A “Discrete” Critique of Discrete Regime Type Data

Matthew Wilson
Pennsylvania State University
mcw215@psu.edu

ABSTRACT:

What are the limitations of discrete regime type data? The attractiveness of these data for measuring authoritarianism warrants rigorous testing of their interchangeability and applicability. I scrutinized three discrete datasets on regime type provided by Cheibub et al. (2010), Hadenius and Teorell (2007), and Wright (2008). My assessment of the data was largely qualitative, focusing on checking the data regarding Latin American cases against continuous data sources and political narratives. My evaluation of Latin American cases shows that, although the datasets are concerned with measuring the same latent concept, they have considerable limitations. The authors disagreed on how to code critical cases; some cases are especially difficult to code; and they have different notions of when and how institutional changes occur. To understand the empirical limitations of the data, I replicated Fjelde’s (2010) analysis of civil conflict onset and demonstrated the possibility of heterogeneous measurement bias. The value of this paper is in expounding on how the datasets differ from one another so that scholars can make more informed choices and are better able to compare results. My suggestions for future developments on the subject include working toward a concrete notion of regime type and maximizing the impact of discrete data.

INTRODUCTION:

Recent scholarship on authoritarian regimes has seen a surge in quantitative studies investigating the effects of institutional choice on various outcomes (Fjelde 2010; Hadenius and Teorell 2007; Peceny et al. 2002; Pickering and Kisangani 2010; Weeks 2008a, b; Wright 2008). Much of the recent work has made use of discrete data on authoritarian regime types. By pointing to some of the limitations of using a continuous, uni-dimensional score to characterize regimes, Gleditsch and Ward (1997) and Vreeland (2008) highlight the importance of differentiating authoritarian regimes into distinct types. Some of the available regime classifications are nearly exclusively focused on adding nuance to transitioning states that are semi-democratic. Others, such as Cheibub et al. (2010), Geddes (1999), Hadenius and Teorell (2007), and Wright (2008), are concerned with classifying the full breadth of authoritarianism. This latter group of datasets is the subject of inquiry in this manuscript.

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1 Special thanks to Professor Gretchen Casper, a very encouraging mentor.
2 Examples include Alvarez et al. (1996); Diamond (2002); Gasiorowski (1996); Levitsky and Way (2002); Mainwaring et al. (2001); O’Donnell (1994); and Schedler (2002).
What are the contributions and limitations of discrete regime type data? The attractiveness of these data for measuring authoritarianism warrants rigorous testing of their interchangeability and applicability. This inquiry follows in the tradition of scholars who examined the empirical limitations of data on democracy (Casper and Tufis 2003; Gledisch and Ward 1997; Vreeland 2008). The next step is to apply the same scrutiny to data on authoritarian regime types to understand how measurement can be further improved. Geddes challenged scholars to “reclassify cases and see if it affects conclusions” as a test of the reliability of her data (2003: 77). Such is one of the contributions of this study.

A qualitative evaluation of discrete data on regime type is firstly necessary—constructing the data required substantial descriptive expertise and the precise identification of a country’s institutional make-up. Such expertise may be more thinly spread by trying to classify the entire universe of cases. Some of the criticisms of other datasets by Hadenius and Teorell centered on “truly categorical regime traits,” emphasizing the need to understand their qualitative differences (2007:144). I restricted my evaluation to Latin American cases, which follows Mainwaring et al. (2001). Their critique of existing datasets and the classification they offer is based on background knowledge of Latin America, 1945-1999. In particular, I focused on the cases of Nicaragua, Colombia, and Brazil in exploring the limitations of regime type data.

My evaluation of Latin American cases shows that, although the datasets are concerned with measuring the same latent concept, they have considerable limitations. The authors disagree on how to code critical cases, some cases are especially difficult to code, and the authors have different notions of when and how institutional changes occur. These issues concern a wide range of subject areas that use discrete data. What are some of the empirical implications? To answer this question I replicated a recent analysis that applies the regime type
data to civil war, a subject of interest to both comparative and IR scholars. I demonstrated that the differences matter—discrete datasets on regime type are not empirically substitutable. Fortunately, there are several novel methodological solutions which warrant further attention.

Such a critique is not meant to demonstrate the superiority of one dataset over another, nor does it suggest that continuous data on regime type are preferable. The value of this paper is in expounding on how the datasets differ from one another so that scholars can make more informed choices and are better able to compare their results (Casper and Tufis 2003). My suggestions for future developments on the subject include working toward a concrete conceptualization of regime type and maximizing the impact of discrete data.

In subsequent sections of this paper, I summarize the datasets and the coding rules used to create them. Then, I evaluate them on three dimensions related to the disagreement, inconclusiveness, and rigidity of the data. I conclude with a discussion of the implications and suggestions for future research on regime type. To reiterate, this analysis is undertaken with the aim of supporting rather than undermining the use of discrete data on authoritarian regimes.

THE DATA:

Geddes (2003) argued that continuous data on regime types were not applicable to certain research questions and proposed instead a discrete classification based on leaders’ incentives for maintaining power. She argued that authoritarian regimes could be distinguished into three categories. She defined military regimes as those governed by a present or retired officer, with the support of the military and a mechanized plan for policy influence by high-level officers. In contrast, policy in single-party regimes is governed by a party, which controls access to power, jobs, and which embeds itself in local politics. Personalist regimes were characterized by a particular leader, whose practice is to consolidate power and means of recruitment, and who in
so doing marginalizes the influence of others (2003: 53).

