Ethiopia	1,120	3.31	1.75
Germany	1,210	4.04	1.18
Greece	1,081	3.44	1.45
Guatemala	1,000	1.63	1.25
Indonesia	3,059	3.86	1.47
Iran	1,405	4.27	1.57
Iraq	1,027	3.06	1.97
Japan	808	4.05	1.20
Jordan	1,073	4.88	1.40
Kazakhstan	891	3.66	1.51
Kyrgyzstan	1,040	2.64	1.71
Lebanon	1,173	2.92	1.58
Malaysia	1,311	3.45	1.46
Mexico	1,613	1.63	1.63
Myanmar	1,198	3.16	1.73
N. Zealand	662	4.16	1.25
Nicaragua	1,166	2.02	1.83
Nigeria	1,152	2.30	1.70
Pakistan	1,641	2.92	1.86
Peru	1,266	1.48	1.46
Philippines	1,192	4.18	1.40
Romania	705	2.74	1.75
Russia	1,295	2.84	1.68
Serbia	839	2.28	1.56
S. Korea	1,245	3.20	1.19
Tajikistan	1,106	4.39	1.47
Thailand	1,164	3.54	1.44
Tunisia	1,025	2.91	1.64
Turkey	2,133	4.14	1.44
Ukraine	841	2.08	1.49
U.S.A.	2,422	3.44	1.40
Vietnam	1,150	4.36	1.10
Zimbabwe	1,156	3.01	1.87
Total	61,648	3.22	1.70

Independent Variables

At the individual level, demographic variables included respondents' *age*, *sex*, *level of education*, *marital status*, whether they were *unemployed*, and whether they resided in an *urban* or *rural* area (see Table 4). Because it cannot be assumed that the distances respondents perceive between Likert scale categories are equal in size, it is difficult to draw conclusions about linear relationships based on ordinal independent variables (Williams, 2020). Ordinal items were therefore entered as factor variables, each with one category omitted to serve as a reference group. Ordinal variables were also zero coded to allow meaningful interpretation of model constants without the need for centering.

Age was a continuous variable that ranged from 16 to 103. Sex was a dichotomous variable (0 = male; 1 = female). Education was a three-category ordinal variable (0 = lower; 1 = middle; 2 = higher), that was entered as two dummy variables, with the lowest category serving as the reference group. This variable is based on a recoded version of the original education variable, with categories collapsed as follows: lower (0) = early childhood, primary, or lower secondary education; middle (1) = upper secondary or post-secondary non-tertiary education; higher (2) = short-cycle tertiary education, bachelor, master, doctoral, or equivalents.

Marital status was collapsed into a dummy variable (0 = single, widowed, separated, divorced; 1 = married, living together as married) with categories specified to better represent active social bonds. Employment status was collapsed into a dummy variable (0 = unemployed; 1 = employed full-time or part-time, self-employed, retired/pensioned, homemaker, student, other). This coding was primarily meant to

capture the group identity associated with the category of “unemployed” as it was assumed that this status carries distinctly negative social implications, unlike other non-employment categories such as student, homemaker, or retiree. Lastly, whether the respondent resided in an urban or rural location was represented as a dummy variable (0 = rural; 1 = urban).

Potential sources of legitimacy included in this analysis were *prior victimization*, *fear of crime*, *fear of war and terrorism*, *vicarious experience*, *group identity*, *social capital*, and *moral alignment* (Table 4). Two dichotomous measures of *prior victimization* from the WVS were included that indicated whether the respondent or any of their family members had been victims of crime in the past year (0 = no; 1 = yes). Respondents’ *fear of crime* was captured using two variables, one measuring how often the respondent felt unsafe from crime in their own home, the other how unsafe they felt from crime in general. Fear of crime at home was a four-category ordinal variable (0 = never; 1 = rarely; 2 = sometimes; 3 = often) that was entered as three dummy variables with the lowest category serving as the reference group. Likewise, fear of crime in general was a four-category ordinal variable (0 = very secure; 1 = quite secure; 2 = not very secure; 3 = not at all secure) entered as three dummy variables. Measures of *fear of war* and *fear of terrorism* were also four-category ordinal variables (0 = not at all; 1 = not much; 2 = a great deal; 3 = very much) that were entered as three dummy variables each.

Obvious indicators of direct experience with authorities were not present in the current wave of WVS data; however, a variable measuring how frequently police or military were perceived to interfere in people’s private lives in the respondent’s neighborhood served as a measure of negative *vicarious experience* with legal authorities.

This was a four-category ordinal variable (0 = not at all frequently; 1 = not frequently; 2 = quite frequently; 3 = very frequently), that was again entered as three dummy variables. While it was not entirely certain if these perceptions were based on personal or vicarious experiences with authorities, the wording of the question suggested that more general experiences were being probed (see Appendix A). This variable closely resembled others in the survey that captured general perceptions of neighborhood crime and disorder, rather than personal experiences, and therefore represented a valid indicator of general experiences with authorities in the respondent's local area.

Group identity was measured using attitudinal variables that captured respondents' identification with the nation-state, including how much pride they felt in their nationality and how close they felt to their country. These measures served as indicators of identification with the superordinate group represented by legal authorities. *National pride* was a four-category ordinal variable (0 = not at all proud/not of country; 1 = not very proud; 2 = quite proud; 3 = very proud) that was entered as three dummy variables with the lowest category serving as the reference group. This survey item originally contained a category indicating that respondents were not the nationality in question, and responses fitting this category were combined with those indicating no national pride. *National identity* was similarly a four-category ordinal variable measuring how close the respondent felt to their country (0 = not close at all; 1 = not very close; 2 = close; 3 = very close) that was entered into the model as three dummy variables while omitting the lowest category as a reference group.

Social capital was captured using variables measuring respondents' generalized trust in other people and their membership in voluntary associations. *Generalized trust*

was a dummy variable based on a question that simply asked whether “most people” can be trusted (0 = need to be very careful; 1 = most people can be trusted). *Voluntary association* was similarly a dummy variable indicating whether the respondent belonged to at least one of the following 12 types of voluntary associations: churches or religious organizations; sport or recreational organizations; art, music, or educational organizations; labor unions; political parties; environmental organizations; professional associations; humanitarian or charitable organizations; consumer organizations; self-help or mutual aid groups; women’s groups; or other (0 = not active member of any organizations; 1 = active member of at least one organization). This variable was calculated to include all cases that had at least one response on any of these variables, rather than losing many cases due to listwise deletion of missing data. Because the measure was only meant to capture whether the respondent belonged to at least one organization, it was not necessary to drop cases with missing values on some items if at least one of the items was answered. Essentially, if the respondent provided a response for at least one of the voluntary association items, other missing values were treated the same as if the respondent had indicated inactive or no membership. Respondents were excluded from the analysis only if they failed to answer all 12 organizational membership questions.

Moral alignment with legal authorities was captured using measures of *perceived corruption* and *importance of democracy*. Unlike other ordinal variables in the WVS that were based on Likert scale responses, these items asked respondents to reply on a scale from one to ten. Ordinal variables with seven or more categories are often treated as continuous in regression analysis, and the numerical nature of this variable made

assumptions of equidistant categories more reasonable. *Perceived corruption* and *importance of democracy* were therefore entered into the model as continuous predictors, eschewing the factor variable approach used for other ordinal variables. *Perceived corruption* ranged from zero (no corruption in country) to nine (abundant corruption in country), and *importance of democracy* similarly ranged from zero (not at all important) to nine (absolutely important).

Table 4: Individual-level concepts, measures, and descriptive statistics

Concept	Measures	Min-Max	Mean	SD
Dependent Variables	Legitimacy of legal authorities	0-6	3.22	1.70
	Legitimacy of police	0-3	1.63	0.96
	Legitimacy of courts	0-3	1.56	0.96
Demographics	Age	16-103	42.58	16.13
	Female	0-1	0.51	0.50
	Education	0-2	1.02	0.80
	Married	0-1	0.65	0.48
	Unemployed	0-1	0.08	0.27
	Urban	0-1	0.67	0.47
Prior Victimization	Victim of crime in last year (self)?	0-1	0.10	0.30
	Victim of crime in last year (family)?	0-1	0.12	0.33
Fear of Crime	How often feel unsafe from crime in home?	0-3	0.58	0.88
	How unsecure feel in general?	0-3	1.02	0.82
Fear of War and Terrorism	How worried about war?	0-3	1.93	1.07
	How worried about terrorism?	0-3	1.97	1.04
Vicarious Experience	How often police/military interfere in private lives of residents in neighborhood?	0-3	0.61	0.80
Group Identity	How much pride in country?	0-3	2.44	0.80
	How close feel to country?	0-3	2.26	0.79
Social Capital	Trust in others	0-1	0.22	0.41
	Organizational membership	0-1	0.44	0.50
Moral Alignment	Perceived corruption	0-9	6.60	2.50
	Importance of democracy	0-9	7.37	2.12

N = 61,648

National-Level Variables

At the national level, this analysis included measures of the *freedom score* and the *homicide rate* (Table 5). *Freedom score* was based on the 2020 Global Freedom Index published by Freedom House. This index ranks countries on a scale from 0 to 100, with higher scores representing more freedom in terms of political rights and civil liberties. Within this sample of countries, the freedom index ranged from a low of 9 (Tajikistan) to a high of 98 (Australia and New Zealand). The mean freedom score across all countries in this sample was 55.04, with a standard deviation of 24.85. The *homicide rate* was obtained from the UNODC and based on the most recent available data from each country, ranging from 2011-2018. The homicide rate for a country is the annual number of intentional homicides per 100,000 residents. The mean homicide rate in this sample of countries was 5.91 ($SD = 8.10$), ranging from a low of less than .01 (Andorra) to a high of 34.52 (Nigeria).

Table 5: National-level variables

Country	Sample Size (World Values Survey, 2021)	Homicide Rate (UNODC 2011-2018)	Global Freedom Score (Freedom House, 2019)
Andorra	942	< 0.01	94
Argentina	807	5.10	85
Australia	1,516	0.80	97
Bangladesh	1,038	2.20	39
Bolivia	1,773	6.30	63
Brazil	1,294	30.50	75
Canada	3,997	1.80	98
Chile	741	4.30	90
Colombia	1,498	24.90	66
Cyprus	741	0.60	94
Ecuador	1,104	5.80	65
Ethiopia	1,120	8.80	24
Germany	1,210	1.00	94
Greece	1,081	0.70	88
Guatemala	1,000	26.10	52
Hong Kong	1,989	0.70	55
Indonesia	3,059	0.40	61
Iran	1,405	2.50	17
Iraq	1,027	9.90	31
Japan	808	0.20	96
Jordan	1,073	1.40	37
Kazakhstan	891	5.00	23
Kyrgyzstan	1,040	4.20	39
Lebanon	1,173	4.00	44
Malaysia	1,311	2.09	52
Mexico	1,613	24.79	62
Myanmar	1,198	2.30	30
N. Zealand	662	0.70	97
Nicaragua	1,166	7.40	31
Nigeria	1,152	34.50	47
Pakistan	1,641	4.20	38
Peru	1,266	7.70	72
Philippines	1,192	8.40	59
Romania	705	1.50	83
Russia	1,295	9.20	20
Serbia	839	1.10	66
Singapore	1,855	0.20	50
S. Korea	1,245	0.60	83
Taiwan	1,184	0.80	93
Tajikistan	1,106	1.60	9
Thailand	1,164	3.20	32
Tunisia	1,025	3.00	70
Turkey	2,133	4.30	32
Ukraine	841	6.20	62
U.S.A.	2,422	5.30	86
Vietnam	1,150	1.50	20
Zimbabwe	1,156	6.70	29
Mean	1,312	5.91	59.27

N = 61,648; K = 47

Data Analysis

This analysis combined individual-level data from Wave 7 of the World Values Survey with national-level data obtained from Freedom House and UNODC datasets. Of primary interest was whether predictors of legitimacy varied significantly in their effects across different countries and how much of this variation could be explained by national-level differences. Multilevel modeling techniques allowed such country-level variation in legitimacy to be controlled and explained separately from individual-level variation. Mixed models of this nature have become the preferred method for social scientists to parsimoniously account for clustering influences on individual-level variation. Of the benefits inherent to such an approach, O'Loughlin (2004) noted that:

Perhaps the greatest potential of multilevel modeling is to take the interaction of place and individual socio-demographic attributes into account. A respondent may answer quite differently depending on the ideology or government style of the country in which he/she is a citizen. Whether through intimidation, pressure, or conversion, ethnic or class determinants of political attitudes can take on different dimensions in different countries. (p. 5)

Multilevel models were constructed in stages, beginning with unconditional (null) models, expanding to fixed-effects models, testing for random variation in these effects using a series of random-effects models, and finally examining the influence of national-level predictors in a series of cross-level interaction models. The following chapter discusses the results of these multilevel analyses in detail.

V. RESULTS

This chapter discusses statistical procedures used in this analysis and summarizes results obtained through these various methods. The focus throughout this study remained extant variation in the sources of legitimacy across different countries. In the first section, a discussion of missing data that began in the methodology section is concluded and implications of potential patterns of missing data are addressed. Data from several countries were omitted from the analysis because of an absence of responses on key variables, and more detailed reasoning behind these omissions is provided below. The implications of listwise deletion and the potential consequences of this practice when data are not missing at random are also addressed in this section. After a brief discussion of centering decisions, descriptive statistics as well as bivariate correlations between variables are presented. The results of an initial ordinary least squares regression (OLS) analysis are then interpreted, including evaluations of multicollinearity based on variance inflation factors derived from the model.

The second section describes each step of the multilevel analysis in detail and summarizes the results of various multilevel models. The suitability of multilevel analysis for the current dataset was first established using an empty “null” model. Subsequent models added explanatory variables as fixed-effects before allowing each effect to vary across countries in a series of random-effects models. Model comparisons using likelihood-ratio tests formed the basis for conclusions regarding which effects varied significantly across countries. Lastly, cross-level interaction effects between explanatory variables and national-level measures of the homicide rate and the freedom score were

estimated and tested for significance in order to explain some of this random variation in effects.

The final section describes supplementary analyses that involved the estimation of two separate binary logistic regression models. These analyses used the two variables comprising the legitimacy index as separate outcomes, with one modeling the legitimacy of police and the other modeling the legitimacy of courts. In contrast to the first set of multilevel models, effects and variances in these models were transformed into log odds and interpreted as odds ratios. These analyses otherwise progressed in similar fashion, first estimating empty models to establish the need for multilevel modeling, then adding fixed effects, and finally testing the significance of random effects and cross-level interactions.

Missing Data

Several important decisions were made when trimming the final dataset for analysis. The latest version of the WVS, released in July 2021, included new data for two additional countries: Canada ($n = 4,018$) and Singapore ($n = 2,012$). Making use of this updated dataset added 6,030 individual-level cases nested in these two additional higher-level groups. A few countries were excluded from the analysis entirely due to missing data on key variables. All 3,036 cases from China were dropped because of missing data on the variable measuring how frequently police and/or military interfere in people's private lives, a crucial question in this analysis notably omitted by local data collectors because it was considered to have "little relevancy" in China (Haerpfer et al., 2020). In Egypt, questions related to confidence in police and courts, fear of war and terror, and vicarious experience with legal authorities were similarly not asked of respondents for

reasons related to security and cultural sensitivity (Haerpfer et al., 2020). Because these missing data included not only several key explanatory variables, but also the dependent variable of interest, all 1,200 cases from Egypt were dropped from the analysis.

Although individual-level data for the remaining countries in the WVS were otherwise largely complete, national-level variables were missing for some countries, absences potentially related to disputes over sovereignty and allegiance. Freedom House does not publish freedom scores for Macau ($n = 1,023$) or Puerto Rico ($n = 1,127$), making these countries unavailable for analysis using the final model. Dropping these countries from the analysis led to a loss of an additional 2,150 cases. Urban residence was not recorded for WVS data from Singapore and no reason was given for this omission. Instead of dropping all cases from this country, urban residence was assumed for all respondents from Singapore based on supplemental data from the United Nations Population Division (2018) indicating that virtually the entire population of that country resides in an urban area. Based on these supplemental data, all of the 2,012 respondents from Singapore were assumed to reside in an urban area and data were adjusted accordingly.

After trimming the dataset in this manner, the remaining sample consisted of $N = 70,511$ individuals distributed across $K = 47$ countries. However, this sample still contained missing data scattered across several variables. Before proceeding with the analysis, these missing data were examined more closely for patterns of randomness, and decisions were made regarding the treatment of missing values in the dataset. This analysis used listwise deletion to remove cases without complete data on all explanatory variables, an approach that was potentially problematic if data were not missing at

random (Grund et al., 2016). Although missing data analyses conducted before listwise deletion did not explicitly indicate the presence of significant patterns of missingness, the possibility remained that the distribution of missing data for some variables was related to other individual-level and national-level factors of interest. Of particular concern was the possibility that missingness was related to the outcome variable itself, in that the legitimacy of legal authorities may in some way be predictive of the likelihood of a respondent choosing not to answer certain questions in the first place. Future study should more carefully account for patterns of missingness in order to control for such potentialities.

Centering

Decisions regarding the centering of variables in the model were made before any further analyses were conducted. These decisions are discussed in the following section. Centering variables is common with continuous variables for which the zero point has no substantive meaning (Paccagnella, 2006). After mean centering, centered variables controlled by the model at zero will instead be controlled at their means. However, in multilevel models a choice must be made between mean centering around the grand mean of all higher-level units, or around the group means of each higher-level unit. The implications of this decision for measurement and interpretation make the centering of variables in multilevel analysis take on far greater complexity than in standard regression models (Luke, 2004; Paccagnella, 2006; Yaremych et al., 2021).

Introducing group-mean centered variables to the model may have allowed for more precise interpretation of country-level intercept values, but the resulting reduction in model parsimony made such an approach prohibitively complex for this study. While

grand-mean centering only affects the intercept value, group-mean centering would have produced entirely different coefficient estimates for all variables in the model and fundamentally altered the interpretation of results. Moreover, mean values derived from these country samples likely did not perfectly reflect actual population values, undermining inferences derived under the assumption that centering represents an adequate control for contextual effects (Longford, 1989; Paccagnella, 2006; Plewis, 1989).

To avoid these complications, none of the variables in the model were group-mean centered prior to analysis. Continuous variables measuring *age*, *perceived corruption*, *importance of democracy*, *homicide rate*, and *freedom score* were grand-mean centered to allow for more reasonable zero-point estimates and to ease computation. Instead of being held constant at zero, these variables were held constant at their global means. Holding variables at zero made conceptual sense for the remaining variables in the model, and these values were retained in their raw forms.

Descriptive Statistics

After arriving at a final sample through listwise deletion, distributions were examined using a variety of graphical and numerical methods. This study was primarily focused on the expected multilevel nature of these WVS data, making descriptive statistics of the overall sample imperfect because they account for neither the multilevel structure nor the possibility of correlated error terms. Nevertheless, these explorations provided initial insight into the broad distribution of values contained within this wide-ranging dataset.

Multilevel modeling partitions variation in the dependent variable into within-group and between-group types. For the purposes of this analysis, this distinction referred to within-country and between-country variation in legitimacy. Within a particular country, some individuals could be expected to report a legitimacy score above that country's mean, some a score below that country's mean, and some a score equivalent to that country's mean. The mean level of legitimacy associated with any particular country could similarly be expected to vary around the global mean of legitimacy. Individual-level differences might be attributable to variation between individuals within countries as well as to variation between countries themselves. There were therefore two types of mean value relevant to the current analysis – a global mean across all countries as well as separate means for each country. For this reason, the following descriptive section highlights both the global mean of each variable as well as the range of country means.

The final multilevel sample included $N = 61,648$ individuals nested in $K = 47$ countries. The dependent variable was the perceived legitimacy of legal authorities, measured using a continuous index variable obtained by combining ordinal measures of confidence in police and confidence in courts. This variable ranged from 0 to 6, with zero indicating that a respondent reported no confidence in either police or courts, and six indicating that a respondent reported high confidence in both police and courts. For the purposes of brevity and clarity, this variable is referred to as *legitimacy* throughout this analysis.

Figure 4 presents the distribution of these mean values across countries, with the vertical dotted line representing the raw global mean of 3.22 ($SD = 1.70$). Country means ranged from 1.48 ($SD = 1.46$) in Peru to 4.88 ($SD = 1.40$) in Jordan, and country standard

deviations ranged from 1.10 in Vietnam ($M = 4.36$) to 1.97 in Iraq ($M = 3.06$).

Superficially, these summary statistics indicated the presence of substantial variation in legitimacy both within and between countries. But whether this variation was significant, which variables might explain this variation, and how much of this variation is attributable to individual-level versus country-level factors could not be established from these simple comparisons.

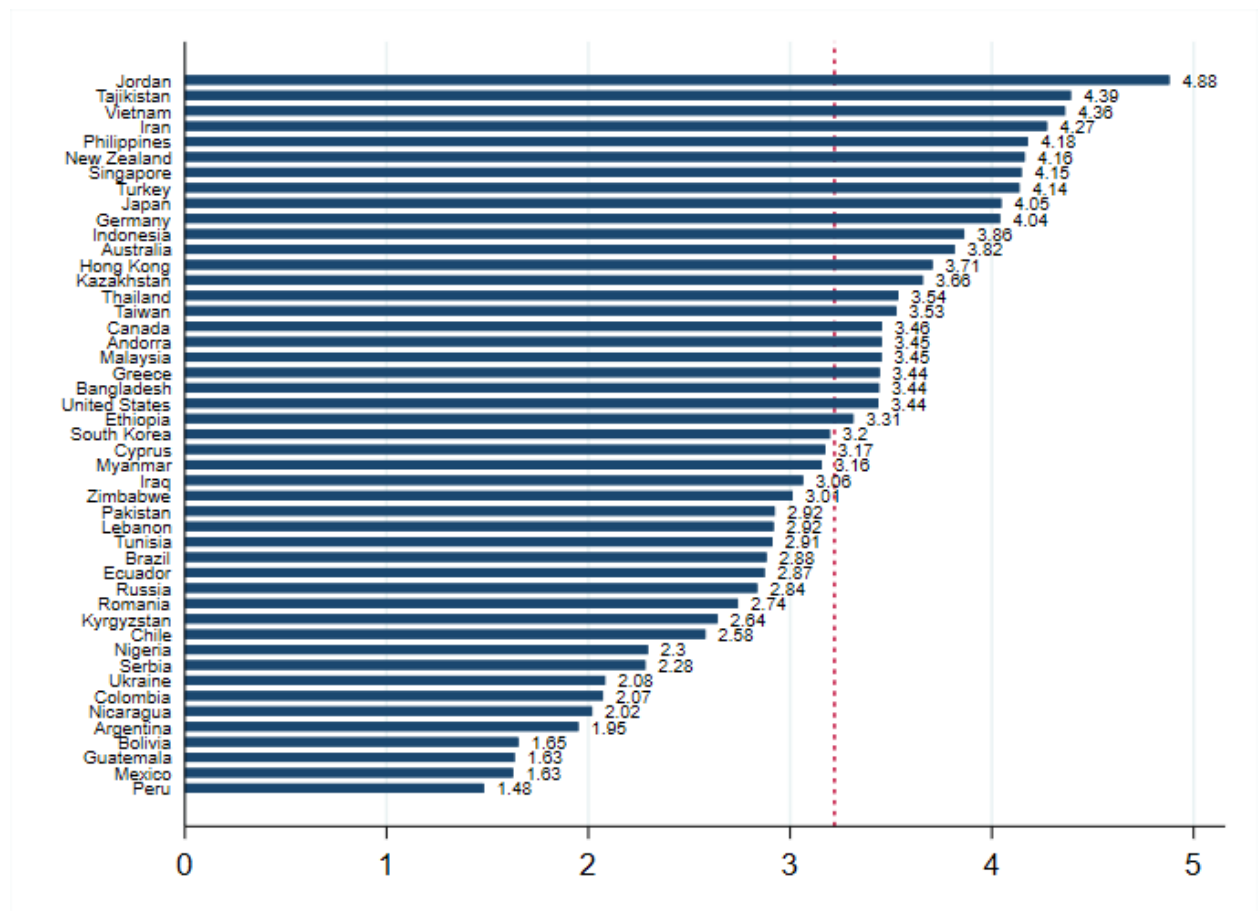


Figure 4: Raw mean legitimacy by country

The mean level of legitimacy appeared to differ greatly between countries, as did the amount of within-country variation around each of these means. Respondents in some countries (e.g., Vietnam) appeared to be more homogenous in their attitudes toward

authorities, displaying relatively limited variation around their country mean, while respondents in other countries (e.g., Iraq) appeared to be more heterogeneous, with wider variation around their country means. At the individual level, 19 conceptually relevant predictors of legitimacy (represented by a total of 34 independent variables due to dummy-coding) were included in the analysis (Table 6).

Table 6: Descriptive statistics

Measures	Min-Max	Mean	SD
Legitimacy (legal authorities)	0-6	3.22	1.70
Legitimacy (police)	0-3	1.63	0.96
Legitimacy (courts)	0-3	1.56	0.96
Age	16-103	42.58	16.13
Female	0-1	0.51	0.50
Education	0-2	1.02	0.80
Married	0-1	0.65	0.48
Unemployed	0-1	0.08	0.27
Urban	0-1	0.67	0.47
Prior victimization (self)	0-1	0.10	0.30
Prior victimization (family)	0-1	0.12	0.33
Fear of crime (home)	0-3	0.58	0.88
Fear of crime (general)	0-3	1.02	0.82
Fear of war	0-3	1.93	1.07
Fear of terrorism	0-3	1.97	1.04
Vicarious experience	0-3	0.61	0.80
National pride	0-3	2.44	0.80
National identity	0-3	2.26	0.79
Trust	0-1	0.22	0.41
Voluntary association	0-1	0.44	0.50
Perceived corruption	0-9	6.60	2.50
Importance of democracy	0-9	7.37	2.12
Homicide rate	0-34.5	5.91	8.10
Freedom score	9-98	59.27	25.99

N = 61,648

Age was a continuous variable that ranged from 16 to 103 and had an overall mean of 42.58 ($SD = 16.14$). Individual country means varied around this global mean, ranging from 31.72 ($SD = 11.40$) in Ethiopia to 56.35 ($SD = 16.07$) in New Zealand. Country-level standard deviations ranged from 11.40 in Ethiopia ($M = 31.72$) to 17.91 in Germany ($M = 52.16$). This variable was grand-mean centered to enable more meaningful interpretation of its zero point. Sex was a dummy variable (0 = male; 1 = female) with an overall mean value of .51 ($SD = .50$), indicating that slightly over half (51.29%) of the overall sample was female. Individual country means varied somewhat around this global mean, with some majority male, such as the United States ($M = .46$, $SD = .50$) and others majority female, such as Kyrgyzstan ($M = .62$, $SD = .48$). Standard deviations of this variable ranged from .48 in Kyrgyzstan ($M = .62$) to .50 in Cyprus ($M = .50$).

Education was a three-category ordinal variable (0 = low; 1 = middle; 2 = high) that was entered into the model as two dummy variables while omitting the lowest category as a reference group. In the overall sample, approximately 31.18% of respondents reported a low level of education (early childhood, primary, lower secondary), 36.14% reported a moderate level of education (upper secondary, post-secondary non-tertiary), and 32.69% reported a high level of education (short-cycle tertiary, bachelor, master, doctoral). The global mean level of education in this sample was 1.02 ($SD = .80$). While the mean of an ordinal variable is not a reliable foundation for estimating relationships, it can still provide superficial indication of relative levels of education reported by respondents in different countries. Individual country means again showed variation around this overall mean, with average levels of education ranging from

.32 ($SD = .64$) in Bangladesh to 1.59 ($SD = .65$) in Ukraine. Standard deviations ranged from .53 in the United States ($M = 1.51$) to .87 in Malaysia ($M = .77$).

Marital status was a dummy variable (0 = not married; 1 = married) with a global mean of .65 ($SD = .48$), indicating that approximately 65% of all respondents reported being married or living together as married. Individual country means varied from .41 ($SD = .49$) in Guatemala to .86 ($SD = .35$) in Bangladesh. Standard deviations ranged from .35 in Bangladesh to .50 in Argentina. Unemployment was a dummy variable (0 = employed; 1 = unemployed) with an overall mean of .08 ($SD = .27$), indicating that approximately 8% of the global sample reported being unemployed. Individual country averages and standard deviations ranged from .00 ($SD = .00$) in Kyrgyzstan to .37 ($SD = .48$) in Zimbabwe.

Urban residence was a dummy variable measuring whether the respondent lived in an urban or rural area (0 = rural; 1 = urban). This variable had an overall mean of .67 ($SD = .48$), indicating that approximately 67% of respondents were reported as residing in urban areas. Country-level means of urban residence displayed variation around this overall mean. The least urban country in this sample was Bangladesh, with a mean of .24 ($SD = .43$), and the most urban countries were South Korea, Hong Kong, and Singapore, all with means of 1.00 ($SD = .00$). Standard deviations of this variable ranged from .00 in South Korea, Hong Kong, and Singapore ($M = 1.00$) to .50 in Nigeria ($M = .49$).

