The Dynamics of Democracy and Human Rights: *Insights from a First-Order Markov Model, 1976-2003*

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Comments Welcome

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Abstract

This paper reconsiders the dynamic relationship between democracy and a variety of human rights abuses. We argue that existing research has failed to distinguish the effects of repression on political competitors and mass publics. This distinction provides a rationale for the belief that democracy conditionally influences respect for human rights in ways that depend on past practice. Furthermore, we argue that this distinction applies to both linear (Poe and Tate (1994) and Poe, Tate and Keith (1999), among others) and threshold (Davenport and Armstrong (2004)) specifications of the relationship between democracy and human rights abuses. We test this claim in a first-order Markovian ordered probit model of global human rights abuses covering the period 1976-2003 across six different measures of human rights abuses. Consistent with our expectations, the effect of political democracy critically depends on the past history of respect for human rights. At low levels of prior repression, democracy limits human rights abuses, but when past repression is widespread, democracy has no effect on respect for personal integrity rights. These results provide an important qualification of existing findings and imply that democracy alone is insufficient to eliminate the abuse of basic human rights.

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1 Introduction

International human rights are a subject of significant academic and popular attention.[1] The previous two decades have witnessed an unprecedented growth in activism regarding human rights including the anti-Apartheid movement, gender discrimination in Islamic societies, oppression of ethnic groups in the former Yugoslavia and Rwanda, and state-sanctioned terror in a broad cross-section of states.[2] Resulting from a human history littered with repression and abuse, scholars have paid critical attention to the determinants of human rights abuses with a view toward limiting a host of reprehensible practices (McKinlay and Cohan 1975, McKinlay and Cohan 1976, Park 1987, Boswell and Dixon 1990, Davenport 1995, Davenport 1996*b*, Davenport 1996*a*, Fein 1995, Gartner and Regan 1996, Henderson 1991, McCormick and Mitchell 1997, McKinlay and Cohan 1975, Mitchell and McCormick 1988, Meyer 1996, Poe and Tate 1994, Poe, Tate and Keith 1999, Poe, Milner and Leblang 1999, Poe, Carey and Vazquez 2001, Richards, Gelleny and Sacko 2001, Zanger 2000). While many of the correlates of human rights abuses are static or exceptionally difficult to change, some manipulable variables have been consistently related to decreases in human rights abuses.

No single factor is thought to more robustly discourage repression and human rights abuses than political democracy (Davenport 1995, Davenport 1999, Davenport and Armstrong 2004, Fein 1995, Henderson 1991, **?**, Mitchell and McCormick 1988, Regan and Henderson 2002, Poe and Tate 1994, Poe, Tate and Keith 1999, Zanger 2000). In both academic and popular circles, democracy is thought to be a powerful pacifying force in environments riddled with repression and terror. These effects operate through a variety of channels. In general, effective political competition, such as occurs in democratic societies, is premised on the respect for a variety of basic political rights characterized by contestation and choice. First, a politically active citizenry can adjudicate elections by choosing among (meaningful) alternatives. Because these rights are virtually meaningless in a climate in

[1] I use the terms abuses of human rights, state terrorism, repression, threats to personal integrity, and personal integrity abuses largely interchangeably.

[2] Guatemala's recent history tells a story of horrific and extended violence against labor unions, students, development workers, and political party activists, as well as leaders of the large indigenous population (Booth 1995, p. 276). While the governments that unleashed the forces and the "death squads" were both civilian and military, the repression was significant, brutal, and widespread (Booth 1995, p. 276-277). Disappearences, murders, and other forms of repression remain commonplace in contemporary Colombia, substantial parts of Africa, the Middle East, Asia, the Americas and Europe.

which they cannot be exercised, political democracy generates a demand for fewer human rights abuses. From the supply side, democratic political institutions constrain the repressive behavior of governments. Because leaders who repress today know that they may meet similar repressive measures tomorrow, the shadow of the future constrains leaders from targeting and repressing political competitors. In sum, democracies are then thought to create a lower demand for (if not an outright aversion to) repression as well as placing inherent limitations on the exercise of coercive force. The central finding, however nuanced, is that political democracy increases national respect for human rights.

Despite broad agreement that there is a relationship between democracy and human rights abuses, recent contributions to the literature on human rights and democracy debate the proper functional form. Poe and Tate (1994) and Poe, Tate and Keith (1999) find evidence of a linear relationship between democracy and human rights, while Davenport and Armstrong (2004) demonstrate a threshold effect. This paper reorients the debate on a more functional level to demonstrate that the targets of repression are at least as important as the methods. Employing a fairly simple theoretical framework, we demonstrate that the influence of political democracy can be critically distinguished among elites and mass publics and that this differentiation leads to a more nuanced relationship between political democracy and human rights. We briefly describe the logic and findings.

Competition among elites for political office, a goal with some inherent value, provides a basis for believing that political repression has different effects on elites and mass publics. In general, the exercise of a voice in collective decision making requires a belief that negative consequences will not result and sufficient stakes in the outcome to participate in the collective choice. For elites, for whom holding office is a reasonable possibility, negative consequences (to participation) can never have the same deterrent effect that they have on citizens of similar political persuasions. Thus, when the citizenry, broadly considered, need not fear the application of coercive measures, political democracy inhibits the abuse of human rights. But, if citizens do not believe that they are free to choose without adverse consequences from participation, then structural democracy is missing a key part of the causal mechanism linking democracy with the inhibition of abuse – the role of the citizenry in choosing among alternatives, replete with the possibility that the incumbents are removed. In this paper, I unravel this relation and analyze the theoretical and empirical linkages between democracy and human rights abuses.

This paper makes three central contributions. First, we provide a theoretical rationale for the belief that the relationship between democracy and

human rights abuses critically depends on past history. Furthermore, we provide a set of coherent expectations with which to confront a host of measures of human rights abuses. These theoretical derivations are both novel and oppose common findings in the literature. Second, we test the arguments using more appropriate methodological approaches. The particular assumptions of linear models with continuous errors are clearly inappropriate for the study of categorical measures of state repression. Thus, we develop ordered Markovian models where the immediate past history influences present realizations in a way that avoids many unrealistic assumptions of previous approaches. Third, we rigorously test our theoretical claims on multiple measures of human rights abuses. Because our theoretical claims run counter to much existing literature, we have maximized the potential for falsifying the empirical expectations by relying on six different indicators of human rights abuses. Virtually all of the results showcase a pattern consistent with the theoretical arguments. Let us briefly elaborate.

We argue that political democracy limits abuses of human rights, but the effect critically depends on the status quo level of repression. Political competition among elites and political participation among mass publics are subject to both different costs and different rewards. To preview, in societies with high levels of previous abuse, there is effectively no relationship between democracy and human rights abuses while in societies with low and moderate levels of abuse, democracy decreases levels of abuse further. In other words, where the rules of the game reflect an underlying prohibition of repressing mass publics, democracy reinforces human rights. Where such prohibitions are lacking, democracy has little meaningful impact. At the risk of oversimplifying, it is considerably harder to build demand-side relationships for good governance than it is to increase the supply of potential governors.

This argument has important implications for debates concerning the role of democracy in eliminating repression. As we see it, the twin functions of democracy are to increase the role of citizen participation in decision making and to place constraints on the behavior of the agents acting on behalf of these citizens. It is important that scholarship not conflate these two features because human rights abuses against the mass public that are intended to suppress participation then register as changes in both the thing being explained and the thing doing the explaining. One policy implication drawn from existing findings reported by a host of scholars including Poe and Tate (1994), Poe, Tate and Keith (1999), and Davenport and Armstrong (2004) is that transforming all societies into functioning democracies would, in some finite length of time, result in a world largely free of re-

pression.[3] This paper demonstrates that increasing global democracy does not provide an impetus for low levels of abuse as an absorption state, given any reasonable distribution of initial conditions that mirrors the global status quo. In summary, global democracy need not result in a world free of repression. Without limits on the factors that engender the repression of society at large, democracy, by itself, is insufficient.

To support this argument, we present appropriate techniques for the study of qualitative time series. Previous literature has, almost exclusively, relied on models that assume human rights abuses are measured on a much more rigorous metric than they actually are. To investigate dynamic relationships involving persistent ordered dependent variables, we analyze a first-order Markovian ordered probit model and demonstrate the far reaching implications of more appropriate controls for past history. For example, there is evidence that states crossing Davenport and Armstrong's threshold for democratic pacification may be even more abusive than nondemocratic societies – the opposite relation to that which they report (Davenport and Armstrong 2004).

The argument is constructed in four remaining sections. We first disentangle democracy, past history, and human rights abuses in section 2. We analyze previous specifications and develop a Markov model in Section 3. We estimate models and compare results in Section 4. Section 5 concludes.

2 Human Rights, Past History, and Democracy

The argument is structured around three central points of departure. First, we define the human rights under consideration. While we recognize that human rights abuses are both difficult to define and measure, we focus on broad definitions capable of cross-national generalization exploring their relative strengths and weaknesses. Second, democracy is a multidimensional concept and repression is intricately linked to one of the most widely studied dimensions of democracy – participation. This leads to a fundamental concern with endogeneity that is addressed through differentiating supply-side (constraints on leaders) and demand-side (influence on decision making) democracy. Third, we argue that changes in structural features of the polity are far more likely to immediately induce behavior in politically active citizens than in the mass public. This leads to hypotheses relating past history with the level of democracy to produce changes in re-

[3] Admittedly, the definition of this democratic world does differ somewhat among authors.

spect for human rights in ways that differ from previous characterizations. This section concludes with a series of clear research hypotheses that condition the effect of democracy on human rights abuses by previous values of human rights abuses in accordance with the arguments. We first turn to the object of explanation – human rights abuses.

2.1 Repression and Human Rights Abuses

The measurement of human rights abuse is contentious. Debate occurs between proponents of events-based approaches (Davenport 1996*a*, Davenport 1996*b*) and proponents of standards-based data (Cingranelli and Richards 1999, McCormick and Mitchell 1997, Poe and Tate 1994, Poe, Tate and Keith 1999). Events data are measured as the number of particular types of events measured in a particular span of time. Standards-based approaches evaluate reported occurrences of a host of these events and categorize them.[4] In part, these approaches reflect different concerns, frequency versus level. The frequency of particular types of abuse may be best understood by the incidence of these events, see Davenport (1999), but such studies fail to differentiate the central focus of this inquiry – the targets. For this reason, we have chosen a standards-based approach.

Within standards-based approaches, measurement of the dependent variable (human rights abuses) is contentious and centers on the number of relevant dimensions and categories (Poe and Tate 1994, McCormick and Mitchell 1997, Poe, Tate and Keith 1999, Cingranelli and Richards 1999, Gibney 2004). Political terror scales (PTS) (Poe and Tate 1994, Poe, Tate and Keith 1999, Gibney 2004) and more complex polychotomous scaling techniques (Cingranelli and Richards 1999) map to a single dimension, analogous to a universalist conception of human rights: all country's human rights abuses can be arrayed on a single dimension from minimal to maximal respect. McCormick and Mitchell (1997) argue that there are two relevant dimensions, deprivation of life (minimalist and universal) and deprivation of individual liberty (expansive and culturally determined). They argue that there are important differences among these two dimensions and that research should seek to disentangle "umbrella concepts". In an attempt to remain agnostic on measurement issues, we choose to apply our models to both approaches and demonstrate that our theoretical claims are not

[4]Given certain assumptions about the process generating both, it is straightforward to show that they should generate identical conclusions, see Alt, King and Signorino (1999). Elsewhere, we construct Bayesian measurement models using Markov Chain Monte Carlo techniques to integrate these data in a common framework. It should also be noted that the data produced by Cingranelli and Richards (1999) are merely truncated events.

dependent on any particular measure of human rights abuses. With these scholarly debates and claims in mind, we turn to specific efforts to define repression.

