Appendix

A1: Sources used in constructing counterrevolutions dataset

* In addition to the sources below, a large number of academic and journalistic secondary sources related to each case were consulted

Encyclopedias:

- Encyclopedia Britannica
- Europa
- Political Handbook of the World
- GlobalSecurity.org
- The Statesman's Yearbook
- The Encyclopedia of Political Revolutions
- Encyclopedia of Wars
- Dictionary of Wars
- Encyclopedia of Stateless Nations
- International Encyclopedia of Revolution and Protest
- Elections in the Americas

Government Sources

- Library of Congress – Country Studies
- State Department Country Background Notes
- CIA World Factbook
- Chiefs of State and Cabinet Members of Foreign Governments

News Archives:

- Keesing's World News Archive
- ProQuest Historical Newspapers

Think tanks:

- Economist Intelligence Unit
- International Crisis Group

- Mass Violence and Resistance Research Network

Qualitative and quantitative datasets:

- Global Nonviolent Action Database
- Comparative Constitutions Project
- African Elections Database
- Ethnic Power Relations Dataset
- Polity / Polity Reports
- Fearon and Laitin Random Narratives
- Rulers.org
- OnWar.com
- Minorities at Risk
- Uppsala Conflict Data Program
- IISS Armed Conflict Database
- Dangerous Companions Project
- Change in Source of Leader Support (CHISOLS) Data
- DADM – Intrastate Dispute Narratives
- Banks
- Global Instances of Coups from 1950 to 2010 (Powell and Thyne 2011)
- Database of Political Institutions
- Freedom House
- Autocratic Regimes Dataset (Geddes et al 2014)
- Authoritarian Regimes Dataset (Hadenius and Teorell 2012)
- Autocracies of the World Dataset (Magaloni et al 2013)
- Authoritarian Spells Dataset (Svolik 2012)

A2: Descriptive statistics

The table below provides descriptive statistics (mean, standard, deviation, min value, and max value) for the variables used in the regression in Table 1. It also lists the original source for each variable. Most variables not hand-coded were found in Beissinger 2022.

Table A.1: Summary statistics for dependent, independent, and control variables

	Mean	SD	Min	Max	Source
Dependent Variable					
Counterrevolution	0.18	0.38	0	1	Hand coded
Independent Variables					
Number of deaths in revolution (log)	6.24	4.41	0	14.91	Beissinger 2022
Civil war	0.40	0.49	0	1	Beissinger 2022
Revolutionary militia	0.51	0.50	0	1	Hand coded
Control Variables					
GDP per capita (log)	7.43	0.87	5.55	9.68	Maddison
Population (log)	9.21	1.47	5.4	13.22	EUGene
Urbanization %	25.01	19.77	0	97.57	EUGene and Vanhannen
Ethnic fractionalization	0.40	0.30	0	0.9	Wimmer and Min 2006
% territory mountainous (log)	2.34	1.37	0	4.32	Fearon and Laitin 2003
End year of revolution	1973	30.78	1906	2015	Beissinger 2022
Duration incumbent was in office	9.93	10.52	0	42	Beissinger 2022
Incumbent military regime	0.16	0.37	0	1	Beissinger 2022
Leftist ideology in revolution	0.18	0.38	0	1	Beissinger 2022
Revolution headed by vanguard party	0.08	0.27	0	1	Beissinger 2022
Rev regime client of major world power	0.32	0.47	0	1	Casey 2020 and hand coded

A3: Explanation of Control Variables used in Main Models

In this appendix, I more fully explain the logic behind the selection of the various control variables used in the paper's regression models. As noted in the main text, these control variables were selected to mitigate two potential threats to inference. First, certain characteristics of countries or regimes might make them both prone to higher levels of revolutionary violence *and* more likely to witness counterrevolutions - such confounding variables could explain any association between revolutionary violence and counterrevolution (particularly counterrevolutionary emergence). Second, my measures of revolutionary violence might actually be picking up *other* important aspects of the revolutionary process, which are the true determinants of counterrevolutionary patterns.