In addition to these seven demographic control variables, the analysis included 27 individual-level explanatory variables capturing a range of theoretical antecedents of legitimacy, including prior victimization, fear of crime, fear of war and terrorism, vicarious experience, national identity, social capital, and moral alignment. Prior

victimization was measured as a dummy variable (0 = no; 1 = yes) and had a global mean of .10 ($SD = .30$) indicating that around 10% of the overall sample reported personally having been a victim of crime in the year prior to the survey. Individual country means varied around this global mean, from .01 ($SD = .08$) in Vietnam to .28 ($SD = .45$) in Mexico. To reiterate, because these are dummy variables, these mean values indicate that compared to around 1% of respondents in Vietnam, approximately 28% of respondents in Mexico reported having been victims of crime within the past year. Standard deviations of this variable ranged from .08 in Vietnam ($M = .01$) to .45 in Mexico ($M = .28$).

Prior family victimization, also measured as a dummy variable (0 = no; 1 = yes), had a global mean of .12 ($SD = .33$) indicating that around 12% of respondents in the overall sample reported a family member having been a victim of crime in the year prior to the survey. Once again, individual country means varied around this overall mean, with Vietnam reporting the lowest level of family victimization at .01 ($SD = .08$), and Mexico reporting the highest at .37 ($SD = .48$). In other words, over one-third (37%) of respondents in Mexico reported that a member of their family had been a victim of crime in the past year, compared to around 1% of respondents in Vietnam. Standard deviations ranged from .08 in Vietnam ($M = .01$) to .48 in Mexico ($M = .37$).

Fear of crime at home was an ordinal variable capturing how often the respondent had felt unsafe from crime in their home during the prior year (0 = never; 1 = rarely; 2 = sometimes; 3 = often), that was entered as three dummy variables. In the overall sample, 64.32% of respondents reported “never” feeling unsafe from crime in their homes in the past year, 18.29% reported “rarely” feeling unsafe, 12.58% reported “sometimes” feeling unsafe, and 4.80% reported “often” feeling unsafe. This variable had a mean of .58 ($SD =$

.88). While the ordinal nature of this variable again precluded the use of mean values for statistical inferences, some rough inferences from mean comparisons across countries could still be made. Because this variable could range from zero to three, with three indicating the most unsafe, this statistic suggested that in the overall sample, respondents on average “rarely” felt unsafe from crime in their homes. However, this mean value varied a great deal between countries, from .07 in South Korea ($SD = .37$) to 1.56 in Peru ($SD = .98$). Standard deviations ranged from .37 in South Korea ($M = .07$) to 1.17 in Mexico ($M = 1.50$).

Fear of crime in general was also an ordinal variable capturing how safe the respondent felt from crime in their neighborhood (0 = very; 1 = quite; 2 = not very; 3 = not at all) that was entered as three dummy variables. This variable was reversed from its original coding so that higher values represented more fear of crime. In the overall sample, 28.09% of respondents reported feeling “very” safe in their neighborhoods, 46.23% reported feeling “quite” safe, 21.00% reported feeling “not very” safe, and 4.69% reported feeling “not at all” safe. This variable had a global mean of 1.02 ($SD = .82$), indicating that in the overall sample, respondents on average felt quite secure from crime in their neighborhoods. Country means once again varied greatly around this global mean, ranging from .26 ($SD = .48$) in Tajikistan to 1.88 ($SD = .78$) in Peru. Standard deviations ranged from .48 in Tajikistan ($M = .26$) to .97 in Colombia ($M = 1.10$).

Fear of war was an ordinal variable (0 = not at all; 1 = not much; 2 = a great deal; 3 = very much) that was entered as three dummy variables while omitting the lowest category as a reference group. In the overall sample, 13.53% of respondents reported no fear of war, 20.78% reported “not much,” 24.68% reported “a great deal,” and 41.02%

reported “very much.” The global mean of this variable was 1.93 ($SD = 1.07$), indicating a great deal of fear on average in the overall sample. Country means varied substantially around this mean, from .78 ($SD = .90$) in New Zealand to 2.75 ($SD = .63$) in Myanmar. Standard deviations ranged from .63 in Myanmar ($M = 2.75$) to 1.34 in Tajikistan ($M = 1.49$).

Similarly, fear of terror was an ordinal variable (0 = not at all; 1 = not much; 2 = a great deal; 3 = very much) entered as three dummy variables while omitting the lowest category as a reference group. In the overall sample, 11.45% of respondents reported no fear of terrorism, 21.65% reported “not much,” 25.42% reported “a great deal,” and 41.47% reported “very much.” This variable had a global mean of 1.97 ($SD = 1.04$), indicating a great deal of fear of terrorism on average in the overall sample. Individual country means showed substantial variation around this global mean, ranging from 1.11 ($SD = .84$) in Canada to 2.87 ($SD = .43$) in Myanmar. Standard deviations ranged from .43 in Myanmar ($M = 2.87$) to 1.29 in Tajikistan ($M = 1.57$).

Vicarious experience was captured using an ordinal variable that measured the frequency with which police and/or military were perceived to interfere in people’s private lives in the respondent’s neighborhood (0 = not at all frequently; 1 = not frequently; 2 = quite frequently; 3 = very frequently). This variable was again entered as three dummy variables while omitting the lowest category as a reference group. In the overall sample, 55.46% of respondents reported that police/military interfere “not at all frequently,” 31.91% reported this occurring “not frequently,” 8.96% reported this occurring “quite frequently,” and 3.67% reported interference occurring “very frequently.” The global average of this variable was .61 ($SD = .80$), indicating that

respondents on average perceived legal authorities to be infrequently interfering in people private lives. Individual country means varied around this overall mean, from .16 ($SD = .41$) in Taiwan to 1.26 ($SD = 1.05$) in Zimbabwe. Standard deviations ranged from .41 in Taiwan ($M = .16$) to 1.05 in Zimbabwe ($M = 1.26$).

National pride was an ordinal variable (0 = not at all proud or not nationality; 1 = not very proud; 2 = quite proud; 3 = very proud) that was entered as three dummy variables while omitting the lowest category as a reference group. In the overall sample, 3.85% of respondents reported being “not at all proud” of their nation, 8.06% reported being “not very proud,” 28.09% reported being “quite proud,” and 60.00% reported being “very proud.” This variable had a global mean of 2.44 ($SD = .80$), indicating a relatively high level of national pride on average across the total sample. Country means varied around this grand mean, ranging from 1.19 ($SD = 1.31$) in Andorra to 2.89 ($SD = .42$) in Jordan. Standard deviations ranged from .41 in the Philippines ($M = 2.87$) to 1.31 in Andorra ($M = 1.19$).

National identity was also an ordinal variable (0 = not at all close; 1 = not very close; 2 = close; 3 = very close) entered as three dummy variables while omitting the lowest category as a reference group. In the overall sample, 2.96% of respondents reported feeling “not at all close” to their nation, 12.84% reported feeling “not very close,” 38.91% reported feeling “close,” and 45.28% reported feeling “very close.” This variable had an overall average of 2.26 ($SD = .79$), indicating high levels of identification with one’s nation on average across the global sample. Individual country means varied around this group mean, ranging from 1.55 ($SD = .95$) in Thailand to 2.94 ($SD = .31$) in

Jordan. Standard deviations ranged from .31 in Jordan ($M = 2.94$) to .95 in Thailand, ($M = 1.55$).

Social capital was measured using two dummy variables – trust in others and organizational membership. The overall mean of trust in the sample was .22 ($SD = .41$), meaning that approximately 22% of respondents in the overall sample reported a belief that most people can be trusted. Country means varied around this global mean, from .02 ($SD = .14$) in Zimbabwe to .65 ($SD = .48$) in New Zealand. Standard deviations ranged from .14 in Zimbabwe ($M = .02$) to .50 in Canada ($M = .50$). The global mean level of organizational membership was .44 ($SD = .50$), indicating that approximately 44% of the total sample reported active membership in at least one type of voluntary association. This average level of membership varied among countries, ranging from .09 ($SD = .29$) in Turkey to 1.00 ($SD = .06$) in Jordan. Standard deviations ranged from .06 in Jordan ($M = 1.00$) to .50 in Tajikistan ($M = .59$).

Lastly, moral alignment was measured using two continuous variables – perceived corruption and importance of democracy. In their raw forms, each of these variables could range from 0 to 9. The average level of perceived corruption in the overall sample was 6.60 ($SD = 2.50$), while country means ranged from 2.51 ($SD = 1.99$) in Singapore to 8.55 ($SD = 1.41$) in Brazil. Standard deviations of these mean values ranged from 1.17 in Peru ($M = 8.52$) to 3.13 in Iran ($M = 5.78$). The average level of importance placed on democracy in the overall sample was 7.37 ($SD = 2.12$), with individual country means ranging from 5.93 ($SD = 2.82$) in Lebanon to 8.53 ($SD = 1.46$) in Ethiopia. Standard deviations ranged from 1.02 in Greece ($M = 8.41$) to 2.82 in Lebanon ($M = 5.93$). Both of these variables were grand mean centered prior to analysis.

At the country level, models included measures of the homicide rate and the freedom score. The average homicide rate for the overall sample was 5.9 (SD = 8.1) with individual country rates varying from a low of less than 1 per 100,000 in Andorra to a high of 34.5 in Nigeria. The average freedom score in the overall sample was 59 (SD = 26), with individual freedom scores varying around this mean from a low of 9 in Tajikistan to a high of 98 in Canada. Both of these variables were grand mean centered to enable more meaningful interpretation of their zero points. The final model, comprising demographic, individual-level, and national-level predictors, contained a total of 36 explanatory variables, including dummy variables representing different categories of the same ordinal measure.

Bivariate Correlations

The next step in the exploratory stage of this analysis was the examination of pairwise relationships between covariates and outcomes in the model. While some variables might have shown moderate to large correlations, there were often theoretical reasons for keeping many of these measures separate. In such cases, variables measuring similar concepts were generally not combined so long as tolerance and variance inflation statistics did not indicate problematically high levels of multicollinearity. Bivariate correlations are presented in Table 7 below.

Table 7: Bivariate correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Legit	1.00																				
2. Age	.08*	1.00																			
3. Sex	.01	-.03*	1.00																		
4. Edu	-.02*	-.11*	-.03*	1.00																	
5. Marriage	.06*	.21*	-.02*	-.09*	1.00																
6. Unemp	-.02*	-.08*	-.04*	-.06*	-.10*	1.00															
7. Urban	-.06*	.07*	-.001	.24*	-.09*	-.04*	1.00														
8. Svictim	-.12*	-.05*	-.03*	.003	-.03*	.02*	.05*	1.00													
9. Fvictim	-.14*	-.06*	.002	.02*	-.03*	.02*	.06*	.44*	1.00												
10. Hcrime	-.14*	-.02*	.007	-.08*	-.01	.05*	.03*	.23*	.24*	1.00											
11. Grime	-.25*	-.002	.05*	.02*	-.05*	.02*	.11*	.16*	.19*	.29*	1.00										
12. Fwar	-.06*	-.10*	.06*	-.15*	.03*	.01*	-.16*	.05*	.04*	.12*	.06*	1.00									
13. Fterror	-.02*	-.07*	.05*	-.13*	.04*	.01	-.14*	.03*	.03*	.10*	.05*	.77*	1.00								
14. Vicar	-.14*	-.11*	-.03*	-.05*	-.05*	.06*	.04*	.15*	.14*	.22*	.21*	.08*	.06*	1.00							
15. Npride	.10*	.02*	-.005	-.13*	.06*	.01	-.16*	-.04*	-.02*	-.02*	-.13*	.13*	.15*	-.07*	1.00						
16. Nident	.10*	.08*	-.03*	.01	.04*	-.01	.02*	-.02*	-.01*	-.01	-.10*	.04*	.06*	-.05*	.32*	1.00					
17. Trust	.15*	.09*	-.02*	.16*	.02*	-.05*	.08*	-.02*	-.03*	-.08*	-.11*	-.18*	-.18*	-.04*	-.06*	.02*	1.00				
18. Assoc	.06*	-.03*	-.04*	.03*	.002	-.01	-.05*	.07*	.07*	.05*	-.04*	.003	.007	.05*	.07*	.01	.06*	1.00			
19. Democ	.06*	.08*	-.02*	.07*	.03*	-.02*	-.01	-.02*	-.002	-.05*	-.03*	.003	.02*	-.10*	.09*	.08*	.04*	.05*	1.00		
20. Corrupt	-.30*	-.09*	-.005	-.08*	-.02*	.03*	-.08*	.08*	.10*	.14*	.17*	.21*	.18*	.10*	.05*	-.02*	-.20*	.02*	.08*	1.00	
21. Homic	-.27*	-.13*	-.01	-.09*	-.07*	.08*	-.002	.14*	.17*	.20*	.17*	.14*	.09*	.19*	.04*	-.04*	-.14*	.10*	-.06*	.27*	1
22. Free	-.05*	.20*	-.000	.20*	-.04*	-.08*	.26*	.05*	.06*	.03*	.09*	-.21*	-.20*	-.08*	-.20*	-.03*	.17*	.05*	.09*	-.02*	-.10*

N = 61,648; *p < .001

Bivariate correlations displayed in Table 7 indicated that the dependent variable exhibited some degree of significant correlation with nearly all of the included explanatory variables. Legitimacy was moderately negatively correlated with perceived corruption ($r = -.30$), homicide rate ($r = -.27$), and fear of crime in general ($r = -.25$), weakly negatively correlated with family victimization ($r = -.14$), fear of crime at home ($r = -.14$), vicarious experience ($r = -.14$), and prior victimization ($r = -.12$), and weakly positively correlated with trust ($r = .15$), national pride ($r = .10$), and national identity ($r = .10$). Only the variable measuring sex did not display a significant correlation with legitimacy.

Other moderately sized correlations among demographic variables were found between age and marriage ($r = .21$), and between education and urban residence ($r = .24$). Prior victimization displayed moderate correlation with family victimization ($r = .44$) and fear of crime at home ($r = .23$), as did family victimization and fear of crime at home ($r = .24$). Fear of crime at home was moderately positively correlated with fear of crime in general ($r = .29$) and vicarious experience ($r = .22$). Fear of crime in general was also moderately positively correlated with vicarious experience ($r = .21$). Fear of war showed a very strong positive correlation with fear of terrorism ($r = .77$), and a moderate positive correlation with perceived corruption ($r = .21$). National pride was moderately positively correlated with national identity ($r = .32$), while trust was moderately and negatively correlated with perceived corruption ($r = -.20$).

National-level variables also displayed significant correlation with other variables in the model. In addition to the previously noted moderate negative correlation with the dependent variable, the homicide rate was also moderately positively correlated with fear

of crime at home ($r = .20$), and perceived corruption ($r = .27$). Freedom score was moderately positively correlated with age ($r = .20$), education ($r = .20$), and urban residence ($r = .26$), while showing moderate negative correlation with fear of war ($r = -.21$), fear of terrorism ($r = -.20$), and national pride ($r = -.20$). All other bivariate correlations among independent variables were relatively weak ($r < .20$) and/or nonsignificant.

Based solely on these correlations, it appeared that fear of crime, perceived corruption, and the homicide rate displayed the strongest associations with legitimacy in this sample. However, these simple correlations did not control for any of the other variables in the model, nor did they account for the likely presence of correlated error terms within countries. They provided no insight into the amount of variation that may exist across different countries and whether these same relationships were equally important in all contexts. While the need for a multilevel approach seemed clear based on national-level variation apparent in descriptive analyses, an ordinary least squares (OLS) regression was attempted before proceeding with the multilevel model, both to test for multicollinearity among the variables and to further establish the benefits of an approach that accounted for country-level variation.

Ordinary Least Squares Models

This analysis began with a series of initial OLS regression models using the total sample, first without controlling for country, and then including a set of dummy variables to control for country-level variation. The results of these OLS regression analyses are presented in Tables 8 and 9 below.

Table 8: Ordinary least squares regression without country controls

	Model A: OLS without country controls (no homicide & freedom)	Model B: OLS without country controls (with homicide & freedom)
Variable	b (SE)	b (SE)
Age	.002*** (.0004)	.002*** (.0004)
Sex	.07*** (.01)	.07*** (.01)
Education (1)	-.16*** (.02)	-.14*** (.02)
Education (2)	-.19*** (.02)	-.20*** (.02)
Married	.07*** (.01)	.04** (.01)
Unemployed	.001 (.02)	.03 (.02)
Urban	-.13*** (.01)	-.08*** (.01)
Victim (self)	-.18*** (.02)	-.14*** (.02)
Victim (family)	-.27*** (.02)	-.20*** (.02)
Fear crime at home (1)	.02 (.02)	.04* (.02)
Fear crime at home (2)	-.05* (.02)	.01 (.02)
Fear crime at home (3)	-.16*** (.03)	-.07* (.03)
Fear crime in general (1)	-.18*** (.02)	-.18*** (.02)
Fear crime in general (2)	-.65*** (.02)	-.59*** (.02)
Fear crime in general (3)	-.88*** (.03)	-.77*** (.03)
Fear war (1)	-.06* (.02)	-.04 (.02)
Fear war (2)	-.10*** (.03)	-.07** (.03)
Fear war (3)	-.19*** (.03)	-.14*** (.03)
Fear terrorism (1)	.10*** (.03)	.07** (.03)
Fear terrorism (2)	.31*** (.03)	.24*** (.03)
Fear terrorism (3)	.32*** (.03)	.26*** (.03)
Vicarious (1)	-.14*** (.01)	-.10*** (.01)
Vicarious (2)	-.17*** (.02)	-.14*** (.02)
Vicarious (3)	-.38*** (.03)	-.29*** (.03)
National pride (1)	.07 (.04)	.08* (.04)
National pride (2)	.24*** (.03)	.23*** (.03)
National pride (3)	.32*** (.03)	.32*** (.03)
National identity (1)	.12** (.04)	.11** (.04)
National identity (2)	.26*** (.04)	.24*** (.04)
National identity (3)	.36*** (.04)	.34*** (.04)
Trust	.35*** (.02)	.33*** (.02)
Association	.20*** (.01)	.25*** (.01)
Corruption	-.17*** (.003)	-.15*** (.003)
Democracy	.04*** (.003)	.04*** (.003)
Homicide		-.035*** (.001)
Freedom		-.003*** (.0003)
Constant	3.73*** (.06)	3.74*** (.06)

Model A: N = 61,648; R² = .1783; Adj R² = .1778; Root MSE = 1.5415 | Model B: N = 61,648; R² = .2022; Adj R² = .2017; Root MSE = 1.5189

Table 9: Ordinary least squares regression with country controls

	Model C: OLS with country controls (no homicide & freedom)	Model D: OLS with country controls (with homicide & freedom)
Variable	b (SE)	b (SE)
Age	-.0006 (.0004)	-.0006 (.0004)
Sex	.06*** (.01)	.06*** (.01)
Education (1)	-.15*** (.02)	-.15*** (.02)
Education (2)	-.17*** (.02)	-.17*** (.02)
Married	.03* (.01)	.03* (.01)
Unemployed	-.05* (.02)	-.05* (.02)
Urban	-.14*** (.01)	-.14*** (.01)
Victim (self)	-.09*** (.02)	-.09*** (.02)
Victim (family)	-.08*** (.02)	-.08*** (.02)
Fear crime at home (1)	.02 (.02)	.02 (.02)
Fear crime at home (2)	.08*** (.02)	.08*** (.02)
Fear crime at home (3)	.08** (.03)	.08** (.03)
Fear crime in general (1)	-.24*** (.01)	-.24*** (.01)
Fear crime in general (2)	-.52*** (.02)	-.52*** (.02)
Fear crime in general (3)	-.87*** (.03)	-.87*** (.03)
Fear war (1)	-.03 (.02)	-.03 (.02)
Fear war (2)	-.06* (.02)	-.06* (.02)
Fear war (3)	-.02 (.03)	-.02 (.03)
Fear terrorism (1)	.05* (.02)	.05* (.02)
Fear terrorism (2)	.15*** (.03)	.15*** (.03)
Fear terrorism (3)	.22*** (.03)	.22*** (.03)
Vicarious (1)	-.08*** (.01)	-.08*** (.01)
Vicarious (2)	-.12*** (.02)	-.12*** (.02)
Vicarious (3)	-.25*** (.03)	-.25*** (.03)
National pride (1)	.06 (.04)	.06* (.04)
National pride (2)	.30*** (.03)	.30*** (.03)
National pride (3)	.48*** (.03)	.48*** (.03)
National identity (1)	.17** (.04)	.17** (.04)
National identity (2)	.28*** (.04)	.28*** (.04)
National identity (3)	.41*** (.04)	.41*** (.04)
Trust	.27*** (.02)	.27*** (.02)
Association	.16*** (.01)	.16*** (.01)
Corruption	-.11*** (.003)	-.11*** (.003)
Democracy	.03*** (.003)	.03*** (.003)
Homicide		.09** (.03)
Freedom		-.01*** (.001)
Constant	3.34*** (.07)	3.65*** (.06)

Model C: N = 61,648; $R^2 = .3091$; Adj $R^2 = .3082$; Root MSE = 1.414 | Model D: N = 61,648; $R^2 = .3091$; Adj $R^2 = .3082$; Root MSE = 1.414

In models that included dummy variables as country controls, Andorra was omitted as the reference group solely because it was first in the alphabetical list of countries. Compared to other countries in the analysis, Andorra displayed a relatively low homicide rate ($< .01$) and a relatively high freedom score (94). Variables measuring age, perceived corruption, importance of democracy, homicide rate, and freedom score were mean centered, allowing zero to represent mean values for these variables. These four regression models were mostly identical, except for differences in national-level variables and country controls. Model A was estimated without country controls and without national-level measures of the homicide rate and the freedom score. Model B also omitted country controls but added homicide rate and freedom score measures. Model C added dummy-coded variables as country controls but did not include the homicide rate or the freedom score. Model D included country controls as well as the homicide rate and the freedom score. Relevant distinctions between these models are discussed in detail below.

Compared to Model A, estimated effects showed notable differences when national-level predictors were included in Model B. While many effects varied only slightly or not at all between these models, coefficients for variables such as fear of crime at home and fear of war displayed a greater sensitivity to the inclusion of these additional measures. This indicated that some of the variation in legitimacy attributable to the individual-level effects, especially those related to crime and safety, was attenuated when national-level measures of the homicide rate and the freedom score were included in the model.

Model C, which added 46 dummy predictors to represent each country sans the reference group, also showed sizeable differences from effects estimated in Model A. The largest differences were apparent in the effects of age, marriage, unemployment, prior and family victimization, fear of crime at home and in general, fear of war and terrorism, and national pride. This appeared to indicate that the individual-level effects of many variables were affected by the inclusion of country controls, or at least by the respecification of Andorra as the reference group upon which all coefficient estimates were based. Notable differences between Model B (with national-level predictors) and Model C (with country controls) were present in the effects of age, urban residence, prior and family victimization, fear of war, national pride, national identity, trust, and voluntary association, among others. Again, these differences are likely primarily related to differences in reference group when all predictor variables are held at zero.

In Model B, coefficients are estimated holding all other variables in the model at zero, which for the homicide rate and the freedom score equal the mean due to centering. Therefore, coefficients in Model B represented the estimated effect of explanatory variables in a country with an average homicide rate and average freedom score, while coefficients in Model C represented the estimated effect of explanatory variables in the reference group. In this case, the reference group was Andorra, a country with an extremely low homicide rate ($< .01$) and a relatively high freedom score (94). Model D included both country controls and measures of homicide and freedom score but omitted data from Singapore and Canada due to multicollinearity. Coefficient estimates produced by this model were almost identical to those of model C, with the notable difference of a

higher constant (3.65). The results of Model D, including national-level variables and country controls, are interpreted in full below.

Age was not significantly associated with legitimacy once country controls were added to the model. However, as will be shown in the following sections, this nonsignificant result means little when considering the variation in effect that may exist in this effect across countries. A non-significant or negligible global effect in no way precludes the possibility that a variable may display strong and significant relationships with legitimacy in some countries. Being female corresponded to a significant .06 increase in legitimacy on average. Compared to the lowest level of education (early childhood, primary, lower secondary), a moderate level of education (upper secondary, post-secondary non-tertiary) was associated with a .15 decrease in legitimacy, while a high level of education (short-cycle tertiary, bachelor, master, doctoral) was associated with a .17 decrease in legitimacy. Being married was associated with a .03 increase in legitimacy, but this relationship was only significant at the .05 level. Unemployment was associated with a .05 decrease in legitimacy, but this relationship was also only significant at the .05 level. Living in an urban area was associated with a significant .14 decrease in legitimacy on average.

Prior victimization and family victimization were associated with significant .09 and .08 decreases in legitimacy, respectively. Fear of crime at home displayed a somewhat complicated relationship with legitimacy, as feeling “rarely unsafe” compared to “never unsafe” was not significantly associated with legitimacy, while feeling “sometimes unsafe” or “often unsafe” were both associated with significant .08 increases in legitimacy. Fear of crime in general exhibited a much stronger relationship with

legitimacy than fear of crime at home, with feeling “quite” safe associated with a significant .24 decrease in legitimacy, “not very” safe with a significant .52 decrease in legitimacy, and “not at all” safe with a significant .87 decrease in legitimacy on average.

Fear of war displayed a weak negative correlation with legitimacy, with only the middle level, representing “a great deal” of fear, corresponding to a significant .06 decrease in the outcome variable. Fear of terrorism displayed stronger, more significant, and notably positive correlations with legitimacy compared to fear of war. Having “not much” fear compared to “none” was associated with a significant .05 increase in legitimacy, “a great deal” with a significant .15 increase, and “very much” with a significant .22 increase.

Negative vicarious experience was significantly and negatively associated with legitimacy. Perceiving authorities as interfering “not frequently” compared to “never” was associated with a significant .08 decrease in legitimacy, perceiving authorities as interfering “quite frequently” with a significant .12 decrease, and perceiving authorities as interfering “very frequently” with a significant .25 decrease.

National pride and national identity displayed positive relationships with legitimacy overall. While feeling “not very proud” of one’s nation compared to “not at all proud” was not significantly associated with legitimacy, feeling “quite proud” was associated with a significant .30 increase, and feeling “very proud” was associated with a significant .48 increase. Feeling “not very close” to one’s nation compared to “not close at all” was associated with a significant .17 increase in legitimacy, feeling “close” with a significant .28 increase, and feeling “very close” with a significant .41 increase.

Trust in others was associated with a significant .27 increase in legitimacy, while voluntary association was associated with a significant .16 increase. Perceived corruption was significantly and negatively associated with legitimacy, with a one-unit increase in perceived corruption corresponding to a .11 decrease in legitimacy on average. Importance of democracy was significantly and positively associated with legitimacy, with a one-unit increase in importance of democracy corresponding to a .03 increase in legitimacy on average.

The national-level homicide rate displayed a positive association with legitimacy at the individual level, with a one-unit increase in the homicide rate corresponding to a significant .09 increase in legitimacy on average. The national-level freedom score was negatively associated with legitimacy at the individual-level, with a one-unit increase in freedom score corresponding to a significant .01 decrease in legitimacy on average.

Variance inflation factors (VIFs) estimated from these OLS models provided tests for problematic levels of multicollinearity among the variables. One slight alteration to the model was made before this postestimation could produce accurate results. Estimation of a regression model using dummy variables to represent ordinal predictors produced inflated VIF scores because variables representing categories of the same measure were highly correlated. When the regression was estimated with ordinal variables treated not as separate dummies but as continuous predictors, none of the VIF or tolerance scores appeared problematically large (Luke, 2004; Mansfield & Helms, 1982; Midi et al., 2013). The highest VIFs were for fear of war (2.58) and fear of terrorism (2.52), while the rest were all well below 2.00, indicating acceptable levels of multicollinearity among variables.

Although bivariate correlations indicated that related variables such as fear of war/fear of terrorism, prior victimization/family victimization, safe at home/safe in general, and national pride/national identity were significantly correlated, the VIFs produced by these regression models did not indicate problematic levels of collinearity among these predictors. Moreover, theoretical distinctions between these concepts and the goal of investigating differences in effect between these predictors made their combination into index variables undesirable for the current analysis.

Taken at face value and ignoring probable violations of heteroskedasticity and uncorrelated error assumptions, these linear regression analyses provided preliminary evidence of significant relationships between legitimacy and many, but not all, explanatory variables in the model. In addition, comparison of the relative significance and strength of these associations with and without controlling for country suggested the importance of country-level differences on individual-level relationships. However, the likely existence of clustering effects within countries meant that these estimates were prone to inaccuracy as they did not properly account for correlated error at the country level (Aitkin & Longford, 1986; Albright & Marinova, 2015; Bell et al., 2019; Gelman et al., 2009; Snijders & Bosker, 2012).

More broadly, these results precluded a nuanced understanding of the specific differences in these relationships that exist across countries. OLS coefficients only indicate estimated *global* mean effects on legitimacy, while the strength, significance, and direction of these relationships might vary widely between different countries. Most, if not all, of the variables included in this study were theorized to exhibit somewhat different relationships with legitimacy in different countries. For example, the effect of

age might vary due to differences in historical contexts between nations, while the effect of sex might depend on differences in gender roles and laws related to sex, gender, sexuality, and reproduction. The relationship between education and legitimacy could vary because of differences in curriculum and academic freedom, while the effect of marriage may vary due to differences in government incentives and the social importance of traditional family structures. The effect of unemployment might vary due to differences in government assistance or vagrancy laws, and the effect of urban residence may vary due to cultural and historical differences, national proportions of rural and urban populations, or different rates of crime.

