Social Constraints and Civil War: Bridging the Gap with Criminological Theory

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Scholars' views on civil warfare have changed dramatically. Understanding that conventional and ideological civil wars are rare, scholars are increasingly coming to view rebellions as large-scale criminality. However, much work remains to link criminality and civil conflict. The authors draw on a large body of criminological research known as social control theory, which identifies informal factors that are expected to produce conformity with norms and laws, such as social attachments, commitment to achieve goals, involvement in the community, and belief that law is just. While a plethora of work has linked these processes to criminological behavior, the authors build a bridge to the civil war literature. Empirical tests examine how marriage, unemployment and military involvement impact the one's "taste for revolt" at the individual-level, and the likelihood of civil war onset at the macrolevel. The results present a robust empirical link between social control theory and internal conflict.

The nature of warfare has changed. While history is replete with examples of both conventional and insurgent warfare, the former type, including major power wars, colonial wars, ideological civil wars, and conventional civil wars, are in such notable decline that they could "well be considered to be obsolescent, if not obsolete" (Mueller 2003, 507).[1] Instead, scholars are increasingly coming to view modern internal warfare akin to criminal activity. Grossman's economic models of insurrections view insurgents as "indistinguishable from bandits or pirates" (1999, 269), for example, while Mueller views "new war" as "nearly opportunistic predation waged by packs—often remarkably small ones—of criminal, bandits, and thugs" (2003, 507). This viewpoint is becoming increasingly difficult to ignore, particularly given recent studies that highlight the criminal nature of modern warfare.

Several innovative paths of research on civil conflicts have responded to this changing viewpoint of warfare to explain why conflicts begin. Economists were quick to counter the idea that rebellions were based on noble and psychological-based grievance factors, instead taking a rationalist approach in mod-

eling rebels as greed-driven entrepreneurs who will turn to organized criminality to maximize their economic utility if the opportunity presents itself (e.g., Collier and Hoeffler 2004; Grossman 1999). Political scientists have likewise adapted to the criminological view of civil warfare by focusing on how the state provides formal mechanisms to inhibit the opportunity for predation (e.g., Fearon and Laitin 2003).

While these paths of research have certainly furthered our understanding of civil conflicts, much more can be done to explore the criminological nature of modern warfare. In fact, only a handful of scholars have explored what we consider the most direct and obvious vein of research for understanding civil conflict—an enormous body of sociological work examining why "criminals and thugs" commit crimes in the first place. Surprisingly close parallels have emerged in spite of a near total absence of cross-pollination between studies of criminology and civil conflict. These parallels are presented in Table 1. The first column presents the theoretical concept, while the second shows how the concept has been examined to understand organized crime within the criminology literature. Mullins and Rothe (2008) summarize four

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[1] Upon print, an online appendix (including variable descriptions, alternative variable specifications, and robustness checks), data, and supporting materials necessary for replication will be made available at www.journals.cambridge.org/jop and at http://www.uky.edu/~clthyn2/.

TABLE 1 The Links and Disconnect between Criminology and Civil Conflict

Theoretical Concept	Criminology Literature	Civil War Literature
Motivation	Drives that provoke offending, such as unemployment and poverty (e.g., Brownfield 1986; Chiricos 1987)	Factors that increase grievances, such as relative deprivation (e.g., Gurr 1970)
Opportunity	Interactions where opportunities for offending emerge (e.g., Cohen and Felson 1979)	A group's ability to organize and fund a rebellion (e.g., Collier and Hoeffler 2004)
Control	Constraints to prevent/punish criminal behavior (e.g., Wilson and Herrnstein 1985)	The ability of the state to control the population (e.g., Fearon and Laitin 2003)
Constraints	Informal controls on one's propensity to commit crimes (Hirschi 1969)	[Unexplored]

factors that structure organized crime, which have direct links to existing civil war scholarship. The first three factors include drives that provoke offending (motivation), social interactions where the possibility for criminal offense emerges (opportunity), and constraints that prevent criminal action or punish violations (control). As shown in the third column, these factors closely parallel arguments from civil war scholars, including respective literatures on grievances, opportunity costs, and state strength. In spite of these parallels, Mullins and Rothe (both sociologists) do not cite a single study from the civil war literature, just as civil war scholars very rarely cite scholarship among the criminology literature.

We move beyond these parallels by pointing to Mullins and Rothe's fourth factor to explain organized crime—"constraints," which has been largely ignored in the literature on civil conflict. Constraints include "social control elements that stand to make a potential crime either riskier or less profitable" (2008, 88). Unlike controls, which focus on formal mechanisms to dissuade or punish offenders, constraints include informal controls on one's propensity to commit crimes. Differentiating between formal and informal social controls opens an interesting avenue for study because only formal social controls, frequently characterized as "state strength," have been found to substantially impact the likelihood of rebellion (e.g., Fearon and Laitin 2003). Empirical studies from the criminology literature indicate that informal controls are at least as important as formal controls in dissuading crime (Hollinger and Clark 1982; Patternoster et al. 1983), suggesting that a study of informal mechanisms might reap enormous rewards in furthering our understanding of why men rebel.