The questions by which Geddes classified regime types can be found in Appendix A of *Sandcastles and Paradigms* (2003); they focused on whether the leader emerged out of a party; whether the regime engaged in elections and distributive politics; whether the leader had a military position and maintained normal military procedures and rule of law; and the extent to which the leader created supportive organs by which to sustain his/her rule. Regimes can be one type or represent “hybrids” of the three. Her original data covered the temporal domain 1946-1999. Wright (2008) extended Geddes’ data to 2002. His updated version also included monarchies, regimes lasting less than four years, and prior Soviet-era countries, reflecting 123 countries. The beginning and end date of a regime is the date of ouster or election, with a given year reflecting the most prominent, stable regime type. The coding favors the date on which change occurs, such that many regimes persist an additional year compared how others code them. The difference in coding rules produces an apparent one-year lag between datasets.

Hadenius and Teorell (2007) built upon Geddes (2003), covering 191 countries over the temporal domain 1972-2003. The institutional component of their classification was the mode of political power maintenance and constitutional legitimization. They distinguished between three methods of maintaining power, namely those based on hereditary succession, the actual or threatened use of force, and popular election. In monarchies, a successor legitimately inherits the state in accordance with “accepted practice or the constitution” (2007:146). According to Hadenius and Teorell, electoral regimes comprise a heterogeneous set of countries based on elections, spanning from no-party, to one-party, to limited multi-party regimes. Multi-party regimes allow some form of opposition, though opponents may boycott elections (2007: 147).

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3 Throughout, I refer to Geddes (1999, 2003) and Wright (2008) interchangeably as contributors of the same dataset.
4 Multi-party authoritarian regimes are those in which a party wins less than two-thirds of the vote in an election.
In addition to these, the authors coded more “irregular” regime types such as those operated under rebels, theocracies, foreign occupation, and civil war. A collapsed version of the data treats all monarchies as monarchies, all military and rebel regimes as military. No-party, one-party and multi-party regimes are kept separate. Civil wars, occupations, theocracies, and transitional regimes are included as “other.” The authors did not distinguish between types of democracies. Using the mean of the Freedom House and Polity scales (fh_ipolity2), the line between democracies and autocracies was drawn at 7.5. This threshold value was chosen by estimating the mean cutoff point separating democracy from autocracy in five well-known categorical measures of democracy⁵. Unlike Geddes, Hadenius and Teorell saw personalism as a secondary trait⁶.

The Cheibub et al. (2010) coding scheme was based on the dichotomous classification of democracies and dictatorships introduced in Alvarez et al. (1996) and Przeworski et al. (2000). It was a classification of all independent regimes for the post World War II period, covering 199 countries over the years 1946-2008 (or the date of death or change). According to the authors, “a measure of democracy based on a minimalist conception…is compatible with most of the theoretical issues that animate empirical research on political regimes” (2010: 72). What mattered for them are the broad electoral rules that can be used to distinguish types of regimes. While other scholars have debated whether empirical understandings of regimes should consider patterns of formation, competition, voting, and economic freedom, Cheibub et al. (2010) emphasized parsimony over a weighted classification based on secondary traits.

In building on the Democracy-Dictatorship (DD) data, Cheibub et al. (2010) adopted

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⁵ Przeworski et al. (2000); Mainwaring et al. (2001); Reich (2002); Freedom House; and Polity. Reich (2002) is an updated version of Gasiorowski’s (1996) Political Regime Change Dataset.
⁶ To control for the degree of personalism in a regime, Hadenius and Teorell (2007) used a measure of the frequency with which the head of government is replaced.
Przeworski’s (1991) definition of democracy. They characterized democracies as contested elections which occur at regular intervals, the outcome of which is not known prior and the winner of which actually assumes office. The authors relied on four rules: 1) the executive must be chosen by a popular election; 2) the legislature must also be popularly elected; 3) more than one party must compete in the election; and 4) alternation in power under electoral rules must occur (2010: 69). To meet the *repeatability* rule, the emergent leader must be replaced by the same rules through which he/she came to office. When a case violated the fourth rule (*repeatability*), they coded as nondemocratic all the years from the moment the leader took power. The authors thus back-coded regime types based on how the leader behaved. A regime in which a leader was democratically elected but consolidated power could be considered a non-democracy for the entire period. They assumed that current actions are revealing of what incumbents “would have done at different points in time” (2010: 70).

Of the regimes that satisfy the four criteria for a democracy, Cheibub et al. (2010) distinguished between presidential, mixed, and parliamentary democracies. They coded non-democracies as monarchial, military, or civilian regimes. Monarchies are regimes based on family and kin decision-making, in which the executive bears an imperial title and legitimizes a hereditary successor or a predecessor. Military regimes are characterized by the leadership of a current or previous member of the armed forces, although they do not include regimes borne out of guerilla movements. Civilian regimes represent a “residual” dictatorship category in which the leader wields neither hereditary nor military power. The theoretical focus of such a classification is how dictators are likely to be removed, measured “with the use of strictly observable criteria for identification” (2010: 89).

The three datasets briefly summarized--Cheibub et al. (2010); Geddes (2003); Hadenius
and Teorell (2007)—share important similarities and differences. The Geddes/Wright data and the Hadenius and Teorell data allow there to be “hybrids” of regime types. Hadenius and Teorell definition of military regimes is also congruent to the Geddes/Wright definition in focusing on the military’s influence on government. Effectively, the Cheibub et al. definition of military regimes is based solely on whether the leader was ever a member of the military. Cheibub et al. (2010) agreed with Hadenius and Teorell (2007), that personalism is not a distinct regime type. The authors were also not in consensus on how to classify party-based autocracies. For Cheibub et al., civilian regimes represented a residual category for non-military and non-monarchial regimes. For Geddes, the presence of electoral parties characterized single-party regimes, but Hadenius and Teorell further distinguished between them. Cheibub et al. included a more exhaustive coding of democracies. The data from Hadenius and Teorell did not distinguish between democracies, and the Geddes/Wright data ends after a period of democracy begins. The authors most closely agree on how to define monarchies. Summary statistics for the regime type data are in the Appendix.