Beyond these demographic variables, the primary conceptual measures included in the analysis were also theorized to display cross-national variation in their relationships with legitimacy. The effects of prior victimization and fear of crime may vary depending on crime rates, police response, perceived police effectiveness, or self-defense and firearms laws (Alda et al., 2017; Boateng, 2017; Chamlin & Cochran, 2006; Dawson, 2017; Jang et al., 2010; Kääriäinen, 2007; Koenig, 1980; Mazrolle et al., 2013; Nalla & Gurinskaya, 2020; Nivette, 2016; Singer et al., 2019; Tankebe, 2009; Thomassen, 2013; Van Dijk, 2015; Zahnow et al., 2019). The effects of fear of war and terrorism may vary depending on the actual or perceived likelihood of these events, which itself could depend on variation in geopolitical events or media exposure in different nations (Banjak-Corle and Wallace, 2020; Brown & Benedict, 2002; Jonathan, 2010; Jonathan-Zamir & Weisburd, 2013; Madon et al., 2017; Sunshine and Tyler, 2003). The effect of vicarious experience, measured here as the frequency with which legal authorities were perceived to be “interfering” with people’s private lives, could vary

depending on crime rates, expectations of police, or the normalization and codification of individual rights and civil liberties (Brandl et al., 1994; Hawdon, 2008; Hinds, 2007; MacCoun, 2005; Mazerolle et al., 2013; Mehozay & Factor, 2017; Murphy, 2017; Nivette et al., 2020; Orr & West, 2007; Roche et al., 2015; Rosenbaum et al., 2005; Smith, 2007; Terpstra & Van Wijck, 2021).

The effects of national identity and national pride may vary depending on the political party currently in power, the degree of factionalism and polarization in a country, or the extent to which legal authorities are entwined with patriotic symbolism (Beetham, 1991; Bradford, 2016; Cherney & Murphy, 2013; Machura et al., 2019; Sargeant et al., 2015; Stack & Cao, 1998; Swain, 2018). The effect of social capital, especially in terms of voluntary association, can vary depending on the role of voluntary organizations in society and the importance of civil service and public participation (Boateng, 2018; De Zuniga et al., 2019; Hu et al., 2019; Kääriäinen, 2007; O'Loughlin, 2004; Tausch, 2016; Tsushima & Hamai, 2015). The effect of moral alignment measured as corruption might depend on the expectations for legal authorities and perceptions of their effectiveness, while the effect of moral alignment measured as importance of democracy might depend on type of government or value system (Beetham, 1991; Coicaud, 2002; Gilley, 2009; Tost, 2011).

Because of this great potential for variation in the effects of explanatory variables across countries, this study employed multilevel modeling to analyze the influence of antecedents of legitimacy at the individual level while accounting for variation at the country level. Multilevel modeling allowed variation to be partitioned into separate components that could be estimated individually. This discussion now turns to the

multilevel portion of the analysis, beginning with a brief summary of the statistical methodology underlying this approach.

Maximum Likelihood Estimation

In a multilevel data structure such as the WVS, residual effects associated with individuals within the same country are likely to be correlated. Correlated residuals violate the independence assumptions of OLS and can lead to erroneous conclusions regarding the relationships between variables (Aitkin & Longford, 1986; Albright & Marinova, 2015; Goldstein, 2011; Leyland & Groenewegen, 2020; Longford, 1993; Luke, 2004; Maas & Hox, 2004a; Raudenbush & Bryk, 2002; Snijders & Bosker, 2012). The non-independence of these residual effects must be accounted for to increase the validity of model estimates. Moreover, a regression analysis of the overall sample precludes close examination of variation in the effects of explanatory variables across different countries.

In contrast to the OLS estimation approach of minimizing the average squared differences between observed data and model-predicted values, multilevel modeling employs maximum likelihood (ML) estimation to arrive at a set of values with the highest likelihood given the specified model parameters. ML estimation calculates the natural log of the likelihood, as likelihoods can be exceedingly small and inscrutable numbers, while analysis of their natural logarithms tends to result in easier optimization and interpretation (Eliason, 1993; Roback & Legler, 2021; Snijders & Bosker, 2012). ML estimation employs an iterative process to arrive at optimal sample estimates for the set of parameters in the model. When the selected fit criterion has been converged upon, the software generates final model estimates. Convergence may be difficult to achieve in

more complex models with a greater number of random slopes, potentially requiring an increase in maximum iterations or respecification of model parameters. ML estimation has been found to produce consistent, efficient, and robust estimates, even when applied to unbalanced datasets with differing group sample sizes (Albright & Marinova, 2010, Snijders & Bosker, 2012).

However, because of the relatively small number of countries included in this analysis, inferences based on ML may inflate Type I error rates due to downward bias in the standard error estimates for fixed and random effects (McNeish, 2017). To correct for this issue, models employed restricted maximum likelihood (REML) estimation whenever possible. Instead of compounding error by deriving random effects from potentially flawed fixed coefficients, as in ML estimation, REML estimates these effects separately, first iteratively establishing random effects and then calculating the coefficients of fixed effects using generalized least squares (GLS). REML thus tends to provide more accurate estimates of variance components when compared to standard ML estimates (Longford, 1993; Maas & Hox, 2004; McNeish, 2017). REML suited the purposes of the current analysis due to the relatively small level-two sample size and large number of parameters being estimated in the final model. However, for model comparisons involving differences in fixed effects, such as between the null model and models containing various sets of predictors, standard ML estimation needed to be used for likelihood-ratio tests to be feasible (McNeish, 2017; Snijders & Bosker, 2012).

Null Models

Instead of directly estimating a separate mean for each country, multilevel modeling summarizes the distribution of higher-level units using a *global mean* of all countries and a *variance* around this mean. The reduced number of parameter estimates using this method compared to the dummy variable method in OLS makes multilevel modeling more parsimonious and efficient for nested data (Luke, 2004; Raudenbush & Bryk, 2002; Snijders & Bosker, 2012). The constant or fixed intercept in this model was the predicted global mean of legitimacy controlling for explanatory variables and accounting for clustering at the country level. Around this predicted mean, the multilevel model partitioned residual effects between different levels of the model, in this case between level one and level two residuals.

The first step in the multilevel analysis was the construction of a baseline model consisting only of the dependent variable and a random intercept term accounting for higher-level variation. This model, hereafter referred to as the “null” model, included only the individual-level dependent variable *legitimacy* and the higher-level grouping variable *country*. The null model was estimated using both ML and REML and results of both procedures are presented in Table 10 below. Both models provided an estimated mean legitimacy score across all individuals and countries of 3.16 and an estimated between-country variance of 2.22. The only notable difference between these two null models was found in the within-country variance estimate, which was .69 in the ML model and .71 in the REML model. Both models included 47 separate random intercepts, one for each country in the sample. Likelihood-ratio tests reported in the output

confirmed that this random intercept model offered significant improvement over a linear regression model.

Significant clustering within higher-level groups in the null model was detected using a measure known as the intraclass correlation coefficient (ICC), which is the proportion of the overall variance in the dependent variable that can be attributed to higher-level units in the model (Goldstein, 2011; Leyland & Groenewegen, 2020; Luke, 2004; Snijders & Bosker, 2012). The ICC was .2377 for the ML null model and .2416 for the REML null model, with both indicating that approximately 24% of the variation in legitimacy could be explained at the national level rather than at the individual level (Goldstein, 2011). Based on standard errors and confidence intervals, both ICCs were significant at the .05 level, indicating the suitability of multilevel modeling for analysis of these data. As with all subsequent multilevel models in this study, statistics related to goodness-of-fit and effect size, including deviance (-2 log-likelihood), Bayesian Information Criterion (BIC), and Akaike Information Criterion (AIC), were estimated and saved for use in model comparisons (Lewis et al., 2011; Luke, 2004).

Table 10: Null models

	Null Model (ML)	Null Model (REML)
	b (SE)	b (SE)
Constant	3.16*** (.12)	3.16*** (.12)
Variance (constant)	.69 (.14)	.71 (.15)
Variance (residual)	2.22 (.01)	2.22 (.01)
ICC	.2377** (.04)	.2416** (.04)
LL (restricted)	-112180.5	-112181.7
AIC	224367.0	224369.4
BIC	224394.1	224396.4

N = 61,648; K = 47

Before expanding the null model to include explanatory variables, baseline values of the individual country intercepts were predicted. Each country was associated with an estimated random intercept value that, when added to or subtracted from the constant, approximated that country's estimated mean legitimacy value. Consistent with earlier examination of country means and standard deviations, these country-level residual effects were positive for some countries and negative for others, shifting the mean level of legitimacy in each country up or down (Figure 5). Importantly, these mean levels did not yet account for the influence of explanatory variables on legitimacy. Predicted random intercepts based on subsequent models including explanatory variables were later estimated for comparison with these initial values.

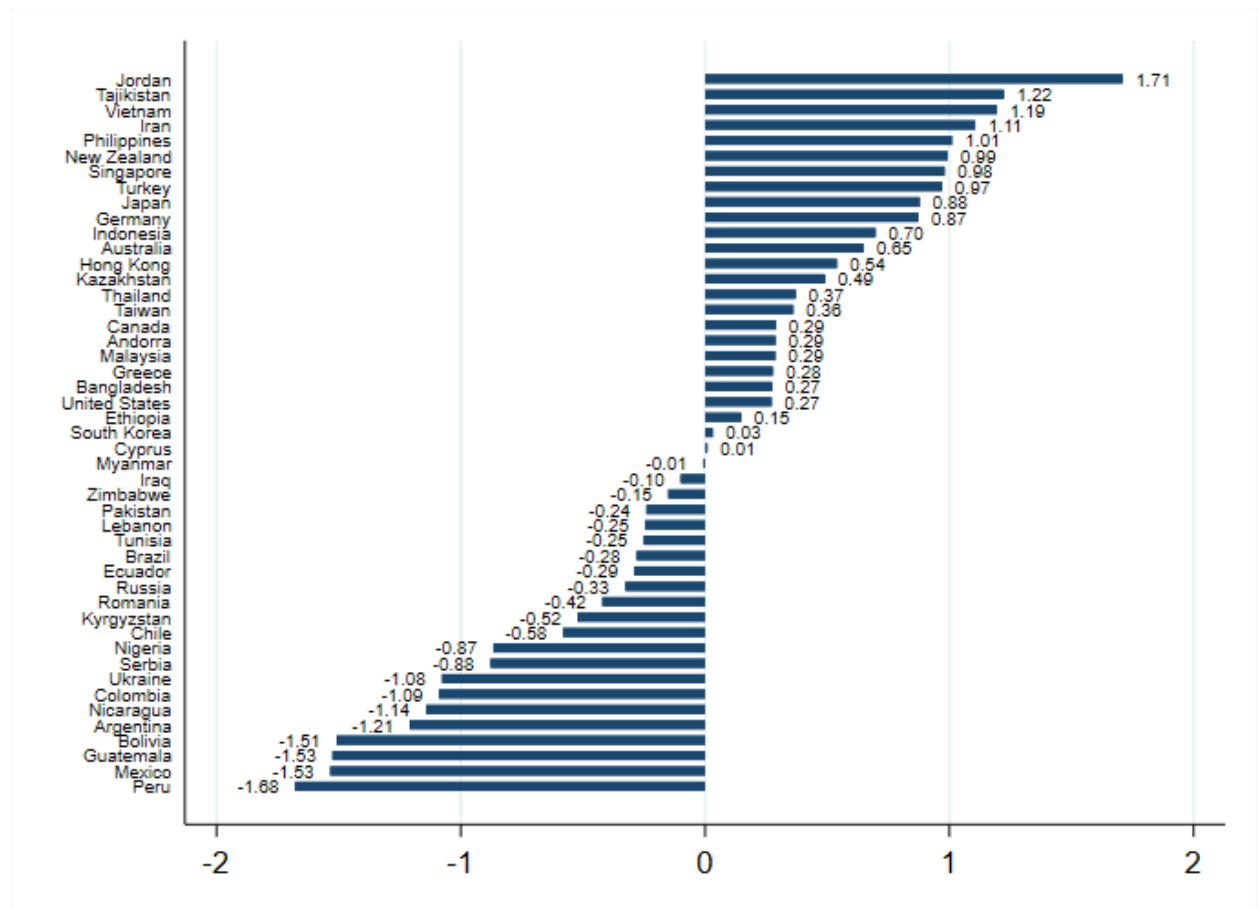


Figure 5: Mean residual variation in legitimacy by country

Figure 5 shows the distribution of residual variation around the global mean of legitimacy estimated by the null model, with some countries appearing close to the mean, some above, and some below. Adding any of these residuals to the estimated constant produces the expected mean level of legitimacy in that country without any explanatory variables included in the model. For example, adding the predicted residual effect for Peru (-1.68) to the constant (3.16) results in an intercept value of 1.48, which approximates the mean legitimacy value listed for Peru in the descriptive statistics section. Adding the predicted residual for Jordan (1.71) to the constant results in a value of 4.87, or the approximate mean of legitimacy for that country. Countries with estimated residuals just above or below zero, such as Cyprus and Myanmar in this model, are thus predicted to have mean legitimacy values nearly identical to the global average.

With the existence of not only individual-level variation, but significant country-level residual variation in legitimacy firmly established by these null models, the analysis proceeded by expanding the multilevel model to include predictors of legitimacy at both levels. The final multilevel model was built in stages, beginning with the fixed effects of explanatory variables before introducing random slopes and allowing these effects to vary across countries. Prior to calculating estimates using the full model, a smaller pilot analysis was conducted including only the demographic control variables as predictors. The results of this demographic analysis are presented here to clarify the methodological procedures used in this analysis before the full model is discussed in earnest.

Demographic Fixed-Effects Models

Fixed-effects models assume that while the mean level of legitimacy for individuals with a given set of characteristics is random and varies between countries, the relationships between this outcome and the explanatory variables in the model are fixed and consistent across all contexts. The demographic fixed-effects model described below included only the dependent variable (legitimacy), the grouping variable (country), and seven demographic predictors (age, sex, education (middle/high vs low), married, unemployed, urban). Fixed-effects models enabled the estimation of individual-level relationships while controlling for national-level variation, but the ultimate goal of this analysis remained to examine and explain this variation in more detail. Therefore, fixed-effects models only served as intermediate points of analysis before the construction of more complex models that allowed effects to vary across countries.

The results of demographic fixed-effects models using both ML and REML estimation are shown in Table 11 below. These models produced nearly identical estimates, with the exception of slightly different variances and resulting ICC values. The estimated constant in both models was 3.37, somewhat higher than in the null model and now representing the model-predicted global mean of legitimacy with all explanatory variables at zero (which for age equaled the grand mean due to centering). Fixed slope coefficients here represent the predicted global mean effect on legitimacy of a one-unit increase in an explanatory variable, holding all other predictors in the model at zero (or mean).

Table 11: Demographic fixed-effects models

	Null model (ML)	Demographic fixed-effects model (ML)	Demographic fixed-effects model (REML)
		b (SE)	b (SE)
Age		.001** (.0004)	.001** (.0004)
Sex		.03* (.01)	.03* (.01)
Education (middle)		-.18*** (.02)	-.18*** (.02)
Education (high)		-.14*** (.02)	-.14*** (.02)
Married		.06*** (.01)	.06*** (.01)
Unemployed		-.11*** (.02)	-.11*** (.02)
Urban		-.21*** (.01)	-.21*** (.01)
Constant	3.16*** (.12)	3.37*** (.12)	3.37*** (.12)
Variance (constant)	.69 (.14)	.68 (.14)	.70 (.14)
Variance (residual)	2.22 (.01)	2.20 (.01)	2.20 (.01)
ICC	.2377 (.04)	.2366 (.04)	.2404 (.04)
LL	-112180.49	-111944.31	-11972.05
AIC	224367.0	223908.6	223964.1
BIC	224394.1	223998.9	224054.4
LR χ^2 vs null		472.37***	

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001

This model found that age, sex, and marriage displayed significant but relatively weak positive relationships with legitimacy, while education, unemployment, and urban residence displayed significant and relatively strong negative relationships with legitimacy. However, these estimates once again represented merely the overall average effects of these variables across all countries in the model. At this stage, the model did not yet account for the possibility that these effects may vary from one country to another. These fixed coefficients were likely obscuring this variation by averaging these different relationships into a single estimate. To gain a better understanding of this variation, fixed-effects models were expanded by adding variance components for each of the fixed slopes, allowing these effects to vary across different countries in the model.

There was little change in the ICC from the null model, with demographic fixed-effects models indicating that approximately 24% of the unexplained variance remained attributable to national-level differences. This lack of improvement over the null was expected at this stage because there were no variables or variance components yet in the model aimed at explaining national-level variation in legitimacy. The inclusion of theoretically relevant explanatory variables at the individual and national level as both fixed and random effects in subsequent models would attempt to further explain some of this variation.

The demographic fixed-effects model was compared to the null model to determine whether the inclusion of demographic variables significantly improved model fit. This initial model comparison is used here to demonstrate the statistical methodology applied to comparisons throughout this analysis. Because these models differed in terms of fixed effects, the comparison between the null and fixed-effects models presented in Table 11 were based on ML estimation to enable use of the likelihood-ratio test. Subsequent comparisons of models with differing fixed effects were also based on ML estimates, while comparisons of models that differed only in their random effects were based on REML estimates.

The likelihood-ratio (LR) test served as the primary method for evaluating model comparisons throughout this analysis. This chi-square test evaluates the difference in -2 log-likelihood (-2LL) or *deviance* values between two nested models, essentially serving as a test of which model is more likely to be accurate given the data in question (Aguinis et al., 2013; Lewis et al., 2011; Snijders & Bosker, 2012). The LR test has degrees of freedom equal to the number of parameters that differ between the models, and a null

hypothesis of no difference in deviance values. The LR test of the null model compared to the demographic fixed-effects model produced a significant chi-square statistic of 472.37 ($df = 7$; $p < .001$). The AIC and BIC values of the fixed-effects model were also lower than those of the null model, indicating meaningful improvement in model fit (see Table 11). Based on these results, the fixed-effects demographic model appeared to fit the data significantly better than the empty model, showing improvement in terms of deviance, AIC, and BIC. The analysis now proceeded by allowing each of these effects to vary randomly in order to determine which sources of legitimacy were likely to vary in their effect across different countries.

Demographic Random-Effects Models

While both the null and fixed-effects models allowed the intercept of legitimacy to vary by country, the effects of independent variables in these models were held constant across countries. But just as country means displayed variation around the grand mean, country slopes for each variable were likely to vary around their predicted global mean slope. Random-effects models allowed slopes to vary across countries and provided estimated variances of these random slope components. The core question in this analysis was whether the effects of explanatory variables on legitimacy varied significantly across countries. If this were the case, then the inclusion of random slope components for such variables would help account for this additional source of national-level variation. A closer inspection of cross-level interactions influencing these random effects could then provide an indication of which national-level predictors may help explain variation in their effects (Aguinis et al., 2013; Bryan & Jenkins, 2016; Diggle et al., 2002; Hamilton,

2012; Luke, 2004; Raudenbush & Bryk, 2002; Singer & Willett, 2003; Snijders & Bosker, 2012).

Adding a random slope to a multilevel model introduces two additional parameters – the *variance* of the slope and the *covariance* between the intercept and slope, necessitating the specification of a structure for the variance-covariance (VC) matrix in order to account for possible correlation between slopes and intercepts (Goldstein, 2011; Snijders & Bosker, 2012). All models testing random slope components were therefore estimated using an unstructured VC matrix that allowed for such correlation.

The contribution of each random slope component to the overall model was evaluated individually, with each demographic random-effects model allowing a single slope to vary randomly before comparing these models with the more constrained fixed-effects model. Table 12 below presents the demographic fixed effects, variance and covariance estimates of each demographic random effect, and the estimated fixed effect for each variable when its random effect was included in the model.

Table 12: Demographic fixed and random coefficients

	Null model (REML)	Fixed-effects model (REML)	Random-effects models (REML)
	b (SE)	b (SE)	b (SE)
Level 1			
Constant	3.16*** (.12)	3.37*** (.12)	
Age		.001** (.0004)	.00003 (.001)
Sex		.03* (.01)	.04* (.01)
Education (Middle)		-.18*** (.02)	-.12*** (.03)
Education (High)		-.14*** (.02)	-.12* (.06)
Married		.06*** (.01)	.04 (.02)
Unemployed		-.11*** (.02)	-.11** (.04)
Urban		-.21*** (.01)	-.21*** (.04)
Level 2			
Constant variance	.707 (.148)	0.697 (.146)	
Residual variance	2.219 (.013)	2.202 (.012)	
Age variance			.00006 (.00001)
Age covariance			.001 (.001)
Sex variance			.007 (.003)
Sex covariance			-.012 (.015)
Education variance			.036 (.008)
Education covariance			-.030 (.025)
Married variance			.021 (.006)
Married covariance			.036 (.021)
Unemployed variance			.047 (.017)
Unemployed covariance			-.091 (.038)
Urban variance			.051 (.013)
Urban covariance			-.021 (.032)

N = 61,648; K = 47; REML estimation; VC unstructured; *p < .05; **p < .01; ***p < .001

Variance components presented in the lower section of Table 12 are estimates of variation around the global mean slope of each explanatory variable, while covariances are estimates of correlation between the variance and intercept. The goal of this analysis was to test the significance of these variance components, thereby determining the existence of significant variation in the effects of predictor variables across countries. However, significance tests using standard errors of variance components are inconclusive as these estimates tend to be biased (Lahuis & Ferguson, 2009; Lewis et al.,

2011; Snijders & Bosker, 2012). Therefore, the likelihood-ratio (LR) test continued to serve as the primary criteria for model comparisons.

When testing two models that differed only in terms of a single random slope component, the LR test functioned as a test of statistical significance for that variance component. Significant test results provided evidence that the inclusion of a variance component for a given slope improved the model fit. To verify the significance of random effects in the model, this analysis compared a series of nested model pairs, with one model specifying all parameters included in the other except for the random slope of interest. Based on these LR tests, as well as comparisons of AIC and BIC values, all demographic effects in the model showed some degree of significant random variation across countries. The results of these model comparisons are presented in Table 13.

Table 13: Demographic random-effects model comparisons

	Fixed effects	Random age	Random sex	Random education	Random married	Random employed	Random urban
Variance		.00006	.007	.036	.021	.047	.051
Constant	3.370	3.346	3.365	3.317	3.380	3.369	3.350
Var(const)	.697	.700	.708	.710	.6458	.710	.706
Covariance		.001	-.012	-.030	.036	-.091	-.021
Var(resid)	2.202	2.187	2.200	2.186	2.197	2.199	2.194
ICC	.2404	.2424	.2436	.2451	.2272	.2442	.2435
LL(restrict)	- 111972.1	-111813.1	-111961.9	-111796.9	-111924.0	-111949.5	-111890.6
AIC	223964.1	223650.2	223947.8	223617.7	223872.0	223923.0	223805.2
BIC	224054.4	223758.6	224056.2	223726.1	223980.4	224031.4	223913.6
LR chi2 (vs fixed)		317.86***	20.27***	350.36** *	96.07***	45.08***	162.89***

N = 61,648; K = 47; REML estimation; VC unstructured; ***p < .001

The demographic pilot study discussed in this section assisted in establishing a methodological framework upon which more complex analyses were built. Subsequent steps involved the addition of several other theoretically relevant individual-level predictors of legitimacy, the further investigation of variation in these effects across countries, and the introduction of country-level variables to explain some of this variation.

Fixed-Effects Models

The previous demographic analysis was expanded to include additional theoretical predictors of legitimacy in the model as fixed effects. Full fixed-effects models ostensibly included 19 individual-level predictors and two national-level predictors. However, due to dummy coding of ordinal variables, the true number of predictors entered into these models was 36. At the individual level, these included measures of prior victimization, fear of crime, fear of war and terror, vicarious experience, national identity, social capital, and moral alignment. After estimating a model that included only individual-level predictors, national-level measures of the homicide rate and the freedom score were added to the final fixed-effects model. These models were compared using likelihood-ratio tests and evaluation of fit statistics. The results of these model comparisons are displayed in Table 14.

Table 14: Fixed-effects model comparisons

	Null model	Demographic fixed-effects model	Individual fixed- effects model	Full fixed- effects model
Constant	3.165 (.121)	3.370 (.122)	2.709 (.111)	2.713 (.100)
Variance (constant)	.692 (.143)	.682 (.141)	.461 (.096)	.356 (.074)
Variance (residual)	2.219 (.013)	2.202 (.012)	1.998 (.011)	1.998 (.011)
ICC	.2377 (.04)	.2366 (.04)	.1875 (.03)	.1513 (.03)
LL	-112180.5	-111944.3	-108946.8	-108940.8
AIC	224367.0	223908.6	217967.7	217959.6
BIC	224394.1	223998.9	218301.8	218311.7
LR chi2 vs. null		472.37***	6467.30***	6479.40***
LR chi2 vs demographic			5994.93***	6007.03***
LR chi2 vs individual				12.10**

N = 61,648; K = 47; ML estimation; VC identity; *p < .05; **p < .01; ***p < .001

Model comparisons displayed in Table 14 provided evidence of substantial improvement in model fit and residual variance explained as predictors were introduced. The full fixed-effects model, containing all relevant individual- and national-level predictors, offered significantly better fit than the null, demographic fixed-effects, or individual-level fixed effects models. The full model displayed a large reduction in unexplained variation across countries, lowering the ICC to .15 compared to .24 in the null model. This indicated that some of the variation in legitimacy at the country level was reduced by the inclusion of additional predictor variables at both the individual and national level, as evidenced by differences between the last two models in Table 14. The results of the full fixed-effects model using REML estimation are presented in Table 15.

Table 15: Full fixed-effects model (REML)

	b (SE)		b (SE)
Age	-.0005 (.0004)	Vicarious (1)	-.08*** (.01)
Sex	.06*** (.01)	Vicarious (2)	-.12*** (.02)
Education (1)	-.14*** (.02)	Vicarious (3)	-.25*** (.03)
Education (2)	-.17*** (.02)		
Married	.03* (.01)	National pride (1)	.06 (.04)
Unemployed	-.05* (.02)	National pride (2)	.30*** (.03)
Urban	-.14*** (.01)	National pride (3)	.48*** (.03)
		National identity (1)	.17*** (.04)
Victim (self)	-.09*** (.02)	National identity (2)	.28*** (.04)
Victim (family)	-.08*** (.02)	National identity (3)	.41*** (.04)
Fear crime at home (1)	.02 (.02)	Trust	.27*** (.02)
Fear crime at home (2)	.08*** (.02)	Association	.16*** (.01)
Fear crime at home (3)	.08** (.03)		
Fear crime in general (1)	-.24*** (.01)	Corruption	-.11*** (.003)
Fear crime in general (2)	-.52*** (.02)	Democracy	.03*** (.003)
Fear crime in general (3)	-.87*** (.03)		
		Homicide	-.04*** (.01)
Fear war (1)	-.03 (.02)	Freedom	-.002 (.003)
Fear war (2)	-.06* (.02)		
Fear war (3)	-.02 (.02)	Constant	2.713*** (.10)
Fear terrorism (1)	.05* (.02)		
Fear terrorism (2)	.15*** (.03)	Variance (constant)	.381 (.08)
Fear terrorism (3)	.22*** (.03)	Variance (residual)	1.999 (.01)

N = 61,648; K = 47; LL (restricted) = -109063.56; ICC = .16 (.03); AIC = 218205.1; BIC = 218557.3; VC (identity); *p < .05; **p < .01; ***p < .001

The model-predicted intercept of 2.71 suggested that an average-aged male with low education, who is unmarried, employed, lives in a rural area, with no prior victimization, no prior family victimization, low fear of crime at home, low fear of crime in general, low fear of war, low fear of terrorism, low negative vicarious experience, low national pride, low national identity, low trust, no voluntary associations, average level of perceived corruption, average level of importance of democracy, living in a country with an average homicide rate and an average freedom score will have a legitimacy score of 2.71, controlling for other variables in the model. All fixed-effects coefficients

interpreted below similarly represent global average effects controlling for all other explanatory variables in the model.

In the fixed-effects model, age did not display a significant relationship with legitimacy. Being female was associated with a significant .06 increase in legitimacy ($p < .001$). A moderate level of education compared to the lowest level was associated with a .14 decrease in legitimacy ($p < .001$), while a high level of education was associated with a .17 decrease ($p < .001$). Marriage was associated with a significant .03 increase in legitimacy ($p < .05$), unemployment with a significant .05 decrease ($p < .05$), and urban residence with a significant .14 decrease ($p < .001$).