Beyond expanding our understanding of the causes of civil conflicts, a focus on informal social controls allows for refinement of existing theories and provides an overarching logic to combine important components of past research efforts. For example, work on both youth bulges (Urdal 2006) and opportunity costs (Collier and Hoeffler 2004) recognize unemployment and marriage as important factors that impact both the motivation and opportunity to rebel against the government. Our work moves these propositions forward by further articulating a theory for why these factors increase costs for fighting and by providing direct empirical tests of the impact of these factors on the likelihood of violently challenging the government. Likewise, the argument from economic/rationalist models that people will rebel when it is economically profitable has been met with mixed empirical results (e.g., Ross 2004). If rebels can indeed be characterized as criminals, then the gap between the theoretical argument and empirical results can be bridged by considering informal costs associated with criminality. People do not always commit crimes when the profits are high and the costs are low, and informal social control theory gives us the tools to understand why. Theories based on state strength can also be refined with this approach. Rather than assuming that state strength is derived from formal institutional and coercive power, it is possible that the state's ability to ward off rebellions can be attributed to its ability to manufacture or support informal mechanisms.

In the following pages, we articulate a theory to explain how informal elements of social control influence an individual's propensity to challenge the state. In order to begin bridging the interdisciplinary divide, we begin by briefly explaining informal social control theory within the criminology literature, noting how the assumptions of the theory mirror recent work within the civil war literature. We then

focus on specific factors identified within the social control literature that might impact one's decision to rebel, deriving hypotheses related to marital attachments, military involvement, and employment. This is followed by both individual- and aggregate-level tests of our propositions. We end by discussing our empirical findings and pointing towards avenues for future study.

Background on Criminology and International Affairs

Criminologists have made recent efforts to contribute to the study of international affairs. Most notably, Hagan, Rymond-Richmond, and Parker (2005) address the genocide in the Darfur region of Sudan, highlighting the power and control exercised by the Sudanese government through racist appeals in the perpetration and continuation of the large-scale killing of non-Arab African tribal groups. In a similar analysis, Hagan and Rymond-Richmond (2008) outline the importance of criminological research in exposing and documenting international atrocities and in developing international criminal courts. Addressing the mass killings in the Democratic Republic of the Congo, Mullins and Rothe (2008) further emphasize the criminality of state leaders and transnational corporations in exploiting economic disorder and weak formal controls to gain control of the valuable mineral fields in the DRC. Genocide then has become one source of integration between criminology and international relations.

Terrorism is the other prominent topic of international concern addressed by recent criminological research. For instance, Aradau and van Muster (2009) argue that the rhetoric of exceptionalism—illiberal policies and practices that are legitimated through claims about necessary exceptions to the norm (Neal 2006)—is crucial to the foundation, transformation, and transgressions of criminal laws. Further, exceptionalism in relation to terrorism influences global power relations, sovereignty, and the deterioration of political communities and social transformation and contextualizes terms, such as deterrence and detention, common to both criminology and international relations. Also addressing terrorism, Savelsberg (2006) suggests that knowledge systems constructed through a combination of long-term beliefs and institutions where such beliefs are cultivated and radicalized are important precursors to terrorism. Lastly, Black (2002) describes terrorism as a form of social control, a tactic that terrorists use against perceived threats when formal state controls are deemed insufficient.

Killing is a key concern in criminological research, and assessments of killing on a mass scale are a logical extension of criminological enterprise. Both genocide and terrorism are integral topics for initial integration efforts between criminology and international relations, but civil war has yet to be addressed within the criminological literature. Furthermore, the early efforts to integrate criminology and international relations have almost exclusively relied on the conflict perspective from sociology. The conflict perspective emphasizes state coercive power and the concomitant manipulation of ideology and knowledge systems leading to violent actions against perceived threats, thus maintaining a central emphasis on state institutions and actors in developing societal grievances or perpetuating societal greed. The conflict theory, therefore, closely mirrors the "state strength" perspective on civil war offered by political scientists.

We attempt to promote a theoretical understanding of civil war onset that is somewhat independent of greed, grievance, and state strength, focusing instead on informal social controls that constrain motivated actors from initiating civil war. While the proceeding argument is meant to speak to all rebel activity, we recognize that our theory may be more applicable to some war types than others. The most direct link between criminality and civil war is among conflicts that have been characterized as being driven by greed, as these rebellions are largely defined by their ignoble motives. Our theory is geared to speak beyond the greed connection, however. Weak rebel groups undertaking nonconventional campaigns are likely to use coercion to extract resources from the civilian population to fund, arm, shelter, and staff their rebellion, which makes criminal activity an unavoidable part of most rebellions (Kalyvas 2006; Wood 2010). Likewise, while strong rebel organization may be able to effectively challenge the government without relying on criminal forms of coercion, it is impossible for potential recruits to know the strength of the rebellion before the conflict begins. Moreover, while rebel groups may eventually come to match the capabilities of government forces, they are likely to be much weaker early on. If we make the minimal assumption that potential rebels need to project how they will fund and maintain their activities once fighting begins, it is likely that they will foresee the need to use criminal activity at least at some point in the conflict. Thus, regardless of the type of conflict that eventually develops, we expect all potential rebels to expect criminal activities to be a part of their activities if

they join a rebellion and should be similarly influenced by the factors provided by our theory. We now turn to a more thorough explanation of these factors.