**ASSESSMENT:**

Though each of the datasets sought to measure the same latent variable—regime types—there is not much overlap in how the authors operationalized them. Because they are not perfectly comparable, evaluating their discrepancy and accuracy is a worthwhile exercise. In the following sections, I evaluated the datasets according to three issue areas that covered the extents to which the authors disagree, cases defy coding rules, and the data change in accordance with important political events. A thorough examination of the data across the full temporal and spatial domain was beyond the scope of this paper. Instead, I restricted my overview of the data
to Latin American countries including Cuba, Haiti, and the Dominican Republic.7 The Appendix also contains sequence index plots illustrating how each of the three coding schemes applies to Latin American cases. In particular, I focused on the narratives of Nicaragua, Colombia, and Brazil. My selection of these cases for exploratory purposes draws from various strategies identified by Seawright and Gerring (2006). Table A2 in the Appendix provides a template for my selection of case-studies in Latin America.

Disagreement

Firstly, I examined the extent to which the authors agreed on how to code a particular country-year in Latin America, illustrated by Figure 1. Some of the disagreement between the authors is justifiable. There are many cases in which the authors did not agree because of definitional or operational dissimilarity. The disagreement over Cuba (1972-1975) is due to the fact that Hadenius and Teorell coded rebel regimes as military regimes and Cheibub et al. did not. Guatemala (1984), Honduras (1979), and Bolivia (1978) were coded by Hadenius and Teorell as transitional regimes (other), for which the other authors did not have a designated code. Discrepancy over Paraguay (1946-1954 and 1972-1988) is due to the unique coding by Hadenius and Teorell of multi-party regimes. In a majority of other cases the disagreement centered on Geddes’ coding of personalism.

There are also cases in which the authors could have agreed but did not, to which I refer as “unjustified differences.” Questionable cases are those classified as military by one author and electoral/civilian by another. In most of these cases a unique identifier such as personalist, no-party, etc. was not at stake. Sometimes, two of the authors were in dispute over whether a country is democratic. I consider this latter discrepancy to be particularly problematic, given that there is a greater consensus among researchers over what characterizes democracy.

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7 The countries in my sample are those identified by Teorell and Hadenius 2005 as belonging to Latin America.
The most apparent disagreements are those in which there was a high level of disagreement between the authors. Equally troublesome cases are those in which the disagreement over democracy had the support of two out of the three authors. In some cases only one author suggested that the country-period was democratic; in other cases, one of the authors suggested that it was autocratic. As figure 1 illustrates, there are not a lot of Latin American cases in which there was a high level of disagreement between the authors, but disagreement prevails.

**Figure 1. Sequence Index Plot: disagreement over Latin American regime types**

Of the Latin American cases, none is more complicated on the issue of disagreement than Nicaragua. The attractiveness of the Nicaraguan case is that it is an extreme case. It exemplifies disagreement between the authors—there are different levels and sources of disagreement over fifty years of its history. In the early 1930s, Augusto Cesar Sandino led a guerilla campaign against U.S. occupation. Sandino was subsequently assassinated in 1934 on the orders of the
National Guard commander General Anastasio Somoza Garcia. General Somoza was elected president three years later (Millett 2007; Walker and Wade 2011; Wynia 1990). The earliest data that I compared begins in 1946. Rule under Somoza Garcia is coded by Cheibub et al. as a military regime, due to his prior post in the National Guard. Following his assassination in 1956, his son Luis Somoza Debayle took over. Luis did not have prior military experience like his father. Thus, Cheibub et al. coded the period of rule under Luis Somoza as civilian rule. It is important to note that Luis commanded significant military presence; his brother, Anastasio Somoza Debayle, headed the National Guard during this time. In 1967, Luis Somoza died of a heart attack at the age of 45. He was preceded by his brother Anastasio, which according to Cheibub et al, returned the country to military rule (Millett 2007; Walker and Wade 2011; Wynia 1990).

Throughout the 44-year-long family-run dictatorship, Wright coded the country as being under personalist rule. Corruption and abuses were prevalent, power was consolidated enough that it could be passed between family members, and the deaths of Anastasio Garcia and Luis Somoza had a significant effect on proceeding politics (Millett 2007; Walker and Wade 2011; Wynia 1990). His interest in the personal hold of power by the Somoza family is justifiably different from the focus of Cheibub et al. Cheibub et al. showed power transitioning between more militarist and civilian hands, no matter how closely connected.

The discrepancy between Wright and Cheibub et al. is further complicated with the introduction of the Hadenius and Teorell in 1972, in which they coded Nicaragua as neither military nor personalist but instead a limited multi-party system. The apparent reason for doing so is due to the presence of oppositional parties such as the Broad Opposition Front (Frente Amplio Opositor) and the National Patriotic Front (Frente Patriótico Nacional), which were
active in destabilizing the Somoza power-hold (Castillo 1979). A military offensive on the part of the Sandanista National Liberation Front (*Frente Sandinista de Liberacion Nacional*, FSLN) led to Debayle’s ouster in 1979 (Kent Smith 1997). Hadenius and Teorell coded the insertion of the FSLN into politics as a rebel regime (it is considered a military regime in their condensed data). While the other authors may not disagree that the FSLN was indeed revolutionary and militarist, they did not code rebel regimes as military regimes. Cheibub et al. coded it as civilian; Wright, as a single-party. The behavior of the FSLN suggests, however, that it was more than a rebel group in the lead-up to the 1984 election. In 1980 they established a legislature, which they replaced with a more liberal legislature in 1983 in an effort to undercut anti-Sandinista aggression by the U.S. (McConnell 1996).