2.1.1 Human Rights Abuse: Political Terror Scale

Poe and Tate (1994) and Poe, Tate and Keith (1999) utilize the "political terror scale" (PTS) a five-category ordinal scale that measures human rights abuses from lowest to highest, according to increasing levels of imprisonment, torture, execution, disappearance, and more general forms of political terror. The data was generated by coding the State Department and Amnesty International Reports under five basic criteria (see Poe, Tate and Keith (1999, p. 8–10) for a discussion of other measures of these concepts). A brief description of the codings is as follows.

Level 1: "Countries . . . under a secure rule of law, people are not imprisoned for their views, and torture is rare or exceptional . . ., political murders are rare."

Level 2: "There is a limited amount of imprisonment for nonviolent political activity. However, few persons are affected, torture and beating are exceptional . . . political murder is rare."

Level 3: "There is extensive political imprisonment, or a recent history of such imprisonment. Execution or other political murders and brutality may be common. Unlimited detention, with or without trial, for political views is accepted . . ."

Level 4: "The practices of **Level 3** are expanded to larger numbers. Murders, disappearance are a common part of life. . . In spite of its generality, on this level terror affects primarily those who interest themselves in politics or ideas."

Level 5: "The terrors of **Level 4** have been expanded to the whole population. . . The leaders of these societies place no limits on the means or thoroughness with which they pursue personal or ideological goals. . ."[a]

[a]Source: Poe and Tate (1994: 867); Gastil (1980), in original.

Table 1: The Political Terror Scale

Thus, while a number of distinct policy choices by governments are included in the evaluation, the resulting scale is ordered on a single dimen-

sion. At **Level 1** and **Level 2**, a fundamental respect for life remains, though liberties may be circumscribed. By contrast, **Level 3** is increasing in brutality but still largely influences the political sphere; **Level 4** expands the numbers and the deprivation of life is widespread. **Level 5** represents widespread and arbitrary societal violence. While one might criticize this scale because it imposes unidimensionality, e.g. McCormick and Mitchell (1997) and Cingranelli and Richards (1999), the broad coverage across both time and space provides a unique opportunity to explore its correlates. After recounting these objections, we argue that the data contain sufficient information to extract a number of key relationships, however, the relevant dimensions linking human rights abuses and political democracy relate to the target population and not the strategies employed.

2.1.2 Political Terror Scale: Objections

McCormick and Mitchell (1997) and Cingranelli and Richards (1999) find the PTS inadequate. McCormick and Mitchell (1997) explain the relationship between universalist and minimalist conceptions of human rights and relate their discussion of multidimensionality to this distinction. In essence, they argue that the fundamental distinction in adequately defining human rights abuses turns on the deprivation of life opposing the deprivation of liberty – the type of basic right violated. The latter arguably represent norms that vary across societies, citing so-called Asian values, while the former are minimal, and therefore universally accepted (McCormick and Mitchell 1997, p. 512–13). Operationalizing the argument, they measure a minimalist definition – **political torture and murder** – and a more expansive liberal conception – **political imprisonment**. They provide two important forms of evidence in support of their claim: (i) regression analyses relating indices **political imprisonment** and **political torture and murder** to the Political Terror Scale to demonstrate that **torture and murder** explains more variation; (ii) the correlates of their two conceptions differ fundamentally. From this, they infer that multidimensionality must exist. The fundamental flaw in their logic relates to the treatment of ordered categories. By assuming relationships between and among the categories, McCormick and Mitchell (1997) demonstrate an artifact of linearity and measurement rather than a forceful substantive critique.[5]

Similarly, Cingranelli and Richards (1999) use a form of polychotomous

[5]They must assume that an ordered variable can be treated as ratio-scale for regression analysis. Put simply, the distance between categories is assumed to be known, with respect to the latent scale, and constant across categories. This claim receives detailed treatment shortly in a subsequent section.

scaling to overcome their suggestion that PTS is too limiting and show the utility of an expansion of the number of ordinal categories. They demonstrate two important themes: 1. a single underlying dimension describes human rights abuses and 2. the sequence of strategies (torture, killing, disappearance, and imprisonment) can be reasonably ordered. On the one hand, these results cast doubt on multidimensionality, with respect to actions, and find remarkable consistency in escalating strategies. On the other hand, these results beg questions about the relevant form of multidimensionality. It is the particular form of multidimensionality that now becomes the focus of our attention.

2.2 Political Democracy

The most celebrated modern contributions to defining and conceptualizing democracy come from Robert Dahl's (1971) contemplations on polyarchy and the work of Przeworski, Alvarez, Cheibub and Limongi (2000). Both share a focus on the centrality of political competition as the defining feature of democratic governance and a shared focus on two basic groups: competitors and citizens. By competitors, we mean those who have some positive probability of governing; citizens are those endowed with the ability to choose among the competitors. To borrow terms from Przeworski et al. (2000, 16), we turn to an explicit discussion of contestation defined by ex ante uncertainty, ex post irreversibility, and repeatability to render the roles of competitors and citizens concrete.

Ex ante uncertainty implies that the results of elections not be known before the election. This requires that either the composition of the electorate [who will actually choose] or the decisions of the particular electors [the ballot itself] not be known in advance. Implicit in ex ante uncertainty is the notion that citizens are free to decide whether or not to choose who rules them and, if they choose to take part in the decision, that their choice not be predetermined. Ex ante uncertainty then implies that citizens choose among the competitors and no competitor knows that he or she will win. Ex post irreversibility implies that the decision of the citizens bind the competitors. The mere contestation of an election is insufficient to denote political democracy because, as has often been the case, reversible elections need not constrain leaders in any meaningful way. More importantly, irreversibility implies that the decision of citizens from among the set of contestants provides a resolution to the competition. Repeatability provides the crucial mechanism of repetition to guarantee that citizens can choose among the competitors and that their choice will be reflected in who governs. These three features taken together establish an important dynamic in which peo-

ple compete for office, citizens choose among the competitors, and those who might wish to lead must consider the consequences of their actions in light of uncertainty emanating from those who decide or will decide. To summarize, democracy is a basic interaction between those who govern, those who have the potential to govern, and those who choose the governor from the set of those with the potential to govern; "democracy is a regime in which government offices are filled by contested elections" (Przeworski et al. 2000, 19).

The reasons that governments abuse their citizens have been widely studied and the conventional wisdom suggests that democracy inhibits the abuse of human rights. The reasoning is straightforward: democratic political institutions make repression more costly at the same time limiting the benefits from applying coercive measures. Democratic political institutions, with their well understood and relatively inexpensive methods of removing leaders from office, make repression more costly because (i) future leaders can repay repression in kind and (ii) citizens are assumed to be averse to the use of repression and willing to punish leaders that are repressive (taking advantage of the relatively inexpensive methods for changing leaders).Taken in combination, leaders of democratic polities avoid the employment of coercive tools to avoid being removed from office and to avoid potential reprisals from the coerced who may lead in the future. With this simplistic view of democracy and repression in mind, we turn to an examination of the previous treatments of the relationship between human rights and democracy.

2.3 Democracy and Human Rights Abuses

The relationship between democracy and human rights abuses has been widely studied (Davenport 1995, Davenport 1999, Davenport and Armstrong 2004, Fein 1995, Henderson 1991, Mitchell and McCormick 1988, Regan and Henderson 2002, Poe and Tate 1994, Poe, Tate and Keith 1999, Zanger 2000).[6] For our purposes, two perspectives are worthy of note. First, a host of studies have argued that democracy is linearly related to human rights abuses. Practically, this implies that making a polity more democratic will decrease human rights abuses; in the limit, human rights abuses will disappear. Second, Davenport and Armstrong (2004) argue that the achievement of a certain level of democracy insures that human rights abuses will be limited. Countering the linear relation, Davenport and Armstrong argue that every step that makes a polity more democratic need not translate into limitations

[6]See Davenport and Armstrong (2004) for a recent summary.

on the exercise of coercive force. Instead, it is only at the point of fully institutionalized democracy that democracy is certain to inhibit the abuse of human rights.

There are reasons to remain skeptical. In the aftermath of recent Iraqi elections, widespread concern arose about the possibility of paybacks directed against Sunni Iraqis by formerly repressed Shiites and Kurds. Though the political system under construction is almost certain to fill political offices by means of contested elections, there is widespread apprehension that democratic political institutions will prove insufficient to guard against the exercise of coercion. If we do not generally believe that the imposition of democracy will prevent human rights abuses in Iraq, why should we believe that democratic institutions discourage the abuse of human rights more generally? We render a theoretical rationale to justify these concerns with arguments that distinguish repression applied to political competitors and mass publics.

Distinguishing the effects of repression on competitors and mass publics is a relatively straightforward theoretical exercise. Assuming the existence of concrete benefits to office-holding, political competitors have strong incentives to enter or reenter the political arena even in the presence of repressive action. Mass publics, by contrast, derive benefits from participation in politics only to the extent that they influence resultant policies. In a nutshell, there are both nonexcludable and (potential) private benefits that accrue to legitimate contenders for political office while only the nonexcludable public consequences of a particular leader induce mass publics to political participation. Put simply, private inducements make political competitors less manipulable by coercive measures than are mass publics who must solely derive benefits (or costs) from the policies of the duly chosen leader.

From this point of departure, we should expect that past history plays a significant role in conditioning the effect of political democracy on the abuse of human rights. Where repression is applied solely against political competitors, potential leaders must weight the potential costs of being the target of repressive action against both public and private benefits should they be elected. By contrast, mass publics have only the public benefits of policies and, as is widely noted in the literature on rational turnout, only a small probability of being pivotal in determining the outcome of competition among potential office-holders. With this distinction in mind, we turn to the formation of concrete hypotheses that depend on past history.

For political competitors, there are strong and constant inducements to return to the political fray, even in the presence of potential coercion, because the private benefits of holding office can only accrue to those that

remain in the "electable" set. For this reason, we argue that past histories of repressive activity, where repression has been exclusive applied to the politically active population, should not have significant impacts in deterring the entry of political competitors. Furthermore, because the citizenry at large has not been the target of repressive activity, citizens are minimally influenced by past histories of human rights abuse. As a result, there is no reason to expect that the widely studied dynamic in which democracy decreases human rights abuses should be disrupted. Citizens do their part and political competitors are a constant feature because of private inducements. But, when repression has been applied to the mass public, we should expect this dynamic to break down.

Mass publics, given a past history of repressive activity, have lesser inducements to perform the vital function of choosing among competitors because the benefits are both widely dispersed and their probability of decisiveness is minimal. Indeed, this is where we should expect the dynamic whereby democracy reduces human rights abuses to break down; ordinary citizens have less to gain and more to potentially lose by continuing in their role as the arbiter – it is easier to simply opt out. Yet, we recall that the vital linkages between democracy and human rights abuses require an aversion to repression among the citizenry and a willingness to punish repressive leaders. When the incentives are such that punishment is potentially quite costly, the crucial role of citizens in guaranteeing that democracy leads to lesser repression breaks down. Borrowing the language of one prominent scholar of democracy, the repression of mass publics leads to a breakdown of "elections as instruments of democracy" because repressing mass publics undoes the very essence of democratic government: Tocqueville's sovereignty of the majority.[7] With this idea in mind, we can derive the following hypotheses.