Hirschi's Social Bond Theory

The social bond theory is a prominent theory in the study of crime and deviance, originating from the classic theoretical assessment of suicide by Emile Durkheim (1951), a foundational sociologist credited with establishing the functionalist tradition in sociology. Durkheim's (1951) focus, however, was not suicide per se, but rather the foundation of social unity. In his classic work *Suicide*, Durkheim "... viewed suicide as a manifestation of the lack of social cohesion and the suicide rate a convenient index of weak social bonds" (Berk 2006, 60). The theory was originally formulated as a macrolevel theory, as the original intent and accompanying analysis were designed to explain differences in suicide rates *between groups*, but subsequent theoretical formulations have extended the concept of social bonds to the individual level. The notion that egoistic social impulses can be controlled by a high degree of social integration remains a stalwart of sociological inquiry and forms the basis of Hirschi's (1969) social bond theory.

Consistent with the notion that all nations experience situations and contexts that motivate the pursuit of civil war (Collier and Hoeffler 2004; DeNardo 1985; Lichbach 1990; Tarrow 1994; Tilly 1978), the social bond theory assumes that all individuals are motivated to deviate from social norms. From this perspective, the difference between an offender and a nonoffender is not rooted in varying levels of motivation to offend, but rather in differences in the degree of constraints imposed on each individual's behaviors. Traditional control theories in criminology point to the constraints on offending imposed through *formal* legal mechanisms, such as the law, police, courts, and prisons (Cohen 1985). In contrast, social bond theory stresses the controlling influence of *informal* processes that strengthen bonds to conventional society.

The social bond theory identifies four informal mechanisms that collectively build and sustain affective bonds to society (Hirschi 1969). *Attachment* refers to an affective relationship an individual has with members and institutions within the dominant society, including parents, educators, coaches, religious leaders, and peers. *Commitment* identifies the degree to which individuals value future goals, such as completing an education, entering a career, or starting a family. *Involvement* suggests that engagement with conventional activities reduces the time and energy necessary to commit criminal or deviant acts. *Belief* suggests that accepting society's formal and informal rules as legitimate decreases the likelihood that an individual will violate social norms. Taken together, attachment to people and institutions, commitment to future goals, involvement in conventional activities, and belief in the moral legitimacy of rules coalesce to form a "stake in conformity." In other words, bonded individuals are unlikely to place their good standing in society at risk through acts of crime and deviance.

Empirical tests of the social bond theory have been supportive of the criminal deterrent effect of social bonds among both adolescents (Chapple, McQuillan, and Berdahl 2005) and adults (Sampson and Laub 1993), and the theory also shows strong support in cross-national studies (Junger and Marshall 1997). Marriage, employment, and military service have been identified as the key sources of social bonding among adults associated with lower levels of criminal offending (Bouffard 2003; Osgood et al. 1996; Warr 1998) and as turning points in criminal desistance processes (Sampson and Laub 1993), primarily through the process of creating a stake in conformity for individuals. Other work has extended the concept of the social bond to macrolevel processes (Berk 2006; Cantor and Land 1985; Steffensmeier and Haynie 2000), showing a consistently positive relationship between subnational unemployment and crime (Chiricos 1987) and a negative relationship between divorce and criminal arrests (Lo and Zhong 2006).

In sum, although the social bond theory is a microlevel theory of deviant behavior, the theoretical background and empirical applications of the theory suggest that the social bond processes also operate at the macro level. We expect that social bonds will operate as social control mechanisms that constrain the onset of civil conflict at the macro level and limit one's "taste for revolt" at the micro level.

Hypotheses

Our discussion thus far has explained how many factors from informal social control theory might be related to civil conflict. Some of these factors, such as education (e.g., Thyne 2006), have already been directly examined in the civil conflict literature. Other factors, including marriage and employment,

have received at least some theoretical attention, but have not been accompanied by direct empirical tests (e.g., Collier and Hoeffler 2004; Urdal 2006). Our purpose here is to develop testable hypotheses linking informal social control theory to civil conflict.

We begin by considering how employment might impact civil conflict. Employment captures the "involvement" component of informal social control theory, which suggests that engagement with conventional activities reduces the time and energy necessary to commit criminal or deviant acts. Employed individuals are engaged in an activity that is likely consistent with the conventional norms of a given society and therefore have solidified a bond to that society. Further, the time and energy that employment consumes leaves very little time or energy to devote to the pursuit of civil war, thus increasing the costs of rebellion.

As noted above, the negative relationship between employment and crime has found strong support within the criminology literature. Though we know of no large-N studies that examine the impact of employment on civil war onset, a plethora of anecdotal evidence suggests that unemployed young men contributed greatly to the ability of rebel leaders to get their movements off the ground. Warlords in Sierra Leone, for example, were able to recruit followers to capture the country's diamonds area by drawing on the large pool of unemployed youth in the country (Addison and Murshed 2003). The unemployed Tutsis in Rwanda and the Hutu in Burundi were likewise "easy targets for political mobilization by opposition movements" (Ndikumana 2001, 6). In contrast, states that are seemingly ripe for conflict, such as Mozambique and Cambodia, have been able to remain peaceful by improving the employment situation for potential rebels (Ohiorhenuan and Stewart 2008).