Prior victimization was associated with a significant .09 decrease in legitimacy ($p < .001$), while family victimization was associated with a significant .08 decrease ($p < .001$). Fear of crime at home displayed a relatively weak and surprisingly positive relationship with legitimacy. While the effect of experiencing fear at home “rarely” compared to “never” was not significant, experiencing fear at home “sometimes” was associated with a significant .08 increase in legitimacy ($p < .001$), and experiencing fear at home “often” with a significant .08 increase ($p < .01$). By contrast, fear of crime in general displayed a relatively strong and negative association with legitimacy across all levels, with feeling “quite” safe compared to “very” safe corresponding to a significant .24 decrease in legitimacy ($p < .001$), feeling “not very” safe to a significant .52 decrease ($p < .001$), and feeling “not at all” safe to a significant .87 decrease ($p < .001$).

Fear of war displayed a significant association with legitimacy in only one of its three factor variables, and this only at the .05 level. Feeling a “great deal” of fear of war was associated with a significant .06 decrease in legitimacy ($p = .029$). In comparison,

fear of terrorism displayed a strong, significant, and notably positive relationship with legitimacy. Feeling “not much” fear of terrorism was associated with a significant .05 increase in legitimacy ($p = .048$), while a “great deal” and “very much” fear were associated with significant .15 and .22 increases, respectively ($p < .001$).

Vicarious experience displayed a significant negative relationship with legitimacy, with perceiving interference “not frequently” compared to “never” associated with a .08 decrease ($p < .001$), “quite frequently” associated with a .12 decrease ($p < .001$), and “very frequently” associated with a significant .25 decrease ($p < .001$). National pride displayed a significant and positive relationship with legitimacy at higher categories. While the difference between feeling “not very proud” of one’s nation compared to “not at all proud” was not significant, feeling “quite proud” corresponded to a significant .30 increase in legitimacy ($p < .001$) and feeling “very proud” to a significant .48 increase ($p < .001$). National identity displayed a significant and positive relationship with legitimacy across all categories, with feeling “not very close” to one’s country compared to “not at all close” associated with a .17 increase ($p < .001$), feeling “close” a .28 increase ($p < .001$) and feeling “very close” a .41 increase ($p < .001$).

Trust in others was associated with a significant .27 increase in legitimacy ($p < .001$) and voluntary association with a significant .16 increase ($p < .001$). A one-unit increase in perceived corruption was associated with a significant .11 decrease in legitimacy ($p < .001$), while a one-unit increase in importance of democracy was associated with a significant .03 increase ($p < .01$). The national-level homicide rate was associated with a significant .04 decrease in legitimacy at the individual level ($p < .001$),

but the national-level freedom score did not display any significant direct relationship with legitimacy.

While coefficient estimates presented in Table 15 provided an interesting picture of global average relationships between legitimacy and this set of explanatory variables, these average effects were not the primary focus of this study. Of greater interest was the existence of variation in these effects across countries and the different relationships these explanatory variables may have with legitimacy depending on national context. The presence of such variation was again tested by adding random slopes one at a time and comparing each random-effects model with the full fixed-effects model.

Random-Effects Models

Variation in the effects of explanatory variables was examined through a series of model comparisons in which separate models, each including a random slope for a single predictor, were compared with the full fixed-effects model. These comparisons used likelihood-ratio tests and evaluation of information criteria to establish the significance of variance components in the model. All random-effects models used REML estimation and were compared to the REML estimated fixed-effects model. The results of these model comparisons are presented in Table 16.

Table 16: Random-effects model comparisons (variance components)

Model	Variance (estimate)	Constant	Variance (constant)	Variance (residual)	Covariance	LL (restricted)	AIC	BIC	LR chi ² vs fixed
Fixed effects		2.713	.381	1.999		-109063.6	218205.1	218557.3	
R. age	.00004 (.00001)	2.711 (.10)	.384 (.08)	1.989 (.01)	.001 (.001)	-108950.8	217983.6	218353.8	225.56***
R. sex	.004 (.002)	2.705 (.10)	.388 (.08)	1.998 (.01)	-.008 (.01)	-109056.8	218195.5	218565.7	13.62**
R. education	.023 (.01)	2.670 (.10)	.405 (.09)	1.988 (.01)	-.025 (.02)	-108940.6	217963.3	218333.5	245.84***
R. married	.013 (.004)	2.720 (.10)	.349 (.08)	1.996 (.01)	.024 (.01)	-109035.7	218153.3	218523.5	55.79***
R. unemployed	.021 (.01)	2.711 (.10)	.390 (.08)	1.998 (.01)	-.038 (.02)	-109056.2	218194.4	218564.6	14.68***
R. urban	.033 (.01)	2.697 (.11)	.424 (.09)	1.994 (.01)	-.038 (.02)	-109014.0	218110.0	218480.2	99.17***
R. victim (self)	.021 (.01)	2.713 (.10)	.386 (.08)	1.998 (.01)	-.017 (.02)	-109054.7	218191.4	218561.6	17.73***
R. victim (family)	.022 (.01)	2.712 (.10)	.393 (.08)	1.997 (.01)	-.028 (.02)	-109051.5	218184.9	218555.1	24.21***
R. fear at home	.013 (.003)	2.704 (.10)	.400 (.09)	1.992 (.01)	-.020 (.01)	-108985.1	218052.1	218422.3	157.02***
R. fear in general	.020 (.005)	2.697 (.11)	.492 (.11)	1.988 (.01)	-.059 (.02)	-108929.1	217940.2	218310.4	268.92***
R. fear of war	.011 (.003)	2.710 (.10)	.390 (.08)	1.991 (.01)	-.014 (.01)	-108979.7	218041.4	218411.6	167.70***
R. fear of terror	.008 (.002)	2.709 (.10)	.407 (.09)	1.993 (.01)	-.014 (.01)	-109000.6	218083.1	218453.3	125.99***
R. vicarious	.028 (.01)	2.711 (.11)	.458 (.10)	1.984 (.01)	-.063 (.02)	-108871.5	217825.1	218195.3	384.05***
R. national pride	.021 (.005)	2.714 (.10)	.301 (.07)	1.990 (.01)	-.008 (.02)	-108966.4	218014.8	218385.0	194.36***
R. national identity	.015 (.004)	2.729 (.11)	.422 (.09)	1.993 (.01)	-.028 (.01)	-108998.4	218078.9	218449.1	130.25***
R. trust	.027 (.01)	2.710 (.10)	.389 (.08)	1.996 (.01)	-.031 (.02)	-109040.9	218163.9	218534.1	45.24***
R. association	.048 (.01)	2.710 (.11)	.437 (.09)	1.991 (.01)	-.074 (.03)	-108981.5	218044.9	218415.1	164.22***
R. corruption	.003 (.001)	2.732 (.10)	.362 (.08)	1.988 (.01)	.014 (.01)	-108927.2	217936.4	218306.6	272.72***
R. democracy	.003 (.001)	2.721 (.10)	.380 (.08)	1.990 (.01)	.010 (.005)	-108960.9	218003.9	218374.1	205.27***

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001; SE in parentheses

These model comparisons indicated that all random slopes displayed some degree of significant variation across countries. With the exception of the random slope for sex, all random slope variances tested by these model comparisons were significant at the .001 level. Although differences in scales across variables precluded the direct interpretation of these coefficients, it could be concluded with a reasonable amount of certainty that nearly all antecedents of legitimacy included in this model varied significantly in their effects across different countries. The inclusion of these random slope components altered the estimated fixed-effect coefficients of several explanatory variables. Table 17 presents coefficient estimates from full fixed-effects model and compares these with coefficients produced by models that allowed the slope of each variable to vary randomly across countries. Although the addition of a random slope component also sometimes altered other predicted relationships in the model, Table 17 only compares the coefficients of the predictor included as a random slope in each model.

Table 17: Random-effects model comparisons (fixed coefficients)

	Fixed-effects model	Random-effects models
Variable	b (SE)	b (SE)
Age	-.0005 (.0004)	-.001 (.001)
Sex	.06*** (.01)	.06*** (.02)
Education (1)	-.14*** (.02)	-.11*** (.03)
Education (2)	-.17*** (.02)	-.15** (.05)
Married	.03* (.01)	.02 (.02)
Unemployed	-.05* (.02)	-.04 (.03)
Urban	-.14*** (.01)	-.14*** (.03)
Victim (self)	-.09*** (.02)	-.11** (.03)
Victim (fam)	-.08*** (.02)	-.10** (.03)
Fear crime at home (1)	.02 (.02)	.03 (.02)
Fear crime at home (2)	.08*** (.02)	.08* (.04)
Fear crime at home (3)	.08*** (.03)	.05 (.06)
Fear crime in general (1)	-.24*** (.01)	-.22*** (.03)
Fear crime in general (2)	-.52*** (.02)	-.52*** (.05)
Fear crime in general (3)	-.87*** (.03)	-.83*** (.07)
Fear war (1)	-.03 (.02)	-.01 (.03)
Fear war (2)	-.06* (.02)	-.03 (.04)
Fear war (3)	-.02 (.02)	.001 (.05)
Fear terrorism (1)	.05* (.02)	.06* (.03)
Fear terrorism (2)	.15*** (.03)	.17*** (.04)
Fear terrorism (3)	.22*** (.03)	.23*** (.05)
Vicarious (1)	-.08*** (.01)	-.07* (.03)
Vicarious (2)	-.12*** (.02)	-.13* (.05)
Vicarious (3)	-.25*** (.03)	-.29*** (.08)
National pride (1)	.06 (.04)	.07 (.04)
National pride (2)	.30*** (.03)	.32*** (.06)
National pride (3)	.48*** (.03)	.48*** (.07)
National identity (1)	.17*** (.04)	.16*** (.04)
National identity (2)	.28*** (.04)	.27*** (.05)
National identity (3)	.41*** (.04)	.40*** (.07)
Trust	.27*** (.02)	.27*** (.03)
Association	.16*** (.01)	.15*** (.04)
Corruption	-.11*** (.003)	-.12*** (.01)
Democracy	.03*** (.003)	.02** (.01)

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001; SE in parentheses

While many of the variables that had displayed significant overall associations with legitimacy in the fixed-effects model retained these relationships when their random slopes were included, others differed noticeably in strength or statistical significance. The estimated effect of age in the random-effects model remained nonsignificant, and the effect of sex was nearly identical between the two models. The effect of education on legitimacy was somewhat attenuated in the random-effects model, while the effects of marriage and unemployment were no longer significant. Urban residence remained strongly and significantly associated with legitimacy across both models.

Prior victimization and family victimization displayed somewhat stronger effects in their random-effects models, but these relationships did not achieve the same level of statistical significance as in the fixed-effects model. The estimated relationship between legitimacy and fear of crime at home was substantially altered in the random-slope model, as only a single category remained significant in the random-slope model, and then only at the .05 level of significance. Fear of crime in general was highly significant across both models, although effect sizes were somewhat attenuated in the random-effects model. Fear of war did not display any significant effect on legitimacy once its random slope was included, while fear of terrorism retained a comparatively large and significant effect in its random-slope model.

Relationships between legitimacy and the lowest levels of vicarious experience were significant only at the .05 level in the random-slope model, but the relationship at the highest level retained its significance and increased in strength with the inclusion of the random slope. The effects of national pride and national identity differed only slightly between the models, as did the effects of trust, voluntary association, and perceived

corruption. Lastly, importance of democracy displayed a smaller effect that was significant only at the .01 level once its random slope was included. These results overall provided substantial evidence that the sources of legitimacy included in the model displayed significant variation in their effects across different countries. The last step in this part of the analysis involved the addition of cross-level interaction terms aimed at explaining some of this variation.

Interaction Models

Cross-level interactions between individual-level predictors of legitimacy and national-level measures of the homicide rate and the freedom score were added to the model to explain variation in the effects of individual-level predictors across countries. Because all relationships in the fixed-effects model possessed significant variance components, all potential cross-level interaction effects between individual-level variables and these national-level measures were examined. These interactions were tested one at a time in another series of model comparisons, with each model allowing one national-level predictor to interact with one individual-level predictor, while also allowing the slope of that individual-level predictor to vary randomly across countries. The inclusion of a random slope component for the individual-level variable involved in a cross-level interaction was necessary for the model to produce accurate standard error estimates (Aguinis et al., 2013; Heisig & Schaeffer, 2019; Mathieu et al., 2012). The results of these interaction models are presented in Table 18 below. All cross-level interaction models were conducted using REML estimation and specifying an unstructured variance-covariance matrix.

Table 18: Cross-level interaction effects

Homicide rate interaction models		Freedom score interaction models	
Interaction	b (SE)	Interaction	b (SE)
Age#homicide	-.00005 (.0001)	Age#freedom	.00004 (.00004)
Sex#homicide	-.0004 (.002)	Sex#freedom	.0002 (.0006)
Education#homicide (1)	-.0003 (.003)	Education#freedom (1)	.0004 (.001)
Education#homicide (2)	-.001 (.006)	Education#freedom (2)	.003 (.002)
Married#homicide	.0003 (.002)	Married#freedom	.002* (.001)
Unemployed#homicide	.0066 (.0034)	Unemployed#freedom	-.003* (.001)
Urban#homicide	-.003 (.004)	Urban#freedom	.002 (.001)
Victim (self)#homicide	.008* (.003)	Victim (self)#freedom	.002 (.001)
Victim (family)#homicide	.010*** (.003)	Victim (family)#freedom	.0006 (.001)
Crime (home)#homicide (1)	.008** (.003)	Crime (home)#freedom (1)	.001 (.001)
Crime (home)#homicide (2)	.008 (.004)	Crime (home)#freedom (2)	.001 (.002)
Crime (home)#homicide (3)	.009 (.007)	Crime (home)#freedom (3)	-.003 (.002)
Crime (gen)#homicide (1)	.003 (.003)	Crime (gen)#freedom (1)	.002* (.001)
Crime (gen)#homicide (2)	.007 (.006)	Crime (gen)#freedom (2)	.004* (.002)
Crime (gen)#homicide (3)	.002 (.008)	Crime (gen)#freedom (3)	.007* (.003)
Fear war#homicide (1)	.006 (.003)	Fear war#freedom (1)	.004*** (.001)
Fear war#homicide (2)	.005 (.005)	Fear war#freedom (2)	.005*** (.001)
Fear war#homicide (3)	.006 (.006)	Fear war#freedom (3)	.004* (.002)
Fear terrorism#homicide (1)	.005 (.003)	Fear terrorism#freedom (1)	.005*** (.001)
Fear terrorism#homicide (2)	.002 (.004)	Fear terrorism#freedom (2)	.006*** (.001)
Fear terrorism#homicide (3)	.002 (.005)	Fear terrorism#freedom (3)	.006*** (.002)
Vicarious#homicide (1)	.009** (.003)	Vicarious#freedom (1)	-.0002 (.001)
Vicarious#homicide (2)	.018** (.006)	Vicarious#freedom (2)	.001 (.002)
Vicarious#homicide (3)	.011 (.009)	Vicarious#freedom (3)	.001 (.003)
Nat. pride#homicide (1)	.002 (.005)	Nat. pride#freedom (1)	-.004* (.002)
Nat. pride#homicide (2)	-.001 (.006)	Nat. pride#freedom (2)	-.005* (.002)
Nat. pride#homicide (3)	-.010 (.008)	Nat. pride#freedom (3)	-.007* (.003)
Nat. identity#homicide (1)	.002 (.005)	Nat. identity#freedom (1)	.002 (.002)
Nat. identity#homicide (2)	.002 (.006)	Nat. identity#freedom (2)	.002 (.002)
Nat. identity#homicide (3)	.003 (.008)	Nat. identity#freedom (3)	.0005 (.002)
Trust#homicide	.007 (.004)	Trust#freedom	.0003 (.001)
Association#homicide	-.005 (.004)	Association#freedom	-.0006 (.001)
Corruption#homicide	-.0001 (.001)	Corruption#freedom	-.0001 (.0003)
Democracy#homicide	-.0005 (.001)	Democracy#freedom	-.0004 (.0003)

N = 61,648; K = 47; p* < .05; p** < .01; p*** < .001

These interaction models tested the influence of the national-level measures of the *homicide rate* and the *freedom score* on relationships at the individual level. Significant interactions were found between the *homicide rate* and the effects of *prior victimization*, *family victimization*, *fear of crime at home*, and *vicarious experience*. Models also indicated the presence of significant interactions between the *freedom score* and the effects of *marriage*, *unemployment*, *fear of crime in general*, *fear of war*, *fear of terrorism*, and *national pride*. These models showed that several important individual-level influences on the legitimacy of legal authorities varied significantly in their effects depending on a country's homicide rate and freedom score. These statistically significant interaction effects are presented graphically in Figures 6 through 15 and discussed in detail in the following paragraphs. The interactions described in this section are the primary basis for conclusions regarding variation in the contextual effects of these influences on legitimacy.

Marginal effects displayed in Figure 6 show the interaction of the national-level homicide rate with the individual-level effect of prior victimization (Williams, 2012). The mean-centered homicide rate ranged from approximately -5 to 28, and the values presented in these figures were chosen to reflect this range. In countries with lower homicide rates, prior victimization appeared to have a negative effect on legitimacy, while in countries with higher homicide rates, prior victimization appeared to have a positive effect. On average, a one-unit increase in the homicide rate was associated with an increase of .008 units on the prior victimization/legitimacy slope.

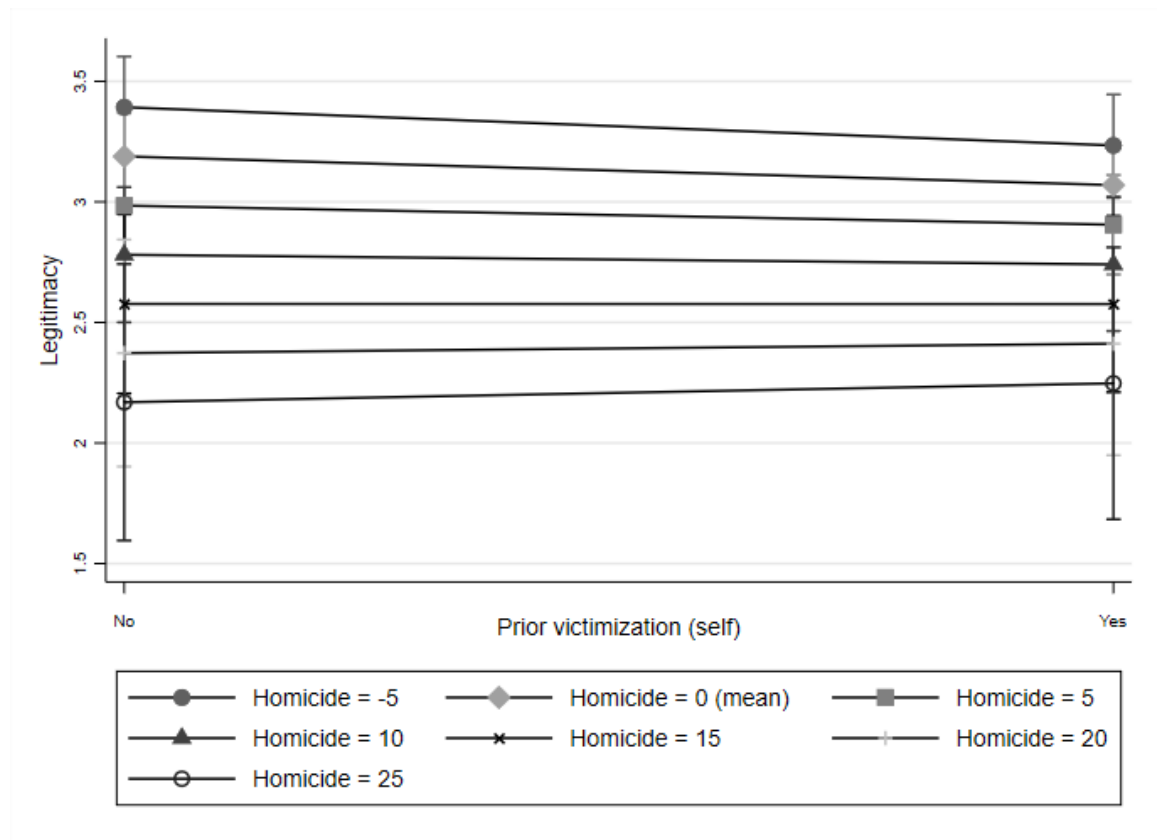


Figure 6: Marginal effects of prior victimization on legitimacy, by homicide rate

Similar results were found for the interaction between the homicide rate and the effect of prior family victimization. Figure 7 shows that family victimization displayed a negative association with legitimacy in low-homicide countries and a positive association in high-homicide countries. On average, a one-unit increase in the homicide rate was associated with an increase of .01 units on the family victimization/legitimacy slope. This interaction was relatively large compared to its standard error and achieved significance at the .001 level.

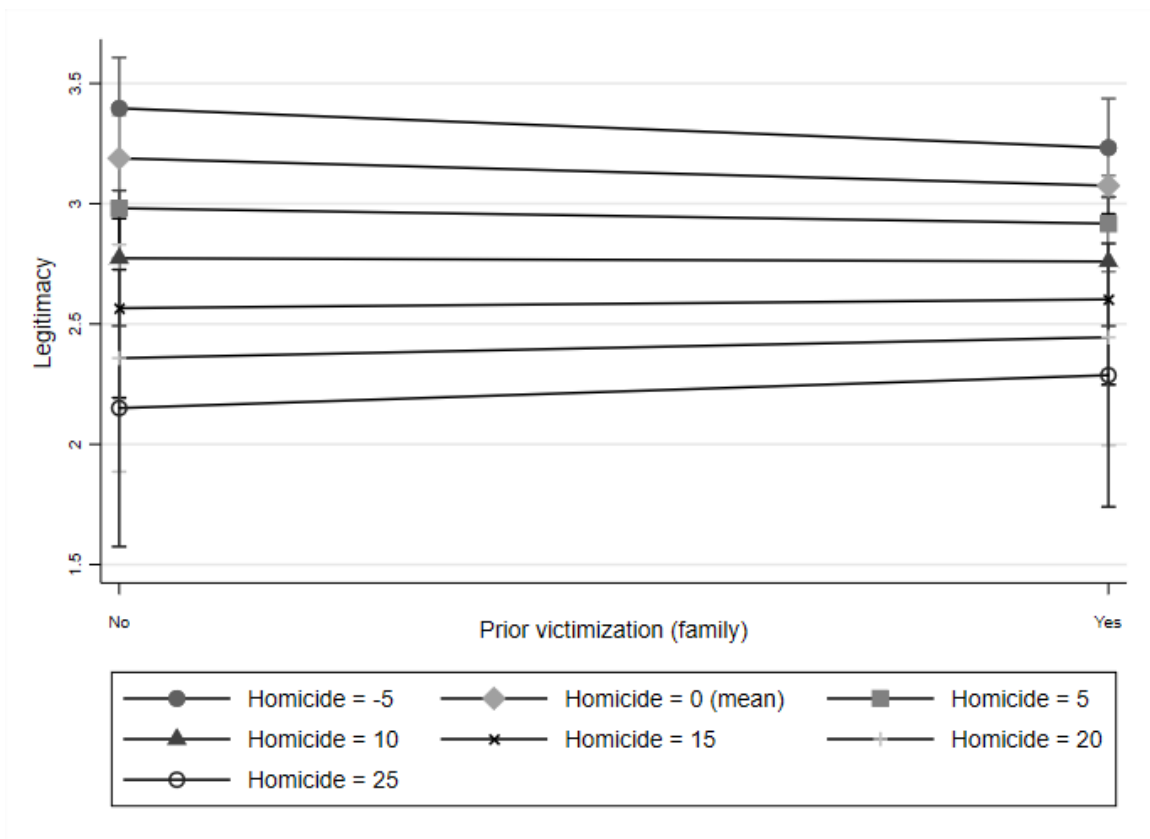


Figure 7: Marginal effects of family victimization on legitimacy, by homicide rate

The homicide rate also displayed a significant influence on the individual-level effect of fear of crime at home on legitimacy. Figure 8 depicts the estimated marginal effects of fear of crime at home for different values of the homicide rate, showing an interaction affecting the lower level of the fear variable. For individuals in low-homicide countries, perceiving fear of crime at home “rarely” compared to “never” was associated with a slight decrease in legitimacy, but for individuals in high-homicide countries, this same difference was associated with an increase in legitimacy. On average, a one-unit increase in the homicide rate was associated with a .01 unit increase on the fear of crime/legitimacy slope for the lowest level of the variable, while displaying no significant effect for other levels.

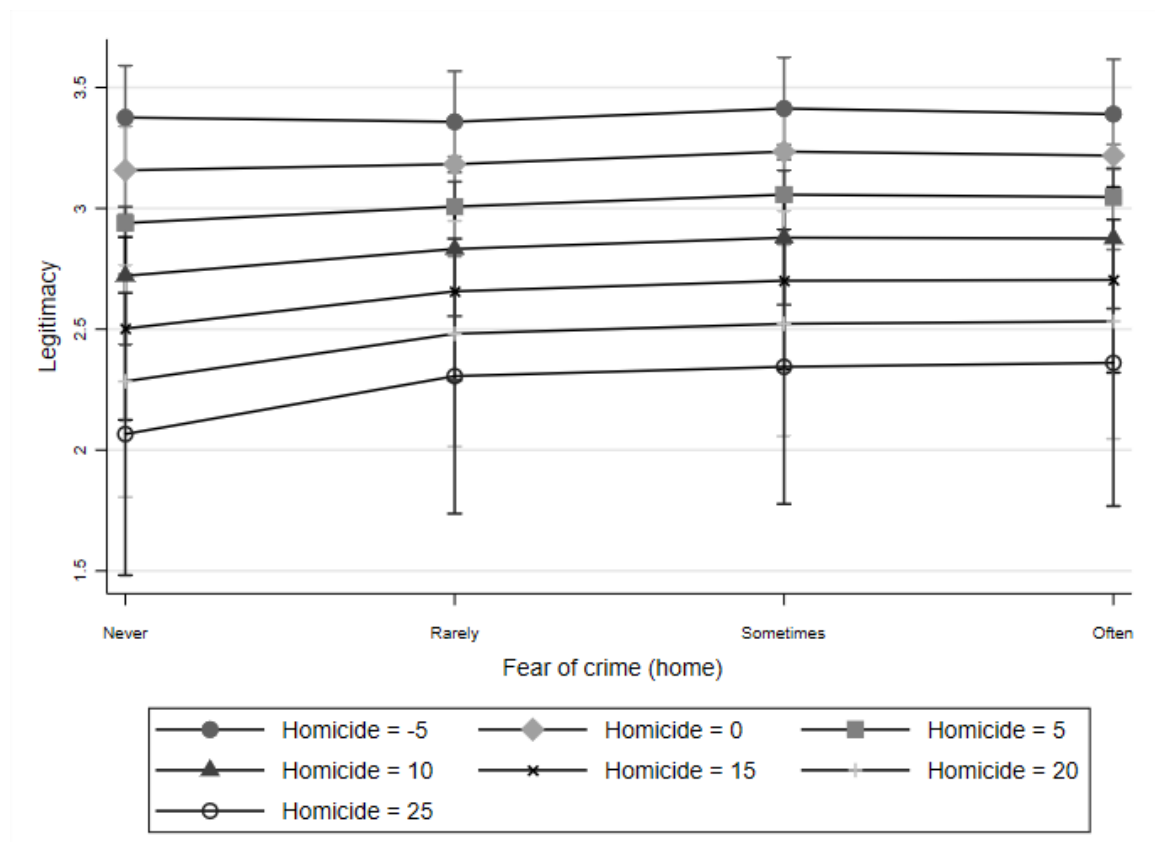


Figure 8: Marginal effects of fear of crime (home) on legitimacy, by homicide rate

Significant interactions were also found between the national-level homicide rate and the effect of negative vicarious experience at the individual level. Figure 9 shows the estimated marginal effects of vicarious experience by homicide rate, indicating that in low-homicide countries, vicarious experience displayed a negative effect on legitimacy across all levels, but that this relationship changed as the homicide rate increased. In countries with higher homicide rates, vicarious experience displayed a positive relationship with legitimacy at lower levels. On average, a one-unit increase in the homicide rate was associated with an increase of .01 units on the vicarious experience/legitimacy slope for the lowest level, and an increase of .02 units for the middle level. The interaction for the highest category did not achieve statistical significance.