The first set of controls seek to capture confounding socio-economic, demographic, temporal, and institutional variables that could be associated with both revolutionary violence and counterrevolution. For example, it is well known that poor countries are more susceptible to conflict of various types, including revolutions, coups, and civil wars (e.g., Przeworski et al, 2000; Collier and Hoeffler, 2004; Fearon and Laitin, 2003). For similar reasons, we might expect revolutions in poor countries to involve more violence and for them to be more susceptible to counterrevolutions. I therefore control for a country's GDP per capita (logged). I add four additional demographic controls for similar reasons: population (logged), urbanization, ethnic fractionalization, and the proportion of a country covered by mountains (logged). Countries with larger populations have been shown to breed more contentious and insurgent activity (Hibbs, 1973; Fearon and Laitin, 2003) – they too might produce more violent revolutions and more counterrevolutions. Similarly, violent revolution has been shown to be less likely in more urbanized countries (Beissinger, 2022), where counterrevolution might also be more difficult to launch. Ethnic fractionalization is also a well-known correlate of violent conflict (Collier and Hoeffler, 2004; Montalvo Reynal-Querol, 2005), which might similarly raise the likelihood of counterrevolution by an ethnic group that has just been thrust from power. And because mountains provide good cover for rebel groups (Fearon and Laitin, 2003), countries with a large proportion of mountainous terrain might be more likely to produce violent revolutions and counterrevolutions. The GDP per capita, population, and urbanization measures are take from the end year of the revolution.

Next, I include a time variable, denoting the end year of the revolution, to capture any secular temporal trends affecting both conflict and counterrevolution. For example, in the

post-Cold War period violent revolution has declined precipitously (Chenoweth and Stephan, 2012; Lachapelle et al, 2020; Beissinger, 2022), and the United States has also become a less consistent supporter of counterrevolution than it was in the early and mid-20th century.

The structure of the former regime could be a confounding variable that affects both the extent of revolutionary violence and the likelihood of counterrevolution. For example, certain types of regimes, like those led by personalist dictators or with large and fragmented security institutions, might be more likely to resist opposition challenges with violence, tipping a revolutionary conflict into protracted civil war (Greitens, 2016; Geddes et al, 2017). After being ousted, the leaders of these regimes might also be more eager to return to power through counterrevolution or might have more resources at their disposal to do so. I therefore introduce two old regime controls, both taken from Beissinger's dataset: a variable measuring the duration that the incumbent was in power, which is a way of capturing personalism (Hadenius and Teorell, 2007); and a binary measure indicating whether the old regime was headed by the military, which captures the size and centrality of the old regime's military apparatus. Later in the appendix I also include models using two alternative old regime controls. First, I use a categorical variable that captures seven different types of old regime structures. Second, I use a variable that measures the size of the old regime's military (the number of military personnel per capita).

The second threat to inference that I seek to control for is that variables that are highly associated with revolutionary violence are actually doing the causal work and driving the results. Some of these other variables have also been identified in prior scholarship as potentially important for shaping counterrevolution and/or new regime longevity. For example, historically many violent revolutions have been waged by leftist guerrilla movements, whose chosen strategy of resistance derives from socialist or communist theories of political transformation (Stewart 2021). These same ideological commitments may help to preserve the unity of these revolutionary coalitions once they come to power, making their regimes more durable (Levitsky and Way 2012). To ensure ideology is not doing the causal work, I include a binary variable denoting whether the revolution made leftist political demands (sourced from Beissinger's data). Similarly, I include a binary variable capturing whether the revolution was led by a vanguard political party (also from Beissinger). Many mid-20th century leftist insurgencies embraced an organizational model in which guerrilla armies were tightly linked with vanguard party-movements. These kinds of strong and well-integrated parties have been shown to contribute to regime stability and longevity, as they help rulers

maintain discipline within their ranks, dole out spoils, and manage intra-coalition conflicts (Huntington, 1968; Brownlee, 2007; Slater, 2010; Levitsky and Way, 2012; Anria and Cyr, 2016; Slater and Smith, 2016). Finally, violent revolutions are often supported and funded by foreign powers; indeed, Chenoweth and Stephan (2012) find that foreign sponsorship is the chief determinant of whether a violent resistance campaign succeeds. Scholars have also found that international sponsorship is central to the process of counterrevolution (Walt 1992; Halliday 1999; Bisley 2004; Jones 2013; Allinson 2019). The same foreign sponsorship that brings a violent revolutionary movement to power might subsequently help the ensuing regime to consolidate its rule and fend off counterrevolutionaries. I therefore include a binary variable, sourced from Adam Casey's (2020) dataset of client dictatorships, denoting whether the new revolutionary regime was sponsored by a major foreign power. Casey's data only cover authoritarian regimes in the post-1946 period. For non-authoritarian revolutionary regimes, and regimes before 1946, I coded this variable myself using Casey's criteria.

A4: Counterrevolutionary counts

In the main models I operationalize counterrevolution using binary variables: whether a counterrevolution emerged in a given case of revolution and whether a counterrevolution was successful in overthrowing a revolutionary regime. However, some revolutions witness multiple counterrevolutionary challenges, and a binary operationalization essentially flattens these counts into a single outcome. In this appendix, I explore whethere the findings in the main paper change when we account for the multiple incidences of counterrevolution in some cases.