Policy makers seem quick to use this anecdotal evidence to develop their current conflict-prevention strategies. Shortly after leaving his command of the Multinational Corps in Iraq, for example, Lt. Gen. Chiarelli noted that finding jobs for "angry young men" was "absolutely critical to lowering the level of violence" (Dept. of Defense 2006). This viewpoint resonates with Tanzanian President Kikwete's more general urging for the international community to address unemployment to prevent further conflict in Africa: "We have seen how some youths with no job prospects and little hope of getting any have become the petrol to raging tires in conflict . . . they easily fall prey to war lords, criminal gangs and political manipulators to the detriment of peace and stability in their countries" (UN News Service 2009). We seek to test of the wisdom of these policies with the following hypotheses:

> *H1a:* Unemployed individuals should have a higher "taste for revolt" than employed individuals.

> *H1b:* Higher levels of employment should reduce the likelihood of civil war onset.

We expect military involvement to also constrain one from joining rebel groups through the "involvement" informal social control mechanism. As noted above, criminologists have found strong empirical support suggesting that military service is a key life event that can reshape trajectories of criminal offending. According to Hollingshead, military institutions are designed to strip soldiers of their civic and personal identities, ultimately creating men, " . . . who will neither think for themselves nor make demands on the institution for needs that are not identified with institutional ends" (1946, 442). From this viewpoint, involvement in the military largely removes soldiers from the set of potential recruits from a rebel organization. The process of military socialization reorients a soldier's social bonds, making him prioritize solidarity with the institution, the society as a whole, and his brothers-at-arms (Dyer 2004; Holmes 1985).

The importance of socializing soldiers to maintain the stability of a country is a recurrent theme throughout history. The Spartans shaped "citizen-soldiers" to establish loyalty to the state (Ducat 2006), for instance, while the Soviets viewed their conscript army as a key component of their socialization program (Jones and Grupp 1982). In potentially chaotic situations, military socialization is often viewed as the primary glue by which the country can build unity. As Lieutenant General Dempsey, the head of the Multi-National Security Training Command-Iraq (MNSTC-I) remarked, "The Iraqi Army has the opportunity to be the single institution that can elevate the narrative beyond regional, local, religious interests . . . [they are] becoming that institution of national unity" (Shanker and Wong 2006, 6). More broadly, we expect the process of military socialization to produce citizens that are less likely to view violence against the government as an acceptable means of social change. This leads to our second set of hypotheses:

> *H2a:* Members of the military should have a lower "taste for revolt" than nonmembers.

> *H2b:* Higher levels of military involvement should reduce the likelihood of civil war onset.

Our third expectation draws on the "attachment" component of informal social control theory, which

suggests that affective relationships an individual has with members and institutions within a dominant society will result in lower criminal behavior. We focus on marital attachments, which criminologists have found to be a strong predictor of criminal desistance. Marriage is expected to deter people from criminal activities for a number of reasons. It creates a system of obligation, mutual support, and restraint (Sampson and Laub 1993), and redirects everyday routines and patterns of association with others away from criminal enterprises (Sampson, Laub, and Wimer 2006). It also provides a mechanism for spouses to moderate behavior by exerting direct social control (Umberson 1992) and forces one to undergo cognitive transformations that heighten responsibilities to care for one's family (Giordano, Cernkovich, and Rudolph 2002). These same mechanisms should deter one from joining a rebel organization.

Though the importance of marital attachments certainly varies by culture, marriage is largely viewed as a transformational experience whereby one's responsibilities detach from oneself to one's spouse and family. Within the Dinka, Bari, and Kakwa tribes in southern Sudan, for example, young unmarried men are responsible for warfare and cattle keeping (Leonardi 2007, 393). This fits with the more general pattern of rebels coming largely from the ranks of the unmarried (Collier et al. 2003, 27). This leads to our third set of hypotheses:

> H3a: Married individuals should have a lower "taste for revolt" than unmarried individuals.

> H3b: Higher levels of marriage rates should reduce the likelihood of civil war onset.

Research Design

Social control theory has been developed both at the individual and aggregate levels, and empirical work on the impact of social controls on crime has found robust empirical support at both levels. Our theory remains consistent with this approach in developing hypotheses both at the macro- and individual-levels, which requires commensurate research designs. The unit of analysis at the macrolevel is country-year for all countries with available data. The dependent variable, civil war onset, is coded 1 for each country-year in which a civil war began and 0 otherwise (Gleditsch et al. 2002).

Though the construction of our macrolevel tests is consistent with the bulk of large-N empirical research on civil war onset, scholars have increasingly come to recognize the danger in drawing invalid inferences about individual-level behavior based on aggregate data. A handful of innovative studies have relied on surveys to capture an individual's propensity to challenge the state violently. Humphreys and Weinstein's (2008) analysis of the Sierra Leone civil conflict (1991-99) comes as close to an ideal research design as we have seen, as the authors interviewed both ex-combatants and ex-noncombatants to determine the factors that motivated the participation in violence. Given safety concerns and lack of resources, few have attempted similarly heroic efforts to understand why individuals revolt. One exception is MacCulloch's (2004) usage of the combined World Values and Eurobarometer surveys. Though unable to directly capture participation in violence, MacCulloch uses a unique survey item to capture one's support of revolutionary action or "taste for revolt." While this does not speak directly to actual action against the state, it is a reasonable proxy for future violent antistate behavior and has at least some relationship with low-level revolutionary actions (MacCulloch 2004, 834).