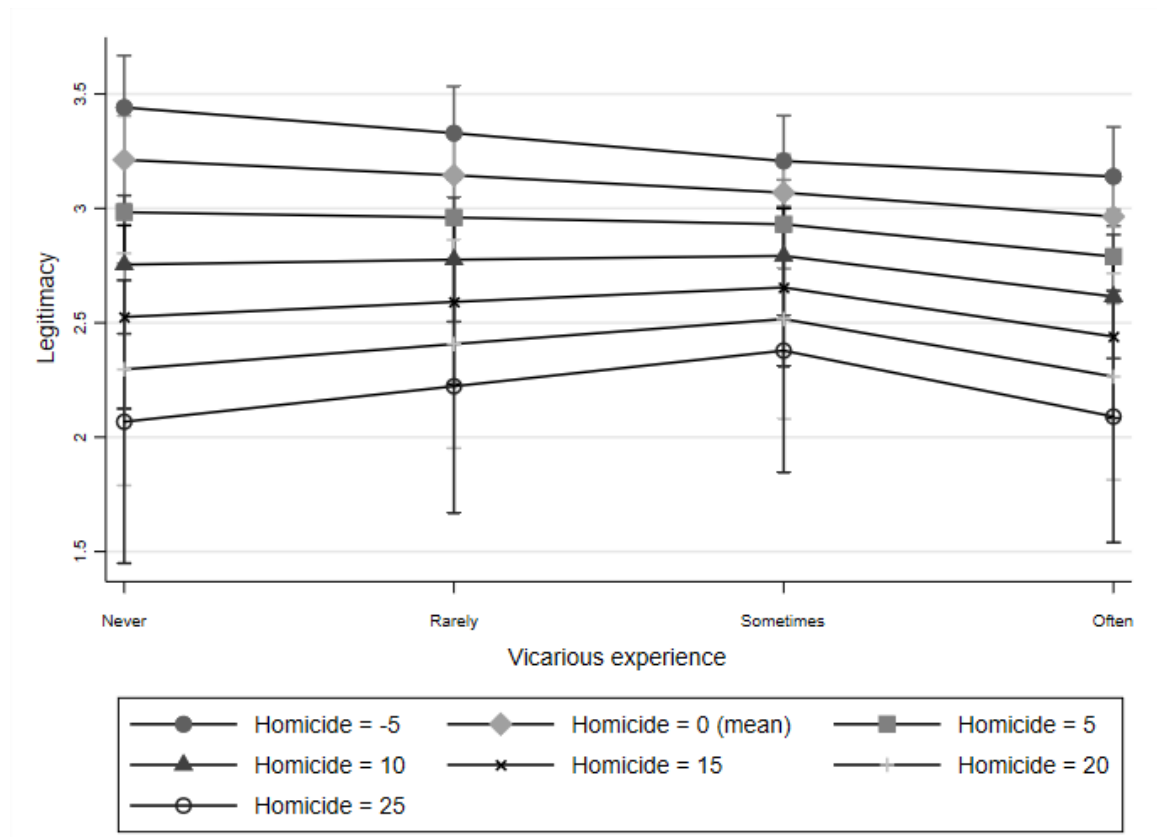


Figure 9: Marginal effects of vicarious experience on legitimacy, by homicide rate

The other national-level variable included in the analysis, *freedom score*, also displayed significant interactions with several individual-level predictors of legitimacy. The mean-centered freedom variable ranged from approximately -50 to 38, and the freedom score values at which marginal effects were estimated were once again selected to reflect this range. Figure 10 shows the relationship between marriage and legitimacy at different levels of the freedom score variable. In low-freedom countries, being married was associated with decreased legitimacy, but in high-freedom countries, marriage was associated with increased legitimacy. On average, a one-unit increase in the freedom score corresponded to a .002 increase in the marriage/legitimacy slope.

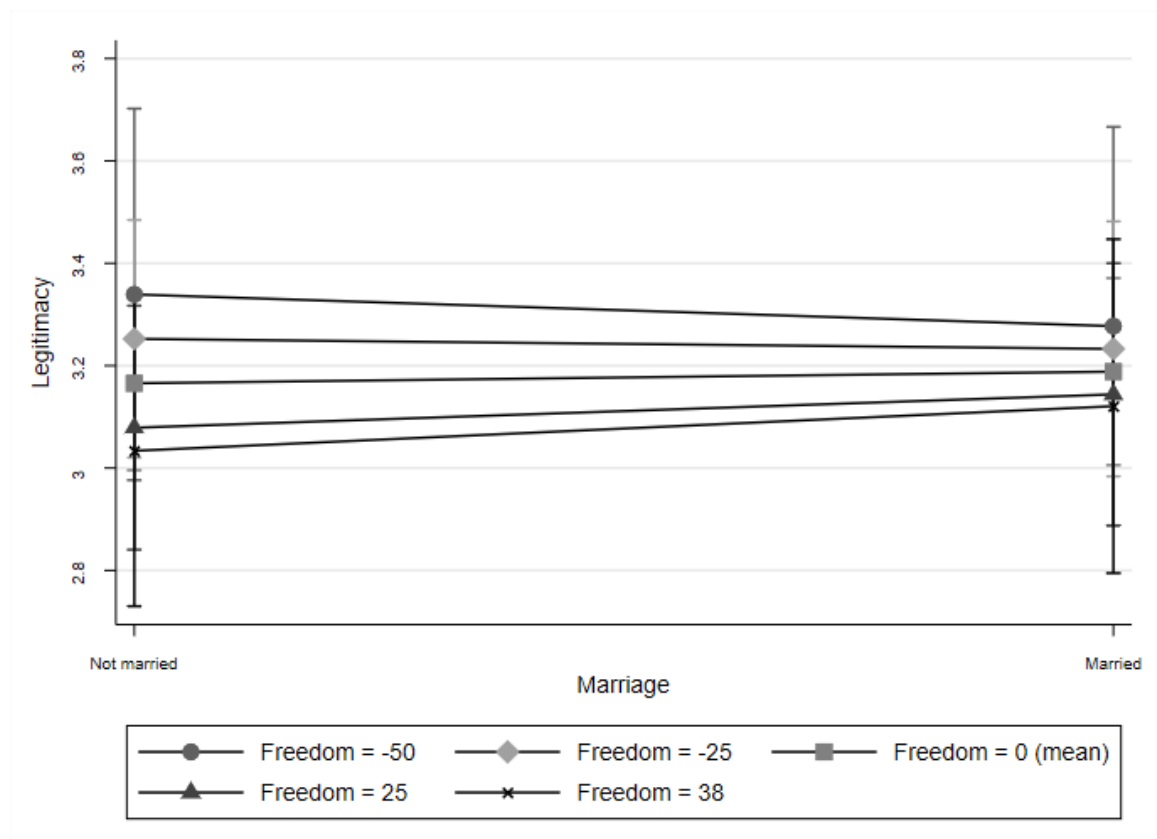


Figure 10: Marginal effects of marriage on legitimacy, by freedom score

The individual-level effect of unemployment on legitimacy also appeared to vary depending on national-level freedom score. Figure 11 shows this interaction, with unemployment displaying a positive relationship with legitimacy in low-freedom countries and a negative relationship in high-freedom countries. On average, a one-unit increase in freedom score was associated with a .003 unit decrease on the unemployment/legitimacy slope.

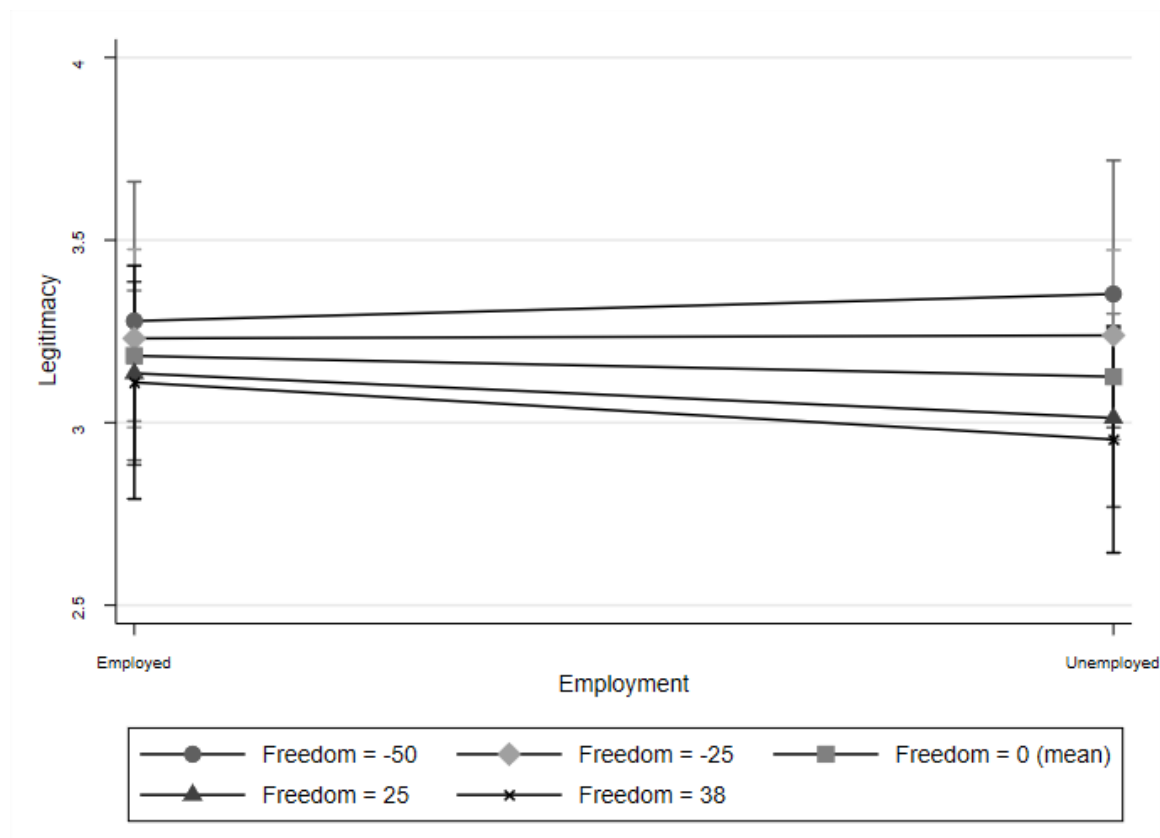


Figure 11: Marginal effects of unemployment on legitimacy, by freedom score

The freedom score also displayed a significant interaction with the individual-level effect of fear of crime in general. Figure 12 shows that while fear of crime had a negative association with legitimacy regardless of freedom score, this negative effect was stronger in low-freedom countries than in high-freedom countries. On average, a one unit increase in the freedom score was associated with a .002 unit increase on the fear/legitimacy slope at the lowest level, a .004 unit increase at the middle level, and a .007 increase at the highest level.

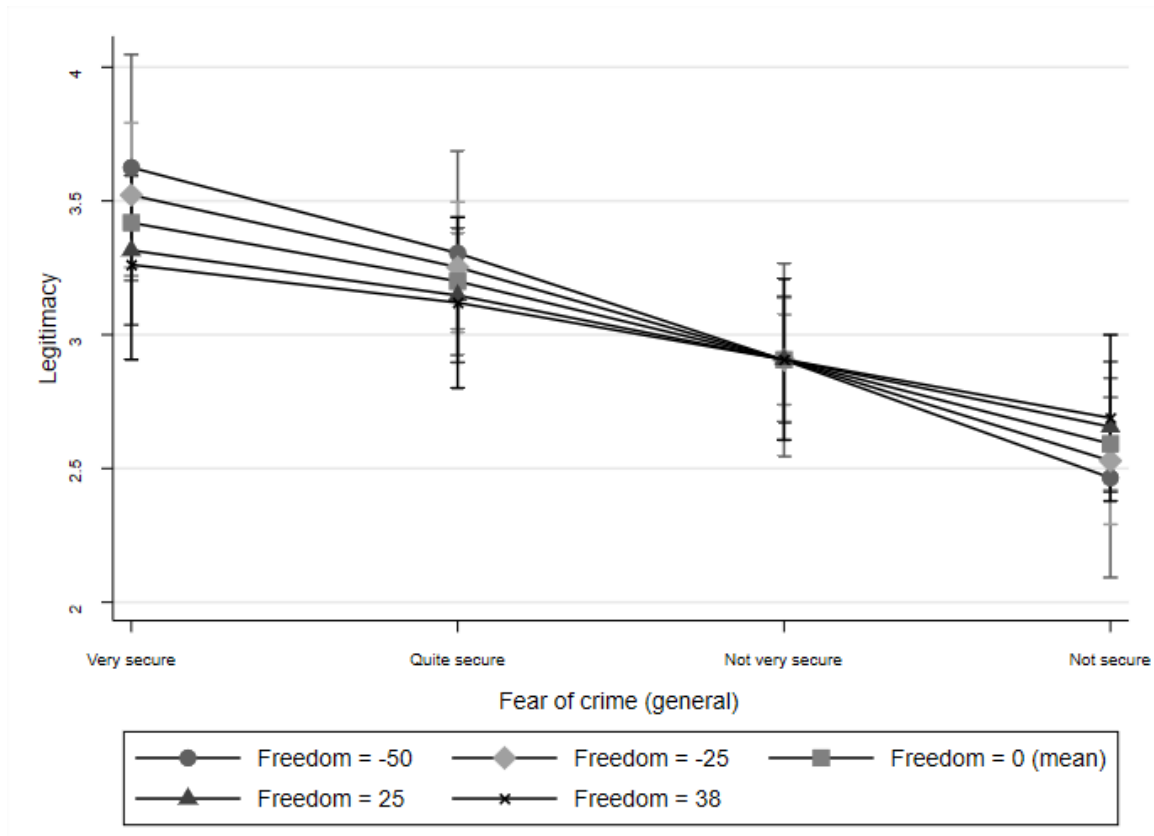


Figure 12: Marginal effects of fear of crime (general) on legitimacy, by freedom score

The freedom score also interacted significantly with the individual-level effects of fear of war and fear of terrorism. Figure 13 shows that in low-freedom countries, fear of war had a negative effect on legitimacy at its lower levels, only shifting to a positive effect at its highest level. In high-freedom countries, fear of war maintained a positive relationship with legitimacy across all levels. On average, a one-unit increase in the freedom score was associated with a .004 increase in the fear/legitimacy slope in the lowest category, a .005 increase in the middle category, and a .007 increase in the highest category.

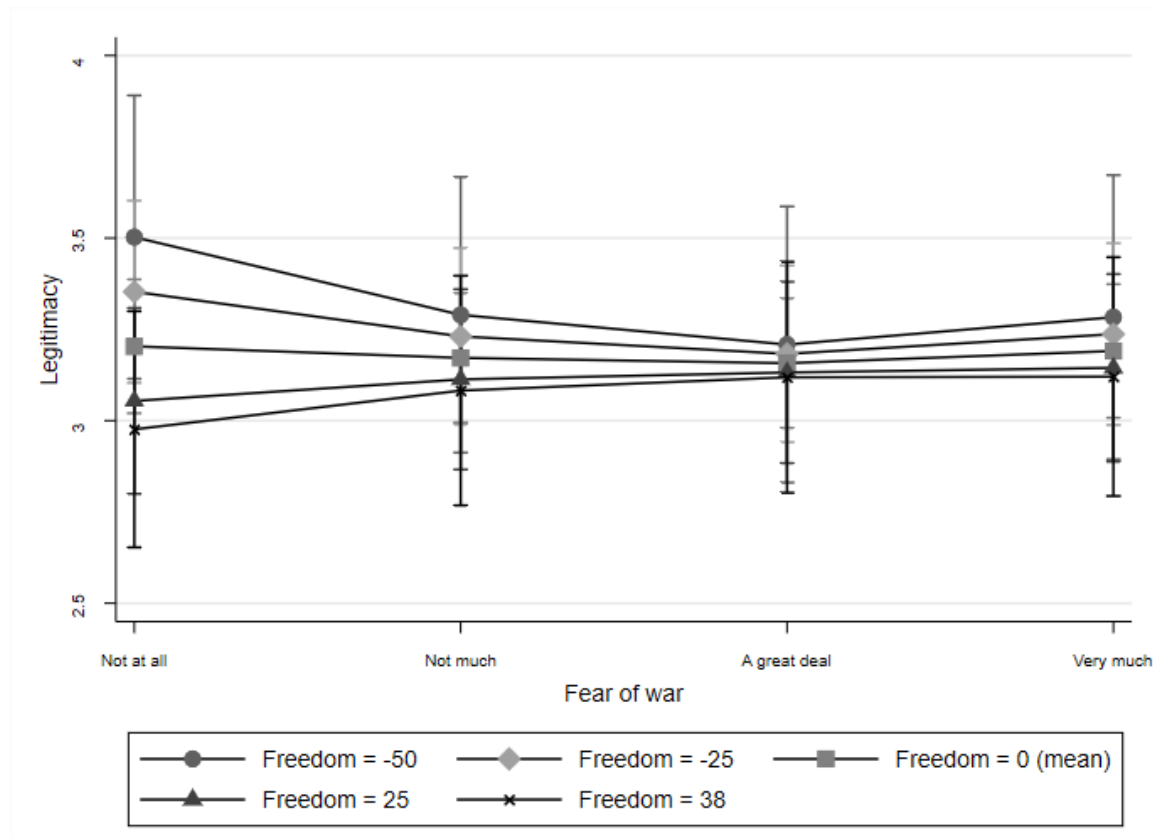


Figure 13: Marginal effects of fear of war on legitimacy, by freedom score

Similarly, Figure 14 shows that in low-freedom countries, the increase from “none” to “not much” fear of terrorism had a negative effect on legitimacy, while this same increase was associated with a positive effect in high-freedom countries. On average, a one-unit increase in freedom score was associated with a .005 increase in the fear of terrorism/legitimacy slope in the lowest category.

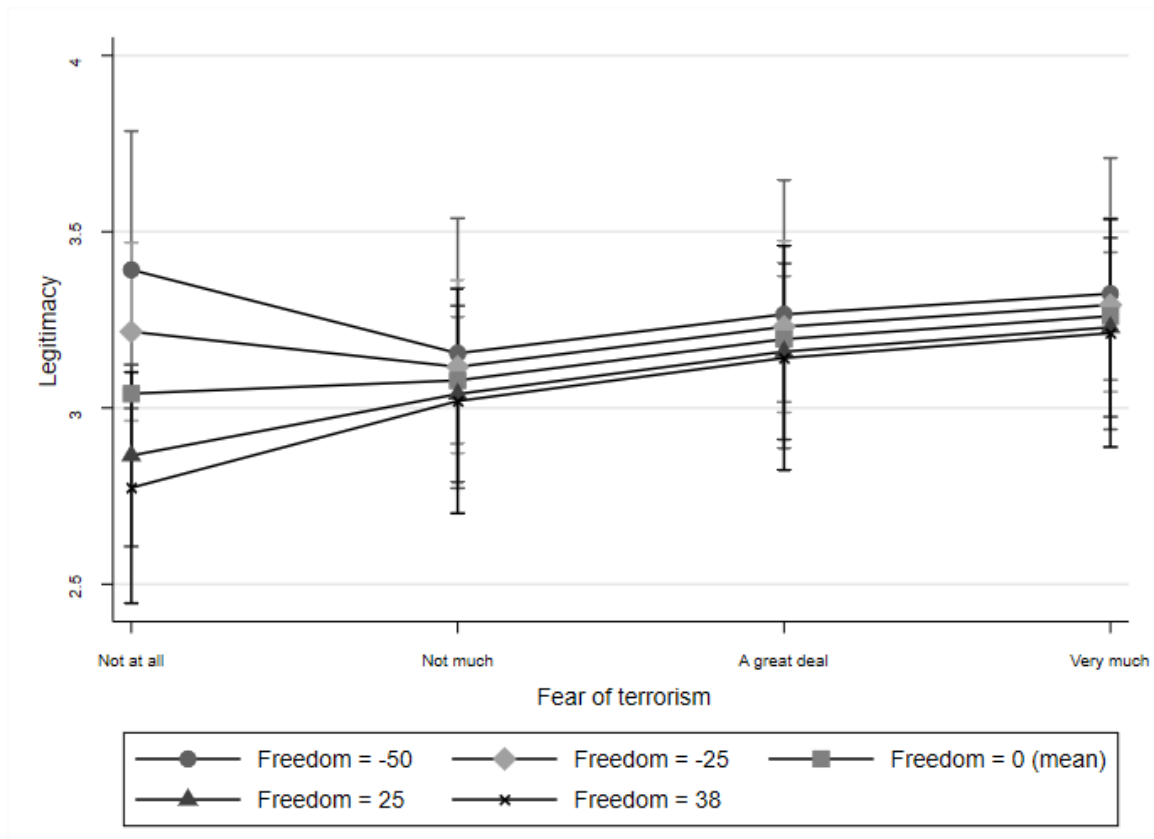


Figure 14: Marginal effects of fear of terrorism on legitimacy, by freedom score

Lastly, freedom score displayed a significant interaction with the individual-level effect of national pride on legitimacy, as shown in Figure 15. In low-freedom countries, national pride had a positive effect across all levels. In high-freedom countries, this effect was negative at the lowest level of national pride and while positive at higher levels, somewhat attenuated when compared to low-freedom countries. On average, a one-unit increase in freedom score was associated with a .004 decrease in the national pride/legitimacy slope at the lowest level, a .005 decrease at the middle level, and a .007 decrease at the highest level.

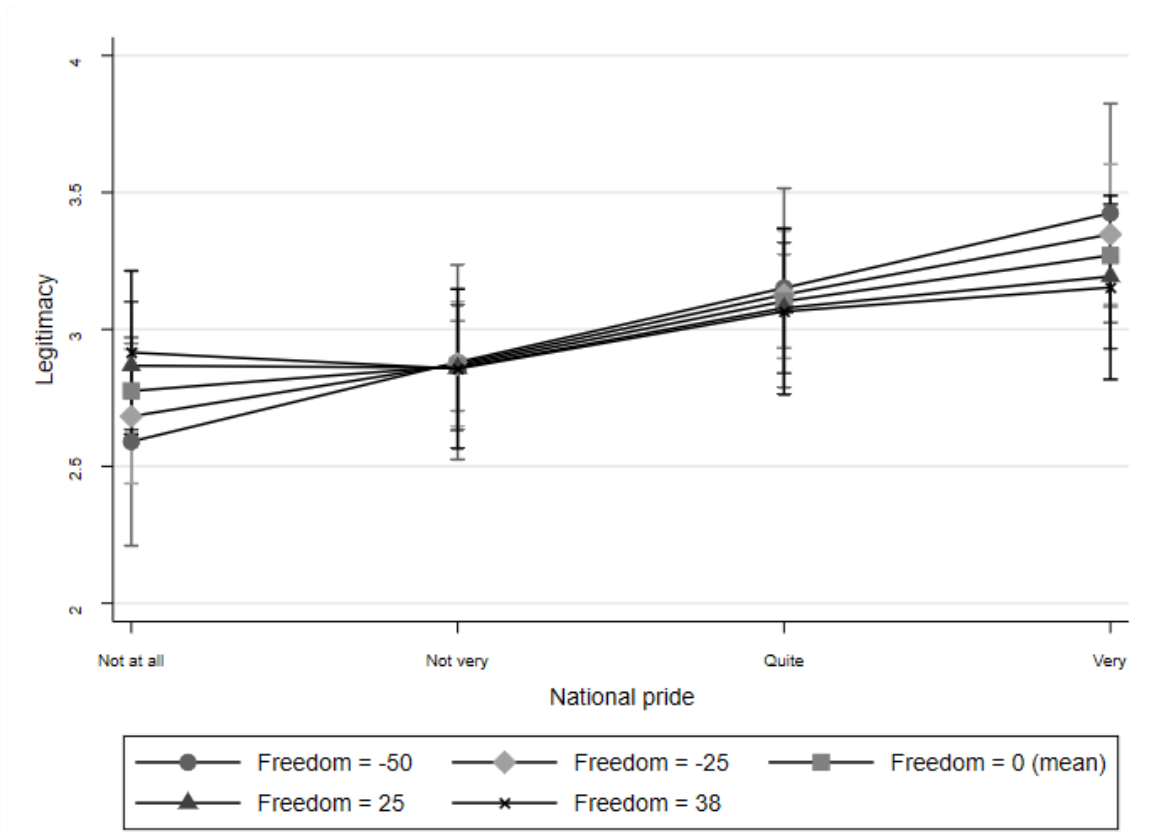


Figure 15: Marginal effects of national pride on legitimacy, by freedom score

Multilevel Binary Logistic Models

Supplementary analyses involved the estimation of two separate multilevel binary logistic regression models, one measuring the legitimacy of police and the other measuring the legitimacy of courts. Of interest was the existence of substantive differences in the relationships between these separate outcomes and the predictor variables included in the previous analysis. In addition, the possibility that random slope variation as well as cross-level interaction differed between police and courts was investigated.

The original four-category ordinal measures of confidence in police and confidence in courts were dichotomized, with a value of 0 representing “none at all” or “not very much” confidence and a value of 1 representing “quite a bit” or “a great deal” of confidence. These multilevel models were estimated using logistic regression, necessitating logarithmic transformation of the outcome and prediction using log odds. Coefficients in these models represented estimated effects of predictor variables on the log-odds of having “quite a bit” or “a great deal” of confidence compared to having “not very much” or “none at all.” Interpretation will in the interest of brevity refer to these estimates as the log-odds of police legitimacy and the log-odds of court legitimacy.

The construction of these models followed the same procedure used in the first analysis, beginning with null models, expanding these to include fixed effects, allowing these effects to vary in a series of random-effects models, and finally introducing cross-level interactions to explain this variation. Before conducting the multilevel analysis, initial models were estimated using mono-level binary logistic regression analyses (Table 19).

Table 19: Binary logistic regression models

	Police legitimacy	Police legitimacy (with country)	Court legitimacy	Court legitimacy (with country)
Age	.01*** (.001)	.005*** (.001)	-.001* (.0005)	-.003*** (.001)
Sex	.10*** (.02)	.09*** (.02)	.07*** (.02)	.08*** (.02)
Education (1)	-.01 (.02)	-.10*** (.03)	-.19*** (.02)	-.16*** (.02)
Education (2)	-.08** (.02)	-.16*** (.03)	-.21*** (.02)	-.09** (.03)
Married	.02 (.02)	.04* (.02)	.06** (.02)	-.01 (.02)
Unemployed	.08* (.03)	-.05 (.04)	.01 (.03)	-.04 (.04)
Urban	-.01 (.02)	-.15*** (.02)	-.15*** (.02)	-.13*** (.02)
Victim (self)	-.17*** (.03)	-.10** (.04)	-.13*** (.03)	-.11** (.04)
Victim (family)	-.20*** (.03)	-.08* (.03)	-.22*** (.03)	-.06 (.03)
Fear of crime at home (1)	.08** (.02)	.05 (.03)	-.02 (.02)	-.02 (.02)
Fear of crime at home (2)	.01 (.03)	.08** (.03)	-.03 (.03)	.07* (.03)
Fear of crime at home (3)	-.06 (.04)	.07 (.05)	-.12** (.04)	.06 (.05)
Fear of crime in general (1)	-.13*** (.02)	-.21*** (.02)	-.05* (.02)	-.22*** (.02)
Fear of crime in general (2)	-.67*** (.03)	-.65*** (.03)	-.60*** (.03)	-.68*** (.03)
Fear of crime in general (3)	-.70*** (.05)	-.92*** (.05)	-.59*** (.05)	-.89*** (.05)
Fear of war (1)	-.02 (.04)	-.02 (.04)	-.07 (.04)	-.04 (.04)
Fear of war (2)	-.05 (.04)	-.04 (.04)	-.10** (.04)	-.04 (.04)
Fear of war (3)	-.20*** (.04)	-.08 (.05)	-.15*** (.04)	.02 (.04)
Fear of terrorism (1)	.16*** (.04)	.11** (.04)	.11** (.04)	.07 (.04)
Fear of terrorism (2)	.41*** (.04)	.29*** (.04)	.22*** (.04)	.12** (.04)
Fear of terrorism (3)	.42*** (.04)	.35*** (.05)	.24*** (.04)	.16** (.05)
Vicarious (1)	-.24*** (.02)	-.21*** (.02)	-.14*** (.02)	-.12*** (.02)
Vicarious (2)	-.30*** (.03)	-.27*** (.03)	-.06 (.03)	-.08* (.03)
Vicarious (3)	-.50*** (.05)	-.43*** (.05)	-.20*** (.05)	-.21*** (.05)
National pride (1)	-.17** (.06)	-.05 (.06)	.13* (.06)	.01 (.06)
National pride (2)	.20*** (.05)	.42*** (.05)	.27*** (.05)	.29*** (.05)
National pride (3)	.25*** (.05)	.65*** (.05)	.29*** (.05)	.45*** (.05)
National identity (1)	.12* (.06)	.15* (.06)	.04 (.06)	.10 (.06)
National identity (2)	.31*** (.05)	.30*** (.06)	.27*** (.05)	.32*** (.06)
National identity (3)	.36*** (.05)	.39*** (.06)	.27*** (.05)	.43*** (.06)
Trust	.44*** (.02)	.38*** (.02)	.49*** (.02)	.40*** (.02)
Association	.26*** (.02)	.23*** (.02)	.23*** (.02)	.17*** (.02)
Corruption	-.17*** (.004)	-.13*** (.005)	-.19*** (.004)	-.16*** (.005)
Democracy	.05*** (.004)	.04*** (.005)	.06*** (.004)	.21*** (.05)
Homicide	-.04*** (.001)	-.15** (.06)	-.04*** (.001)	.21*** (.05)
Freedom	-.001 (.0004)	-.01*** (.002)	-.006*** (.0003)	-.02*** (.002)
Constant	-.13 (.08)	-.19 (.34)	-.07 (.07)	1.55 (.30)

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001

These initial logistic models provided the first indication of differences between the effects of explanatory variables on police and court legitimacy. Some of these differences are noted here, but full interpretations of these preliminary logistic models are omitted for brevity. Age displayed a significant positive association with police legitimacy but a significant negative association with court legitimacy. The effect of education also differed between the two outcomes, with a higher level of education having a stronger negative effect on police legitimacy and a moderate level of education having a stronger negative effect on court legitimacy.