The 1984 elections were “[r]elatively clean, if imperfectly competitive” (McConnell 1996). As the FSLN candidate, Daniel Ortega won the election fairly easily. According to Hadenius and Teorell, the year 1984 marked the involvement of the FSLN as a political party. For Cheibub et al., however, it signaled the beginning of democracy, since Ortega came to power via an election and would pass it on to Chamorro in the same way. By the standards of Wright and Hadenius and Teorell, Ortega’s term was still not sufficient to be considered a democracy. Wright’s coding of Nicaragua stops beyond the 1990 election, in which Violeta Chamorro defeated Ortega as the UNO candidate with 55-percent of the vote. Chamorro was nevertheless criticized for rejecting constitutional reforms that would have prohibited nepotism, required legislative budget approval, shortened the presidential term, and expanded civil liberties (Prevost and Vanden 2002). Perhaps this is why Hadenius and Teorell continued to code Nicaragua as a
limited government until the election of Arnoldo Aleman in 1996.\(^8\)

Nicaragua seems a difficult case to code. There is correspondence between the authors of the three datasets over the changes that surrounded the ouster of Anastasio Debayle, though they disagreed on whether certain *somocistas* acted as civilians, militarists, personalists, or party members. There was also disagreement over whether the FSLN immediately represented a party or remained a rebel group during its years in office before the 1984 elections. Ortega’s victory as the FSLN candidate would suggest that it had established itself as a party before then, at least in the minimal sense. Moreover, the FSLN created institutions beyond what would have been expected of a rebel group. Neither were the authors in agreement that Nicaragua had reached the status of democracy until 1996, though Cheibub et al. considered it one over a decade prior.

The sources of their disagreement are varied. One source is, quite obviously, the authors’ definitions and operationalization of regime type. As it pertains to non-democracies, incompatibility occurs over how to code rebel regimes, transitional regimes, occupations, and personalist regimes. There was also a great deal of disagreement between Hadenius and Teorell and Cheibub et al. over when a country should be considered democratic. This is largely because Cheibub et al. asked who controls the government, whereas Hadenius and Teorell coded only those that score higher than 7.5 on the averaged Freedom House and Polity scores. Other differences can be attributed to the simultaneous focus on elections, non-electoral events, and individual leaders. Lastly, another source of disagreement is due to when the authors coded the beginning and end of a regime. Outside of the Latin American cases there may certainly be other, equally complex cases that make difficult the task of reconciling the authors’ differences.

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\(^8\) Clearly, Hadenius and Teorell did not begrudge the FSLN as the sole reason for restricted politics—the FSLN won municipal elections in 2000 and Ortega was reelected in 2002 and 2006, which they coded as democratic (Millett 2007; Walker and Wade 2011; Wynia 1990). Moreover, they implied that the Chamorro term was still limited.
Inconclusiveness

I also checked for observations that appear questionable according to the author’s coding rules. This is a sensitive task, as each of the authors surely undertook coding objectively and with an interest in precision. Creating a comprehensive global dataset nevertheless entails holding complex cases to equal standards and risks overlooking qualitative differences. It is thus helpful to evaluate Latin American cases and highlight especially difficult cases.

Cheibub et al. noted the difficulty of coding regimes based on leader entry and exit. The authors discussed how they decided when to finally code Mexico as a democracy; they claim that although the PRI allowed alternation in power, democracy effectively began with the change in the electoral rules under the Zedillo presidency (in 1996). There are other observations where the choice to code the start of democracy was unclear. In some, elections were held but did not qualify as democratic (Haiti 1990; Dominican Republic 1961; El Salvador 1990-1991; Nicaragua 1984-1995). In others, the country-period is coded as democracy although subsequent elections were preempted by a coup (Guatemala 1958-1962 and 1966-1981; Honduras 1957-1962 and 1971; Venezuela 1946-1947; Ecuador 1946; Peru 1956-1967). Still more are cases where severe uncertainty persists and democracy was short-lived (Panama 1948-1951; Argentina 1962-1982).

There are also cases in which democracy was widely undisputed but there were signs that authoritarian behaviors had persisted. The authors agreed that the following cases were democratic: Venezuela (1974 and 1998-2009); Bolivia (2000 and 2007); and Uruguay (1972). Rule-by-decree, legislative purges, martial law, and suspension of liberties have also been observed under these periods of democracy. Conversely, Paraguay was unanimously regarded as a non-democracy, despite its “Democratic Springs” (Gauyo 2008). Legislative change in 1949
El Salvador corresponds to a change in Wright’s data but not Cheibub et al.\textsuperscript{9,10}

Some cases are difficult to code because group activism is unclear. As an example, how might one classify Cuba during the early stages of its Communist revolution? In 1961, Castro's 26th of July Movement, Roca’s Popular Socialist Party, and Chomon’s Revolutionary Directory coalesced into the Integrated Revolutionary Organizations (IRO). Within four years, the IRO had been renamed the official Cuban Communist Party, over which Castro was named First Secretary. Following the Castro-led rebellion in 1959, Cheibub et al. and Wright consistently coded the country as a civilian dictatorship and single-party-personalist regime, respectively. In stark contrast, Hadenius and Teorell considered the government to be rebel-led until 1975, which coincided with the First Communist Party Congress. The First Communist Party Congress marked important changes in the government, including a new Socialist constitution in 1976 and greater activism by Cuba in the spread of Communism abroad (Leogrande 1980). Until the First Communist Party Congress, party activism in Cuba was scant (Leogrande 1980). Thus it is unclear when politics in Cuba had real party leadership.

Other cases are difficult to code because the importance of leader-specific characteristics is vague. Given his candidacy and election under the 23 year-old Partido Revolucionario Institutional (PRI), it is unclear what about Adolfo Ruiz Cortines--apart from his involvement in the revolutionary army and prior administrative positions--qualified his term as a period of military rule in Mexico (1952-1957). Conversely, Wright did not consider General Anastasio

\textsuperscript{9} There are also cases in which coding decisions seem to have been affected by shocks, as may be the case in Costa Rica 1948—it is labeled a civilian dictatorship during a particularly nasty conflict between Figueres and Calderon. Elsewhere, foreign occupation casts doubt on coding decisions (Panama 1989; Dominican Republic 1965).