There are two ways in which a count variable could change our findings. First, we may find that revolutionary violence *is* associated with the emergence of counterrevolution when we use a count outcome rather than a binary outcome. Note that here we are asking a slightly different question. Instead of asking whether revolutionary regimes that emerged from violent processes are more or less likely to witness a counterrevolution at all, now we are asking whether these regimes are likely to witness a higher or lower number of counterrevolutions. Second, we may find that there is a relationship between the number of counterrevolutionary challenges and the likelihood of a counterrevolution succeeding. Further, such a relationship could be shaping the main findings about the relationship between violence and counterrevolutionary success. For example, if we find that nonviolent revolutions are more likely to witness multiple counterrevolutions, and that multiple counterrevolutionary challenges are associated with a higher level of success, then this would be an important omitted variable in the main models.

I therefore run two analyses below. First, I use a Poisson regression to model the relationship between revolutionary violence and the number of counterrevolutionary challenges. Second, I move the counterrevolutionary challenges variable to the right side of the equation, entering it as an independent variable in the models of counterrevolutionary success. As the tables demonstrate, neither analysis produces meaningful or statistically significant results. Violence has no strong relationship with the number of counterrevolutionary challenges, just as it had no relationship with counterrevolutionary emergence. And the number of counterrevolutionary challenges is not associated with counterrevolutionary success, nor does it change the strength of the association between violence and success. Accounting for the *number* of counterrevolutionary challenges following a given revolution does not change the conclusions in the main paper.

Table A.2: Revolutionary violence and number of counterrevolutions (Poisson regression)

	Dependent variable:		
	Number of Counterrevs		
	(1)	(2)	(3)
Deaths (log)	−0.043		
	(0.044)		
Civil War		−0.314	
		(0.295)	
Rev militia			−0.133
			(0.309)
GDP per cap (log)	−0.101	−0.096	−0.037
	(0.284)	(0.258)	(0.230)
Pop (log)	0.170*	0.152*	0.142
	(0.098)	(0.086)	(0.087)
Urban %	−0.005	−0.005	−0.004
	(0.009)	(0.009)	(0.009)
Ethnic frac	0.131	0.125	0.150
	(0.449)	(0.460)	(0.460)
Mountainous % (log)	0.131	0.126	0.136
	(0.085)	(0.085)	(0.086)
End year	−0.006*	−0.006*	−0.007**
	(0.004)	(0.003)	(0.003)
Incumbent duration	−0.009	−0.010	−0.008
	(0.010)	(0.010)	(0.010)
Incumbent military regime	0.892***	0.890***	0.898***
	(0.252)	(0.245)	(0.237)
Leftist	0.509	0.449	0.389
	(0.347)	(0.309)	(0.328)
Vanguard party	−0.579	−0.625	−0.595
	(0.477)	(0.499)	(0.513)
Foreign sponsor	0.297	0.343	0.351
	(0.244)	(0.270)	(0.279)
Constant	−1.359	−1.373	−1.803
	(1.975)	(1.834)	(1.650)
Observations	114	114	114
Log Likelihood	−127.426	−127.642	−128.170
Akaike Inf. Crit.	280.852	281.283	282.339
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A.3: Revolutionary violence and counterrevolutionary success, controlling for number of counterrevolutions (penalized logistics regression)

	Dependent variable:		
	Counterrevolutionary success		
	(1)	(2)	(3)
Deaths (log)	−0.148***		
	(0.052)		
Civil War		−1.444***	
		(0.539)	
Rev militia			−1.624***
			(0.459)
Number of counterrevs	−0.299	−0.370	−0.313
	(0.221)	(0.232)	(0.233)
GDP per cap (log)	−0.019	−0.090	−0.291
	(0.420)	(0.396)	(0.355)
Pop (log)	−0.144	−0.136	−0.176
	(0.166)	(0.158)	(0.167)
Urban %	−0.007	0.00003	0.002
	(0.020)	(0.019)	(0.018)
Ethnic frac	−0.686	−0.576	−0.570
	(0.758)	(0.820)	(0.799)
Mountainous % (log)	0.008	0.063	0.038
	(0.222)	(0.203)	(0.217)
End year	−0.022***	−0.022***	−0.022***
	(0.007)	(0.007)	(0.007)
Incumbent duration	0.027	0.030	0.013
	(0.026)	(0.028)	(0.025)
Incumbent military regime	−0.234	−0.181	−0.128
	(0.529)	(0.556)	(0.554)
Leftist	−1.309**	−1.012*	−0.395
	(0.666)	(0.591)	(0.628)
Vanguard party	1.918	1.767	1.333
	(1.335)	(1.144)	(1.185)
Foreign sponsor	−3.035***	−3.030***	−1.897***
	(0.683)	(0.639)	(0.542)
Constant	2.841	2.564	4.478
	(3.703)	(3.523)	(3.398)
Observations	62	62	62
Log Likelihood	−24.783	−24.275	−24.201
Akaike Inf. Crit.	77.565	76.550	76.402
Note:			*p<0.1; **p<0.05; ***p<0.01