Our individual-level design follows the work from MacCulloch in attempting to explain individuals' taste for revolt. We utilize aggregated survey responses from the World Values Survey (WVS), which includes more than 250,000 interviews from five waves of studies in 87 societies from 1981 to 2008. The dependent variable, taste for revolt, is captured with a question that asks: "On this card are three basic kinds of attitudes vis-à-vis the society in which we live in. Please choose the one which best describes your own opinion." Responses include: "the entire way our society is organized must be radically changed by revolutionary action," "Our society must be gradually improved by reforms," and "Our present society must be valiantly defended against subversive forces." Our dependent variable is coded 1 for respondents who choose the first option and 0 otherwise.

Our aggregate-level analyses employ logistic regression to test the hypotheses. We control for temporal dependence using a variable counting the number of peace years and cubic splines (Beck, Katz, and Tucker 1998). Using a similar construct for the individual-level analyses would present a host of methodological problems because our data are hierarchically structured, with individual respondents nested within states. Thus, we estimate the individual-level model using hierarchical linear modeling (HLM), which is designed to deal with multilevel data (Raudenbush and Bryk 2002). We employ a Bernoulli distribution with a logit link function using the HLM 7 statistical package (Raudenbush et al. 2011).

Independent Variables. While examining the individual impact of concepts discussed in our theory provides the most direct test of our hypotheses, it is important to note that the mechanisms identified by social control theory are easily blurred. Attachment can refer to military involvement or marriage, for instance, just as involvement can work through either the military or employment. Thus, we begin our analyses by taking a more comprehensive look at the combined effects of the social control elements (explained below) by creating a common factor "social controls index" for both the aggregate- and individual-level analyses.

Moving to the specific expectations, our first set of hypotheses predicts that unemployed individuals should have a higher taste for revolt (H1a) and that higher aggregate levels of unemployment should increase the likelihood of civil war onset (H1b). At the individual level, *unemployed* is coded 1 if the respondent chose "unemployed" in response to his/her employment status. For the macro tests, *unemployment* captures those unemployed as a percentage of the total labor force from the World Development Indicators (WDI) dataset (2009).

Our second set of hypotheses predicts that married individuals should have a lower taste for revolt (H2a) and that the likelihood of civil war onset should decrease in states with high rates of military involvement (H2b). At the individual level, *military* is coded 1 if the respondent chose "Member of the armed forces" when asked about his/her profession/ occupation. At the aggregate level, *military involvement* equals the total number of military personnel divided by the total population. Data come from the Correlates of War National Material Capabilities dataset (Bennet and Stam 2000; Singer 1988).

Our final hypotheses predict that married individuals should have a lower taste for revolt (H3a) and that the likelihood of civil war onset should be lower in states with high marriage rates (H3b). At the individual level, *married* is coded 1 if the respondent chose "Married" when asked about his/her marital status. At the aggregate level, *marriage rate* is the number of marriages per 1,000 people for each calendar year. Data come from the United Nation's Statistics and Indicators on Women and Men (2009).

Control Variables. The individual-level analyses employ control variables that have been found to be important in previous work, largely following MacCulloch (2004) in using WVS survey items. The first control, *income*, asks the respondent to choose their household income (wages, salaries, pensions, and other) among deciles for their home country. We expect income to have a negative impact on one's taste for revolt as the opportunity costs of fighting should increase with an individual's peacetime income (e.g., Grossman 1999; Patterson 1991). Second, we expect males to have a higher propensity for violence following both civil war literature on youth bulges (Urdal 2006) and sociological work on criminality (Elliott 1994). Education has also been shown to both decrease the likelihood of civil war onset (Thyne 2006) and criminal activity (Maguin and Loeber 1996). Thus, our next two control variables use a three-level measure to capture the "highest education level attained" on a country bases, including "lower," "middle," and "upper." We include the latter two measures, leaving "lower" as the baseline category. The final measures ask the respondent their age (in years). We include both age and age squared, expecting the highest taste for revolt to come neither from the very young or the very old, which is grounded in both literature on civil wars (Urdal 2006) and crime (Hirschi and Gottfredson 1983).