\textsuperscript{10} Another curious example is Haiti (1957-1985), which resembles the closest approximation of a monarchy that modern Latin America may ever have. According to the authors’ coding practices, a monarchial regime is one where the leader holds an imperial title and hereditary succession is legitimated either by custom or constitution. Elected in 1957, Francois Duvalier declared himself president-for-life. Before his death, Duvalier managed to get congressional approval that his son would succeed him. Like his father, Jean-Claude Duvalier also declared himself president-for-life. The Haitian case is not different from North Korea, which Hadenius and Teorell clearly rejected as a monarchy. Nevertheless, the line that designates legitimated succession within a “royal” family is thin.
Somoza Garcia, former National Guard commander, a military or military-personalist dictator.

By far, the most interesting case that epitomizes the incongruity of coding decisions deals with institutional rules in Colombia under the National Front (1958-1974). My use of the Colombian example is to show a deviant case, one which differs from cross-country notions of democracy. General Gustavo Rojas Pinilla abdicated power in 1957, after which an interim junta assumed the role of governing (Kline and Gray 2007; Wynia 1990). During this time Alberto Lleras Camargo and Laureano Gomez, leaders of the Liberal and Conservative parties, forged a pact against Rojas through the "Declaration of Sitges" in Spain. Both parties introduced the National Front in their efforts to end a protracted period of violent conflict between them referred to as La Violencia, the very crisis that prompted Rojas’ military solution (Kline and Gray 2007; Wynia 1990). Following the plan’s acceptance in two national referendums, the government alternated for sixteen years between the Conservative and Liberal parties. Elections were held to place seats in the senate and lower house, which were shared equally by both parties. The party of the president was guaranteed, but approaching its term the presiding party had to present a list of nominees to compete among each other in the election. In this way, elites hoped to preserve a democratic system during a period of particular instability (Kline and Gray 2007; Library of Congress 1988; Schmidt 1974; Wynia 1990).

According to some, the National Front embodied a consociational democracy, a broad coalition of leaders representing much of Colombia (Dix 1980). There is considerable debate, however, over whether this period can indeed be classified as fully democratic. As Dix (1980) noted, inhibiting social change was an implicit intent of the oligarchy in both parties. Thus, although ANAPO politicians gained seats by aligning themselves with a traditional party, the party was sufficiently marginalized for Rojas to lead the formation of an insurrectionist group.
known as the *Movimiento 19 de Abril* (M-19) (Nielson and Shugart 1999; Schmidt 1974). A contribution of the National Front was to devalue, though not completely eradicate, brokerage and clientelist politics (Schmidt 1974). Despite the representation provided by intraparty competition, National Front politics was still perceived by many to be quite exclusive. There remained “widespread discontent about the practice of politics in the country and about the content of the policies that the political system produced” (Nielson and Shugart 1999).

Some scholars considered Colombia during the National Front period to be a diminished subtype of democracy rather than a full-fledged democracy. As the National Front pact excluded third parties as well as limited competition between the two majority parties, the regime has been described as semi-competitive, restricted, or limited (Bejarano and Pizarro 2001). According to Bejarano and Pizarro, “[d]uring the National Front period, democracy’s limitations resulted from restrictions on political participation and political competition” (2001: 1). The authors referred to 1960s Colombia as “besieged democracy” because exogenous factors made it nearly impossible for democracy to function adequately. By Marinwaring et al. (2001)’s three-classification, this period was only semi-democratic (Altman and Perez-Linan 2000; Mainwaring 1999; Mainwaring et al. 2001). Others considered the period representative of an “inclusionary authoritarian regime,” although Bejarano and Pizarro (2001) argued that classifying Colombia as an authoritarian regime obscures the line between democracies and non-democracies (Bagley 1984; Collier and Levitsky 1997). Nevertheless, if Colombia was a democracy at this time it was one characterized by restrictions on competition resulting from the 1957 institutional pact (Bejarano and Pizarro 2001).

The example of Colombia under the 1957 National Front pact is interesting because the authors all seem to agree that it should be considered a completely democratic system. Wright’s coding stopped after 1958, implying that upon forming the pact Colombia had lost all semblance of an authoritarian state. The beginning of the Hadenius and Teorell data in 1972 also indicated
that the country had been democratic before then. This consensus arose despite differences in how the authors defined democracy and in how they chose to denote it. Nevertheless, there is sufficient scholarly debate to demonstrate that the issue is not as clear as the data suggest.

How does one distinguish between politics under the National Front, in which party representation was not a choice, and post-National Front Colombia, which in 1975 held “fully democratic” elections (Dix 1980)? How might an empirical study of regime type and transitions be improved by denoting the limited democratic setting provided by the National Front before real democracy could flourish in Colombia? In contrast to the Nicaraguan case which highlights the authors’ divergent views, the Colombian case exemplifies a difficult case to code in which the authors seemed to agree. Even with competing coding schemes the data may also miss important nuances in modern Latin American politics. I also identified other, less unanimous Latin American cases. As this section demonstrates, even the best coding practices have their limitations, the implications of which far surpass the limited domain examined herein.

Rigidity

It is also helpful to evaluate the data in the Latin American context to understand the extent to which each of the datasets capture important political changes. I therefore sought to identify sources of institutional variation that are not captured by one or more of the three sets of authors. I supplemented my knowledge of Latin American politics with the Political Constraints Index provided by Henisz (2000; 2002), which measures “the extent to which a change in the preferences of any one political actor may lead to a change in government policy” (Teorell et

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12 The index is composed from the following information: the number of independent branches of government with veto power over policy change, counting the executive and the presence of an effective lower and upper house in the legislature (more branches leading to more constraint); the extent of party alignment across branches of government,
al. 2010: 108). Henisz also indicated whether there were no, one, or two legislative tiers and judicial independence in a given country-year observation. Comparing discrete data on regime type to data on legislative change and constraints reveals at least some of the opportunities for coding regime change. I refer to this issue as “rigidity” in the sense that there is missing variation, or movement, in the data. The Polity IV score provides a second source of data validation (Marshall and Jaggers 2008).