Where past human rights abuses have solely been applied to political competitors, the necessary elements are in place to suspect that democracy limits further abuse. *With low prior levels of repression, democracy should limit human rights abuses.* However, when past human rights abuses have been applied beyond potential competitors for political office, the theoretical rationale for democracy limiting human rights abuses breaks down. As a result, there is no necessary relationship between democracy and human rights abuses in the presence of previous repression that deters the mass public from performing its vital role. *With high prior level of repression, democracy should have no effect on the incidence of human rights abuses.* With these ideas in mind, we turn to methods for testing these claims.

[7]The conceptualization of elections as instruments of democracy owes to Powell (2000).

3 Linear Models, Ordinal Data, and a Markov Model

This section critiques previous approaches to modelling human rights abuses and develops a Markov model for ordered dependent variables. Because virtually all measures of human rights abuses are categorical, special concerns arise that require appropriate models. For example, the widely used political terror scale is a rating distilled from State Department or Amnesty International reports of human rights abuses. The range of this rating is the integers including one and five. This poses a series of econometric concerns that have not been adequately addressed by previous research. To formalize these concerns, we establish a set of necessary primitives.

We argue that there is a latent propensity toward, or utility derived from, increasing levels of repression. Define y^* as an unobserved latent variable with J discrete realizations $y = \{1, 2, \ldots, j\}$ and $F(\cdot)$ as a function that maps y^* to one and only one of the $j \in J$ ordered categories.[8] Put simply, though we do not observe the actual level of abuse (y^*), we observe a series of ordered responses (y) that reflect broad categories of increasingly repressive behavior.

The unobserved latent variable y^* is composed of a systematic and a stochastic component. Define the systematic component as $y^* = X\beta$ and the stochastic component as ϵ.[9] This framework is sufficiently detailed and general to proceed to an analysis.

3.1 The OLS Estimator

To illustrate, consistent with previous research, e.g. Poe and Tate (1994), Davenport and Armstrong (2004), if we suppose that y^* is observed as y and assume that the stochastic component $\epsilon \sim N(0, \sigma^2)$, then we can write

$$y = y^* = X\beta + \epsilon. \tag{1}$$

Of course, there are obvious problems with this approach that we will briefly explore. (i) This model implies that $y = y^*$ is a linear function of $X\beta$. A frequent justification for rejecting linear models (with nice small sample properties) is that *the predictions* $(X\beta)$ *can lie outside the range of the observed depen-*

[8] Ordering here implies that $F(y') \geq F(y'')$ if $y' > y''$.

[9] X is a row vector of exogenous characteristics, β is a column vector of unknown parameters, and ϵ is a random variable.

dent variable, i.e. $X\beta < min(y)$ *or* $X\beta > max(y)$.[10] While this is troublesome, a greater problem exists. (ii) The density function of y only has positive probability at J points, i.e. y is discrete. While this fact has no direct influence on the bias of β, it ensures that test statistics that derive from the normality of the OLS estimator, e.g. χ^2, F, will not yield accurate results. Specifically, rewriting (1) as $\epsilon = y - X\beta$, ensures that ϵ also has only J positive mass points, $\epsilon \in \{1 - X\beta, 2 - X\beta, ..., J - X\beta\}$. It follows that ϵ has a multinomial probability distribution and $Var[\epsilon|X]$ is a function of β – heteroscedasticity must be present. However, the more important problems involve the translation of theoretical claims to statistical tests.

Assuming inter-coder consistency, y represents an evaluation of human rights practices that undoubtedly contains variation both within and between categories. The assumption that $y = y^*$ amounts to the untenable maintained hypothesis that *all variation is between categories*. Equally troubling, $y = y^*$ implies, as a maintained hypothesis, *the unit difference between categories is constant and equal*. This overly literal interpretation of the categories has generated criticism for the restrictiveness (Cingranelli and Richards 1999) of the scale and its composition (McCormick and Mitchell 1997). Sympathetic to these criticisms, we argue that the observed y represent the imposition of ordering, a form of censoring, in the mapping of y^* onto y. Rather than ignoring this feature of the data, it is useful to exploit the ordinality of the political terror scale to better understand the use of repression through time. We first confront appropriate models for ordered phenomena.

3.2 An Ordered Model

We must now define a mechanism for differentiating the categories. Define $J + 1$ threshold parameters, $\mu \in \{\mu_0, \mu_1, \ldots, \mu_J\}$, where the elements in μ are a strict order ($\forall j \in J, \mu_j > \mu_{j-1}$) $\mu_0 = -\infty$ and $\mu_J = \infty$. Assuming some cumulative distribution, F [and the associated probability mass function f], for the observed y, we can write the probability that $y = j$,

$$Pr(y = j|X\beta) = \pi_j = \int_{\mu_{j-1}}^{\mu_j} f(y^*|X\beta)dy^*. \tag{2}$$

Defining,

$$y_j = \left\{ \begin{array}{cc} 1 & \text{if } y = j \\ 0 & \text{otherwise,} \end{array} \right\} \tag{3}$$

[10]This obtains because $E[\epsilon] = 0$ by construction. As a result, the expected value of y is simply $X\beta$.

and recalling that $\pi_j = 1 - \pi_1 - \ldots - \pi_{j-1}$, we can write the likelihood as,

$$L(\beta|y, X) = \prod_{i=1}^{J} \pi_1^{y_1} \cdot \pi_2^{y_2} \cdot \ldots \cdot (1 - \sum_{k=1}^{J-1} \pi_k)^{y_j}. \tag{4}$$

The log likelihood can be formed from (4) generating

$$lnL(\beta, \mu \mid y, X) = \sum_{j=1}^{J} \sum_{y_i=j} ln[F(\mu_j - X\beta) - F(\mu_{j-1} - X\beta)] \tag{5}$$

which Madalla (1983, 48-49) shows converges to a global maximum using the Newton-Raphson algorithm. Furthermore, assuming a well-specified model, the resulting estimates are consistent and asymptotically efficient. To ensure that the model is well-specified, we must define a mechanism for capturing the temporal dependence of these ordered variables.

3.3 An Ordered Markovian Model

Markov models are surprisingly simple and treated in a variety of econometrics texts, e.g. Amemiya (1985). To specify our model, we need to focus on $X\beta$. While X generally consists of exogenous and predetermined covariates, the Markov model incorporates lagged values of the dependent variable in a way similar to the work of Beck and Katz (1995, 1996). The crucial difference is that the dependent variable is not continuous and the lagged dependent variable is also discrete.

Recalling a J category dependent variable, the lagged dependent variable also has J categories. To appropriately capture the relationship between the present and past, define J dummy variables $z_1 \ldots z_j$. For Beck and Katz (1995, 1996) [and Poe and Tate (1994), Poe, Tate and Keith (1999), and Davenport and Armstrong (2004)], a single row of X consists of k truly exogenous regressors and y^*_{t-1} where t indexes time. The Markovian framework is identical except that a single row of X now consists of k truly exogenous regressors and $J - 1$ of the J dummy variables (denoted z) capturing the effects of previous states.[11] In simple terms, the regression equation can be stated as

$$y = f(x_1, \ldots, x_k, z_2, \ldots, z_J)$$

In the previous section, we argued that the effects of democracy depend on the prior value of repression. Because democracy only influences

[11] Only $J - 1$ dummy variables can be included if X is to be of full rank.

y above through a single linear term, this model is insufficiently flexible to capture our hypothesized effects. Fortunately, the Markovian framework is sufficiently flexible that it can be adapted to test interactions between democracy and past repression.[12] To make this point clearly, let us further unpack X. As it stands, $X = \{x_1, \ldots, x_k, z_2, \ldots, z_J\}$. Let us arbitrarily label democracy as x_k. Then, $X = \{x_1, \ldots, x_{k-1}, democracy, z_2, \ldots, z_J\}$. Analogous to a regression model with multiplicative interactions, rewrite $X = \{x_1, \ldots, x_{k-1}, democracy, democracy * z_2, democracy * z_3, \ldots democracy * z_J, z_2, \ldots, z_J\}$. Now the effect of democracy depends on the prior state. So, for example, we can interpret a regression coefficient on *democracy* as the effect of democracy when the prior state is z_1.[13] If we wish to know the effect of democracy when the prior state is z_2, (in the metric of the latent variable), this can be inferred from the coefficient on *democracy* plus the coefficient on *democracy* $* z_2$. Because the model can be estimated by maximum likelihood, likelihood-ratio and Wald tests can be used to test whether or not state dependent effects of *democracy* are equal to zero.

Returning to Maddala's result regarding consistent and asymptotically efficient estimation, we must have a well-specified model. We first confront the measure of democracy. We employ the Polity 4 indicator of democracy ranging from zero to ten. Polity measures authority patterns and the Polity democracy measure is a composite of variables measuring the openness and competitiveness of executive recruitment, the degree of constraint on the exercise of executive authority, and regulations on political participation. While other measures are available, this measure is chosen because it is widely used in the literature, facilitating appropriate comparisons with past research, and because it is available for the broadest array of countries through time.

To fully specify the model, we have scoured prior literature for additional controls. In general, the literature suggests that economic development, economic growth, the size of a country's population, the change in the population, and involvement in civil and international wars are important determinants of human rights abuses. Relying on the International Monetary Fund's *International Financial Statistics*, we are able to measure economic development and growth and the size of a country's population (from which it is straightforward to calculate the change in population). Furthermore, the PRIO/Uppsala project has measured civil wars, internationalized civil wars, interstate wars, and other forms of violent conflict. To follow previous literature, we employ their measures of interstate, civil,

[12] Indeed, standard practice in estimating Markovian models of this sort is to allow the exogenous variables to have effects that depend on the prior state.

[13] Because z_1 is omitted from the regression.

and internationalized civil war. The resulting model is remarkably similar to that estimated by Davenport and Armstrong (2004). The resulting dataset contains over 3300 observations between 1976 and 2003 on 180 countries.

4 Testing the Model

We test our theoretical claims by estimating an ordered Markovian model as specified above using the data reported in the previous paragraph. The final issue is the measures of human rights to be studied. To examine the robustness of our theoretical claims, we test them using the commonly employed political terror scale and cross-validate the results using data on the incidence of particular human rights abuses compiled by Cingranelli and Richards (1999). We first turn to an examination of democracy and the political terror scale.

4.1 Political Terror Scales

Recalling that the political terror scale ranges from one to five where one represents almost no human rights abuses and five represents society-wide terror, we distinguish categories one through three from categories four and five. In PTS categories one through three, political competitors are the targets of repression while in categories four and five, targets are either becoming or are the mass public. Translating the hypotheses of the previous section, we should expect democracy to have no effect on human rights abuses given past values of four or five, but a net negative effect in categories one through three. Table 2 and Table 3 report estimates of an ordered Markovian probit model. We take these tables in turn.

4.1.1 Amnesty International Reports

Table 2 reports the results for the political terror scale coded from Amnesty International Reports: $\hat{\beta}$ is the estimated coefficient while the robust standard error appears in the third column. Overall, the model fits the data well; the likelihood that all coefficients are truly zero is almost zero ($\chi^2_{16} = 1384$ and almost all of the individual regressors are statistically different from zero. The cutpoints separating the discrete categories ($\mu_1 \ldots \mu_4$) are a strict order and, interpreting their standard errors, are statistically differentiable

from one another. In short, the model provides a nice fit for the data.[14]

Turning to the individual regressors and reading down the rows, we see what we would expect regarding the past values of repression. The expected level of repression is lowest when the past value is two and the expected level of repression is consistently increasing at higher past values. Skipping the effect of democracy for a moment, we see that civil wars increase human rights abuses about twice as much as internationalized civil wars, while international wars fail to significant increase human rights abuses. Consistent with previous literature, economic development discourages human rights abuses while countries with larger populations engage in more human rights abuses, all other things equal.