A5: Robustness tests

In this section of the appendix I include robustness tests conducted on the regression models in Tables 1 and 2. The first set of robustness tests assess the degree to which my relatively small sample size is affecting results. First, I evaluate whether the models in the main paper are over-fitted by running reduced models, with no or only some control variables included. I begin by simply showing bivariate relationships between the main independent variables and each counterrevolutionary outcome, then I add demographic and economic controls, and then old regime controls.

Second, I show that my results are not sensitive to the omission of high-leverage observations, which can be an issue in datasets with small sample sizes. I run models with the highest leverage observation omitted in each case. For the main models and the counterrevolutionary success models this observation is the 1919 Hungarian Counterrevolution. It makes sense that this is a high leverage observation, since this is a case that is in many ways anomolistic – it is the only case of a successful counterrevolution against a leftist revolutionary regime and one enjoying strong foreign sponsorship (it is less anomolistic on the violence variables, however). Removing it from the dataset does not change the main results for any of the violence variables. For the counterrevolutionary emergence model the highest-leverage case is the Ethiopian Civil War. Again, results do not change when removing this observation. Separately, I also removed the second- and third-highest leverage cases in each model, and results remained robust to these omissions as well.

The final set of robustness tests introduce alternative old regime control variables (in the main models I control for the length of time that the incumbent leader was in power and whether the incumbent regime was a military regime). First, I introduce a categorical variable capturing seven types of incumbent regimes: colonial or occupation regime, democracy, hybrid regime, military regime, monarchy, personalist regime, and one-party regime. In these models the reference category is colonial or occupation regime. Second, I introduce a control variable capturing the size of the old regime's military: the number of military personnel per capita. Note that because of missing data this variable results in four additional observations being dropped from the analyses.

Table A.4: Revolutionary violence and counterrevolution (penalized logistic regression), reduced models

	Dependent variable:								
	Counterrevolution (aggregate outcome)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Deaths (log)	-0.084^{**}	-0.140^{***}	-0.130^{***}						
	(0.037)	(0.048)	(0.043)						
Civil War				-1.197^{**}	-1.598^{***}	-1.499^{***}			
				(0.493)	(0.572)	(0.536)			
Rev militia							-1.454^{**}	-2.308^{***}	-2.164^{***}
							(0.586)	(0.565)	(0.518)
GDP per cap (log)		-0.673^{*}	-0.743^{**}		-0.713^{*}	-0.815^{**}		-0.799^{**}	-0.955^{***}
		(0.367)	(0.356)		(0.377)	(0.362)		(0.386)	(0.353)
Pop (log)		-0.113	-0.113		-0.142	-0.143		-0.105	-0.110
		(0.157)	(0.146)		(0.161)	(0.148)		(0.170)	(0.150)
Urban %		-0.011	-0.003		-0.008	-0.0003		-0.007	0.003
		(0.015)	(0.013)		(0.015)	(0.014)		(0.017)	(0.015)
Ethnic frac		-1.104	-1.355^{*}		-1.035	-1.317^{*}		-1.011	-1.244^{*}
		(0.793)	(0.726)		(0.820)	(0.766)		(0.795)	(0.717)
Mountainous %		0.288^{**}	0.276^{*}		0.245^{*}	0.235^{*}		0.236^{*}	0.225
		(0.141)	(0.144)		(0.133)	(0.141)		(0.134)	(0.138)
End year		-0.012	-0.013		-0.011	-0.012		-0.017^{*}	-0.019^{*}
		(0.009)	(0.009)		(0.010)	(0.010)		(0.010)	(0.010)
Incumbent duration			0.024			0.023			0.017
			(0.026)			(0.027)			(0.025)
Incumbent military regime			0.932^{**}			0.940^{**}			0.853^{**}
			(0.411)			(0.419)			(0.413)
Constant	-1.006^{***}	5.187	5.183^{*}	-1.116^{***}	5.468^{*}	5.727^{*}	-0.911^{***}	6.049^{*}	6.724^{**}
	(0.348)	(3.209)	(3.074)	(0.273)	(3.259)	(3.094)	(0.294)	(3.381)	(3.052)
Observations	123	114	114	123	114	114	123	114	114
Log Likelihood	-56.516	-43.630	-42.460	-54.933	-42.251	-41.190	-53.249	-37.441	-36.848
Akaike Inf. Crit.	117.031	103.261	104.921	113.865	100.502	102.380	110.497	90.882	93.695