There are three sources of rigidity that I can identify across the datasets. The first is where Cheibub et al. or Hadenius and Teorell identified an observation as a non-democracy but Wright does not. Unlike the other authors, the Geddes/Wright coding does not begin again after an initial period of democracy. The data are unlikely to indicate that a democratic regime has adopted authoritarian features. Compared to Hadenius and Teorell and Cheibub et al., it may be better suited for measuring transitions toward rather than away from democracy. Wright warns users that the dataset is still a work in progress and may reconcile this in future updates.

A second source of rigidity is where the coding rules by one or more authors appear to be relatively constant over a period of time, but where the data on legislatures and judicial independence change. Throughout the 1960s, Cheibub et al. coded Ecuador as a military regime and Wright as a single-party military regime. Legislative changes occurred in Ecuador in 1960 and 1963, however, and the political constraints index also changed in 1967. Significant legislative and constraint-index changes occurred 1982-1984 in Panama, although all three authors consistently code the period surrounding it as militarist. Over a two-year period in Venezuela (2001-2002) Chavez pursued reforms that eliminated its second legislature and eradicated independent judicial review. Nevertheless, its regime type coding did not change.

measured as the extent to which the same party or coalition of parties control each branch (decreasing the level of constraint); and preference heterogeneity within each legislative branch, measured as legislative fractionalization in the relevant house (increasing constraint for aligned executives, decreasing it for opposed executives).
An arguably rare but important source of variation not captured by the datasets is significant political events that could be but are not used to define regimes\textsuperscript{13}. One of the best examples of political change that should have had a corresponding change in the data is Brazil 1964-1989. Brazil represents a “typical” Latin American case, one which had a protracted period of military rule but during which experienced political fluctuations (Remmer 1991). Throughout this period, each of the three sets of authors consistently coded Brazil as being a military dictatorship. In the beginning of military rule after the 1964 coup, officers drafted a new constitution and instituted several acts in response to increasing resistance (Wiarda 2007; Wynia 1990). The military’s claim to power was founded on the threat of Communism in Brazil and the promise to restore democracy, albeit through the use of repression. The First Institutional Act in 1964 expanded executive powers in order to expedite the restoration of the country. The military also embarked on an aggressive campaign to purge the government of a broad swath of political actors, including members of the Catholic Church, politicians, labor organizations, academics, and political activists (Breneman 1995; Wiarda 2007; Wynia 1990).

The Brazilian military continued to eliminate leftists and institutionalize control throughout the 1960s. Direct elections were maintained, but political activism was severely restricted. Still, opposition parties continued to hold ground in local elections, which prompted threats by military hardliners. In response, General Castello Branco issued the Second Institutional Act abolishing political parties and suspending the direct elections of governors. The Fifth Institutional Act effectively suspended all other political activities and censored remaining opposition. By 1968, Brazil had reached a high point of repression and censorship (Breneman 1995; Sarney 1982; Wiarda 2007; Wynia 1990).

\textsuperscript{13} An example is 1954 Colombia, in which General Rojas Pinilla granted women the right to vote. The extension of suffrage is perhaps a good indicator of regime change when it is concurrent with some form of elections.
General Geisel began to reverse the military’s stronghold when he took office as president in 1974. Geisel sought to seriously reinstate democracy, but in a slow and orderly fashion. His decompression plan involved controlling hardliners in the military and maintaining growth. Following Geisel’s efforts, President and former General Figueiredo released political prisoners and ended party restrictions created by the Second Institutional Act. The military installed civilian Jose Sarney as president in 1985, and in 1989 Fernando Collor de Mello took office via the first direct elections in decades (Breneman 1995; Wiarda 2007; Wynia 1990).

Over the span of military rule in Brazil (1964-1984), Cheibub et al., Hadenius and Teorell, and Wright were in agreement on its status as a regime type. No change was observed across the data, though other scholars have described significant impacts during this period on legislative institutions, the constitution, civil rights, political parties, and electoral competition. Breneman (1995) argued that the consolidation of military power occurred in distinct phases, the apex of which was reached with the Fifth Institutional Act. In contrast to the tyrannical dictums of earlier acts, the Fifth Institutional Act simultaneously dissolved Congress and state legislatures, suspended the constitution, and imposed censorship. It is thus surprising that the data—whether measured by elections, constitutions, or institutional support—do not reflect changes as momentous as those imposed in 1968.

Figure 2 compares changes in the discrete data on regime type to changes in the continuous Political Constraints III index and the Polity IV score (Henisz 2000; Marshall and Jaggers 2008). Although the Political Constraints index does not show variation during the period of military rule in Brazil, the Polity IV score does. The Polity score reflects the Geisel-led decompression plan in 1974. They both show other changes that are not reflected in the discrete coding. From start to end of the Cheibub et al. data (represented by vertical dashed
lines), their coding changes twice; Wright codes Brazil as militarist and only during the 1964-1984 period. The Hadenius and Teorell data show the most change, though there may still be more political change in Brazil than has been accounted for by the discrete data on regime types. The years 1954, 1958, 1983, 1991, and 2003 stand out in need of explanation.

**Figure 2. Line plot: political transition in Brazil**

![Diagram showing political transition in Brazil](image)

**EMPIRICAL IMPLICATIONS:**

In an effort to understand some of the empirical implications of the above-mentioned issues, I used Fjelde’s (2010) recent analysis of civil conflict onset as an example. Fjelde argued that authoritarian leaders can coerce or co-opt rivals but are differently able to rely on those strategies to stay in power. Using Hadenius and Teorell (2007)’s data, she compared military, monarchy, single-party, and multi-party regimes. Fjelde found that military and multi-party autocracies are more prone to conflict onset. Similar relationships appear when she substituted Wright’s (2008) data for the Hadenius and Teorell data on regime type. The first model in table
I shows replication results for her model with controls.