Control variables for the aggregate tests include variables that have been found to exert considerable influence in past models of civil war onset. The first, *population*, has consistently found to increase the likelihood of civil war onset because large populations confound a government's ability to control the people, while opposition leaders have an easier time recruiting fighters as the supply of potential fighters increases (Collier and Hoeffler 2004; Fearon and Laitin 2003). Previous scholars have argued that the likelihood of civil war should be greatest in semi-democracies, which fail to adequately deter revolt with insufficient repressiveness and fail to provide political openness to allow people to address grievances using nonviolent means (Hegre et al. 2001; Muller and Weede 1990). Therefore, we control for regime type using dummy variables for *democracies* and *authoritarian* regimes. Democracies are defined as countries receiving a score of 6+ from Polity IV's democ-autoc index, while authoritarian regimes receive a score of −6 and below (Marshall, Jaggers, and Gurr 2009). Semi-authoritarian regimes are the baseline category. We also recognize that our measure for military personnel is apt to capture elements of state strength or high opportunity costs for rebellion. Thus, we control for *military expenditures* to help isolate the social control elements within this measure (Bennet and Stam 2000; Singer 1988). We likewise control for the general level of *state wealth* in a society by including GDP/capita (logged) in the analyses (Gleditsch 2002). This measure should help isolate social control elements in both the unemployment and military involvement variables because it

captures several related concepts, including opportunity, grievances, and state strength (Collier and Hoeffler 2004; Fearon and Laitin 2003).

Data Analyses

We begin by examining the Social controls indices in Table 2, which show the combined effects of the social control measures at both the individual (Model 1) and aggregate levels (Model 5).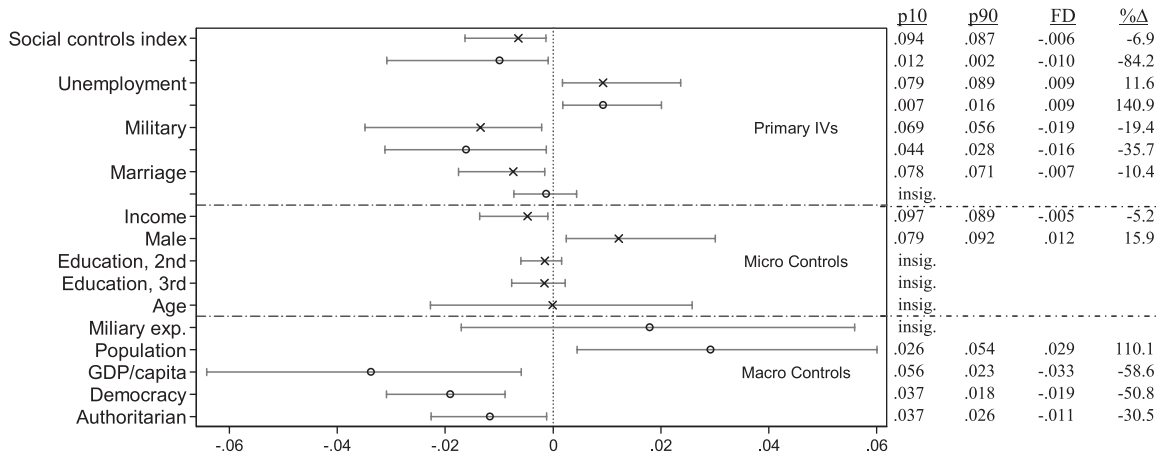 As expected, each index is negative and significant, which provides support for the combined measures identified by our theory. In Figure 1 we present the substantive influence of the independent variables by calculating each variable's marginal effect on the dependent variable using *Clarify* (King, Tomz, and Wittenberg, 2000; Tomz, Wittenberg, and King, 2003). The figure displays how the likelihood of one's taste for revolt (''X''s) and the state's likelihood of civil war onset (''O''s) varies as each independent variable ranges from either 0 to 1 (for dichotomous) and from the 10th to 90th percentile (for continuous),

TABLE 2   Impact of Informal Social Controls on Taste for Revolt and Civil War Onset

	Taste for Revolt (individual level)				Civil War Onset (aggregate level)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Soc. cont. index	-0.178***				-1.721*			
	(0.031)				(0.797)			
Unemployment		0.127***				0.066**		
		(0.033)				(0.027)		
Military			-0.246*				-27.700*	
			(0.127)				(13.470)	
Marriage				-0.113***				-0.039
				(0.024)				(0.089)
Income	-0.009*	-0.014**	-0.015	-0.017***				
	(0.005)	(0.005)	(0.011)	(0.005)				
Male	0.173***	0.185***	0.187***	0.187***				
	(0.021)	(0.021)	(0.035)	(0.020)				
Education, 2nd	-0.020	-0.007	-0.002	-0.001				
	(0.027)	(0.026)	(0.038)	(0.026)				
Education, 3rd	-0.023	-0.011	-0.008	-0.013				
	(0.032)	(0.719)	(0.877)	(0.031)				
Age	-0.001	-0.007	-0.007	-0.001				
	(0.004)	(0.004)	(0.005)	(0.001)				
Age^2	-0.001	-0.001	-0.001	-0.001**				
	(0.001)	(0.001)	(0.001)	(0.000)				
Military exp.	5.666	3.133	2.841	3.433	-0.320	-0.732	0.175	-0.003
	(15.15)	(14.76)	(13.36)	(13.89)	(0.955)	(0.467)	(0.171)	(0.405)
Population	0.205*	0.191*	0.182*	0.179*	1.328	1.451**	0.487*	0.823*
	(0.100)	(0.098)	(0.090)	(0.095)	(1.066)	(0.537)	(0.227)	(0.493)
GDP/capita	-0.964***	-0.932***	-0.965***	-0.963***	2.040	-0.271	-0.625**	0.237
	(0.184)	(0.179)	(0.186)	(0.176)	(2.174)	(0.849)	(0.243)	(0.643)
Democracy	0.113	0.097	0.090	0.086	-2.220**	-0.431	-0.735***	-1.858***
	(0.168)	(0.163)	(0.152)	(0.156)	(0.789)	(0.477)	(0.209)	(0.435)
Authoritarian	0.279	0.280	0.271	0.281	-0.379	0.491	-0.381*	-1.616***
	(0.263)	(0.257)	(0.352)	(0.251)	(1.012)	(0.480)	(0.172)	(0.516)
Interc./Const.	-1.941***	-1.813 ***	-1.789***	-1.882***	-14.209*	-4.604*	-3.525***	-6.614***
	(0.109)	(0.101)	(0.140)	(0.101)	(7.456)	(2.723)	(0.878)	(2.122)
Observations	88,426	94,459	92,722	99,120	915	1,462	6,300	2,600
Variance Comp.	0.300	0.533	0.286	0.276				
Df	71	71	74	74				
Chi^2	2919.1***	3074.0***	2919.7***	3113.6***	27.92***	52.83***	115.0***	43.29***