Fear of terrorism appeared to have a stronger positive association with police legitimacy than with court legitimacy. Vicarious experience displayed a stronger negative association with police legitimacy than with court legitimacy. Importance of democracy appeared to have a stronger positive effect on court legitimacy than on police legitimacy. Lastly, while the homicide rate was negatively associated with police legitimacy both with and without country controls included, this variable was positively associated with court legitimacy in the model with country controls. The next step in the logistic regression analysis was the construction of separate multilevel null models for police legitimacy and court legitimacy. The results of these null models and presented as both log odds and odds ratios in Table 20.

Table 20: Binary logistic null models

	Police legitimacy		Court legitimacy	
	b (SE)	OR	b (SE)	OR
Constant	.40** (.16)	1.50* (.24)	.16 (.16)	1.18 (.18)
Variance (constant)	1.15 (.24)	1.15 (.24)	1.13 (.23)	1.13 (.23)
LL	-35473.62	-35473.62	-36195.78	-36195.78
ICC	.2592 (.04)	.2592 (.04)	.2556 (.04)	.2556 (.04)
AIC	70951.25	70951.25	72395.56	72395.56
BIC	70969.31	70969.31	72413.61	72413.61
LR test vs. logistic model	12395.49***	12395.49***	12317.35***	12317.35***

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001

Intraclass correlation coefficients (ICCs) estimated via these null models provided evidence of significant national-level clustering effects for both outcome variables. These models indicated that approximately 26 percent of the variation in these outcomes could be attributed to differences at the country level. Based on these results, the analysis proceeded with the construction of full fixed-effects models (Table 21).

Comparison of these models revealed several notable differences in the effects of explanatory variables on police and court legitimacy. All coefficient estimates interpreted below are on average and controlling for other variables in the model. A one-unit increase in age was associated with a significant .005 increase in the log-odds of police legitimacy, but the same increase was associated with a significant .003 *decrease* in the log-odds of court legitimacy. The effect of sex was similar across both models, with being female associated with a significant .09 increase in the log-odds of police legitimacy and a significant .08 increase in the log-odds of court legitimacy.

Table 21: Binary logistic fixed-effects models

	Police legitimacy model		Court legitimacy model	
	b (SE)	OR	b (SE)	OR
Age	.005*** (.001)	1.005*** (.001)	-.003*** (.001)	.997*** (.001)
Sex	.09*** (.02)	1.10*** (.02)	.08*** (.02)	1.08*** (.02)
Education (1)	-.09*** (.02)	.91*** (.02)	-.16*** (.02)	.85*** (.02)
Education (2)	-.16*** (.03)	.85*** (.02)	-.09*** (.03)	.91*** (.02)
Married	.04* (.02)	1.04* (.02)	-.01 (.02)	.99 (.02)
Unemployed	-.05 (.04)	.95 (.03)	-.04 (.04)	.96 (.03)
Urban	-.15*** (.02)	.86*** (.02)	-.13*** (.02)	.87*** (.02)
Victim (self)	-.10** (.04)	.90** (.03)	-.11** (.04)	.89** (.03)
Victim (family)	-.08* (.03)	.92* (.03)	-.06* (.03)	.94* (.03)
Fear crime at home (1)	.05 (.03)	1.05 (.03)	-.02 (.02)	.99 (.02)
Fear crime at home (2)	.08** (.03)	1.09** (.03)	.07* (.03)	1.07* (.03)
Fear crime at home (3)	.06 (.05)	1.07 (.05)	.05 (.05)	1.06 (.05)
Fear crime in general (1)	-.21*** (.02)	.81*** (.02)	-.22*** (.02)	.81*** (.02)
Fear crime in general (2)	-.65*** (.03)	.52*** (.02)	-.68*** (.03)	.51*** (.02)
Fear crime in general (3)	-.92*** (.05)	.40*** (.02)	-.89*** (.05)	.41*** (.02)
Fear of war (1)	-.02 (.04)	.98 (.04)	-.04 (.04)	.96 (.04)
Fear of war (2)	-.04 (.04)	.96 (.04)	-.04 (.04)	.96 (.04)
Fear of war (3)	-.08 (.05)	.92 (.04)	-.02 (.04)	1.02 (.05)
Fear of terrorism (1)	.11** (.04)	1.12** (.05)	.07 (.04)	1.07 (.04)
Fear of terrorism (2)	.29*** (.04)	1.34*** (.06)	.12** (.04)	1.13** (.05)
Fear of terrorism (3)	.35*** (.05)	1.41*** (.07)	.16** (.05)	1.17** (.06)
Vicarious (1)	-.21*** (.02)	.81*** (.02)	-.12*** (.02)	.88*** (.02)
Vicarious (2)	-.27*** (.03)	.76*** (.03)	-.08* (.03)	.92* (.03)
Vicarious (3)	-.43*** (.05)	.65*** (.03)	-.21*** (.05)	.81*** (.04)
National pride (1)	-.05 (.06)	.95 (.06)	.01 (.06)	1.01 (.06)
National pride (2)	.42*** (.05)	1.52*** (.08)	.29*** (.05)	1.34*** (.07)
National pride (3)	.64*** (.05)	1.90*** (.10)	.44*** (.05)	1.56*** (.08)
National identity (1)	.15* (.06)	1.16* (.07)	.10 (.06)	1.11 (.07)
National identity (2)	.30*** (.06)	1.35*** (.08)	.32*** (.06)	1.37*** (.08)
National identity (3)	.39*** (.06)	1.48*** (.08)	.42*** (.06)	1.53*** (.09)
Trust	.38*** (.02)	1.46*** (.04)	.40*** (.02)	1.50*** (.04)
Association	.23*** (.02)	1.26*** (.03)	.17*** (.02)	1.18*** (.02)
Corruption	-.13*** (.005)	.87*** (.004)	-.16*** (.005)	.85*** (.004)
Democracy	.04*** (.005)	1.04*** (.005)	.05*** (.005)	1.05*** (.005)
Homicide	-.06*** (.01)	.94*** (.01)	-.05** (.02)	.95** (.01)
Freedom	.001 (.005)	1.00 (.005)	-.007 (.005)	.99 (.005)
Constant	-.24 (.14)	.79 (.11)	-.25 (.15)	.78 (.11)

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001

The effect of education continued to display notable differences between the models, with a middle level of education compared to a low level associated with a significant .09 decrease in the log-odds of police legitimacy, but a much larger .16 decrease in the log-odds of court legitimacy. On the other hand, a high level of education compared to the lowest level was associated with a .16 decrease in the log-odds of police legitimacy but a much smaller .09 decrease in the log-odds of court legitimacy. Marriage was associated with a .04 increase in the log-odds of police legitimacy, but this effect was significant only at the .05 level. Marriage did not display a significant relationship with court legitimacy. Unemployment was not significantly associated with either police legitimacy or court legitimacy, while urban residence was significantly and negatively associated with both outcomes. Living in an urban area corresponded to a .15 reduction in the log-odds of police legitimacy and a .13 reduction in the log-odds of court legitimacy.

Prior victimization was significantly and negatively associated with both police and court legitimacy, corresponding to a .10 decrease in the log-odds of police legitimacy and a .11 decrease in the log-odds of court legitimacy. Family victimization was associated with a .08 decrease in the log-odds of police legitimacy and a .06 decrease in the log-odds of court legitimacy, however, both of these estimated effects were significant only at the .05 level. Fear of crime at home displayed no significant relationship with police or court legitimacy at its lowest and highest levels, but significant relationships at moderate levels in both models. Being fearful of crime at home “sometimes” compared to “never” was associated with a significant .08 increase in the log-odds of police legitimacy and a significant .07 increase in the log-odds of court legitimacy. By contrast, fear of crime in general displayed strongly negative effects on

both police legitimacy and court legitimacy across all levels. Feeling “quite secure” from crime compared to “very secure” was associated with a significant .21 decrease in the log-odds of police legitimacy and a significant .22 decrease in the log-odds of court legitimacy. Feeling “not very secure” was associated with a significant .65 decrease in the log-odds of police legitimacy and a significant .68 decrease in the log-odds of court legitimacy. Feeling “not at all secure” was associated with a .92 decrease in the log-odds of police legitimacy and a .89 decrease in the log-odds of court legitimacy.

Fear of war was not significantly associated with the legitimacy of police or courts in these separate models. Conversely, fear of terrorism displayed significant positive associations with both outcome variables. Having “not much” fear of terrorism compared to “none” was associated with a .11 increase in the log-odds of police legitimacy, but this same difference displayed no significant effect on the log-odds of court legitimacy. Having a “great deal” of fear of terrorism was associated with a significant .29 increase in the log-odds of police legitimacy and a smaller .12 increase in the log-odds of court legitimacy. Having “very much” fear of terrorism was associated with a significant .35 increase in the log-odds of police legitimacy and a smaller .16 increase in the log-odds of court legitimacy.

Vicarious experience displayed notable differences in effect between the police and court legitimacy models. Perceiving authorities to interfere “not frequently” compared to “not at all frequently” was associated with a significant .21 decrease in the log-odds of police legitimacy and a significant but smaller .12 decrease in the log-odds of court legitimacy. Perceiving such interference “quite frequently” was associated with a significant .27 decrease in the log-odds of police legitimacy, but a much smaller .08

decrease in the log-odds of court legitimacy that was significant only at the .05 level.

Perceiving authorities to interfere “very frequently” was associated with a significant .43 decrease in the log-odds of police legitimacy and a significant but again smaller .21 decrease in the log-odds court legitimacy.

National pride displayed a significant positive relationship with both police and court legitimacy in its higher two categories. While feeling “not very proud” compared to “not at all proud” of one’s nationality did not display a significant relationship with either police legitimacy or court legitimacy, feeling “quite proud” was associated with a significant .42 increase in the log-odds of police legitimacy and a significant but smaller .29 increase in the log-odds of court legitimacy. Feeling “very proud” of one’s nationality was associated with a significant .64 increase in the log-odds of police legitimacy and a significant but smaller .44 increase in the log-odds of court legitimacy.

National identity displayed significant positive effects on the log-odds of police legitimacy across all categories and similarly significant positive effects on the log-odds of court legitimacy at all but the lowest level. Feeling “not very close” to one’s country compared to “not close at all” was associated with a significant .15 increase in the log-odds of police legitimacy but had no significant effect on the log-odds of court legitimacy. Feeling “close” was associated with a significant .30 increase in the log-odds of police legitimacy and a significant .32 in the log-odds of court legitimacy. Feeling “very close” was associated with a significant .39 increase in the log-odds of police legitimacy and a significant .42 increase in the log-odds of court legitimacy.

Trust in others was associated with a significant .38 increase in the log-odds of police legitimacy and a significant .40 increase in the log-odds of court legitimacy.

Voluntary association corresponded to a significant .23 increase in police legitimacy and a significant .17 increase in court legitimacy. Perceived corruption was significantly and negatively associated with both police and court legitimacy. A one-unit increase in perceived corruption was associated with a .13 decrease in the log-odds of police legitimacy and a .16 decrease in the log-odds of court legitimacy. Importance of democracy displayed a significant positive association with both police and court legitimacy. A one-unit increase in importance of democracy was associated with a .04 increase in the log-odds of police legitimacy and a .05 increase in the log-odds of court legitimacy.

Lastly, the homicide rate displayed significant negative direct effects on the legitimacy of both police and courts. A one-unit increase in the homicide rate was associated with a .06 decrease in the log-odds of police legitimacy and a .05 decrease in the log-odds of court legitimacy, although the latter relationship only achieved significance at the .01 level. The other national-level variable, freedom score, did not display statistically significant relationships with the legitimacy of either police or courts.

Comparisons of these fixed-effects models with null models indicated significant improvement in model fit and reduction of unexplained variance at the country level, as depicted in Table 22. However, significant ICCs produced by these fixed-effects models indicated that sizable amounts of higher-level variation still remained in both models. The analysis therefore proceeded once again by allowing each of these effects to vary across countries in a series of random-effects models.

Table 22: Binary logistic fixed-effects model comparisons

	Police legitimacy		Court legitimacy	
	Null model	Fixed-effects model	Null model	Fixed-effects model
	b (SE)	b (SE)	b (SE)	b (SE)
Constant	.40 (.16)	-.24 (.14)	.16 (.16)	-.25 (.15)
Variance (constant)	1.15 (.24)	.68 (.14)	1.13 (.23)	.71 (.15)
ICC	.2592 (.04)	.1708 (.03)	.2556 (.04)	.1783 (.03)
AIC	70951.25	66950.32	72395.56	68524.02
BIC	70969.31	67293.43	72413.61	68867.13
LL	-35473.62	-33437.16	-36195.78	-34224.01
LR chi2 vs null		4072.93***		3943.54***

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001

Tables 23 and 24 present the results of these random-effects model comparisons, indicating that most of the predictors in the model displayed significant cross-national variation in their effects on the legitimacy of both police and courts. In the police legitimacy models (Table 23), the effects of sex and prior victimization displayed no significant variation across countries, while variation in the effects of unemployment and trust were significant only at the .05 level, and family victimization was significant only at the .01 level. All other variance components in the police legitimacy model were significant at the .001 level. Models with significant variance components displayed improvement in fit with random slopes included, as evidenced by corresponding reductions in AIC and BIC values.

Table 23: Police legitimacy random-effects model comparisons (variance components)

Model	Variance (estimate)	Covariance (estimate)	LL	AIC	BIC	LR chi2 vs fixed
Fixed effects			-33437.16	66950.32	67293.43	
R. age	.0001 (.00002)	.001 (.001)	-33325.94	66731.89	67093.05	222.43***
R. sex	.01 (.006)	.0003 (.02)	-33434.66	66949.33	67310.50	4.99
R. education	.04 (.01)	-.03 (.03)	-33359.34	66798.69	67159.86	155.63***
R. married	.04 (.01)	.09*** (.02)	-33402.29	66884.58	67245.75	69.74***
R. unemployed	.04 (.02)	-.06 (.05)	-33432.99	66945.99	67307.16	8.33*
R. urban	.05 (.02)	.08** (.03)	-33405.39	66890.77	67251.94	63.55***
R. victim (self)	.02 (.02)	-.02 (.04)	-33434.81	66949.61	67310.78	4.70
R. victim (family)	.04 (.02)	-.01 (.04)	-33431.57	66943.14	67304.31	11.18**
R. crime (home)	.02 (.01)	-.06* (.02)	-33409.00	66898.00	67259.17	56.31***
R. crime (general)	.04 (.01)	-.13** (.04)	-33365.37	66810.75	67171.92	143.57***
R. fear war	.02 (.005)	-.02 (.02)	-33380.27	66840.53	67201.7	113.79***
R. fear terrorism	.02 (.005)	-.02 (.02)	-33386.02	66852.04	67213.21	102.28***
R. vicarious	.05 (.01)	-.13** (.04)	-33319.20	66718.39	67079.56	235.93***
R. national pride	.04 (.01)	.02 (.02)	-33375.95	66831.91	67193.08	122.41***
R. national ident	.02 (.01)	.004 (.02)	-33402.45	66884.89	67246.06	69.42***
R. trust	.02 (.01)	-.01 (.03)	-33432.67	66945.34	67306.51	8.98*
R. association	.10 (.03)	.08 (.04)	-33400.69	66881.38	67242.54	72.94***
R. corruption	.01 (.002)	.01 (.01)	-33301.17	66682.33	67043.50	271.99***
R. democracy	.005 (.001)	.02* (.01)	-33356.78	66793.56	67154.73	160.76***

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001

Table 24: Court legitimacy random effects model comparisons (variance components)

Model	Variance (estimate)	Covariance (estimate)	LL	AIC	BIC	LR chi2 vs fixed
Fixed effects			-34224.01	68524.02	68867.13	
R. age	.0001 (.00002)	.003 (.001)	-34148.12	68376.25	68737.42	151.77***
R. sex	.02 (.01)	.06* (.02)	-34207.06	68494.12	68855.28	33.90***
R. education	.04 (.01)	-.01 (.03)	-34139.68	68359.36	68720.53	168.66***
R. married	.02 (.01)	.06*** (.02)	-34196.75	68473.51	68834.67	54.51***
R. unemployed	.06 (.03)	-.04 (.05)	-34217.05	68514.09	68875.26	13.93***
R. urban	.08 (.02)	.08* (.03)	-34166.00	68412.00	68773.17	116.02***
R. victim (self)	.06 (.02)	-.05 (.05)	-34215.68	68511.35	68872.52	16.67***
R. victim (family)	.06 (.02)	-.05 (.05)	-34210.81	68501.63	68862.79	26.39***
R. crime (home)	.03 (.01)	-.08* (.03)	-34172.61	68425.22	68786.38	102.80***
R. crime (general)	.03 (.01)	-.09** (.03)	-34165.52	68411.04	68772.21	116.98***
R. fear war	.02 (.006)	-.04 (.02)	-34170.15	68420.30	68781.47	107.72***
R. fear terrorism	.02 (.004)	-.03 (.02)	-34178.86	66437.72	68798.89	90.29***
R. vicarious	.05 (.01)	-.14** (.04)	-34117.69	68315.37	68676.54	212.65***
R. national pride	.02 (.01)	.01 (.03)	-34190.88	68461.75	68822.92	66.26***
R. national ident	.02 (.01)	-.05 (.03)	-34195.89	68471.79	68832.96	56.23***
R. trust	.08 (.02)	-.01 (.05)	-34184.54	68449.09	68810.26	78.93***
R. association	.07 (.02)	-.13* (.05)	-34187.57	68455.15	68816.32	72.87***
R. corruption	.005 (.001)	.02* (.01)	-34151.11	68382.22	68743.39	145.79***
R. democracy	.005 (.001)	.03* (.01)	-34162.09	68404.18	68765.35	123.84***

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001

In the court legitimacy models (Table 24), all variance components were significant at the .001 level, indicating greater variation overall in the effects of these predictors on the legitimacy of courts than on the legitimacy of police. The inclusion of random slopes for these variables substantially improved the fit of these models, as evidenced by sizable reductions in AIC and BIC values. Coefficient estimates for several variables were affected by the inclusion of random slope components, which altered the predicted global average effects of these variables on the legitimacy of police and courts.

Table 25 compares coefficient estimates from fixed-effects models with coefficient estimates for each variable produced by random-effects models.

Table 25: Binary logistic random-effects model comparisons (fixed coefficients)

	Police legitimacy		Court legitimacy	
	Fixed-effects model	Random-effects models	Fixed-effects model	Random-effects models
	b (SE)	b (SE)	b (SE)	b (SE)
Age	.005*** (.001)	.003 (.002)	-.003*** (.001)	-.004* (.002)
Sex	.09*** (.02)	.10*** (.02)	.08*** (.02)	.08** (.03)
Education (1)	-.09*** (.02)	-.08* (.04)	-.16*** (.02)	-.12** (.04)
Education (2)	-.16*** (.03)	-.14* (.07)	-.09** (.03)	-.09 (.07)
Married	.04* (.02)	.04 (.03)	-.01 (.02)	-.01 (.03)
Unemployed	-.05 (.04)	-.05 (.05)	-.04 (.04)	-.02 (.06)
Urban	-.15*** (.02)	-.15*** (.04)	-.13*** (.02)	-.12** (.04)
Victim (self)	-.10** (.04)	-.12** (.04)	-.11** (.04)	-.14** (.05)
Victim (family)	-.08* (.03)	-.10* (.05)	-.06* (.03)	-.10** (.05)
Fear crime at home (1)	.05 (.03)	.04 (.03)	-.02 (.02)	-.01 (.04)
Fear crime at home (2)	.08** (.03)	.05 (.05)	.07* (.03)	.06 (.06)
Fear crime at home (3)	.06 (.05)	-.004 (.08)	.05 (.05)	-.001 (.09)
Fear crime in general (1)	-.21*** (.02)	-.22*** (.04)	-.22*** (.02)	-.21*** (.04)
Fear crime in general (2)	-.65*** (.03)	-.67*** (.07)	-.68*** (.03)	-.65*** (.06)
Fear crime in general (3)	-.92*** (.05)	-.93*** (.10)	-.89*** (.05)	-.88*** (.09)
Fear of war (1)	-.02 (.04)	-.01 (.05)	-.04 (.04)	.01 (.05)
Fear of war (2)	-.04 (.04)	-.04 (.06)	-.04 (.04)	.02 (.06)
Fear of war (3)	-.08 (.05)	-.06 (.08)	-.02 (.04)	.05 (.08)
Fear of terrorism (1)	.11** (.04)	.12** (.05)	.07 (.04)	.08 (.05)
Fear of terrorism (2)	.29*** (.04)	.28*** (.06)	.12** (.04)	.14* (.06)
Fear of terrorism (3)	.35*** (.05)	.34*** (.08)	.16** (.05)	.18* (.08)
Vicarious (1)	-.21*** (.02)	-.20*** (.04)	-.12*** (.02)	-.12** (.04)
Vicarious (2)	-.27*** (.03)	-.29*** (.08)	-.08* (.03)	-.08 (.08)
Vicarious (3)	-.43*** (.05)	-.50*** (.12)	-.21*** (.05)	-.24* (.11)
National pride (1)	-.05 (.06)	-.08 (.07)	.01 (.06)	.04 (.07)
National pride (2)	.42*** (.05)	.35*** (.08)	.29*** (.05)	.31*** (.08)
National pride (3)	.64*** (.05)	.56*** (.10)	.44*** (.05)	.46*** (.09)
National identity (1)	.15* (.06)	.17** (.06)	.10 (.06)	.11 (.07)
National identity (2)	.30*** (.06)	.34*** (.08)	.32*** (.06)	.33*** (.08)
National identity (3)	.39*** (.06)	.45*** (.09)	.42*** (.06)	.45*** (.09)
Trust	.38*** (.02)	.39*** (.04)	.40*** (.02)	.35*** (.05)
Association	.23*** (.02)	.24*** (.05)	.17*** (.02)	.16*** (.04)
Corruption	-.13*** (.005)	-.15*** (.01)	-.16*** (.005)	-.16*** (.01)
Democracy	.04*** (.005)	.03* (.01)	.05*** (.005)	.04*** (.01)

N = 61,648; K = 47; *p < .05; **p < .01; ***p < .001

With the existence of significant cross-national variation in the effects of predictor variables now established by these random-effects models, the analysis proceeded by estimating another series of models that included cross-level interactions between these individual-level relationships and national-level measures of the *homicide rate* and the *freedom score*. Coefficient estimates for interaction terms produced by these models are presented in Tables 26 and 27 below.

Police legitimacy interaction models indicated the presence of significant interactions between the homicide rate and the individual-level effects of unemployment, prior victimization, family victimization, fear of crime at home, and vicarious experience. In addition, significant interactions were found between the freedom score and the individual-level effects of marriage, fear of crime at home, fear of crime in general, fear of war, fear of terrorism, and national identity.

Court legitimacy interaction models indicated the presence of significant interactions between the homicide rate and the individual-level effects of prior victimization, family victimization, fear of crime at home, fear of crime in general, and vicarious experience. Additionally, significant interactions were found between freedom score and the effects of urban residence, prior victimization, fear of war, fear of terrorism, national pride, trust, and perceived corruption.

Table 26: Police legitimacy cross-level interaction effects

Homicide rate interaction models		Freedom score interaction models	
Interaction	b (SE)	Interaction	b (SE)
Age#homicide	-.0002 (.0002)	Age#freedom	.0001 (.0001)
Sex#homicide	-.004 (.003)	Sex#freedom	.001 (.001)
Education#homicide (1)	.002 (.005)	Education#freedom (1)	.001 (.002)
Education#homicide (2)	.007 (.009)	Education#freedom (2)	.003 (.002)
Married#homicide	-.005 (.004)	Married#freedom	.004** (.001)
Unemployed#homicide	.01* (.005)	Unemployed#freedom	-.003 (.002)
Urban#homicide	.0003 (.004)	Urban#freedom	.002 (.001)
Victim (self)#homicide	.01** (.004)	Victim (self)#freedom	-.00003 (.002)
Victim (family)#homicide	.01** (.004)	Victim (family)#freedom	-.001 (.002)
Crime (home)#homicide (1)	.01* (.004)	Crime (home)#freedom (1)	.003* (.001)
Crime (home)#homicide (2)	.02** (.006)	Crime (home)#freedom (2)	.002 (.002)
Crime (home)#homicide (3)	.01 (.01)	Crime (home)#freedom (3)	.003 (.003)
Crime (gen)#homicide (1)	.005 (.004)	Crime (gen)#freedom (1)	.003* (.001)
Crime (gen)#homicide (2)	.007 (.007)	Crime (gen)#freedom (2)	.01** (.002)
Crime (gen)#homicide (3)	-.001 (.01)	Crime (gen)#freedom (3)	.01** (.004)
Fear war#homicide (1)	-.001 (.005)	Fear war#freedom (1)	.006*** (.002)
Fear war#homicide (2)	-.004 (.007)	Fear war#freedom (2)	.007** (.002)
Fear war#homicide (3)	-.006 (.009)	Fear war#freedom (3)	.007* (.003)
Fear terrorism#homicide (1)	.004 (.005)	Fear terrorism#freedom (1)	.01*** (.002)
Fear terrorism#homicide (2)	-.008 (.006)	Fear terrorism#freedom (2)	.01*** (.002)
Fear terrorism#homicide (3)	-.009 (.008)	Fear terrorism#freedom (3)	.01*** (.002)
Vicarious#homicide (1)	.01* (.005)	Vicarious#freedom (1)	-.001 (.002)
Vicarious#homicide (2)	.02** (.01)	Vicarious#freedom (2)	-.002 (.003)
Vicarious#homicide (3)	.02 (.01)	Vicarious#freedom (3)	-.002 (.004)
Nat. pride#homicide (1)	.001 (.007)	Nat. pride#freedom (1)	-.005 (.003)
Nat. pride#homicide (2)	-.009 (.009)	Nat. pride#freedom (2)	-.004 (.003)
Nat. pride#homicide (3)	-.02 (.01)	Nat. pride#freedom (3)	-.006 (.004)
Nat. identity#homicide (1)	.001 (.007)	Nat. identity#freedom (1)	.005* (.002)
Nat. identity#homicide (2)	-.007 (.009)	Nat. identity#freedom (2)	.006 (.003)
Nat. identity#homicide (3)	-.006 (.01)	Nat. identity#freedom (3)	.004 (.004)
Trust#homicide	.005 (.005)	Trust#freedom	.0002 (.001)
Association#homicide	-.006 (.005)	Association#freedom	-.0004 (.002)
Corruption#homicide	.001 (.002)	Corruption#freedom	-.00005 (.0005)
Democracy#homicide	-.001 (.001)	Democracy#freedom	.0001 (.0002)

N = 61,648; K = 47; p* < .05; p** < .01; p*** < .001

Table 27: Court legitimacy cross-level interaction effects

Homicide rate interaction models		Freedom score interaction models	
Interaction	b (SE)	Interaction	b (SE)
Age#homicide	-.00003 (.0002)	Age#freedom	.00003 (.00006)
Sex#homicide	-.002 (.004)	Sex#freedom	.000003 (.001)
Education#homicide (1)	.001 (.004)	Education#freedom (1)	-.0001 (.002)
Education#homicide (2)	-.002 (.003)	Education#freedom (2)	.002 (.002)
Married#homicide	.0002 (.004)	Married#freedom	.001 (.001)
Unemployed#homicide	.003 (.01)	Unemployed#freedom	.003 (.002)
Urban#homicide	-.004 (.005)	Urban#freedom	.004* (.002)
Victim (self)#homicide	.01* (.005)	Victim (self)#freedom	.004* (.002)
Victim (family)#homicide	.01** (.005)	Victim (family)#freedom	.002 (.002)
Crime (home)#homicide (1)	.02*** (.004)	Crime (home)#freedom (1)	.0004 (.001)
Crime (home)#homicide (2)	.02** (.01)	Crime (home)#freedom (2)	.003 (.002)
Crime (home)#homicide (3)	.01* (.01)	Crime (home)#freedom (3)	-.003 (.004)
Crime (gen)#homicide (1)	.01* (.004)	Crime (gen)#freedom (1)	-.0004 (.001)
Crime (gen)#homicide (2)	.02** (.01)	Crime (gen)#freedom (2)	.001 (.002)
Crime (gen)#homicide (3)	.01 (.01)	Crime (gen)#freedom (3)	.005 (.004)
Fear war#homicide (1)	.001 (.005)	Fear war#freedom (1)	.004* (.002)
Fear war#homicide (2)	-.0004 (.01)	Fear war#freedom (2)	.005* (.002)
Fear war#homicide (3)	.004 (.01)	Fear war#freedom (3)	.003 (.003)
Fear terrorism#homicide (1)	-.004 (.005)	Fear terrorism#freedom (1)	.005** (.002)
Fear terrorism#homicide (2)	-.004 (.01)	Fear terrorism#freedom (2)	.003 (.002)
Fear terrorism#homicide (3)	.0005 (.01)	Fear terrorism#freedom (3)	.003 (.002)
Vicarious#homicide (1)	.01* (.005)	Vicarious#freedom (1)	-.0001 (.002)
Vicarious#homicide (2)	.02** (.01)	Vicarious#freedom (2)	-.0005 (.003)
Vicarious#homicide (3)	.02 (.01)	Vicarious#freedom (3)	.001 (.004)
Nat. pride#homicide (1)	.0003 (.01)	Nat. pride#freedom (1)	-.004 (.003)
Nat. pride#homicide (2)	-.01 (.01)	Nat. pride#freedom (2)	-.01* (.003)
Nat. pride#homicide (3)	-.01 (.01)	Nat. pride#freedom (3)	-.01** (.003)
Nat. identity#homicide (1)	-.0001 (.01)	Nat. identity#freedom (1)	-.001 (.002)
Nat. identity#homicide (2)	-.0002 (.01)	Nat. identity#freedom (2)	-.002 (.003)
Nat. identity#homicide (3)	.004 (.01)	Nat. identity#freedom (3)	-.006 (.003)
Trust#homicide	.01 (.01)	Trust#freedom	.004* (.002)
Association#homicide	.003 (.005)	Association#freedom	.002 (.002)
Corruption#homicide	.002 (.001)	Corruption#freedom	-.001* (.0004)
Democracy#homicide	-.0005 (.001)	Democracy#freedom	-.0004 (.0004)

N = 61,648; K = 47; p* < .05; p** < .01; p*** < .001

VI. SUMMARY AND DISCUSSION

These results offered valuable insight into the complex tapestry of relationships that exist between legitimacy and its antecedents around the world, ultimately providing partial support for all three research hypotheses. To reiterate, these hypotheses predicted that (1) the individual-level sources of legitimacy would vary in their effects across countries, (2) that some of this variation could be explained by national-level characteristics, and (3) that these relationships at both levels would differ between police and courts.