I approximated the data used by Fjelde (2010). The dependent variable is armed conflict presence, which comes from the Uppsala Conflict Data Project/PRIO Armed Conflict Dataset (ACD) (UCDP/PRIO 2009). The independent variables are regime type measured by Hadenius and Teorell, with single-party regimes as the reference category. The control variables mirror Fjelde’s. Data on the real GDP per capita and population come from the Penn World Tables (Heston et al. 2009). I included Fearon and Laitin (2003)’s measure of ethnic fractionalization. I also used the number of years since last regime change, as recorded by the Polity IV project, to measure regime durability (Marshall and Jaggers 2008). Like Fjelde, I controlled for previous conflict by lagging the dependent variable by one year. I also used the BTSCS approach developed by Beck, Katz, and Tucker (1998) and reported robust standard errors.

In the replication model, I obtained similar results to those of Fjelde (2010). Compared to single-party regimes, military and multi-party regimes appear to be most conflict prone and have estimates that are significant below a five-percent probability of error. The coefficients on the other regime types are not significant, nor are the coefficients on real GDP per capita and regime duration. A population increase is associated with an increased likelihood of civil conflict, as is ethnic fractionalization. Not surprisingly, conflict in the prior year is a strong, significant predictor of conflict; it is less likely after a prolonged period of peace.
Table 1. Replication and Validation Tests: Fjelde (2010)

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<th>add h_polcon5</th>
<th>add disagree and h_polcon5</th>
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<td>0.680 (0.332)**</td>
<td>0.990 (0.331)**</td>
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<td>0.595 (0.331)*</td>
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<td>0.650 (0.342)*</td>
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<td>0.356 (0.454)</td>
<td>0.195 (0.454)</td>
<td>0.353 (0.454)</td>
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<td>hitemul</td>
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<td>0.698 (0.331)**</td>
<td>0.991 (0.343)**</td>
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<td>-0.140 (0.102)</td>
<td>-0.102 (0.102)</td>
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<td>0.318 (0.051)**</td>
<td>0.344 (0.052)**</td>
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<td>ethnic frac.</td>
<td>0.708 (0.217)**</td>
<td>0.700 (0.312)**</td>
<td>0.734 (0.315)**</td>
<td>0.726 (0.310)**</td>
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<td>-0.001 (0.003)</td>
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<td>4.714 (0.151)**</td>
<td>4.705 (0.151)**</td>
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<td>-0.003 (0.002)**</td>
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<td>--</td>
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Standard errors in parentheses. *p<0.10; **p<0.05; ***p<0.01

To test the substitutability of regime type data I added the *disagreement* variable, on which the sequence index plot in Figure 1 is based. It equals (0) for cases on which none of the authors disagreed; (1) when there was “justified” differences; (2) when there were “unjustified” differences; and (3) when there was a high level of disagreement between the datasets. Including the measure in her analysis thus gives weight to “independently verified” observations. It does not have as large an effect on the significance of the estimates as it does on coefficient size—its presence reduces the coefficient on military and multi-party regimes by a third. Accounting for the extent of disagreement causes the estimates on democracy to increase to just below a ten percent probability of error and depresses the significance of military and multi-party regimes.

As figure 3 shows, there is a connection between the influence of an observation in the sample and disagreement among authors. Fifty percent or more of the internal armed conflicts reported by the UCDP are subject to unjustified disagreements among the authors of the three datasets, which is not true of other types of conflict. As is also indicated by the level of confidence attributed to the estimate on *disagree*, some of the relationship between regime type and conflict may be attributable to heterogeneous measurement bias. The more the authors
disagreed on an observation, the more likely is conflict in the sample. Disagreement is also highly correlated with regime type, military regimes in particular (figure A2 in the Appendix).

I also attempted to account for additional variation in political transition patterns by adding the Political Constraints Index to the equation. The Political Constraints Index does not have as strong an effect on other regime type variables as it does on democracy. On the whole, however, it does not have much of an impact on the results, nor does it increase the explanatory power of the model. The change in coefficient size suggests that discrete datasets on regime type overlook political variation among democracies, but the Political Constraints Index appears to be more sensitive to changes within democracies and this in part explains the effect\textsuperscript{14}.

Figure 3. Scatterplot: influence of observations

\textsuperscript{14} Similar results are obtained by using the Polity score instead of the Political Constraints Index.
DISCUSSION:

The lack of consensus that I identified in the data emphasizes the need for scholars to be theoretically informed when choosing data. Due to the threat of heterogeneous measurement bias, scholars must also be cognizant of the relationships they are comparing. Statistically significant relationships in analyses that use a reference category depend on what is being compared as well as how comparable are the other types. An immediate empirical problem is that—because the sets of cases being compared do not have proportional distances—some results may be artifacts of research design and data limitations. Measurement error that is unevenly distributed bears on empirical findings and the generalizations made from them. If nothing else, this is a likely problem when researchers use different datasets interchangeably. This is also likely depending on what is the dependent variable. Conflict, for example, correlates with the substitutability of the data. One solution to this may be to rely on the multiple overimputation methods developed by Blackwell et al. (2010). There are additional policy implications—despite finding robust empirical trends across datasets and in various models, scholars will have difficulty applying findings to the real world. The cases on which the empirics are based change depending on which dataset is being used.