Note: Robust standard errors in parentheses. * $p < .05$, **$p < .01$, ***$p < .001$ (one-tailed).

FIGURE 1 Impact of Informal Social Controls on Civil War Onset and Taste for Revolt: Substantive Effects

	p10	p90	FD	%Δ
Social controls index	.094	.087	-.006	-6.9
	.012	.002	-.010	-84.2
Unemployment	.079	.089	.009	11.6
	.007	.016	.009	140.9
Military	.069	.056	-.019	-19.4
	.044	.028	-.016	-35.7
Marriage	.078	.071	-.007	-10.4
	insig.			
Income	.097	.089	-.005	-5.2
Male	.079	.092	.012	15.9
Education, 2nd	insig.			
Education, 3rd	insig.			
Age	insig.			
Miliary exp.	insig.			
Population	.026	.054	.029	110.1
GDP/capita	.056	.023	-.033	-58.6
Democracy	.037	.018	-.019	-50.8
Authoritarian	.037	.026	-.011	-30.5

Note: "X"s denote individual/microlevel effects (Models 1–4). "O"s denote aggregate/macrolevel effects (Models 5–8). Control variables are calculated from Models 1(micro) and 7 (macro).

while holding all other variables constant at their mean or mode. Using this approach, we see an average 6.9% decrease in the taste for revolt and an 84.2% decrease in the likelihood of civil war onset as the social controls indices increase.

We now move to tests of our specific hypotheses. The first set of hypotheses predicts that unemployed individuals should have a higher taste for revolt (H1a) and that higher rates of male unemployment should increase the likelihood of civil war onset (H1b). We find strong support for both expectations with positive and significant coefficients at both the individual level (Model 2) and at the aggregate level (Model 6). In substantive terms, we can expect an average increase of 11.6% in one's taste for revolt and an increase of 140.9% in the likelihood of civil war onset when unemployment increases, which provides strong support for our expectations.

We also note that unemployment is significant even when controlling for personal income and levels of state wealth, suggesting that employment produces informal social controls independent of more commonly captured concepts. However, employment can also be viewed within the grievance framework if the government is viewed as failing to provide an adequate infrastructure for economic development (Choucri 1974; Gurr 1970). Conceptually, therefore, unemployment can be considered both a grievance and an indicator of weak social bonds that might influence civil wars. Fortunately, unemployment is only one aspect of the constellation of factors that influence social bonds. Marriage and military service are also conceptualized as social bonds in the

criminological literature and have little connection to grievances (Dixon 2009). We now turn to a discussion of these factors.

Our second set of hypotheses predicts that individuals in the military will have a lower taste for revolt at the individual level (H2a) and that higher levels of military involvement will decrease the likelihood of civil war onset at the aggregate level (H2b). We find strong support for these expectations with negative and significant coefficients in Models 3 and 7. We also note that the aggregate-level finding is significant even when controlling for military expenditures and GDP/capita, which suggests that military involvement is likely working through informal mechanisms, rather than capturing state strength. In substantive terms, those in the military are found to have a 19.4% decrease in taste for revolt on average, while an increase in military personnel reduces the likelihood of civil war by 35.7%. These results represent two of the strongest influences on our dependent variables.

Our final set of hypotheses predicts that married individuals will have a lower taste for revolt (H3a) and that higher levels of marriage rates should decrease the likelihood of civil war onset (H3b). We find mixed support for these expectations. At the individual level, we see strong support for our expectation with a negative and significant coefficient for marriage (Model 4). In substantive terms, we should expect a 10.4% average decrease in one's taste for revolt when they are married. At the aggregate level, we see marriage rates to have the expected negative sign, though the result is far from significant ($p < .329$). We have two potential explanations for this null finding. First, it is possible

that the pacifying effect of marriage is countered by potentially altruistic motives, whereby married men initiate civil war to protect their families from intergroup atrocities. This is consistent with criminological research documenting that altruism is a salient factor in some criminal events (Cromwell and Thurman, 2001; Kivivuori 2007). Second, our theory implicitly assumes that spouses can influence their partner's choices at a constant rate, which may be unsafe given the wide variation in discrimination (particularly towards females) across societies. Instead, we might expect the impact of marriage rates on civil war onset to matter most when genders are equally valued throughout society. Subsequent analyses (not shown) interacting marriage rates with gender equality (proxied by a ratio of female to male life expectancy) support the expectation that marriage matters most under gender equality, which provides at least some support for this explanation.