Examining our central claim, we see that the Polity 4 measure of democracy is statistically and substantively significant and generally reduces human rights abuses. Examining the interactions with prior levels of human rights abuses, the effects appear to cluster. With the lowest level of past repression, democracy has a strong negative effect. In countries with low and medium levels of past repression, democracy still limits human rights abuses, but the effects are severely attenuated. In countries with relatively high and high levels of past repression, we find an interacted coefficient that is larger (in absolute value) than the raw effect of democracy. This implies that increases in the Polity 4 democracy score, in states with high levels of past repression, either increases or has no effect on the level of human rights abuses. These results contradict past literature and are uniquely explained by our theoretical differentiation between competitors and mass publics. When mass publics have been repressed, democracy no longer inhibits human rights abuses because this past repression disrupts the centrality of elections and mass participation as instruments of democracy.

To further verify the veracity of our theoretical perspective, we report the results of a likelihood-ratio test of no markovian effects. This test compares the null hypothesis that the effect of democracy is independent of the prior state against the alternative hypothesis that the effect of democracy depends on past levels of repression. The result ($\chi^2 = 68.5$) provides strong evidence that the Markovian model provides a better fit than previous efforts, but contradicts the theoretical claims in the extant literature. With this support for our claims in mind, we replicate the analysis using State

[14]Before turning to the results, a note on interpretation is in order to avoid potential misconceptions. The Markovian Ordered Probit models tell us, conditioned on a prior level of personal integrity abuses, whether higher (or lower) democracy leads to lesser, greater, or no effect on present abuses in comparison with the baseline. Put plainly, we address the relationship between democracy and human rights abuses, not democratization (though democratization is a counter-factual inference that can be culled from the results).

Department derived political terror scales.

Table 2: Ordered Probit: Amnesty International Reports

Variable	$\hat{\beta}$	**S.E.**
Lag AI=2	0.939**	0.189
Lag AI=3	1.897**	0.200
Lag AI=4	2.838**	0.225
Lag AI=5	3.894**	0.275
Polity 4 Democracy	-0.141**	0.023
Polity*Lag AI=2	0.091**	0.025
Polity*Lag AI=3	0.110**	0.025
Polity*Lag AI=4	0.158**	0.029
Polity*Lag AI=5	0.154**	0.046
Civil Wars	0.779**	0.093
International Wars	0.325	0.229
Int. Civil Wars	0.307*	0.137
ΔGDP	-0.007	0.004
log(GDP per capita)	-0.102**	0.024
ΔPopulation	0.001	0.018
log(Population)	0.139**	0.020
μ_1	0.898*	0.356
μ_2	2.810**	0.363
μ_3	4.323**	0.377
μ_4	5.835**	0.405

N	3223
Log-likelihood	-2828.409
$\chi^2_{(16)}$	1384.31
H_0: No Markovian Effects	
LR Test: $\chi^2_4 = 68.5, p = 0.0000$	

Significance levels : † : 10% * : 5% ** : 1%

4.1.2 State Department Reports

Table 3 reports the results for the political terror scale coded from Amnesty International Reports. Identical in structure to the previous table, we see that the model provides a nice fit to the data insofar as the likelihood that all coefficients are zero is nil, the individual coefficients are, for the most part, statistically differentiable from zero, and the cutpoints between the

discrete categories are statistically differentiable from one another and form a strict order. We now turn to the individual coefficients, leaving aside the effects of democracy, for a moment.

Providing intuitive evidence supporting the specification of the model, higher levels of past abuse translate to higher levels of present abuse, all other things equal. Civil wars lead to significant increases in human rights abuses with slightly greater magnitude than internationalized civil wars, though both are substantively meaningful. International wars have no statistically significant effect. Once again, countries with larger populations are more repressive, all other things equal, while countries with higher levels of economic development (proxied by the natural log of GDP per capita) are less repressive. In this equation, countries with faster growing populations tend to be less repressive, though this variable has no effect on Amnesty International reports. Overall, the results are generally consistent across political terror scales derived from both Amnesty International and State Department reports. With this consistency in mind, we turn to the effects of political democracy.

The Polity 4 measure of democracy is statistically and substantively significant and generally reduces human rights abuses. Examining the interactions with prior levels of human rights abuses, the effects appear to cluster, though slightly differently. With the lowest level of past repression, democracy has a strong negative effect. In countries with low levels of past repression, democracy still limits human rights abuses, but the effects are severely attenuated. In countries with medium, relatively high, and high levels of past repression, we find a net effect that is roughly zero. This implies that increases in the Polity 4 democracy score, in states with medium and high levels of past repression, has no effect on the level of human rights abuses. Once again, we find evidence supporting our central theoretical claims. When mass publics have been repressed, democracy no longer inhibits human rights abuses.

To summarize these tests of our central claim, in Table 4, we report a series of Wald χ^2 tests of the null hypothesis that democracy has no effect on human rights abuses by the lagged level of political terror. For countries with low levels of past repression, we can strongly reject the hypothesis that democracy has no effect; democracy still inhibits the abuse of human rights. When we move to medium levels of past repression, the results are mixed leading us to conclude that there is no strong relationship between democracy and human rights abuses at medium and higher levels of repression. Most importantly, there is no evidence to contradict our central theoretical claim, democracy has no impact on human rights abuses at the highest levels of past repression. To conclude this analysis of the political terror scale,

Table 3: Ordered Probit: State Department Reports

Variable	$\hat{\beta}$	**S.E.**
Lag SD=2	1.144**	0.160
Lag SD=3	2.212**	0.187
Lag SD=4	3.416**	0.212
Lag SD=5	4.648**	0.283
Polity 4 Democracy	-0.136**	0.021
Polity*Lag SD=2	0.085**	0.023
Polity*Lag SD=3	0.127**	0.027
Polity*Lag SD=4	0.131**	0.028
Polity*Lag SD=5	0.139*	0.055
Civil Wars	0.833**	0.098
International Wars	0.161	0.206
Int. Civil Wars	0.622**	0.132
ΔGDP	-0.006	0.004
log(GDP per capita)	-0.141**	0.024
ΔPopulation	-0.032*	0.015
log(Population)	0.135**	0.020
μ_1	0.738*	0.316
μ_2	2.722**	0.330
μ_3	4.472**	0.337
μ_4	6.108**	0.361

N	3223
Log-likelihood	-2507.305
$\chi^2_{(16)}$	1468.319
H_0: No Markovian Effects	
LR Test: $\chi^2_4 = 40.7, p = 0.0000$	

Significance levels : † : 10% * : 5% ** : 1%

H_0: Net Effect of Democracy is Zero.

		AI	SD
Interaction	Lag=2	26.66, 0.00	18.35, 0.00
Interaction	Lag=3	7.68, 0.01	0.33, 0.57
Interaction	Lag=4	1.32, 0.25	0.08, 0.77
Interaction	Lag=5	0.24, 0.63	0.00, 0.96

Cells report: χ^2 with 1 degree of freedom, P-value

Table 4: Wald Tests: Markovian Effects of Democracy on Human Rights

we turn to a set of graphical depictions of the relationship in Figures 1 and 2.

Figures 1 and 2 display the effects of democracy on political terror by past level of political terror. The vertical axis measures changes in the Polity 4 democracy score, while the horizontal axis reports the probability that a country with median values on all of the other regressors would witness abuse at the discrete values of the political terror scale. For example, in the top left panel of Figure 1, we see that increases in the level of democracy imply increasing likelihoods of the lowest levels of abuse. In the top middle and top right panels, we see a relatively weak effect of increases in democracy though, in general, democracy still decreases the incidence of human rights abuses given these past levels of repression. The bottom two panels ferret out our central theoretical claim, at high and maximal levels of past abuse, democracy has no effect on the level of repression. In Figure 2, we see the same general patterns. For countries with virtually no prior abuse [top left panel], democracy significantly inhibits the incidence of human rights abuses. The top middle and top right panels show a severe attenuation of this effect with low and medium levels of past abuse. In the bottom two panels, we see further support for our central claim, at high and maximal levels of past abuse, democracy has no effect on current human rights abuses. With this support for our theoretical expectations in mind, we reanalyze Davenport's claim of a threshold relationship between democracy and human rights abuses.

4.1.3 Reexamining Davenport and Armstrong's Trichotomy

Davenport and Armstrong (2004) argue that the linear relationship between democracy and human rights abuses is problematic. Instead, using a linear binary decomposition and the theoretical invocation of thresholds, they argue that countries must become "sufficiently democratic" for the pacific