Note: *p<0.1; **p<0.05; ***p<0.01

Table A.5: Revolutionary violence and counterrevolutionary emergence (penalized logistic regression), reduced models

	Dependent variable:								
	Counterrevolutionary emergence								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Deaths (log)	0.009	−0.081	−0.074						
	(0.041)	(0.052)	(0.052)						
Civil War				0.013	−0.473	−0.347			
				(0.372)	(0.443)	(0.440)			
Rev militia							0.091	−0.356	−0.142
							(0.355)	(0.393)	(0.428)
GDP per cap (log)		−0.819***	−0.884***		−0.745***	−0.791***		−0.690***	−0.732***
		(0.244)	(0.227)		(0.242)	(0.231)		(0.246)	(0.238)
Pop (log)		0.210	0.229		0.169	0.194		0.179	0.202
		(0.144)	(0.143)		(0.138)	(0.138)		(0.139)	(0.139)
Urban %		−0.013	−0.007		−0.012	−0.006		−0.012	−0.006
		(0.014)	(0.013)		(0.013)	(0.012)		(0.013)	(0.012)
Ethnic frac		−0.539	−0.821		−0.571	−0.854		−0.558	−0.868
		(0.648)	(0.629)		(0.649)	(0.639)		(0.646)	(0.635)
Mountainous % (log)		0.062	0.037		0.056	0.036		0.056	0.042
		(0.156)	(0.147)		(0.152)	(0.147)		(0.151)	(0.146)
End year		−0.005	−0.007		−0.005	−0.007		−0.006	−0.007
		(0.008)	(0.007)		(0.008)	(0.007)		(0.007)	(0.007)
Incumbent duration			0.019			0.018			0.018
			(0.017)			(0.017)			(0.017)
Incumbent military regime			1.408**			1.389**			1.398**
			(0.566)			(0.557)			(0.553)
Constant	0.056	5.190**	5.044**	0.107	4.695**	4.370**	0.066	4.192*	3.781*
	(0.326)	(2.213)	(2.112)	(0.244)	(2.262)	(2.204)	(0.266)	(2.300)	(2.223)
Observations	123	114	114	123	114	114	123	114	114
Log Likelihood	−85.033	−67.829	−64.401	−85.057	−68.514	−65.156	−85.025	−68.695	−65.389
Akaike Inf. Crit.	174.066	151.659	148.802	174.114	153.029	150.313	174.050	153.391	150.778

Note: *p<0.1; **p<0.05; ***p<0.01

Table A.6: **Revolutionary violence and counterrevolutionary success (penalized logistic regression), reduced models**

	Dependent variable:								
	Counterrevolutionary success								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Deaths (log)	−0.130**	−0.148**	−0.138**						
	(0.055)	(0.064)	(0.060)						
Civil War				−1.459***	−1.557***	−1.447***			
				(0.538)	(0.586)	(0.535)			
Rev militia							−1.868***	−2.310***	−2.260***
							(0.646)	(0.533)	(0.462)
GDP per cap (log)		−0.377	−0.374		−0.464	−0.456		−0.627	−0.562
		(0.393)	(0.367)		(0.388)	(0.364)		(0.412)	(0.379)
Pop (log)		−0.156	−0.159		−0.162	−0.170		−0.206	−0.190
		(0.155)	(0.149)		(0.164)	(0.160)		(0.187)	(0.176)
Urban %		−0.005	−0.004		−0.001	0.001		−0.004	−0.007
		(0.019)	(0.018)		(0.017)	(0.016)		(0.021)	(0.020)
Ethnic frac		−1.052	−1.047		−0.865	−0.886		−0.936	−0.874
		(0.794)	(0.714)		(0.850)	(0.761)		(0.847)	(0.776)
Mountainous % (log)		0.288	0.277		0.284	0.273		0.147	0.123
		(0.207)	(0.212)		(0.194)	(0.202)		(0.249)	(0.236)
End year		−0.010	−0.009		−0.007	−0.007		−0.013	−0.012
		(0.009)	(0.008)		(0.010)	(0.009)		(0.010)	(0.009)
Incumbent duration			0.010			0.011			−0.010
			(0.034)			(0.035)			(0.028)
Incumbent military regime			0.137			0.141			−0.134
			(0.533)			(0.536)			(0.522)
Constant	0.126	4.074	3.905	−0.150	4.253	4.122	0.188	6.663*	6.322*
	(0.487)	(3.231)	(3.160)	(0.359)	(3.199)	(3.092)	(0.410)	(3.402)	(3.244)
Observations	65	62	62	65	62	62	65	62	62
Log Likelihood	−39.547	−32.835	−32.863	−38.095	−31.893	−31.940	−35.553	−27.211	−27.297
Akaike Inf. Crit.	83.093	81.671	85.726	80.191	79.786	83.880	75.106	70.422	74.594
Note:									*p<0.1; **p<0.05; ***p<0.01