In regards to the control variables, we see evidence further supporting the conclusions by past scholars. We first note that wealth has a consistent pacifying effect in both sets of analyses. Given that wealth is strongly associated with both criminality and civil war onset, the findings for personal income and GDP/capita provide useful baselines to gauge the substantive influence of the social control elements identified by our theory. From Figure 1, we see that the influences of all three social control elements are at least as strong as the influence for income at the individual level, though the aggregate tests show that GDP/capita largely outweighs both unemployment and military involvement in the aggregate models. We also find that males have a consistently higher taste for revolt and that states with large populations and semidemocracies are more susceptible to rebellions. Beyond these measures, our results only weakly support expectations from past work with results that are largely insignificant.

Conclusion and Implications

While economists and political scientists have adapted to the changing nature of civil warfare—marked by a transition from ideological to criminal warfare—little work has drawn upon a large literature developed by criminologists to explain the decision to rebel. The purpose of this article was to build a bridge between civil war and criminology research. We began by noting the rather impressive congruence in the two literatures, which have managed to develop in parallel with little cross-pollination of the approaches. Formal

social controls, such as state strength in the civil war literature and the judicial process in the criminology literature, have been found to dramatically reduce the likelihood of civil war onset and criminal offenses. We sought to better understand how the decision to join modern rebellions might be influenced by informal controls, which have received great attention in the criminological literature but scant attention in the civil war literature. Examining both individual- and aggregate-level effects, our findings suggest that employment and military involvement provide strong informal controls to lessen the likelihood of rebellion. Strong support is also found for the impact of marriage in the individual-level analyses, though weaker support was found at the state level. Taken together, our discussion provides both an extension of previous work in further articulating the mechanisms by which grievances and opportunity costs may increase and a new avenue by which we can better understand the onset of rebellions.

This work provides important implications for scholars studying both civil conflict and crime. For the former, we show the importance of thinking across disciplines to improve our understanding of civil conflict. Early work integrating sociology and civil conflict produced strong evidence that informal controls increased the likelihood of civil conflict. From this approach, rebellion was seen as a collective good, and informal ties helped peasants overcome the collective action problem (DeNardo 1985; Lichbach 1990; Tarrow 1994). We take a radically different approach. Recognizing that most modern conflicts are best described as criminal adventures, we argue that informal controls should discourage young men from joining a rebellion. Our empirical results provide strong support for this approach, both standing alone and in comparison to the "usual suspects" from other theoretical approaches to studying civil conflict. Due to space limitations, we left aside many other developments within the criminology literature that are likely to improve our understanding of civil conflicts. Future work might focus on the "belief" component of informal social control theory (focusing on one's perception of the moral legitimacy of society's formal and informal rules), for example, in better understanding the decision to join a rebellion. Much more could be done to directly extend our work as well, perhaps focusing on the ability of a person to improve his social standing through employment, formal and informal rules constricting marriage decisions, and conscripted versus voluntary decisions to join the military.

This work also has important implications for those studying crime from a sociological perspective. Most obviously, this article shows that there is little

reason to confine studies of criminality to U.S. borders or to take a narrow perspective on the definition of "crime." Recent work among criminologists has improved our understanding of genocide and terrorism. This article shows another fruitful area of expansion: civil conflicts. Our article also unwittingly stumbled upon a third potentially fruitful area of expansion: integrating feminist theories into studies of civil conflict. Our inconsistent finding for the impact of marriage on the likelihood of civil conflict contrasts greatly with studies of crime, which finds that marriage provides strong informal social controls to deter criminal offense. Our efforts to make sense of this finding suggested that gender equality plays an important role in strengthening informal social controls. Thus far, criminologists have done little to analyze the impact of gender equality in studies of crime. Likewise, scholars studying civil conflicts have done little to consider how gender issues impact the decision to rebel. Future studies might consider how the gender composition of both the rebel and government forces impact civil conflicts, for instance.

This article also highlights important implications for policy makers. First, our empirical results strongly support the importance of employment in reducing civil conflict. While leaders have many options to pursue economic advancement, our results highlight the importance of putting men to work. When considering investments in various sectors of the economy, therefore, governments should place emphasis on areas that require an abundant labor source (e.g., infrastructural improvements) as opposed to sectors that require little labor (e.g., resource extraction). Second, our results show that experience in the military is a social-transformative process that makes people less likely to rebel. This suggests that states prone to civil violence should consider at least a minimal level of compulsory military conscription. Finally, while admittedly underdeveloped both theoretically and empirically, our results point towards gender equity as a potentially important concern for policy makers seeking peace. At a minimum, this article shows that informal mechanisms identified in the criminological literature have important implications for studies of civil conflict, and we urge scholars to more carefully consider this cross-disciplinary component in future research.

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