Figure 1: State Dependent Effect of Democracy on Amnesty Intl. Reports

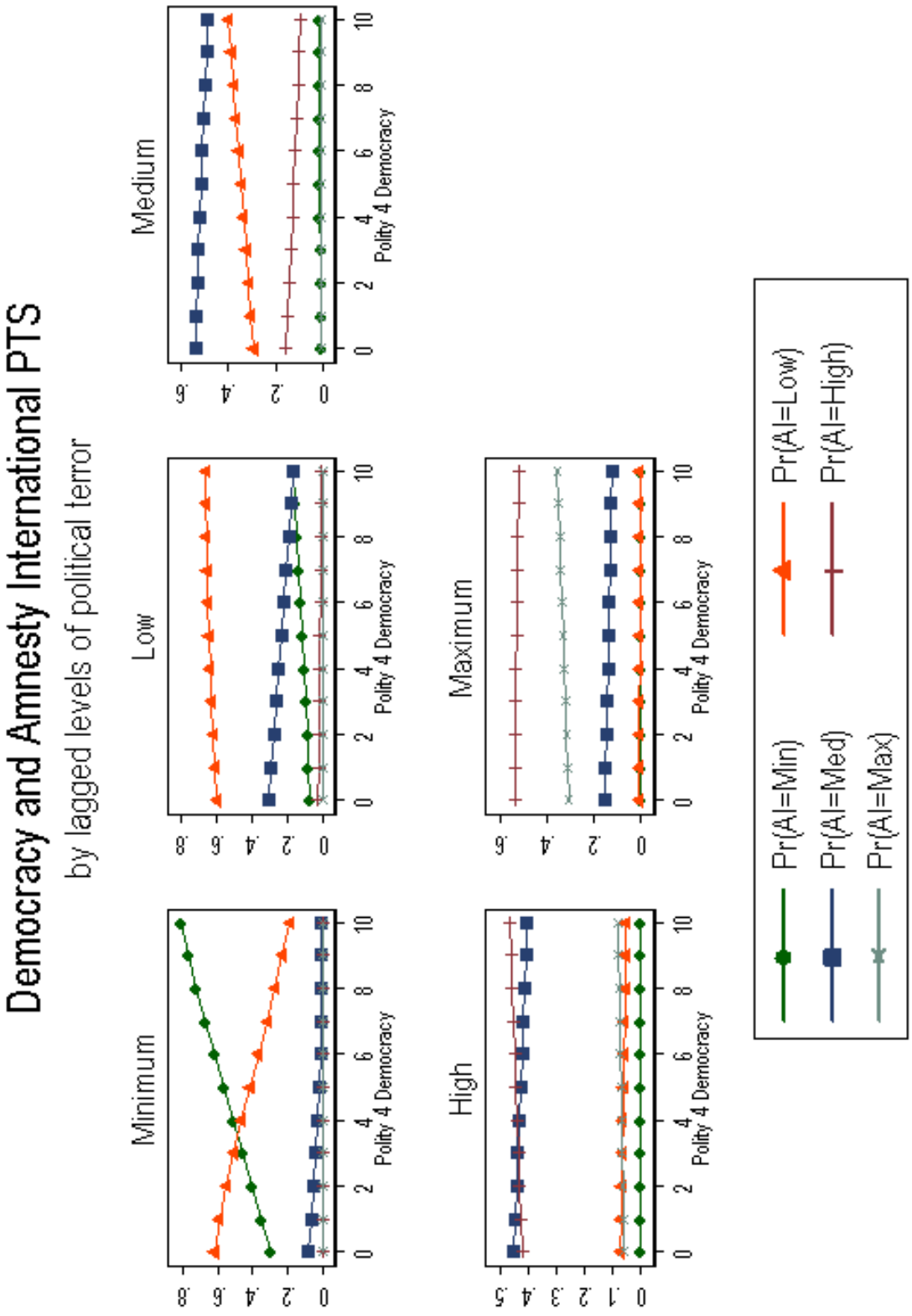
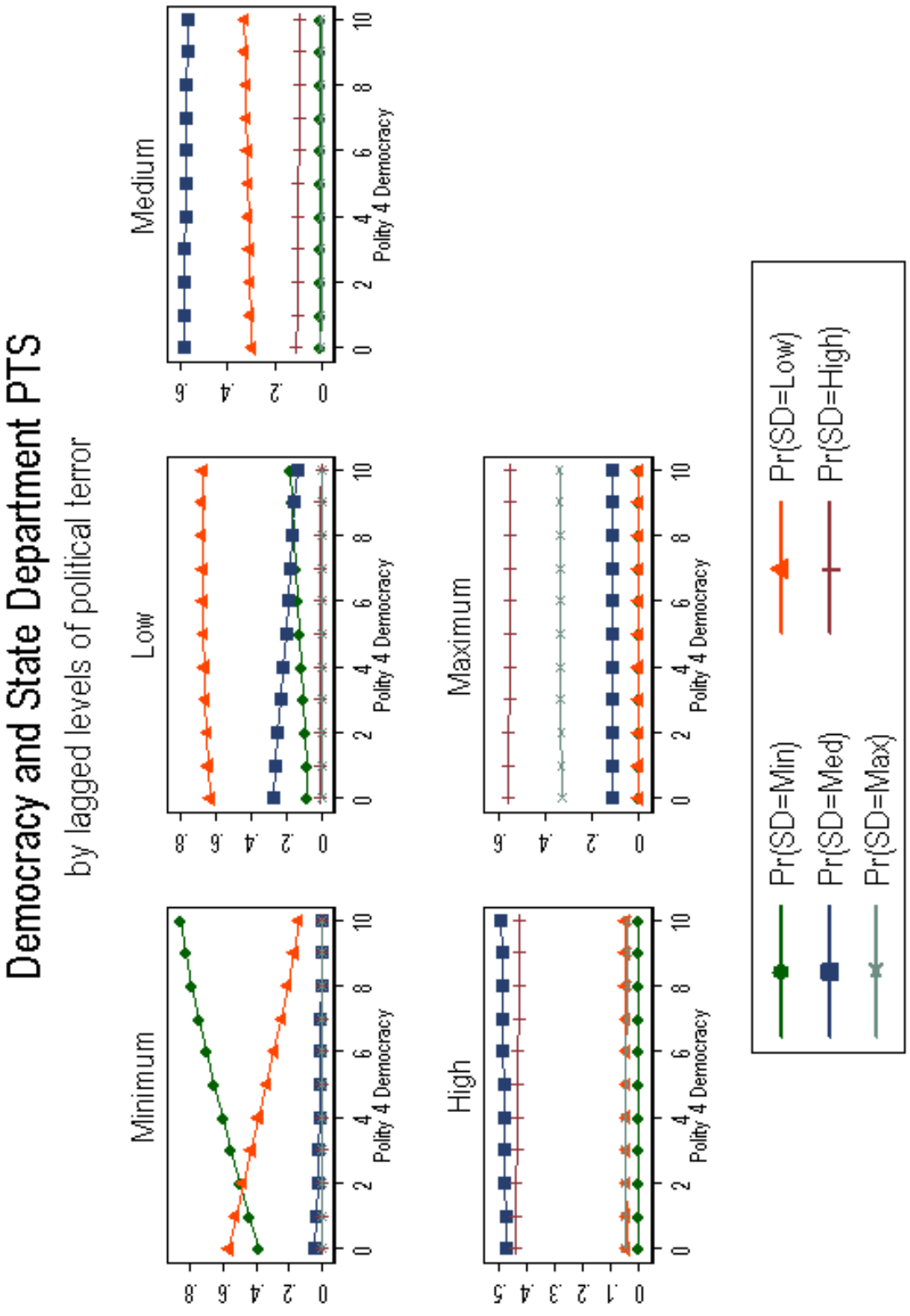


Figure 2: State Dependent Effect of Democracy on State Dept. Reports



effects of democracy on human rights to emerge. Their research identified two important thresholds. The first, where Polity scores are eight or nine, represents the first point at which democracy is said to decrease human rights abuses. The second, Polity's most democratic countries (Polity democracy equals 10), is said to robustly discourage the employment of political terror.

Because their analysis is based on roughly the same data, it is straightforward to reanalyze this claim. We expect, as before, that at the highest levels of previous abuse, democracy should have no effect on current abuses of basic personal integrity rights. At a minimum, there should be significant variation in the effect of these thresholds of democracy that depend on past levels of human rights abuses. To this reanalysis, we now turn.[15]

In the interests of space, these results are reported in an appendix. We summarize the findings of central importance in Table 5 with a series of Wald tests, mirroring Table 4. The upper block of results reports the effects of the first threshold interacted with prior abuse, in the left columns for Amnesty International reports and the right columns for State Department reports. The lower block of results reports the effect of maximal democracy on political terror conditioned on the prior level of abuse.

Table 5 makes clear that the thresholds of Davenport and Armstrong (2004) do not have consistent effects across levels of past abuse. For example, at low levels of prior abuse, both thresholds exhibit statistically and substantively important decreases on the incidence of political terror. However, at all but the lowest levels of prior abuse, their thresholds have little pacifying impact on political terror. Indeed, only for the lowest levels of abuse can democracy be said to decrease political terror. The rest of the effects are zero with one interesting exception. Most surprisingly, though not inconsistent with our central claims, the results for Amnesty International reports suggest that the highest threshold of democracy (Polity = 10) **increases** rather than decreases the incidence of human rights abuses. This directly and strongly contradicts the arguments in Davenport and Armstrong (2004), but is not inconsistent with our arguments. This provides further evidence consistent with our theoretical claims. While not wishing to belabor this point, we have a result that no previous perspectives can explain, providing strong support for our view that the effect of democracy on human rights abuses critically depends on past history. As a final and important

[15] An advance note is in order. The highest levels of prior abuse do not coexist with maximal democracy for State Department reports and only coexist with maximal democracy for Amnesty International reports in a single case: Israel in 2003. Because a dummy variable to capture a single case confounds estimation, we fold this case into those with high (but not maximal) levels of prior abuse.

Wald Tests of Markovian Effects
H_0: Democracy has no effect.

Lag Value	Amnesty Intl. PTS		State Dept. PTS	
	χ^2	p-value	χ^2	p-value
Trichotomy = 1[Polity 4 Democracy = 8,9]				
Lag = 2	6.29	0.01	10.75	0.001
Lag = 3	0.33	0.56	0.05	0.82
Lag = 4	0.19	0.66	1.45	0.23
Lag = 5	0.01	0.94	0.07	0.8
Trichotomy = 2[Polity 4 Democracy = 10]				
Lag = 2	47.76	0	36.07	0
Lag = 3	**3.8**	**0.05**	0.04	0.85
Lag = 4	**4.94**	**0.03**	0.15	0.69
Lag = 5				

Effect takes the wrong sign: Democracy increases abuse.

Table 5: State Dependence and the Trichotomy

cross-validation, we now examine our claims on data on specific types of human rights abuses: disappearances, political imprisonment, extrajudicial killing, and torture.

4.2 Cingranelli and Richards Data

David Cingranelli and David Richards have undertaken an impressive effort at providing disaggregated ordinal measures of the specific types of abuses, extending the earlier work of McCormick and Mitchell (1997). In particular, Cingranelli and Richards have measured a host of types of human rights. As a result, we have focused on the elements used to construct the more general Political Terror Scales that we have previously analyzed: disappearances, political imprisonment, torture, and extrajudicial killing and we rely on the same analytical model, attempting to falsify the theoretical arguments relying on new measures of human rights abuses. While this seems relatively straightforward, there are reasons to be at least a bit skeptical. First, it is not obvious that these particular types of abuse are not

mere substitutes for one another. Such substitution effects would render the results for individual types of abuse inconsistent simply because movements in the individual indicators need not reflect broader increases and decreases in abuse. That said, there is a surprising level of consistency to the following results.

Before turning to this analysis, we must examine two important caveats. First, the scales for all of these subset measures of personal integrity abuses range from zero to two where zero represents the highest levels of abuse, one represents occurrences of the particular abuse, and two represents no such abuses. Put simply, the scale ranges from zero to two and runs from highest to lowest levels of abuse. Thus, the signs of the previous results should be inverted. We will briefly describe the phenomenon being measured before presenting the results. First, we turn to disappearances.

4.2.1 Disappearances

Throughout the world, individuals disappear at the hands of political authorities. In an effort to understand the determinants of political disappearances, it is necessary to construct a model of the dynamics of disappearances. Before turning to the substance of the analysis, we briefly recount the exact nature of the disappearances under study.

> Disappearances are cases in which people have disappeared, political motivation appears likely, and the victims have not been found. Knowledge of the whereabouts of the disappeared is, by definition, not public knowledge. However, while there is typically no way of knowing where victims are, it is typically known by whom they were taken and under what circumstances.
> (Cingranelli and Richards 2004, p.1)

With this in mind, we turn to the determinants of disappearances reported in Table 6.

Overall, the model fits the data well. The model χ^2 of 1211 is statistically significant to the level of computer precision, implying that it is extraordinarily unlikely that all coefficients are equal to zero. The cutpoints are well-spaced and can be differentiated from each other with high confidence. Furthermore, the likelihood-ratio test of no markovian effects rejects the hypothesis at conventional levels. Turning to the coefficient estimates, more disappearances in the previous period increase the likelihood of more disappearances in the present. Civil wars have a statistically significant and

Table 6: Ordered Markov Model: Disappearance

Variable	Coefficient	Std. Err.
Lag Disappearance=0	-1.896**	0.164
Lag Disappearance=1	-1.020**	0.116
Civil Wars	-0.864**	0.101
International Wars	0.355	0.351
Int. Civil Wars	-0.368**	0.126
Polity 4 Democracy	0.029†	0.015
Lag Disapp.=0*Democracy	-0.064	0.044
Lag Disapp.=1*Democracy	-0.038†	0.022
log(Population)	-0.128**	0.026
Δ Population	-0.031	0.027
log(GDP per capita)	0.135**	0.032
Δ GDP	0.011†	0.006
μ_1	-3.421**	0.531
μ_2	-2.261**	0.516

N	2701
Log-likelihood	-1250.582
$\chi^2_{(12)}$	1211.353
H_0: No Markovian Effects	
LR Test: $\chi^2_2 = 8.5, p = 0.01$	

Significance levels : $\dagger$: 10% $*$: 5% $**$: 1%

substantively impact on disappearances – civil wars make disappearances more likely. Internationalized civil wars have a similar effect in sign, but of a considerably lesser magnitude. International wars have no statistically discernible effect. Consistent with results for the political terror scale, countries with larger populations are more likely to have higher levels of disappearance, while wealthier countries are less likely to witness politically motivated disappearances. With these findings in mind, we turn to the effect of democracy on disappearance.