Table A.7: Revolutionary violence and counterrevolution (penalized logistic regression), Hungary 1919 removed

	Dependent variable:		
	Counterrevolution (aggregate outcome)		
	(1)	(2)	(3)
Deaths (log)	−0.104**		
	(0.049)		
Civil War		−1.081**	
		(0.527)	
Rev militia			−2.014***
			(0.516)
GDP per cap (log)	−0.551	−0.578	−0.962**
	(0.432)	(0.418)	(0.428)
Pop (log)	0.087	0.074	0.119
	(0.147)	(0.137)	(0.135)
Urban %	−0.008	−0.006	0.007
	(0.020)	(0.020)	(0.018)
Ethnic frac	−1.118	−1.164	−1.130
	(0.750)	(0.768)	(0.816)
Mountainous % (log)	0.352**	0.351**	0.408***
	(0.146)	(0.142)	(0.150)
End year	−0.024***	−0.024***	−0.028***
	(0.008)	(0.008)	(0.009)
Incumbent duration	0.080***	0.080***	0.072**
	(0.028)	(0.029)	(0.029)
Incumbent military regime	0.738*	0.736	0.795
	(0.446)	(0.457)	(0.506)
Leftist	−2.253***	−2.390***	−1.072**
	(0.577)	(0.598)	(0.435)
Vanguard party	−1.199**	−1.020**	0.427
	(0.477)	(0.473)	(0.544)
Foreign sponsor	−4.934***	−4.845***	−3.712***
	(0.793)	(0.759)	(0.613)
Constant	1.595	1.600	3.729
	(3.412)	(3.274)	(3.420)
Observations	113	113	113
Log Likelihood	−30.131	−29.712	−27.914
Akaike Inf. Crit.	86.263	85.423	81.827
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A.8: Revolutionary violence and counterrevolutionary emergence (penalized logistic regression), Ethiopia 1974 removed

	Dependent variable:		
	Counterrevolutionary emergence		
	(1)	(2)	(3)
Deaths (log)	−0.055		
	(0.053)		
Civil War		−0.168	
		(0.438)	
Rev militia			0.090
			(0.454)
GDP per cap (log)	−0.893***	−0.790***	−0.731***
	(0.233)	(0.241)	(0.252)
Pop (log)	0.244*	0.209	0.210
	(0.148)	(0.142)	(0.145)
Urban %	−0.008	−0.009	−0.009
	(0.014)	(0.014)	(0.014)
Ethnic frac	−0.799	−0.790	−0.797
	(0.603)	(0.611)	(0.618)
Mountainous % (log)	0.076	0.076	0.082
	(0.153)	(0.152)	(0.152)
End year	−0.006	−0.006	−0.006
	(0.007)	(0.007)	(0.006)
Incumbent duration	0.017	0.017	0.019
	(0.016)	(0.017)	(0.017)
Incumbent military regime	1.683***	1.661***	1.691***
	(0.564)	(0.562)	(0.560)
Leftist	−0.101	−0.311	−0.446
	(0.554)	(0.563)	(0.631)
Vanguard party	−0.185	−0.136	−0.082
	(0.949)	(0.947)	(0.957)
Foreign sponsor	0.170	0.194	0.180
	(0.385)	(0.372)	(0.373)
Constant	4.802**	4.109*	3.566
	(2.075)	(2.200)	(2.191)
Observations	113	113	113
Log Likelihood	−61.979	−62.404	−62.447
Akaike Inf. Crit.	149.957	150.808	150.894
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A.9: Revolutionary violence and counterrevolutionary success (penalized logistic regression), Hungary 1919 removed