Investigation of cross-national variation in the effects of explanatory variables in a series of multilevel random-effects models found support for the first hypothesis. The second hypothesis was partially supported by the results of cross-level interaction models, although the ability of the included national-level factors to explain variation in effect was limited to only some of the predictor variables. Lastly, results of separate binary logistic regression analyses provided partial support for the third hypothesis, indicating that several individual-level effects, national-level variation in these effects, and the potential to explain this variation using the included national-level factors differed between police and courts.

Fixed-effects coefficient estimates from these various models allowed for broad inferences regarding the global mean relationships likely to exist between these predictor variables and the legitimacy of legal authorities. While the entire purpose of this analysis was to indicate the irrelevance of broad measures of central tendency when analyzing a complex concept such as legitimacy across a wide variety of national contexts, these global mean values provided a point of comparison around which predictors could be

understood to display significant variation across countries. Importantly, a relationship appearing to be small or nonsignificant on average across all countries does not preclude the possibility of significant and large relationships in some countries. To this end, each slope was allowed to vary across countries in a series of random-effects models, cross-level interactions were tested, and separate binary logistic regression models were evaluated for substantial differences between the effects of predictor variables on the legitimacy of police compared to courts. The following paragraphs summarize the overall conclusions of these models and discuss their relevance in the context of the wider research literature surrounding the legitimacy of legal authorities.

Demographics

Age did not display a consistently significant relationship with legitimacy on average across all countries, but significant variance shown in the random-effects model indicated that the effect of this variable was likely to depend on national context. Interaction models did not indicate that the effect of age on legitimacy was influenced by either the homicide rate or the freedom score, and the significant variation in this effect across countries could not be explained by these higher-level characteristics. The results of binary logistic analyses evaluating the legitimacy of police and courts as separate outcomes offered a partial explanation for the absence of any significant relationship between age and the combined legitimacy measure. These models revealed a significant positive relationship between age and the legitimacy of police, but a significant negative relationship between age and the legitimacy of courts. Random-effects models found significant cross-national variation in both relationships, but interaction models once

again provided no indication that either effect was influenced by national-level variation in the homicide rate or the freedom score.

These inconclusive results align with the inconsistent findings of previous research on the relationship between age and legitimacy. While some have found generally positive associations between age and police legitimacy specifically (e.g., Brown & Benedict, 2002; Hurst & Frank, 2000; Reisig & Parks, 2000), others have noted that the effect of age may depend on national context (e.g., Boateng, 2018; Ferdik et al., 2013; Hinds, 2007; McLean et al., 2018; Nivette et al., 2020; Reynolds et al., 2018). Significant variation in the effect of age revealed in these models provided support for the latter assessment. Cross-national differences in the effect of age may be attributable to different generational values, group identities, and social bonds that likely result from the wide variety of unique social, cultural, and historical factors present in different countries. Furthermore, the current study found evidence that the effect of age on legitimacy may not be the same for different types of legal authority. While older individuals might indeed have more positive attitudes toward police, this association does not necessarily extend to other types of legal authority.

Sex was significantly and positively associated with legitimacy on average across all countries, with female respondents generally reporting slightly more positive attitudes toward legal authorities overall. Once again, significant variation in this effect was discovered across countries, and the strength and direction of this effect in any given country appeared likely to depend on national context. In some nations, being female may indeed be positively associated with the legitimacy of legal authorities, while in others this relationship may be less positive or even negative. Interaction models did not

reveal any significant influence from national-level measures of the homicide rate or the freedom score. The lack of significant interaction with freedom score was particularly notable because this index contained measures related to sex and gender equality. The relationship between sex and legitimacy was theorized to be more positive in countries with more rights guaranteed for women and less positive in countries with fewer such rights guaranteed. However, the current analysis did not provide evidence of such an interaction. The source of variation in the effect of sex may be related to other factors, perhaps embedded in cultural norms that run deeper than the political and civil rights captured by the freedom index.

Binary logistic models revealed similar relationships between sex and the legitimacy of police and courts, with female respondents generally reporting more positive attitudes toward both types of legal authority. Interestingly, logistic random-effects models found that while the effect of sex on *police legitimacy* did not vary significantly across countries, this effect displayed significant cross-national variation in the *court legitimacy* model. It would appear from these results that the positive relationship between sex and legitimacy is more consistent across countries for police than it is for courts. Binary logistic interaction models did not indicate the presence of significant interactions between these effects and either the homicide rate or the freedom score, again somewhat surprising results considering the implications of a low freedom score for sex and gender equality. Whatever cross-national variation may exist in the relationship between sex and legitimacy, it appears unrelated to differences in democratic freedoms.

There was a significant negative relationship between education and legitimacy on average. This effect displayed significant cross-national variation but no significant interaction with either the homicide rate or the freedom score. Binary logistic models revealed similarly significant and negative relationships with the legitimacy of police and courts but found notable differences in the effect of education between these types of legal authority. For police legitimacy, the negative effect of possessing a moderate level of education compared to a low level was smaller than the negative effect of a high level of education. But for court legitimacy, this pattern was reversed, with a moderate level of education associated with a larger negative effect than a high level of education. In other words, while education overall had a negative effect on the legitimacy of both types of legal authority, the effect of a moderate level of education was less negative for police and more negative for courts, while the effect of a high level of education was more negative for police and less negative for courts. Random-slope models found significant variance components for the effect of education on both police and courts, but interaction models did not reveal significant relationships with national-level predictors.

These results align with mixed findings in previous research regarding the effect of education on legitimacy. While some studies have determined higher levels of education to be associated with lower levels of legitimacy (e.g., Jang et al., 2010; Stack & Cao, 1998), this relationship has been found to vary depending on national differences in educational systems, cultural meanings of education, and school curricula (Boateng et al., 2016; Hinds & Murphy, 2007; Luo et al., 2019; Sunshine & Tyler, 2003; Weitzer & Tuch, 2005). The current results indicate that in addition to these likely differences across

national contexts, the effect of education on legitimacy may also vary between police and other types of legal authority, such as courts.

The relationship between marriage and legitimacy appeared tenuous overall in these models. While being married had a significant positive effect on legitimacy in OLS and fixed-effects models, this effect was no longer significant once its slope was allowed to vary in the random-effects model. The effect of marriage showed significant variation across countries, and at least some of this variation was found likely to be attributable to differences in the national-level freedom score. In very low-freedom countries, marriage was found to have a negative effect on the legitimacy of legal authorities, while in countries with higher freedom scores this effect became positive. Binary logistic models revealed differences between the effects of marriage on police and court legitimacy. For police legitimacy, being married had a significant and positive effect overall, but for court legitimacy this effect was non-significant. Random-effects models indicated significant cross-national variation in the effect of marriage on both of these outcomes. For police legitimacy, a significant interaction was again found between marriage and the freedom score. In countries with higher freedom scores, the effect of marriage was more positive than in countries with lower freedom scores. For court legitimacy, no significant interactions with the effect of marriage were found.

Prior research has indicated the difficulty of parsing the effect of marriage on legitimacy from related influences associated with sex, education, social class, social bonds, and social capital (Boateng, 2018; Cao & Wu, 2019; Cao & Zhao, 2005; Kääriäinen, 2007; McLean et al., 2018; Stack & Cao, 1998). This variable is likely capturing broader social factors related to attachment, status integration, and investment

in conventional society (Gibbs, 2000). However, the specific implications and importance of marriage for these social connections is likely to depend not only on the sex and gender of the person in question, but on the broader cultural norms and traditions regarding the practice in their society (Stafford & Gibbs, 1988). These results provided evidence that the individual-level relationship between marriage and legitimacy varies across countries, and that this variation is affected in part by the national-level freedom score. Being married appears to increase the perceived legitimacy of police in countries with greater civil liberties and political rights but decrease the perceived legitimacy of police in countries lacking such protections.

There was a significant negative association between unemployment and legitimacy overall in the fixed-effects model, but no significant association in the random-effects model. The effect of unemployment was found to vary significantly across countries, and a significant interaction was discovered between this individual-level effect and the national-level freedom score. In low-freedom countries, unemployment had a positive effect on legitimacy, while in high-freedom countries it had a negative effect. Binary logistic models revealed no significant relationship overall with either of the disaggregated outcome variables, but once again there was significant variation in this effect across countries. In contrast to the combined legitimacy model, binary interaction models showed a significant positive interaction between the homicide rate and the effect of unemployment on police legitimacy, but there was no interaction with the freedom score in the police legitimacy model, nor were significant interactions found with either national-level variable in the court legitimacy model. The effect of

unemployment overall appeared relatively inconsistent and likely to depend on the implications of being unemployed within a particular national context.

Similar to the variable capturing marital status, this measure may have acted as a proxy for social attachment and investment more generally (Gibbs, 2000; Stafford & Gibbs, 1985). However, the relationship between unemployment and social bonding is likely to depend once again on the specific implications of this social status in a particular country. Some nations may offer more social support for those facing unemployment, perhaps alleviating some of the alienation that results, while in other nations, the unemployed are left to fend for themselves, shamed, or even criminalized. Results here indicate that the relationship between unemployment and legitimacy partially depends on a nation's freedom score, with unemployment having a negative effect in high-freedom countries and a positive effect in low-freedom countries. In addition, binary logistic models found that unemployment had a less negative effect on police legitimacy in countries with higher homicide rates, indicating that this type of social attachment and commitment may be less relevant to the legitimacy of police in low-security environments, where instrumental concerns over safety are more likely to take precedent.

Urban residence was significantly and negatively associated with legitimacy overall. These findings align with previous research indicating a distinctly negative relationship between urban residence and legitimacy in many countries (Benedict et al., 2000; Gau et al., 2012; Taylor et al., 2015; Taylor & Lawton, 2012). This effect displayed significant variation across countries, but there was no significant interaction with either the homicide rate or freedom score. Binary logistic models indicated a similar pattern, with urban residence exerting a negative influence on the legitimacy of both

police and courts, although this negative effect appeared somewhat stronger for police legitimacy. Logistic random-effects models revealed significant variation in both effects, and while no significant interactions were found in the police legitimacy model, the freedom score interacted significantly with the effect of urban residence in the court legitimacy model. In high-freedom countries, urban residence appeared to have a somewhat less negative effect on the legitimacy of courts than in low-freedom countries. These results provide support for the notion that the relationship between urban residence and legitimacy depends on national context and is not universally negative (Sun et al., 2013).

Prior Victimization

Prior victimization was significantly and negatively associated with the legitimacy of legal authorities, but this effect varied significantly across countries and displayed a positive interaction with the national-level homicide rate. Prior victimization appeared to have a negative effect on legitimacy in low-homicide countries, while having a positive effect in high-homicide countries. No significant interaction was found between this effect and the freedom score. Binary logistic models indicated differences in this relationship between police and courts. Prior victimization remained significantly and negatively associated with the legitimacy of both types of legal authority, and variation in the effect of prior victimization on court legitimacy remained significant, but random-effects models indicated no significant cross-national variation in this effect for police legitimacy. Interaction models found that, despite the lack of a significant variance component, the effect of prior victimization on police legitimacy interacted significantly with the homicide rate, while the effect on court legitimacy interacted with both the

homicide rate and the freedom score. Prior victimization displayed positive effects on the legitimacy of both police and courts in countries with higher homicide rates, while having negative effects in low-homicide countries. In addition, the effect of prior victimization on court legitimacy was more positive in countries with higher freedom scores.

Family victimization was also significantly and negatively associated with the legitimacy of legal authorities overall, and this effect varied significantly across countries. A significant positive interaction was found with the homicide rate, with family victimization displaying more positive effects in countries with higher homicide rates. For legitimacy overall, no significant interaction was found between the effect of family victimization and the freedom score. Logistic models indicated similar patterns for the legitimacy of both police and courts as separate outcomes, with family victimization significantly and negatively associated with the legitimacy of both types of legal authority and both models indicating significant variation in these effects across countries. However, in contrast to the combined outcome model, logistic random-effects models found significant interactions with the homicide rate. For both police and courts, the homicide rate appeared to positively influence the relationship between family victimization and legitimacy, making family victimization exert a more positive influence in countries with higher homicide rates. The national-level freedom score did not display significant interaction with either relationship.

Research to date has indicated a significant association between criminal victimization and fear of crime, with victims tending to perceive greater amounts of vulnerability and risk both at home and in their neighborhoods (Alda et al., 2017; Orr & West, 2007; Sprott & Doob, 1997; Stafford & Galle, 1984). However, what is less clear is

to what extent victimization affects attitudes toward legal authorities, such as police and courts. Not all victims respond to their experiences in the same way, and the amount of fear people feel as a result of victimization may itself depend on perceptions related to the competence of legal authorities (Berthelot et al., 2017; Dowler & Sparks, 2008; Dull & Wint, 1997; Koster et al., 2016; Singer et al., 2019; Van Dijk, 2015; Wolfe et al., 2016). The current study indicated that differences exist between the effects of victimization and the effects of fear, between the effects of victimization in different countries, and between the effects of victimization for police and for courts. Measuring the complex relationship between prior victimization, fear of crime, and the legitimacy of different types of authority becomes an increasingly daunting endeavor when attempting to account for variation across countries, but the mixed associations indicated by these models are consistent with some of the contradictory international literature on the subject (Alda et al., 2017; Koenig, 1980; Nalla & Gurinskaya, 2020; Nivette, 2016; Singer et al., 2019; Tankebe, 2009; Van Dijk, 2015).

Fear of Crime

There was a complex relationship between fear of crime and legitimacy. Two different variables were included in the analysis to capture respondents' concerns over crime, one representing how often they fear crime at home and the other, how secure they feel in general. These results indicated substantial differences between the effects of these two measures on the legitimacy of legal authorities. Fixed-effects models found that higher levels of fear at home were significantly and positively associated with the legitimacy of legal authorities overall, but only one of these slopes was significant in the random-effects model, while all slopes displayed significant cross-national variation.

Some of this variation could be explained by a significant positive interaction with the national-level homicide rate in the lowest category. In low-homicide countries, perceiving fear of crime at home “rarely” compared to “never” appeared to exert a negative influence on legitimacy, but in high-homicide countries this same difference displayed a positive effect. Higher levels of this variable showed no significant interaction with either the homicide rate or freedom score.

Binary logistic models produced similarly mixed results regarding the effect of fear of crime at home on police and court legitimacy as separate outcomes. Fixed-effects models revealed significant positive relationships only in the second category, which represented the difference between fearing crime “sometimes” compared to “never.” When slopes were allowed to vary in random-effects models, no significant relationship was found between fear of crime at home and either outcome, while both effects were found to vary significantly across countries. For police legitimacy, significant positive interactions were found between the homicide rate and the effects of the lower two categories of this variable. In high-homicide countries, lower levels of fear of crime at home appeared to have a more positive effect than in low-homicide countries. In addition, a significant positive interaction was also found between the freedom score and the effect of fear on police legitimacy. In countries with higher freedom scores, fearing crime at home “rarely” compared to “never” had a slightly more positive effect on the legitimacy of police than in countries with lower freedom scores. For court legitimacy, the homicide rate had a significant positive interaction with fear of crime at home across all three categories. Fear of crime at home had a more positive effect on the legitimacy of courts in high-homicide countries than in low-homicide countries.

Fear of crime in general exhibited a stronger and more consistently negative effect on legitimacy overall than did fear of crime at home, but this effect again varied significantly across countries. Interaction models found some of this cross-national variation to be attributable to differences in the freedom score. In low-freedom countries, fear of crime in general had a more negative effect on legitimacy than in high-freedom countries. For the combined legitimacy measure, no significant interaction was found between the effect of fear of crime in general and the homicide rate. Binary logistic models, while still showing the same negative effect of fear of crime in general on the legitimacy of both police and courts, along with significant cross-national variation in both relationships, indicated that the freedom score had a positive interaction with this effect for police, while the homicide rate had a positive interaction with this effect for courts. In countries with higher freedom scores, fear of crime in general had a less negative effect on the legitimacy of police, and in countries with higher homicide rates, fear of crime in general had a less negative effect on the legitimacy of courts.

These results were generally consistent with prior research that has found fear of crime to be an important instrumental source of legitimacy for legal authorities in many different countries (Boateng, 2017; Bottoms & Tankebe, 2012; Jang et al., 2010; Koenig, 1980; St. Louis & Greene, 2019; Sunshine & Tyler, 2003; Tankebe, 2009; Weitzer & Tuch, 2005). However, models showed substantial differences between the effect of fear of crime at home and the effect of fear of crime in general. On average, fear of crime at home exerted relatively weak positive effect on legitimacy overall and on the legitimacy of police and courts individually, especially in countries with higher homicide rates. By contrast, fear of crime in general exerted a much stronger negative effect on legitimacy

overall and on the legitimacy of police and courts individually. While all of these effects were found to vary significantly across countries, clear differences were evident between fear of crime at home and fear of crime in general, not just in terms of the predicted direction of the effect but also its magnitude. These differences might be related to these variables having slightly different meanings and being phrased differently in the original survey instrument. Fear of crime at home measured the frequency of an occurrence within the past year, while fear of crime in general captured a broader sense of security without any specific time limitation. This might explain some of the dissimilarity between predicted relationships with legitimacy, but these differences likely also indicate actual dissimilarity in the effects of these measures on the legitimacy of legal authorities. Feeling unsafe from crime in one's home appears to have different connotations and implications for legitimacy than feeling unsafe in general, perhaps related to differing expectations for authorities (Armaline et al., 2014; Kochel, 2018; Tankebe, 2013; Skogan, 2009). While general security in one's neighborhood might be more likely to fall under the mandate given to legal authorities, security at home could be considered by some to be more of a personal responsibility. As these findings indicate, specific experiences with crime and general feelings of insecurity potentially have different implications for the legitimacy of legal authorities.

Fear of War and Terrorism

Fear of war displayed a relatively weak association with legitimacy overall, as this effect only achieved significance in the fixed-effects model in the second category, (i.e., "a great deal" compared to "not much") and was non-significant in the random-effects model. However, the relationship between fear of war and legitimacy displayed

significant variation across countries, some of which was likely attributable to interaction with the national-level freedom score. In low-freedom countries, fear of war had a negative effect on legitimacy at its lower two levels, only becoming positive at the highest level, while in high-freedom countries, fear of war displayed a positive effect on legitimacy across all categories. In binary logistic models, the relationship between fear of war and legitimacy did not achieve statistical significance for either police or courts, but there was significant variation in both relationships across countries. For both police and courts, the national-level freedom score was again found to interact with the effect of fear of war on legitimacy. In high-freedom countries, fear of war appeared to have a more positive effect on the legitimacy of police and courts than in low-freedom countries.

In contrast to fear of war, fear of terrorism displayed a consistently significant, much stronger, and notably positive effect on legitimacy overall. This effect showed significant variation across countries and was influenced by the national-level freedom score. The difference between “none” and “not much” fear of terrorism was associated with a negative effect on legitimacy in low-freedom countries but a positive effect in high-freedom countries, while all other categories displayed positive effects regardless of the freedom score. Binary logistic models revealed similarly significant and positive effects on the legitimacy of both police and courts, although fear of terrorism had a substantially larger positive effect on legitimacy for police than for courts. Logistic random-effects models indicated significant variation in both relationships, partially attributable to a significant positive interaction with the national-level freedom score in both models.

These results provided further evidence that concerns about national-level security issues such as war and terrorism appear to differ in their influence on people's perceptions of legal authorities when compared to individual-level concerns about crime. Unlike the negative relationship displayed by fear of crime, measures of fear of war and especially fear of terrorism were found to be positively related to the legitimacy of legal authorities overall. This aligns with prior research that has revealed support for law enforcement to increase after terrorist attacks or during wartime, indicating the existence of a different symbolic pathway to legitimacy likely related not only to fear, but also to national identity and patriotism (Banjak-Corle & Wallace, 2020; Brown & Benedict, 2002; Jonathan, 2010; Jonathan-Zamir & Weisburd, 2013; Sela-Shayovitz, 2014; Sunshine & Tyler, 2003).

Further, these models indicated that the effect of fear of war on legitimacy may be very different from the effect of fear of terrorism. Although both may be considered external threats, these different sources of concern appear to have different implications for the legitimacy of legal authorities, perhaps because terrorism is more likely to fall under the mandate given to police and courts, while war is seen as the purview of other government entities and institutions, such as the military and intelligence agencies. Similar to fear of war, fear of terrorism displayed a significant interaction effect with the national-level freedom score. This could indicate that national-level threats are more damaging to legitimacy and the image of state power in countries with fewer democratic freedoms, a finding that would align with Beetham's (1991) suggestion that in the absence of popular legitimation through democratic processes, authoritarian states more heavily rely on instrumental performance standards as their source of legitimacy. When

these governments fail to meet such standards, for example by not providing citizens with sufficient security from the dangers of war and terrorism, they have few other wellsprings of legitimation to draw from, as they lack broad popular support based on the principles of democratic consent (Beetham, 1991).

Vicarious Experience

Vicarious experience, measured in this study as the frequency with which authorities were perceived to interfere in people's private lives, displayed a significant negative effect on legitimacy overall. However, this global average effect once again varied significantly across countries in the random-effects model, and interaction models indicated that some of this variation was likely attributable to differences in the national-level homicide rate. In low-homicide countries, vicarious experience had a consistently negative effect on legitimacy across all levels, but in high-homicide countries, this variable had a positive effect at all but its highest level. These results indicated that in low-security contexts, even a great deal of interference by authorities in people's private lives might be tolerated or even welcomed by respondents, while no such interference is tolerated in high-security environments. This suggests that boundary concerns are less relevant and expansions of the mandate more tolerated where security concerns are heightened.

Logistic regression models similarly indicated that vicarious experience had a significant and negative effect on legitimacy for both police and courts, but the effect on police legitimacy was much larger than the effect on court legitimacy. Both logistic random-effects models showed significant random variation in the effect of vicarious experience, and both models indicated significant positive interactions between this

variable and the national-level homicide rate. For both police and courts, vicarious experience was more positively associated with legitimacy in countries with higher homicide rates, and more negatively associated with legitimacy in countries with lower homicide rates.

Group Identity

Measures of group identity were found to be significantly and positively associated with the legitimacy of legal authorities overall, but some differences existed between the effects of national pride and national identity. National pride was significantly and positively associated with legitimacy in its highest two levels. The lack of significance in the lowest comparison could be expected because the difference between being “not very proud” of one’s nation and “not proud at all” was unlikely to be as impactful as the difference between either “quite proud” or “very proud” and “not proud at all.” These results provided some indication that a dichotomized version of this variable may have produced more efficient estimates of the same effect. Random-effects models found this relationship to vary significantly across countries, and interaction models indicated that some of this variation was attributable to differences in the national-level freedom score. In low-freedom countries, national pride appeared to have a much more positive effect on legitimacy than in high-freedom countries.

Binary logistic models similarly indicated a positive relationship between national pride and legitimacy but found this relationship to be stronger for police than for courts. This distinction further revealed that respondents likely possessed somewhat different attitudes towards police and courts, and perhaps derived their perceptions of the legitimacy of these authorities from different sources. The combination of different legal

institutions into index measures, such as the one included in this study, may obscure this variation in attitudes toward specific types of authority. Both models revealed significant variation in these effects, and while no significant interactions were found for police legitimacy, the effect of national pride on court legitimacy was found to interact negatively with the freedom score. In high-freedom countries, national pride had a less positive effect on the legitimacy of courts than in low-freedom countries.

National identity had a similarly significant and positive association with legitimacy overall, but random-effects models once again indicated the presence of significant variation in this effect across countries. However, no significant interactions were found with either the homicide rate or the freedom score. Logistic models indicated that stronger and more consistent positive relationships existed for the higher two levels of this variable, again providing evidence that a dichotomous measure of national identity would potentially produce similar results. For both police and courts, higher levels of national identity were associated with more legitimacy overall, but these effects once again varied significantly across countries. In the police legitimacy model, this effect also showed a slight positive interaction with the freedom score, with national identity in high-freedom countries associated with a more positive influence on police legitimacy than in low-freedom countries. No significant interactions were found in the court legitimacy model.

These results generally supported previous research findings that the groups with which individuals identify strongly impact their attitudes toward legal authorities (Blumer, 1958; Bradford et al., 2020; Braithwaite, 2003; Loader & Walker, 2007; Murphy & Cherney, 2012; Radburn & Stott, 2018; Reynolds et al., 2018; Schatz &

Lavine, 2007; Trinkner, 2019). A sense of belonging to the “in-group,” represented here by feelings of national pride and national identity, was generally found to be associated with more positive attitudes toward legal authorities, although these positive effects were strongest in low-freedom countries.

Notably, the different relationships found between freedom score and the effects of national pride and national identity may indicate that identification with one’s nation is distinct from pride in one’s nation, with each having different implications for the legitimacy of legal authorities in different contexts. While identifying with one’s nation was associated with more legitimacy in high-freedom countries, having pride in one’s nation was associated with more legitimacy in low-freedom countries. These findings are consistent with international research indicating that legitimacy may be more dependent on group identity in less-democratic contexts, where allegiance to the in-group represented by legal authorities is more of an imperative than a choice. Authoritarian regimes are often highly dependent on the promotion of a strong sense of national identity among their populations, often under the guise of populist movements, as they lack the ability to derive their legitimacy from rational principles of popular electoral consent (Beetham, 1991; Brudny & Finkel, 2011; Fauve, 2015; Günay & Dzihic, 2016; Ortmann, 2009; Pratt, 2007; Von Soest & Gauvogel, 2017).

Social Capital

Measures of social capital were found to be positively associated with the legitimacy of legal authorities overall. Trust displayed a significant and positive association with legitimacy, as well as significant variation in effect across countries. However, no significant interactions were discovered with the homicide rate or the

freedom score that could explain this cross-national variation. Logistic regression models indicated similarly significant and positive relationships between trust and the legitimacy of both police and courts, although this effect appeared somewhat larger for police than for courts. No significant interactions were found in the police legitimacy model, but for court legitimacy the effect of trust was found to interact significantly with the freedom score. Trust had a more positive effect on the legitimacy of courts in countries with higher freedom scores.

Voluntary association was also significantly and positively associated with legitimacy overall. This effect showed significant variation across countries but no significant interactions with either the homicide rate or the freedom score. Logistic models indicated significant positive associations between this variable and the legitimacy of both police and courts, although the effect once again appeared somewhat larger for police than for courts. Logistic random-effects models indicated that both relationships varied significantly across countries, but these models also found no significant cross-level interactions with either the homicide rate or the freedom score.

As previously discussed, social capital has generally been found to increase the ability of individuals to effectively influence social institutions such as police and the justice system, thereby increasing the perceived legitimacy of these institutions (Cao & Wu, 2019; Newton & Norris, 1999; Putnam, 2000; Rothstein & Stolle, 2008; Van Craen, 2013). The results here provided support for this contention, with trust in others and voluntary association both displaying significant positive associations with legitimacy. However, significant variance components discovered in each effect indicate that this relationship is far from universal and is likely to depend on national context. Whatever

affects this variation, it does not appear related to differences between countries in either their homicide rate or freedom score. As previously mentioned, the meaning of voluntary association and the importance of interpersonal trust may differ according to cultural and social factors not captured by the included national-level measures (Boateng, 2018; De Zuniga et al., 2019; Hu et al., 2019; Kääriäinen, 2007; O’Loughlin, 2004; Tausch, 2016; Tsushima & Hamai, 2015).