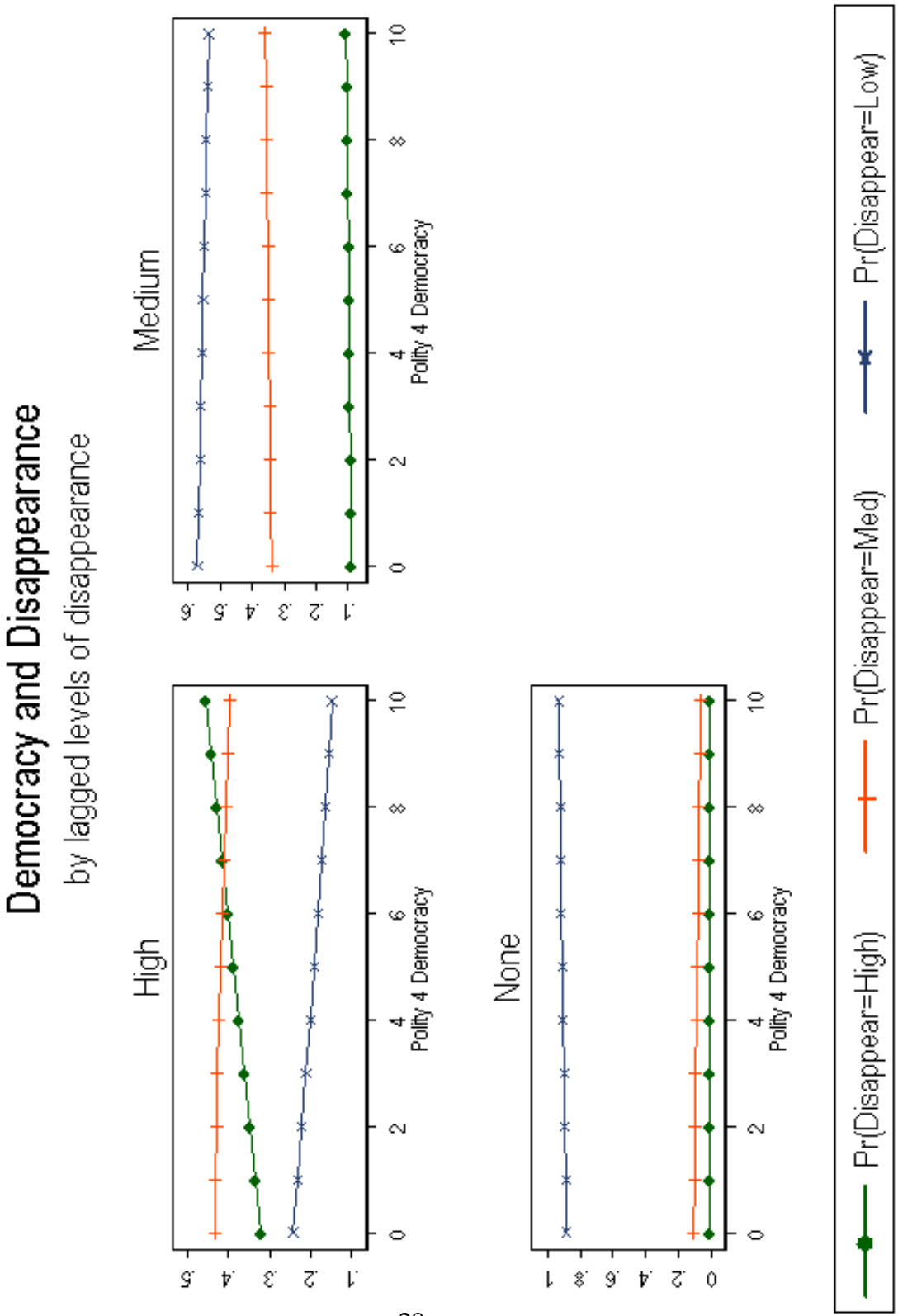
Democracy, all other things equal, weakly decreases the likelihood of disappearances. When interacted with prior disappearance levels, we see a similar pattern to the estimates on the political terror scale. For countries with the highest lag levels of disappearances, we fail to reject the null hypothesis that democracy has no effect on current disappearances (Wald χ^2 = 2.05, p=.15). Furthermore, the absolute size of the estimate for countries with the highest lag levels is greater than the raw effect; there is weak evidence that democracy encourages rather than suppresses current disappearances when past disappearances are at their highest level. This result is borne out in the top left panel of Figure 3 where the probability of the highest level of disappearances is increasing as Polity 4 democracy increases. In that same panel, we also see that the probability of no disappearances is decreasing as political democracy increases. For medium lagged levels of disappearances, democracy has no discernible impact on political disappearances. In countries with no past disappearances, there is an extremely high probability of no disappearances in the present period and democracy only minimally improves the prospect of no disappearances. In general, these results are consistent with our expectations and provide further evidence that the relationship between democracy and human rights abuses critically depends on past history. With this in mind, we turn to political imprisonment.

4.2.2 Political Imprisonment

Imprisonment occurs, throughout the world, for reasons that range from violations of the law to simple violations of the sensibilities of political leaders. Throughout the world, imprisonment is often seen as an effective political tool for silencing political opposition. As a result, the incidence of political imprisonment has been measured as a vital component of government deprivations of liberty. Formally, Cingranelli and Richards invoke the following operational definition.

> Political imprisonment refers to the incarceration of people

Figure 3: State Dependent Effect of Democracy on Disappearances



by government officials because of: their speech; their non-violent opposition to government policies or leaders; their religious beliefs; their non-violent religious practices including proselytizing; or their membership in a group, including an ethnic or racial group.
(Cingranelli and Richards 2004, p.1)

Table 7: Ordered Markov Model: Political Imprisonment

Variable	Coefficient	Std. Err.
Lag Pol. Imprison.=0	-2.004**	0.134
Lag Pol. Imprison.=1	-1.024**	0.117
Civil Wars	-0.530**	0.150
International Wars	-0.025	0.229
Int. Civil Wars	0.022	0.131
Polity 4 Democracy	0.122**	0.015
Lag Pol. Impris.=0*Democracy	-0.054*	0.024
Lag Pol. Impris.=1*Democracy	-0.023	0.024
log(Population)	-0.171**	0.027
Δ Population	-0.042†	0.023
log(GDP per capita)	0.053†	0.030
Δ GDP	0.003	0.004
μ_1	-3.879**	0.441
μ_2	-2.421**	0.433
N	2694	
Log-likelihood	-1772.184	
$\chi^2_{(12)}$	2280.644	
H_0: No Markovian Effects		
LR Test: $\chi^2_2 = 8.5, p = 0.01$		

Significance levels : † : 10% * : 5% ** : 1%

Turning to an analysis of political imprisonment, we find that political imprisonment appears to engage qualitatively dynamics and determinants than other forms of abuse. In general, the model fits the data reasonably well, the cutpoints are a proper order and are well spaced, implying that the model well differentiates the categories. Furthermore, the lagged levels of imprisonment are appropriately ordered implying that high past levels of imprisonment make present imprisonment more likely. Highlighting differences with prior estimates, civil wars are the only form of overt conflict that influences imprisonment, though it does so in predictable ways. Fur-

thermore, larger and faster growing populations encourage imprisonment while economic development weakly discourages political imprisonment.

Turning to the effects of democracy on imprisonment, increasing levels of democracy seem to decrease the likelihood of political imprisonment for each past level of imprisonment. Most clearly displayed in Figure 4, we see that for all past levels of imprisonment, countries that become more democratic tend to engage in less political imprisonment. For example, in the top two panels, the probability of high levels of imprisonment is decreasing as democracy increases. Similarly, in the top right and bottom left panels, we see that as democracy increases, the likelihood of the lowest levels of political imprisonment increases. Unlike all the analyses reported to this point, political imprisonment appears to behave exactly as the previous literature has argued. While a variety of potential explanations for this finding could be presented, the palpable lack of understanding regarding leader's motivations for the choice of particular repressive techniques leaves an open question for future research. We now turn to a description of the determinants of torture.

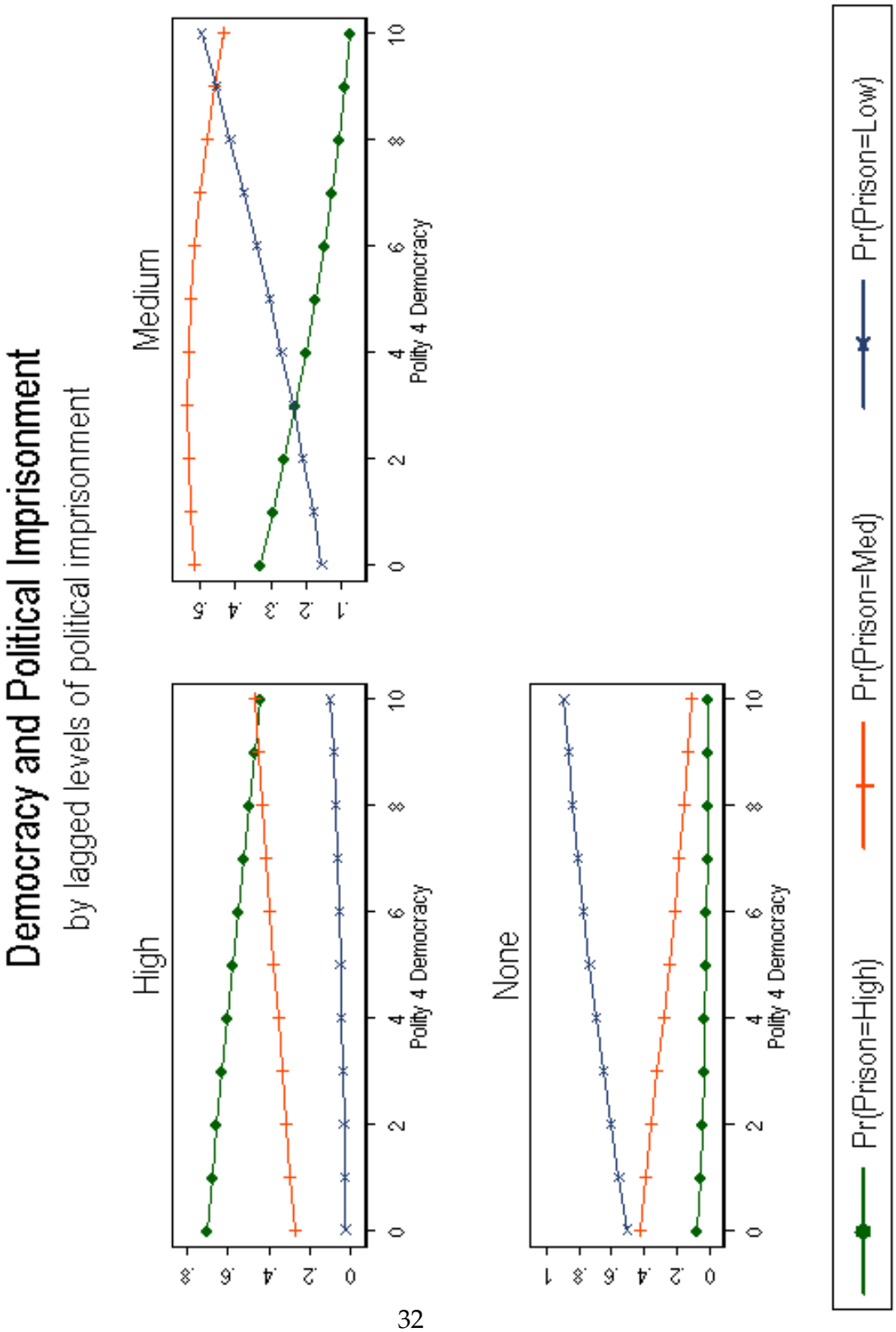
4.2.3 Torture

Torture has a long history as tool of political repression. In Latin America throughout the 1980s and even in much of modern Africa, torture was and remains a powerful and inherently political tool. Recognizing the centrality of the prevention of torture to any reasonable conception of human rights, Cingranelli and Richards have measured the incidence of torture employing the following operational definition.