	Dependent variable:		
	Counterrevolutionary success		
	(1)	(2)	(3)
Deaths (log)	−0.179**		
	(0.070)		
Civil War		−1.302**	
		(0.569)	
Rev militia			−2.002***
			(0.645)
GDP per cap (log)	−0.259	−0.293	−0.560
	(0.412)	(0.428)	(0.390)
Pop (log)	−0.018	−0.033	0.058
	(0.138)	(0.126)	(0.135)
Urban %	−0.005	0.004	−0.001
	(0.027)	(0.026)	(0.024)
Ethnic frac	−0.624	−0.563	−0.414
	(0.797)	(0.831)	(0.839)
Mountainous % (log)	0.300	0.291	0.382*
	(0.190)	(0.182)	(0.196)
End year	−0.030***	−0.029***	−0.028***
	(0.009)	(0.009)	(0.008)
Incumbent duration	0.085***	0.078***	0.069***
	(0.028)	(0.028)	(0.025)
Incumbent military regime	−0.382	−0.335	−0.171
	(0.531)	(0.541)	(0.544)
Leftist	−1.468**	−1.395***	0.059
	(0.668)	(0.520)	(0.755)
Vanguard party	0.792	0.420	−0.435
	(0.748)	(0.706)	(0.678)
Foreign sponsor	−6.338***	−5.626***	−4.379***
	(1.060)	(0.847)	(0.626)
Constant	1.855	1.415	2.424
	(3.071)	(3.009)	(2.837)
Observations	61	61	61
Log Likelihood	−19.646	−20.153	−19.322
Akaike Inf. Crit.	65.292	66.307	64.645
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A.10: Revolutionary violence and counterrevolution (penalized logistic regression), alt. old regime controls

	Dependent variable:		
	Counterrevolution (aggregate outcome)		
	(1)	(2)	(3)
Deaths (log)	-0.156^{***}		
	(0.041)		
Civil War		-1.375^{**}	
		(0.630)	
Rev militia			-1.843^{***}
			(0.375)
GDP per cap (log)	-0.596	-0.724	-0.981^{***}
	(0.374)	(0.450)	(0.328)
Pop (log)	0.265^{**}	0.194	0.135
	(0.125)	(0.136)	(0.151)
Urban %	-0.019	-0.012	-0.002
	(0.019)	(0.020)	(0.018)
Ethnic frac	-0.515	-0.472	-0.497
	(0.707)	(0.742)	(0.646)
Mountainous % (log)	-0.099	-0.089	-0.074
	(0.158)	(0.148)	(0.156)
End year	-0.025^{***}	-0.024^{***}	-0.026^{***}
	(0.009)	(0.009)	(0.010)
Incumbent democracy,	0.028	0.918	1.897^{***}
	(0.857)	(0.674)	(0.570)
Incumbent military regime	2.602^{***}	2.769^{***}	2.987^{***}
	(0.557)	(0.603)	(0.617)
Incumbent monarchy	0.598	1.064^{*}	1.497^{**}
	(0.703)	(0.633)	(0.612)
Incumbent hybrid	3.321^{***}	3.420^{***}	3.429^{***}
	(0.579)	(0.612)	(0.621)
Incumbent personalist	4.255^{***}	4.397^{***}	4.296^{***}
	(0.643)	(0.651)	(0.678)
Incumbent one-party	0.328	0.683	0.813^{*}
	(0.440)	(0.462)	(0.488)
Leftist	-1.071^{**}	-1.093^{**}	-0.453
	(0.462)	(0.523)	(0.432)
Vanguard party	0.202	0.051	0.507
	(0.571)	(0.526)	(0.505)
Foreign sponsor	-1.477^{***}	-1.437^{***}	-0.968^{**}
	(0.460)	(0.419)	(0.434)
Constant	0.355	1.086	3.165
	(2.629)	(2.996)	(2.500)
Observations	114	114	114
Log Likelihood	-29.540	-29.511	-28.655
Akaike Inf. Crit.	93.081	93.022	91.309
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A.11: Revolutionary violence and counterrevolutionary emergence / success (penalized logistic regression), alt. old regime controls