Moral Alignment

Two measures of moral alignment – perceived corruption and importance of democracy – were included to capture the extent to which respondents’ perceptions of civic morality were related to their attitudes toward legal authorities. Perceived corruption was significantly and negatively associated with legitimacy overall. There was significant variation in this effect across countries, but no significant interactions with either the homicide rate or the freedom score. Binary logistic models revealed similarly significant and negative relationships between perceived corruption and the legitimacy of both police and courts, although corruption appeared to have a slightly more negative effect on attitudes toward courts than toward police. No significant interactions were found in the police legitimacy model, but the court legitimacy model found a significant negative interaction with the freedom score. Perceived corruption appeared to have a more negative effect on the legitimacy of courts in high-freedom countries than in low-freedom countries. These findings are consistent with research that has found a relationship between legitimacy and the perceived alignment of authority figures with normative, ethical, and moral standards (Coicaud, 2002; Gilley, 2006; Kelling & Coles, 1998; Mazerolle et al., 2012; Reisig et al., 2011; Tyler, 2009). These results are also

supportive of existing literature suggesting that those who perceive more corruption in their country tend to have less confidence in legal authorities (Jackson et al., 2014; Kochel et al., 2013; Levi et al., 2009; Punch & Gilmour, 2010; Tankebe et al., 2016).

Importance of democracy was significantly and positively associated with legitimacy overall. This variable also displayed significant variation in its effects across countries, but no significant interactions with the homicide rate or the freedom score. Logistic regression models indicated similarly significant and positive relationships between importance of democracy and the legitimacy of police and courts, as well as significant variation in both relationships. However, these models found no significant interactions with either the homicide rate or the freedom score. These results were somewhat surprising, as importance of democracy was expected to vary in its effect on legitimacy depending on the level of democratic freedom in a particular country. Strong democratic values were theorized to be conducive to moral alignment with legal authorities in more democratic societies, but these same values were thought likely to be associated with defiance of authority and disillusionment with legal institutions in more autocratic and authoritarian societies (De Zuniga et al., 2019). Contrary to these predictions, the relationship between importance of democracy and legitimacy displayed no such significant interaction with the freedom score. Although this effect did vary significantly across countries and was not likely to have the same effect on legitimacy everywhere, the source of this variation appeared to be unrelated to the included measure of democratic freedom.

Homicide and Freedom

In addition to interacting with other relationships in the model, national-level predictors themselves exerted direct effects on legitimacy at the individual level. The homicide rate was significantly and negatively associated with legitimacy overall, and logistic regression models found similar results for both police and courts. These findings were consistent with previous research indicating a direct negative association between national-level crime rates and individual-level perceptions of legal authorities (Chamlin & Cochran, 2006; Dawson, 2017, 2018). It should be noted that while the homicide rate is assumed to be capturing an objective measure of public safety, this variable could also be reflective of the effectiveness of social control mechanisms in a country, a measure that itself has important implications for people's subjective perceptions of authority.

Stafford & Gibbs (1993) theorized that the absence of effective social control leads to a higher incidence of interpersonal disputes, violence, and homicide. However, while this absence of control is potentially related to the perceived effectiveness of legal authorities, a connection at the micro level cannot reasonably be inferred from the national-level homicide rate. The large amount of variation that likely exists within countries in terms of individual-level experiences with crime and disorder precludes any conclusion regarding direct relationships between the national-level homicide rate and individual-level perceptions of social control. Such inferences are better drawn from individual-level measures included in the analysis that might pertain to individual-level perceptions of lack of control, such as fear of crime and prior victimization.

The freedom score did not display a significant direct association with legitimacy overall, nor with the legitimacy of police or courts individually. The lack of any direct

effect for this variable, which is designed to rank countries in terms of their political rights and civil liberties, did not support some of the more traditional normative conceptualizations of the inherent legitimacy of democratic forms of government (e.g., Habermas, 1975; Rawls, 1971). A nation's freedom score did not appear to have any direct bearing on whether respondents in a particular country expressed more positive attitudes toward legal authorities. Freedom score was also found to be negatively associated mean legitimacy at the national level. However, the national-level freedom score was found to exert interactive effects on individual-level relationships between legitimacy and many other explanatory variables. While level of democracy may not directly influence legitimacy, it appears likely to alter the criteria by which legitimacy is evaluated.

In Summation

This study hypothesized that (1) the individual-level sources of legitimacy would vary in their effects across countries, (2) some of this variation could be explained by national-level characteristics, and (3) these relationships at both levels would differ between police and courts. These results provided partial support for all three hypotheses and offered valuable suggestions for the future study of legitimacy. The antecedents of legitimacy included in this analysis all displayed significant variation in their effects across countries, many were found to interact with national-level measures of the homicide rate and the freedom score, and the relationships for several variables varied between police and courts. While some of this variation was found likely to be attributable to national-level differences in security and liberty, future studies should investigate additional factors may affect the process of legitimization in different countries.

VII. CONCLUSION



Illustration 4: *The Dead Alchemist* by Elihu Vedder

Overall, this dissertation research provided evidence in support of a legitimization process that is dependent on context, with antecedents taking on varying levels of importance in different countries and effects dependent on national-level characteristics. The search for a universal set of criteria upon which the legitimacy of legal authority is based may be futile when considering the diversity of attitudes and influences that exist around the world. Not only the meanings of legitimacy but also the mechanisms of legitimization appear likely to vary depending on the national context in which they appear. Any attempt at empirical measurement of legitimacy must account for the subjective conditions present in different contexts, cultures, and countries.

This study was informed by three central research questions aimed at discerning to what extent the sources of legitimacy vary in their effect across different countries, what influence country-level characteristics have on this variation, and whether these relationships are similar for different types of legal authority. Results indicated significant cross-national variation in the individual-level effects of several theoretical antecedents of legitimacy, interaction between these effects and national-level measures of the homicide rate and the freedom score, and notable differences in these relationships between police and courts.

These results also have important macro-level implications for the debate over empirical and normative conceptions of legitimacy (Beetham, 1991; Coicaud, 2002; Gilley, 2012; Hinsch, 2010). It does not appear from this analysis that the legitimacy of legal authorities, measured here as confidence in police and courts, is any less likely to exist in authoritarian societies than it is in democratic societies. In fact, the countries that were rated highest in terms of mean legitimacy possessed relatively low freedom scores, while countries with the lowest levels of mean legitimacy tended to score comparatively higher in terms of democratic freedoms. These results were supported by aggregate-level regression analyses that indicated the presence of a significant and weak negative association between the freedom score and raw mean legitimacy at the national level. The mean level of legitimacy in a country, at least when measured as confidence in legal authorities, had a negative relationship with the strength of democratic political rights and civil liberties at the national level.

For example, the country in this sample with the highest mean level of legitimacy was Jordan, a near-autocratic monarchy that was rated 37 on the freedom score at the

time of the analysis, well below the sample mean of 55 and far from the high scores held by democratic nations such as Canada (98), Australia (97), Japan (96) and the United States (86). While parliamentary elections are held in Jordan on a regular basis, the executive wields enormous legislative power over this body and most important government positions are appointed unilaterally by the king. In addition, these elections are fraught with undue influence from powerful groups and unequal access to voting infrastructure. Media in Jordan are heavily restricted by the government, and academic education is highly monitored to prevent the dissemination of politically sensitive content. Jordanian law also places limitations on speech, expression, assembly, and religion (Freedom House, 2019). Nevertheless, respondents from Jordan rated the legitimacy of their police and courts higher on average than all other countries in the sample.

By contrast, the country in this sample with the lowest mean level of legitimacy was Peru, a relatively well-established democracy with a freedom score of 72, well above the average for this sample and far from the low scores held by authoritarian nations such as Tajikistan (9), Iran (17), Russia (20), and Vietnam (20). Elections in Peru are largely considered free and fair, although high-profile incidents of corruption and unequal access by indigenous groups have continued to undermine public confidence in the process. Media are free and independent, but defamation is strictly criminalized, and ownership of media companies is limited to a handful of wealthy elites. Academic freedom is not restricted, and citizens enjoy freedom of speech, expression, assembly, and religion (Freedom House, 2019). Despite these relatively positive democratic indicators,

respondents from Peru rated the legitimacy of their police and courts lower on average than all other countries in the sample.

The importance of a contextual analysis of legitimacy is exemplified by the significant cross-level interactions revealed in this multilevel analysis. In countries with very low freedom scores, marriage, fear of crime, fear of war, and fear of terrorism were negatively associated with the legitimacy of legal authorities, while unemployment and national pride were positively associated with legitimacy. But in countries with very high freedom scores, marriage, fear of war, and fear of terrorism were positively associated with legitimacy, the negative effect of fear of crime was attenuated, and unemployment and national pride displayed negative effects. In other words, heightened security concerns about war and terrorism were associated with less legitimacy in authoritarian countries, but these same anxieties were associated with more legitimacy in democratic countries. Similarly, national pride exhibited a much more positive relationship with legitimacy in authoritarian than in democratic countries. By contrast, measures of marriage and employment, often treated as proxy measures for active social bonds (Gibbs, 2000), were associated with less legitimacy in authoritarian countries but more legitimacy in democratic countries. And while fear of crime displayed a consistently negative relationship with legitimacy regardless of the freedom score, this relationship was significantly more negative in countries with lower freedom scores.

The significant cross-level interactions found in these models indicate that many predictors of legitimacy vary in strength and significance depending on a nation's freedom score. Instrumental factors regarding personal safety and national security, as well as personal identification with the state, appear to be more beneficial for the

legitimacy of police and courts in authoritarian societies, where the perceived lack of strength or capacity for control on the part of legal authorities can have more severe consequences for public confidence in state institutions and the need for a strong sense of patriotic duty among citizens can be more pronounced (Beetham, 1991). While prior research has found authoritarian nations to rely heavily on the creation of external threats for their internal legitimacy (e.g., Shakhrai, 2015), these results suggested that national security concerns have more negative effects on the legitimacy of legal authorities in countries with lower freedom scores. Legal authorities in democratic societies are comparatively less reliant on instrumental performance evaluations for their legitimacy, in particular those evaluations related to national security threats. These differences could be a result of the greater separation of powers between legal authorities and national governments in more democratic countries, leading individuals to be less likely to attribute national-level security concerns to failures of these domestic institutions. In contrast, authoritarian countries often possess militarized police forces and nationalized judicial systems, perhaps making citizens of these nations more likely to allocate responsibility for all manner of security failures to legal authorities (Hathazy, 2013; Mekouar, 2017; Sun et al., 2018; Way & Levitsky, 2006).

Compared to authoritarian societies, legitimacy in democracies also appears to be more dependent on the existence of strong social bonds among citizens. These findings are consistent with other research that has found authoritarian states to be more dependent on regime performance for their legitimacy than democratic societies, where legitimacy is more likely derived from the alignment of authorities with common social values (Beetham, 1991; Brudny & Finkel, 2011; Fauve, 2015; Günay & Dzihic, 2016;

Ortmann, 2009; Pratt, 2007; Von Soest & Gauvogel, 2017). By contrast, legitimacy in authoritarian states appears to be more dependent on the existence of strong feelings of national pride among citizens. In democratic societies, legitimacy seems to benefit from citizens having strong bonds to each other, while in authoritarian societies, legitimacy benefits from citizens having strong bonds to the state. National pride is less beneficial for the legitimacy of legal authorities in democracies, perhaps because democratic values encourage a healthy skepticism toward state authority (De Zuniga et al., 2019; Gilley, 2012; O'Loughlin, 2004). Attributing too much legitimacy to the state or its legal authorities is contrary to some of the most foundational democratic ideals. A wider range of opinions toward legal authorities is therefore perhaps to be expected from a more democratic citizenry.

The significant influence of the other national-level predictor included in this analysis, the homicide rate, provided additional evidence of the importance of contextual variation in the study of legitimacy. The homicide rate was found to be significantly and negatively associated with mean legitimacy at the country level and all types of legitimacy at the individual level. Homicide rates in countries with the highest mean legitimacy scores, Jordan (1.40), Tajikistan (1.60), Vietnam (1.50), and Iran (2.50) were all well below the mean homicide rate in this sample (5.91), while those countries with the lowest mean legitimacy scores, Peru (7.70), Mexico (24.79), Guatemala (26.10), and Bolivia (6.30) all had homicide rates above the mean. These results are far from conclusive but provide some indication that at both macro and micro levels, instrumental concerns related to the homicide rate may have a greater influence on the perceived

legitimacy of a nation's legal authorities than normative concerns related to political rights and civil liberties.

The homicide rate was also found to interact with the individual-level effects of prior victimization, family victimization, fear of crime, and vicarious experience. In countries with higher homicide rates, prior victimization, fear of crime, and vicarious experience displayed more positive effects on the legitimacy of legal authorities than in countries with lower homicide rates. These findings suggest that personal experiences and instrumental concerns related to crime can have very different implications for legitimacy depending on a country's violent crime rate. In addition, significant interaction with the effect of vicarious experience provided evidence that even ostensibly negative "interference" by legal authorities with citizens' private lives can have varying consequences for the legitimacy of these authorities in different security contexts.

Normative theorists might dismiss these patterns by claiming that the high levels of perceived legitimacy expressed by citizens in non-democratic countries is not evidence of "true" legitimacy and instead merely represents coerced opinions or "dull compulsion" (Akinlabi & Murphy, 2018; Beetham, 1991; Carrabine, 2005; Cao et al., 2012; Rawls, 1971; Tankebe, 2013). However, the notion of "false" legitimacy makes little sense from an empirical perspective, suggesting as it does a normative definition of the concept based on an external judgement, as opposed to one derived solely from the assessments and actions of the citizens subject to a given authority (Cao et al., 2012; Dawson, 2017; Hinsch, 2010). Normative definitions of legitimacy that cannot be separated from democratic ideals are inconsistent with the fact that authoritarian regimes can be very popular internally, often inducing a level of fanatic devotion from citizens that appears

unlikely to be the result of mere “dull compulsion”. Rather than discredit the opinions of these citizens as “false” or incompatible with normative definitions of legitimacy, research should strive to understand the forces that influence popular support for authority in different contexts.

These results may be inconsistent with a normative conception of legitimacy based on principles of democratic freedom and justice (e.g., Rawls, 1971), but perhaps still allow for the sort of transcendental interpretation suggested by Beetham (1991). What is needed is an empirical conception of “legitimacy-in-context” that is able to account for normative political and philosophical criteria based on principles such as legality, ethics, and consent. That acts of consent do not have to take the form of democratic elections seems clear, but the argument could be made that even authoritarian regimes still essentially rely on popular consent, although this consent may be manufactured in various ways by the state and expressed in different forms by citizens. To Beetham (1991), normative and empirical conceptions of legitimacy can complement each other because “it is reflection on the empirical processes through which legitimacy is reproduced that leads to the discovery of the principles and procedures of an ideal legitimacy which is not conditioned by the very power that it validates” (p. 247). The results of this study confirm an interpretation of legitimacy that may not be universal but is still empirically measurable using multilevel analysis to account for contextual variation in the effects of its predictors.

Measuring legitimacy in context allows for sources of legitimacy such as procedural justice, distributive justice, effectiveness, lawfulness, vicarious experience, group identity, social capital, and moral alignment to all play subjective roles in the

creation of this objective property, while enabling a greater understanding of the variation that exists across nations in terms of each factor's specific contextual relevance. While all of these elements of legitimacy might matter to some extent in most contexts, the specific extent to which they matter is likely influenced by contextual factors. These cross-level interactions can be measured empirically using multilevel modeling techniques such as those employed by the current study. Nearly all forms of government can be considered legitimate by their citizens, and a better understanding of the contextual factors that lead people to support different regime types, even decidedly undemocratic ones, will enable a more accurate grasp of the processes and mechanisms underlying legitimation. Knowing what makes people support authoritarian regimes can help democracies identify potential threats to their own continued popular support. Only by placing all systems on the same spectrum of legitimacy can researchers hope to make sense of why democratic institutions gain and lose popularity among their citizens. If legitimacy is to be understood at all, it must be understood in all contexts.

Notable limitations of this study include the lack of any direct measure of police contact or procedural justice, which produced a significant gap in the theoretical model analyzed here given the prevalence of these concepts in the literature on police legitimacy. This omission could not be avoided due to the absence of any such measure in the dataset being analyzed. But while the inclusion of procedural justice or other measures of direct contact with legal authorities would undoubtedly improve the explanatory power of the current model, these variables should not be considered essential to the study of legitimacy. As previously noted, while procedural justice is an integral part of many common conceptions of legitimacy, it is not the only factor relevant

to people's attitudes toward legal authorities, nor is it likely to influence the many individuals who have little meaningful contact with police or courts in their daily lives.

Furthermore, many definitions of procedural justice employ decidedly normative conceptualizations of proper legal procedure, imposing democratic notions of fairness and equality that may not be equally relevant in all societies. The included measure of vicarious experience, framed in terms of interference by authorities in people's private lives, is also tangentially related to boundary concerns associated with procedural justice. In order for citizens to make the judgement that authorities are interfering too much in people's private lives, there must exist a norm of separation between these spheres – the line between public and private must exist in people's minds for it to be crossed by authorities. This measure therefore presumably captured at least some of these boundary concerns associated with procedural and distributive justice.

Another limitation may reside in the use of *confidence* as the sole measure of legitimacy for this analysis. This variable may be better suited as part of a larger index of legitimacy encompassing not only confidence, which may derive entirely from instrumental assessments of authority, but clearer measures of trust, identification, and voluntary acts of endorsement that indicate recognition of state legitimacy (Beetham, 1991). However, increasing the complexity of any measure of legitimacy by including such concepts as constituent parts rather than antecedent effects risks imposing preconceived definitions of the concept that echo the normative prescriptions long made by political philosophers. To understand the complexity of its origins and implications in different civilizations, countries, and cultures, legitimacy must be understood as a

fundamentally emergent property that exists ephemerally at the intersection of diverse social, political, and historical vectors.

Yet another potential shortcoming of this analysis was the untested potential for clustering within groups above or below the country level. Preliminary analyses explored the potential for testing a three-level model that included primary sampling unit (PSU) as an intermediate level between individuals and countries. However, the variety of sampling techniques employed in the collection of WVS data rendered PSUs incomparable across countries, and the lack of any PSU coding for a great number of respondents would have resulted in the loss of substantially larger amounts of data. Future international survey research should attempt to measure such intermediate groups more precisely to allow for a better understanding of attitudinal clustering effects. In addition, the possibility remained that clustering effects were present above the country level, for example due to international alliances, cross-cultural similarities, colonial histories, or continental geography. However, sample sizes at such higher levels are likely to be quite small, complicating the use of multilevel modeling in arriving at valid estimates that account for such clustering. It was hoped that the inclusion of the freedom score and the homicide rate would account for at least some of these potential parallels between nations, but future research should attempt to identify other national-level variables that may explain similarities and differences in the mechanisms of legitimization.

Additional limitations regarding the generalizability of these results were associated with the sample of countries included in this analysis. As previously discussed, responses from China and Egypt could not be included in this analysis due to missing data on key explanatory variables. The possibility remains that the lack of data on

variables capturing attitudes toward formal authorities may in some countries have been related to social pressure, government censorship, or restrictions on thought and opinion that lead respondents to be less willing to answer such questions, or survey researchers less willing to ask them. Such a phenomenon may of course also have affected data that were included in this study, and overly positive reported attitudes towards ostensibly authoritarian forms of authority should likely be viewed with some caution.

Further sampling issues included the potential for inherent bias in the selection of countries included in the WVS, in which there is a notable absence of decidedly non-democratic, underdeveloped, or conflict-prone nations, such as North Korea, South Sudan, Yemen, Venezuela, and Cuba. Including data from as many of these nations as possible would increase the potential for models to identify country-level characteristics that influence individual-level sources of legitimacy within a variety of regime types, economic contexts, and geopolitical orientations. In addition to the absence of these “outlier” nations, the most recent wave of the WVS also lacked data on many other countries around the world. Future research should attempt to increase the sample of countries to include more nations from Africa, Asia, Latin America, and Europe, perhaps by combining previous waves of the WVS that included data from additional nations.

Finally, it is important to note that these findings are limited to the legitimacy of police and courts, rather than the legitimacy of other social institutions or of the state more generally. The sources of legitimacy and contextual variation in effects may be entirely different for different institutions. However, because of the visibility of police and courts in public life, it is likely that specific attitudes toward these legal authorities

have an important relationship with more general feelings about the authority structures of state and society.

Despite these limitations, what is clear from this research is that the formulation of universal criteria by which to measure the constellation of concepts related to legitimacy is exceedingly difficult if not inherently impossible. Legitimacy is not easy to define in generalizable terms, and the potential for great variation in this confluence of attitudes makes the application of any single model to all national contexts a source of trepidation. The possibility of cross-national variation applies whether considering Weber's (1922) model of legitimacy based on tradition, charisma, or rationality; Beetham's (1991) model of legitimacy derived from legality, justification, and consent, Tyler's (1990) model of legitimacy arising from quality of treatment and quality of decision-making, or Tankebe's (2013) model of legitimacy composed of effectiveness, lawfulness, distributive fairness, and procedural justice.

Future research must continue to explore the validity of these and other models of legitimacy under different social, cultural, political, and historical conditions, incorporating the potential for contextual variation in the sources of people's attitudes toward legal authorities. The use of multilevel modeling to account for cross-national variation in the sources and substance of legitimacy should become a standard feature of any future attempt to establish a more generalizable model of this phenomenon. Different sources of legitimacy imply different approaches to its cultivation. If the primary source of legitimacy is direct experience with legal authorities, then institutions should focus on improving quality of treatment and quality of decision-making in such encounters. But legitimacy influenced more by vicarious experience, group identity, moral alignment, or

social capital might suggest an approach geared toward image management, community outreach, and personal bonds. Legitimacy based primarily on effectiveness and fear of criminal victimization would call for legal authorities to focus on public safety and crime control.

The legitimacy of legal authority is a fundamental pillar of any society. The institutions that create, adjudicate, and enforce the law must receive popular support, however manufactured, to fulfill the mandates for which they are created. Legitimacy is influenced by instrumental concerns related to the legal mandate given to authorities, by the fulfillment of symbolic duties related to the image of state competence and power, and by the bonds formed between state entities and personal identities. But the nature of these influences depends in large part on broader contextual factors that set the stage for legitimization processes to occur. There is little question that the study of legitimacy carries important implications in a global context, not only for legal authorities and justice systems, but for social institutions in general (Beetham, 1991; Hinsch, 2010; Mazerolle et al., 2013; Tankebe, 2009; Tyler, 1990; Weber, 1922). Legal authorities such as police and courts are often the “face” of state authority that is most visible to citizens, and the legitimacy of these institutions is therefore intimately tied to the legitimacy of the state itself (Hamm et al., 2022). Corrosion in the legitimacy of these legal authorities is likely to spread across the broader social order, however that order happens to be defined. The relativistic nature of legitimacy and the reality that its existence likely relies on different factors in different national contexts makes comprehension of these implications exceedingly difficult, but not entirely impossible. A better understanding of these differential legitimization processes would be beneficial not only for the future study of

legitimacy by academics, but also as for its cultivation by agencies and institutions interested in improving relationships with the general public.

APPENDIX

Appendix A: Questions from the World Values Survey

The following questions are worded exactly as on the original World Values Survey (WVS). Questions from the WVS not relevant to this study have been omitted. Questions are presented in the order in which they are discussed in Chapter IV of this dissertation, rather than the order they appeared on the WVS questionnaire.

Dependent variables were based on the following items:

I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence, or none at all?

Q69. The police

Q70. The courts/justice system

Demographic variables were based on the following items:

Q260. Respondent's sex (coded by observation, not asked):

1. Male

2. Female

Q262. Age in years (number)

Q273. Are you currently:

1. Married

2. Living together as married

3. Divorced

4. Separated

5. Widowed

6. Single

Q275. What is the highest educational level that you have attained?

1. Primary

2. Secondary

3. Post-secondary

4. Tertiary

Q279. Are you employed now or not? If yes, about how many hours a week? If more than one job; only for the main job.

Yes, has paid employment:

- 1. Full-time employee (30 hrs/wk or more)*
- 2. Part-time employee (less than 30 hrs/wk)*
- 3. Self-employed*

No, no paid employment:

- 4. Retired/pensioned*
- 5. Housewife not otherwise employed*
- 6. Student*
- 7. Unemployed*
- 8. Other (write-in)*

H1. Settlement type

- 1. Urban (city, town)*
- 2. Rural (village)*

Prior victimization and fear of crime variables were derived from the following items:

Q52. In the last 12 months, how often have you or your family felt unsafe from crime in your home?

- 1. Often*
- 2. Sometimes*
- 3. Rarely*
- 4. Never*

Q131. Could you tell me how secure do you feel these days?

- 1. Very secure*
- 2. Quite secure*
- 3. Not very secure*
- 4. Not at all secure*

Have you been the victim of a crime during the past year? And what about your immediate family – has someone in your family been the victim of a crime during the last year?

Q144. Respondent

1. Yes

2. No

Q145. Family

1. Yes

2. No

Fear of war and terrorism variables were based on the following items:

To what degree are you worried about the following situations?

Q146. A war involving my country:

1. Very much

2. A good deal

3. Not much

4. Not at all

Q147. A terrorist attack:

1. Very much

2. A good deal

3. Not much

4. Not at all

The vicarious experience variable was based on a single item:

Q134. How frequently do [police or military interfere with people's private life] in your neighborhood?

1. Very frequently

2. Quite frequently

3. Not frequently

4. Not at all frequently

Group identity variables were based on the following items:

Q254. How proud are you to be [country's nationality]?

1. Very proud

2. Quite proud

3. *Not very proud*

4. *Not at all proud*

*People have different views about themselves and how they relate to the world.
Using this card, would you tell me how close do you feel to...?*

Q257. Your [country]:

1. *Very close*

2. *Close*

3. *Not very close*

4. *Not close at all*

Variables measuring social capital were derived from the following two items:

Q57. Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?

1. *Most people can be trusted*

2. *Need to be very careful*

Now I am going to read off a list of voluntary organizations. For each organization, could you tell me whether you are an active member, an inactive member, or not a member of that type of organization?

Q94. Church or religious organization

Q95. Sport or recreational organization, football/baseball/rugby team

Q96. Art, music, or educational organization

Q97. Labor union

Q98. Political party

Q99. Environmental organization

Q100. Professional association

Q101. Humanitarian or charitable organization

Q102. Consumer organization

Q103. Self-help group, mutual aid group

Q104. Women's group

Q105. Other organization

Measures of perceived corruption and importance of democracy were based on the following items from the WVS:

Q112. Now I'd like you to tell me your views on corruption – when people pay a bribe, give a gift, or do a favor to other people in order to get the things they need done or the services they need. How would you place your views on corruption on a 10-point scale where “1” means “there is no corruption in my country” and “10” means “there is abundant corruption in my country?” If your views are somewhat mixed, choose the appropriate number in between. (1-10)

Q250. How important is it for you to live in a country that is governed democratically? On this scale where 1 means it is “not at all important” and 10 means “absolutely important” what position would you choose? (1-10)

Appendix B: Freedom House Democracy Index

Political Rights

A. Electoral Process

A1. Was the current head of government or other chief national authority elected through free and fair elections?

A2. Were the current national legislative representatives elected through free and fair elections?

A3. Are the electoral laws and framework fair, and are they implemented impartially by the relevant election management bodies?

B. Political Pluralism and Participation

B1. Do the people have the right to organize in different political parties or other competitive political groupings of their choice, and is the system free of undue obstacles to the rise and fall of these competing parties or groupings?

B2. Is there a realistic opportunity for the opposition to increase its support or gain power through elections?

B3. Are the people's political choices free from domination by forces that are external to the political sphere, or by political forces that employ extra-political means?

B4. Do various segments of the population (incl. ethnic, religious, gender, LGBT, and other relevant groups) have full political rights and electoral opportunities?

C. Functioning of Government

C1. Do the freely elected head of government and national legislative representatives determine the policies of government?

C2. Are safeguards against official corruption strong and effective?

C3. Does the government operate with openness and transparency?

Discretionary political rights question: Is the government or occupying power deliberately changing the ethnic composition of a country or territory so as to destroy a culture or tip the political balance in favor of another group?

Civil Liberties

D. Freedom of Expression and Belief

D1. Are there free and independent media?

D2. Are individuals free to practice and express their religious faith or nonbelief in public and private?

D3. Is there academic freedom, and is the educational system free from extensive political indoctrination?

D4. Are individuals free to express their personal views on political or other sensitive topics without fear of surveillance or retribution?

E. Associational and Organizational Rights

E1. Is there freedom of assembly?

E2. Is there freedom for nongovernmental organizations, particularly those that are engaged in human rights- and governance-related work?

E3. Is there freedom for trade unions and similar professional or labor organizations?

F. Rule of Law

F1. Is there an independent judiciary?

F2. Does due process prevail in civil and criminal matters?

F3. Is there protection from the illegitimate use of physical force and freedom from war and insurgencies?

F4. Do laws, policies, and practices guarantee equal treatment of various segments of the population?

G. Personal Autonomy and Individual Rights

G1. Do individuals enjoy freedom of movement, including the ability to change their place of residence, employment, or education?

G2. Are individuals able to exercise the right to own property and establish private businesses without undue interference from state or nonstate actors?

G3. Do individuals enjoy personal social freedoms, including choice of marriage partner and size of family, protection from domestic violence, and control over appearance?

G4. Do individuals enjoy equality of opportunity and freedom from economic exploitation?

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