> Torture refers to the purposeful inflicting of extreme pain, whether mental or physical, by government officials or by private individuals at the instigation of government officials. Torture includes the use of physical and other force by police and prison guards that is cruel, inhuman, or degrading. This also includes deaths in custody due to negligence by government officials.
> (Cingranelli and Richards 2004, p.1)

Applying our theoretical framework relating democracy and past history, we find that torture behaves in a fashion consistent with previous findings, with a few interesting caveats. In general, the model fits the data rather well. The cutpoints are well spaced and the lagged values, taken by themselves, are a proper order. Supporting the general modelling strategy, we

Figure 4: State Dependent Effect of Democracy on Political Imprisonment



can reject the hypothesis of no markovian effects – that is, the coefficients on democracy do not differ by past history – can be rejected with high confidence. The model χ^2 is significant to the level of computer precision and the pattern of individual effects generally conforms to other indicators. For example, countries with larger populations are more likely to have higher levels of torture while wealthier countries tend to engage in significantly less torture. Civil wars and internationalized civil wars increase the incidence of torture, but surprisingly, international wars appear to statistically significantly decrease the incidence of torture. We now turn to the interaction of democracy and past history.

Table 8: Ordered Markov Model: Torture

Variable	**Coefficient**	**Std. Err.**
Lag Torture=0	-1.977**	0.166
Lag Torture=1	-1.086**	0.159
Civil Wars	-0.542**	0.127
International Wars	0.440*	0.219
Int. Civil Wars	-0.164	0.118
Polity 4 Democracy	0.053**	0.020
Lag Torture=0*Democracy	-0.054*	0.024
Lag Torture=1*Democracy	-0.022	0.023
log(Population)	-0.176**	0.021
Δ Population	0.010	0.022
log(GDP per capita)	0.152**	0.028
Δ GDP	0.001	0.005
μ_1	-3.221**	0.385
μ_2	-1.370**	0.390
N	2696	
Log-likelihood	-1950.123	
$\chi^2_{(12)}$	1735.024	
H_0: No Markovian Effects		
LR Test: $\chi^2_2 = 9.94, p = 0.007$		

Significance levels : † : 10% * : 5% ** : 1%

Figure 5 shows precisely the pattern of effects expected by the theory. For example, given highest levels of past torture [top left panel], democracy has no effect on the incidence of present torture. All three lines are parallel to the horizontal axis, suggesting democracy has no effect on torture given a significant past history of torture. By contrast, medium levels of past torture [top right panel] combine with democracy to produce some minimal decreases in present torture. These minimal decreases in present torture

are a significant attenuation of strong democratic pacification. That said, in countries that experienced no lagged torture, democracy exerts a powerful tendency to inhibit present abuses. As democracy increases [in the bottom left panel], the probability of no torture increases rapidly while the probability of both medium and high torture decrease significantly. In general, torture provides additional evidence in support of a differentiation in the effects of democracy on human rights abuses that critically depends on past history. With this in mind, we turn to the final set of estimates, an analysis of extrajudicial killing.

4.2.4 Extrajudicial Killing

Extrajudicial killing is among the most reprehensible of human rights abuses. The deprivation of life embodied in extrajudicial killing is among the most honored and widely respected of basic rights and the dynamics and determinants of state decisions to kill citizens are an important phenomenon to be understood. Our modelling effort proceeds by exploring the determinants of extrajudicial killings defined in the following way.

> Extrajudicial killings are killings by government officials without due process of law. They include murders by private groups if instigated by government. These killings may result from the deliberate, illegal, and excessive use of lethal force by the police, security forces, or other agents of the state whether against criminal suspects, detainees, prisoners, or others.
> (Cingranelli and Richards 2004, p.1)

Extrajudicial killings behave quite similarly to other measures of human rights abuses. Describing the overall model, there is an infinitesimal likelihood that all coefficients are zero. Furthermore, a series of intuitively pleasing results emerge lending further credence to this approach. For example, higher levels of past killing make present killing more likely. The cutpoints between discrete categories are well-spaced, though the standard errors are quite large. Supporting our modelling strategy, there is strong evidence of Markovian effects, or rather, strong evidence to reject the hypothesis of no Markovian effects. The pattern of individual effects is quite similar to those reported for other abusive practices.

As countries become more wealthy, they tend toward less abusive practices. For extrajudicial killing, this same result holds. In addition, countries with larger populations are more likely to have higher levels of extrajudicial killing. Population change is weakly associated with decreases in political

Figure 5: State Dependent Effect of Democracy on Torture

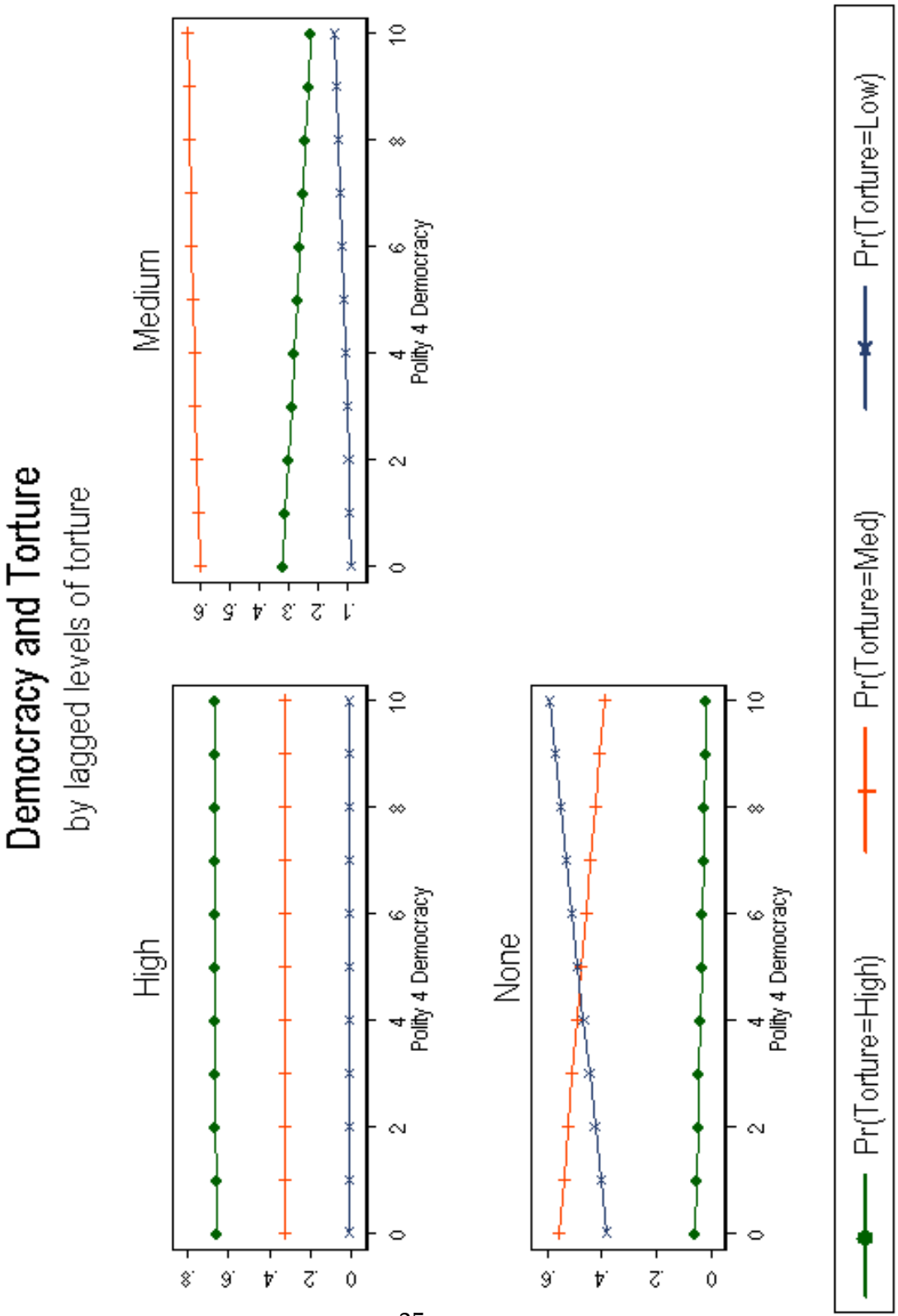


Table 9: Ordered Markov Model: Extrajudicial Killing

Variable	**Coefficient**	**Std. Err.**
Lag Kill=0	-0.709**	0.155
Lag Kill=1	-0.256*	0.109
Civil Wars	-0.362*	0.145
International Wars	0.398	0.245
Int. Civil Wars	-0.257*	0.129
Polity 4 Democracy	0.095**	0.016
Lag Kill=0*Democracy	-0.130**	0.030
Lag Kill=1*Democracy	-0.100**	0.020
log(Population)	-0.216**	0.030
Δ Population	0.065†	0.037
log(GDP per capita)	0.159**	0.042
Δ GDP	-0.007	0.006
μ_1	-2.508**	0.529
μ_2	-0.925**	0.539

N	2691
Log-likelihood	-1757.581
$\chi^2_{(12)}$	1891.396
H_0: No Markovian Effects	
LR Test: $\chi^2_2 = 27.51, p = 0.0000$	

Significance levels : † : 10% * : 5% ** : 1%

murder. Also consistent with previous findings, civil wars and internationalized civil wars increase extrajudicial killings and civil wars have a greater effect. With this in mind, we turn to an analysis of democracy, past history, and political murder.

Figure 6 reports the effect of democracy on extrajudicial killing conditioned by past levels of killing. The pattern conforms to theoretical expectations. Given high past levels of political murder [top left], democracy weakly encourages higher levels of current political murder (though we cannot reject the hypothesis that the effect is zero). In addition, medium past levels of killing [top right] interact with democracy to produce increases in higher levels of killing.[16] Only in cases where there was no prior extrajudicial killing [bottom left] do increasing levels of democracy correlate with lower levels of extrajudicial killing. This pattern of effects is consistent with theoretical expectations.