My analysis of the Latin American cases also shows that there are also cases that do not easily conform to coding rules. One unanswered question is how exceptional these cases are in the entire universe of observations. A looming problem is the possibility that there are similarly complex cases that demonstrate the difficulty of coding regimes—and the limited applicability of discrete data for explaining them. One must be cognizant of the limitations posed by trying to make fit into categories a variety of institutional arrangements. Moreover, one must consider whether one way of coding regimes better handles this issue, if the universe of cases fits more
naturally in one classification than in another. Because they are not equally stringent, some regime types may contain more anomalous cases than others. There is an ever present risk that, due to the difficulty of creating easy-fitting categories, the cases in a dataset or across datasets are not comparable; that one or a few cases biases the comparison of categories; and that some generalizations are better suited for predicting outcomes in one category over another. This is one of the main points laid out by Gleditsch and Ward (1997), who argue that there is more variation between cases at one end of the Polity scale than at the other. My conclusions also speak to the importance of “outlier” cases. If Colombia during the National Front period differs from predictions made of other democracies, it may be related to its status as a democracy. Knowing the extent to which the datasets are capable of accommodating difficult cases helps to explain why certain predictions are, in fact, difficult to make.

Finally, I have demonstrated that the rigidity of existing discrete data on regime types prevents certain questions on the role of institutions from being explored. Nevertheless, it is not easy to answer how responsive the data should be regarding regime types. What is perhaps more important is that structural and contingent conditions are not easily separable. Many institutional changes correspond to important actors and relationships between actors. It is thus not surprising that some of the variation that is evident in the datasets—such as the switch from civilian to military rule in Mexico under Adolfo Cortines—is based on the tenure of specific leaders. If this is true, institutional arguments tested with discrete regime type data are partly reliant on actors and their actions. There is thus a need to develop the data to better accommodate actor-based arguments or to better specify the institutional changes that are being measured. Including the Political Constraints Index or the Polity score in Fjelde’s (2010) model does not significantly change the results. There may still be substantial variation for which discrete datasets may need
to account. The importance of this suggestion is underscored by the fact that Chavez’ Venezuela appears today to be as democratic as it was in 1998, despite considerable institutional change.

My critique of discrete data is not meant to invalidate their use. On the contrary, scholars’ interest in finite institutional features should pave the way for others to find new ways to use them. Discrete data on regime type offer substantial benefits to those studying transitions, particularly through the use of sequence analysis. Though sequence analysis represents a broad analytical subfield, it is unique in allowing the comparison of data sequences. Sequence analysis allows scholars to treat sequences as the unit of analysis and to compare sequence structures. Figure 1 is an example of country-specific sequences in Latin America. However, the ability to compare sequences and to create predictive models from them is dependent on scholar’s confidence in validity of sequence patterns (Abbott and DeViney 1992; Scherer 2001). As such, understanding discrepancies and limitations among discrete datasets on regime type serves not to undercut them but to prime scholars to better adapt them to emerging analytic techniques.15

CONCLUSION:

To summarize, I scrutinized the three discrete datasets on regime type provided by Cheibub et al. (2010), Hadenius and Teorell (2007), and Wright (2008). My assessment of the data was largely qualitative, focusing on checking the data regarding Latin American cases against Henisz (2000, 2002) and political narratives. I discussed three particular issues that are relevant to the coding. Firstly, I noted considerable disagreement between the datasets on how to code regimes. Differences in the coding stemmed from definitional or operational similarity and also from differing opinions and sources. Nicaragua is a good example of this issue, as the three datasets exhibit incompatibility over fifty years of its history. Secondly, I identified a variety of cases that are particularly difficult to code according to the authors’ different coding rules.

15 For an overview on sequence analysis techniques in Stata, see Brzinski-Fay et al. (2006).
Colombia during the National Front is an example of this issue because all of the authors actually do agree on how to code it, despite extensive debate over whether it was a democracy at that time. Lastly, I contrasted the discrete data on regime type to data on legislative and judicial changes, confirming political events that do not have major impacts on how regimes are coded by the authors. In particular, I cited the Fifth Institutional Act in Brazil and its non-impact on the data as a point of concern.

To understand the empirical limitations of the data, I replicated Fjelde’s (2010) analysis of civil conflict onset and demonstrated the presence of heterogeneous measurement bias. Following the work of Casper and Tufis (2003), I showed that discrete data on regime types are no more comparable than are continuous data on regime type. Scholars must therefore be aware of how comparable are the relationships suggested by substituting other datasets on regime type; how easily the datasets classify observations; and how much variation they capture. As always, scholars must also know intimately how the data are measured and how well they lend themselves to prediction-making.

The future recommendations gleaned from this analysis are to work toward a common notion of regime types and a standard of comparison between them. Scholars should work toward a consensus on what regime are and are not; such classifications should be equally fitting of the cases they are meant to classify (to the extent possible); and they should be as sensitive as possible to other notions of political transition, or more explicitly focused on structural features. In so doing, work on the subject will reap higher profits. Generalizations of regime type will be more readily applicable, the data will be more substitutable, and the data will be more adaptable to methods suited for discrete data. In particular, sequence analysis is a promising avenue for transition specialists that would benefit from improvements in the classification of regime type.
REFERENCES:


Wilson 29


APPENDIX:

Table A1. Summary Statistics

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Figure A1a. Sequence Index Plot: distribution of regime types in Latin America by year

source: Cheibub et al. (2010)
Figure A1b. Sequence Index Plot: distribution of regime types in Latin America by year

Figure A1c. Sequence Index Plot: distribution of regime types in Latin America by year
Figure A2. Bargraph: disagreement by regime type
## Table A2: Case-study Template\(^\text{16}\)

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<td><strong>Selection Strategy</strong></td>
<td>Extreme: The authors of the three datasets disagree on fifty consecutive years of Nicaragua’s history, at various levels and for different reasons</td>
<td>Deviant: The institutional rules during this period do not represent the common notion of democracy</td>
<td>Typical: The period of military rule and changes during it characterize many transition periods on Latin American politics</td>
</tr>
<tr>
<td><strong>Illustrative Purpose</strong></td>
<td>Illustrates the variety of reasons that the authors may not agree and how they can complicate a consensual notion of regime type</td>
<td>Illustrates a case that can be especially difficult to code, even when the authors agree on how to code it</td>
<td>Illustrates a case with significant changes not captured in discrete regime type data</td>
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</table>

\(^{16}\) Based on Seawright and Gerring (2008)