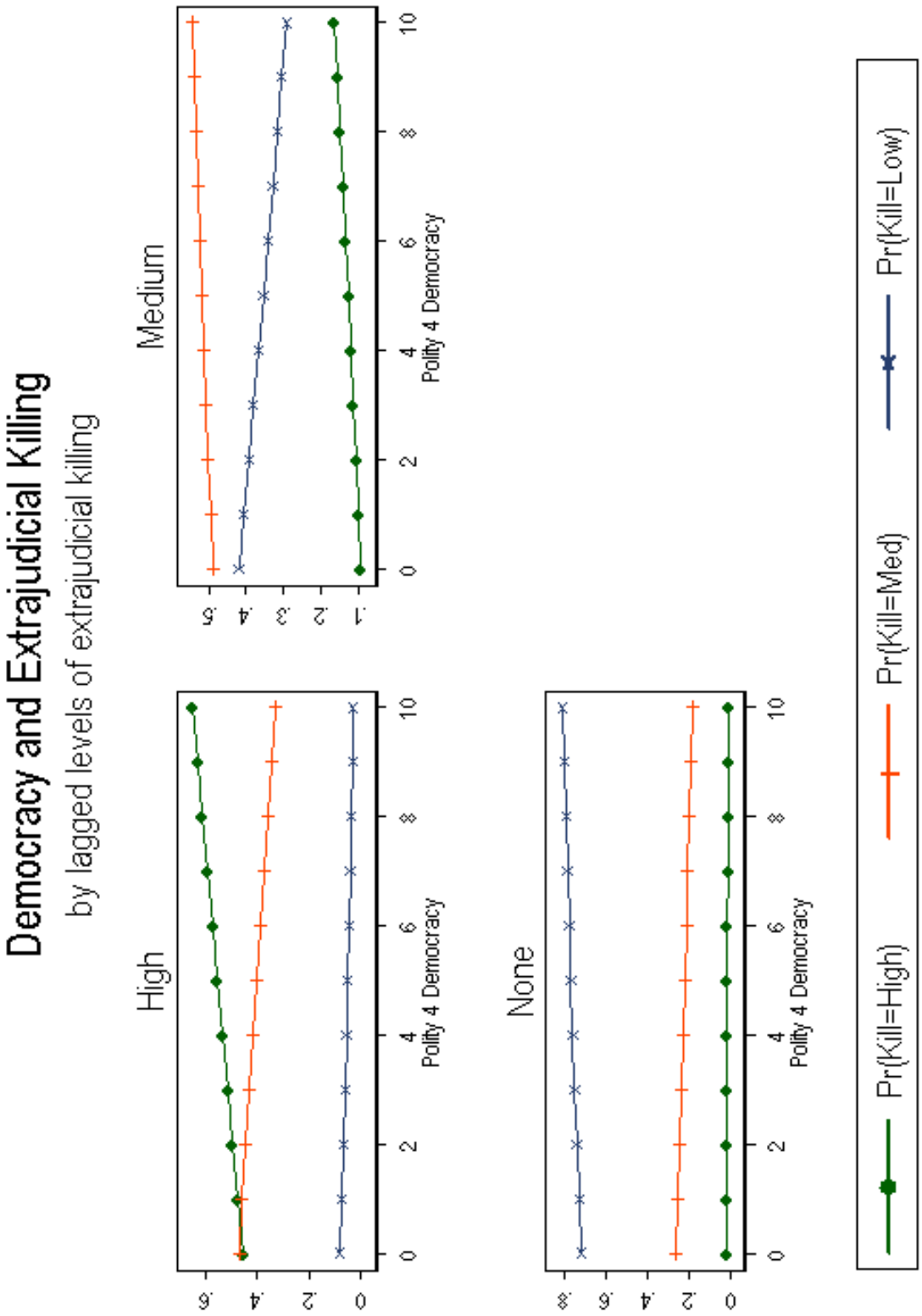
5 Concluding Remarks

To our knowledge, this is the most comprehensive investigation of the dynamic relationship between democracy, past history, and human rights abuses. Though it is widely agreed that democracy inhibits human rights abuses, we have provided a theory to explain why democracy and past history interact to both improve and have no effect on a country's human rights record. We have subjected this claim to scrutiny using both linear and threshold effects of democracy and have employed a host of varied measures of human rights abuses. For the political terror scale, in four different specifications, torture, extrajudicial killing, and disappearances, we find a strikingly similar pattern of effects that comports with our differentiation of effects. We have provided both a theory and evidence in support of the claim that democracy reduces human rights in a way that critically depends on past practice.

This investigation does raise a few questions. First, what is the functional relationship between different types of human rights abuses – extrajudicial killing, torture, disappearances, and political imprisonment? We can envision situations in which different tactics are both substitutable and complimentary. To answer this question requires clear attention to the goals of repression and the expected impacts of different methods of abuse. When combining all elements of abuse together, we cannot hope to understand the employment of varied strategies. Our focus on different strategies is a first

[16] We are unable to reject the hypothesis that the net effect is zero.

Figure 6: State Dependent Effect of Democracy on Extrajudicial Killing



step in encouraging scholarship to differentiate the determinants of different repressive techniques.

Second, we hope to have provided new models for investigating the dynamics of discrete human rights abuses. For reasons we have mentioned, variants of ordinary least squares are inappropriate for the analysis of ordered variables. Furthermore, the inclusion of lagged variables and panel corrected standard errors do nothing to remedy the underlying problem – extant measures are discrete not continuous. The methods we employ can be used to analyze a host of other dynamic problems involving panels of discrete data.

We have offered a significant qualification of almost universally agreed findings in the quantitative study of human rights. Democracy need not decrease human rights abuses. We have shown that the trichotomy of Davenport and Armstrong (2004) is equally susceptible to this critique as standard approaches which argue that any increase in the level of democracy correlates with decreasing levels of abuse. Of larger importance, this finding results from a focus on conditional relationships that depend on a dynamic process. Democracy has important, but conditional, influences on democracy.

These results suggest the gains to researchers of addressing the shortcomings of theories of repression: adding specificity to the conditions under which violations of personal integrity abuses occur. At the very least, this implies that researchers of this subject might be well advised to seriously consider the conditions under which governments repress and abuse mass publics and to spend greater time theorizing about the functional motivations for particular repressive measures. It is also likely that leaders undertake strategic calculations regarding the use of oppression as one among many tools for ensuring both domestic tranquility and survival in positions of political power. Understanding the determinants and interrelations among elements in the "repression toolbox" is a goal worthy of substantial effort.

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Table 10: Ordered Markov Model: Amnesty International PTS

Variable	Coefficient	Std. Err.
Lag AI=2	1.194**	0.106
Lag AI=3	2.134**	0.112
Lag AI=4	3.168**	0.128
Lag AI=5	4.226**	0.163
Tri-1 (Polity=8,9)	-0.543**	0.175
(Lag AI=Low)*Tri-1	0.288	0.200
(Lag AI=Med)*Tri-1	0.484*	0.202
(Lag AI=High)*Tri-1	0.601**	0.218
(Lag AI=Max)*Tri-1	0.564†	0.319
Tri-2 (Polity=10)	-1.307**	0.131
(Lag AI=Low)*Tri-2	0.529**	0.155
(Lag AI=Med)*Tri-2	0.560	0.401
(Lag AI=High)*Tri-2	2.035**	0.352
Civil Wars	0.802**	0.106
International Wars	0.370*	0.182
Int. Civil Wars	0.334**	0.124
Growth in GDP per capita	-0.008*	0.004
log(GDP per capita)	-0.073**	0.018
Chg. in Population	0.010	0.015
log(Population)	0.147**	0.015
μ_1	1.536**	0.285
μ_2	3.469**	0.290
μ_3	4.984**	0.297
μ_4	6.497**	0.304

N	3223
Log-likelihood	-2813.861
$\chi^2_{(20)}$	3801.002
H_0: No Markovian Effects	
LR Test: $\chi^2_7 = 42.61, p = 0.0000$	

Significance levels : † : 10% * : 5% ** : 1%

Table 11: Ordered Markov Model: State Department PTS

Variable	Coefficient	Std. Err.
Lag SD=2	1.327**	0.098
Lag SD=3	2.431**	0.108
Lag SD=4	3.680**	0.130
Lag SD=5	4.909**	0.175
Tri-1 (Polity=8,9)	-0.762**	0.160
(Lag SD=Low)*Tri-1	0.434*	0.184
(Lag SD=Med)*Tri-1	0.786**	0.192
(Lag SD=High)*Tri-1	0.577**	0.220
(Lag SD=Max)*Tri-1	0.672†	0.381
Tri-2 (Polity=10)	-1.297**	0.129
(Lag SD=Low)*Tri-2	0.484**	0.171
(Lag SD=Med)*Tri-2	1.233**	0.359
(Lag SD=High)*Tri-2	1.479**	0.478
Civil Wars	0.832**	0.109
International Wars	0.196	0.196
Int. Civil Wars	0.635**	0.130
Growth in GDP per capita	-0.007†	0.004
log(GDP per capita)	-0.117**	0.019
Chg. in Population	-0.023	0.016
log(Population)	0.143**	0.016
μ_1	1.288**	0.288
μ_2	3.283**	0.293
μ_3	5.034**	0.301
μ_4	6.668**	0.311

N	3223
Log-likelihood	-2496.92
$\chi^2_{(20)}$	4226.987
H_0: No Markovian Effects	
LR Test: $\chi^2_7 = 34.24, p = 0.0000$	

Significance levels : † : 10% * : 5% ** : 1%

Table 12: Ordered Markov Model: Amnesty International PTS [original]

Variable	Coefficient	Std. Err.
Lag AI=2	0.979**	0.255
Lag AI=3	1.948**	0.260
Lag AI=4	2.921**	0.275
Lag AI=5	4.163**	0.318
Polity 4 Democracy	-0.127**	0.029
Polity*Lag AI=2	0.054†	0.030
Polity*Lag AI=3	0.112**	0.032
Polity*Lag AI=4	0.161**	0.035
Polity*Lag AI=5	0.143**	0.048
Civil Wars	0.777**	0.131
International Wars	0.243	0.212
Int. Civil Wars	0.129	0.200
Growth in GDP per capita	-0.005	0.006
log(GDP per capita)	-0.050†	0.028
Chg. in Population	0.054†	0.032
log(Population)	0.102**	0.022
μ_1	0.615	0.487
μ_2	2.712**	0.490
μ_3	4.341**	0.498
μ_4	5.825**	0.507

N	1420
Log-likelihood	-1299.407
$\chi^2_{(16)}$	1457.813

Significance levels : † : 10% ∗ : 5% ∗∗ : 1%

Table 13: Ordered Markov Model: State Department PTS [original]

Variable	Coefficient	Std. Err.
Lag SD=2	1.157**	0.139
Lag SD=3	2.200**	0.153
Lag SD=4	3.413**	0.199
Lag SD=5	4.201**	0.272
Polity 4 Democracy	-0.174**	0.019
Polity*Lag SD=2	0.128**	0.021
Polity*Lag SD=3	0.168**	0.025
Polity*Lag SD=4	0.192**	0.031
Polity*Lag SD=5	0.222**	0.063
Civil Wars	0.805**	0.137
International Wars	0.336	0.238
Int. Civil Wars	0.612**	0.204
Growth in GDP per capita	-0.012*	0.005
log(GDP per capita)	-0.110**	0.027
Chg. in Population	-0.051†	0.028
log(Population)	0.130**	0.022
μ_1	0.879*	0.423
μ_2	2.834**	0.429
μ_3	4.603**	0.439
μ_4	6.100**	0.450

N	1770
Log-likelihood	-1315.25
$\chi^2_{(16)}$	2316.762

Significance levels : † : 10% * : 5% ** : 1%

		AI PTS					
		1	2	3	4	5	
	1	919	177	21	2	0	1,119
Lag	2	162	850	241	35	4	1,292
AI	3	12	260	715	140	17	1,144
PTS	4	1	25	168	296	82	572
	5	0	3	10	92	145	250
		1,094	1,315	1,155	565	248	4,377

Table 14: Amnesty International Reports: Basic Markov Matrix

				SD	PTS		
		1	2	3	4	5	
	1	1,128	192	14	1	0	1,335
Lag	2	163	838	240	23	3	1,267
SD	3	16	219	713	115	22	1,085
PTS	4	1	14	121	263	52	451
	5	0	1	16	61	161	239
		1,308	1,264	1,104	463	238	4,377

Table 15: State Department Reports: Basic Markov Matrix