	Dependent variable:					
	Counterrevolutionary emergence			Counterrevolutionary success		
	(1)	(2)	(3)	(4)	(5)	(6)
Deaths (log)	−0.078			−0.394***		
	(0.055)			(0.090)		
Civil War		−0.102			−2.295***	
		(0.482)			(0.650)	
Rev militia			0.164			−2.386***
			(0.431)			(0.456)
GDP per cap (log)	−0.938***	−0.748***	−0.695***	−0.345	−0.421	−0.897**
	(0.243)	(0.234)	(0.228)	(0.403)	(0.477)	(0.350)
Pop (log)	0.375**	0.323**	0.329**	0.286**	0.091	0.039
	(0.172)	(0.164)	(0.165)	(0.112)	(0.131)	(0.165)
Urban %	−0.022	−0.021	−0.022*	−0.043*	−0.017	0.001
	(0.014)	(0.013)	(0.013)	(0.024)	(0.022)	(0.021)
Ethnic frac	−0.695	−0.666	−0.690	−0.292	0.119	0.008
	(0.585)	(0.578)	(0.587)	(0.803)	(0.799)	(0.682)
Mountainous % (log)	−0.060	−0.059	−0.054	−0.445**	−0.254	−0.250
	(0.149)	(0.148)	(0.149)	(0.204)	(0.185)	(0.203)
End year	−0.014	−0.015*	−0.016*	−0.010	−0.005	−0.016*
	(0.009)	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)
Incumbent democracy,	2.217***	2.432**	2.524***	−0.865	−1.451	−0.738
	(0.855)	(0.988)	(0.968)	(1.069)	(1.107)	(0.977)
Incumbent military regime	3.043***	3.158***	3.274***	−0.003	−0.190	0.664
	(0.844)	(0.891)	(0.851)	(0.691)	(0.752)	(0.536)
Incumbent monarchy	0.373	0.693	0.781	0.276	0.453	0.611
	(0.788)	(0.828)	(0.719)	(0.950)	(1.002)	(0.886)
Incumbent hybrid	2.487***	2.629***	2.736***	2.042***	1.206	1.722**
	(0.865)	(0.952)	(0.906)	(0.642)	(0.802)	(0.694)
Incumbent personalist	3.180***	3.251***	3.327***	1.971**	1.719*	1.908**
	(0.743)	(0.816)	(0.804)	(0.886)	(0.920)	(0.747)
Incumbent one-party	1.378	1.623*	1.768*	−4.585***	−3.000***	−2.104***
	(0.866)	(0.932)	(0.919)	(1.179)	(0.768)	(0.495)
Leftist	0.904	0.642	0.569	0.029	−0.974**	0.746
	(0.679)	(0.696)	(0.744)	(0.465)	(0.470)	(0.596)
Vanguard party	−2.053*	−2.038*	−2.090*	0.054	0.896	−0.271
	(1.056)	(1.095)	(1.117)	(0.903)	(0.945)	(1.022)
Foreign sponsor	0.431	0.450	0.427	−3.650***	−2.865***	−1.639***
	(0.379)	(0.379)	(0.390)	(0.733)	(0.521)	(0.525)
Constant	3.126	1.601	0.965	3.754	3.694	6.488**
	(2.526)	(2.655)	(2.557)	(2.785)	(3.487)	(2.737)
Observations	114	114	114	62	62	62
Log Likelihood	−56.497	−57.321	−57.271	−17.850	−20.033	−19.843
Akaike Inf. Crit.	146.993	148.642	148.542	69.700	74.066	73.686
Note:						*p<0.1; **p<0.05; ***p<0.01

Table A.12: Revolutionary violence and counterrevolution (penalized logistic regression), military personnel per capita

	Dependent variable:		
	Counterrevolution (aggregate outcome)		
	(1)	(2)	(3)
Deaths (log)	−0.061		
	(0.044)		
Civil War		−1.213**	
		(0.613)	
Rev militia			−2.140***
			(0.546)
GDP per cap (log)	−0.346	−0.537	−0.726**
	(0.388)	(0.426)	(0.337)
Pop (log)	−0.060	−0.039	0.014
	(0.146)	(0.146)	(0.141)
Urban %	−0.006	−0.005	0.002
	(0.013)	(0.014)	(0.014)
Ethnic frac	−1.108	−1.056	−1.058
	(0.766)	(0.813)	(0.824)
Mountainous % (log)	0.030	0.017	0.027
	(0.151)	(0.150)	(0.165)
End year	−0.020***	−0.019**	−0.028***
	(0.008)	(0.009)	(0.009)
Military personnel per capita	−0.025***	−0.025***	−0.033***
	(0.009)	(0.008)	(0.009)
Leftist	−0.707	−0.403	0.016
	(0.476)	(0.556)	(0.456)
Vanguard party	0.124	0.195	0.679
	(1.027)	(0.921)	(0.608)
Foreign sponsor	−1.731***	−1.844***	−1.365***
	(0.532)	(0.498)	(0.396)
Constant	3.155	4.295	5.251*
	(3.082)	(3.224)	(2.680)
Observations	110	110	110
Log Likelihood	−37.987	−36.676	−33.139
Akaike Inf. Crit.	99.973	97.352	90.278
Note:			*p<0.1; **p<0.05; ***p<0.01

Table A.13: Revolutionary violence and counterrevolutionary emergence / success (penalized logistic regression), military personnel per capita

	Dependent variable:					
	Counterrevolutionary emergence			Counterrevolutionary success		
	(1)	(2)	(3)	(4)	(5)	(6)
Deaths (log)	−0.042			−0.146**		
	(0.058)			(0.065)		
Civil War		−0.170			−1.292*	
		(0.468)			(0.708)	
Rev militia			−0.077			−1.974***
			(0.464)			(0.610)
GDP per cap (log)	−0.709***	−0.643**	−0.614**	−0.214	−0.298	−0.535
	(0.258)	(0.252)	(0.269)	(0.493)	(0.532)	(0.433)
Pop (log)	0.339**	0.317*	0.321*	−0.136	−0.135	−0.120
	(0.168)	(0.169)	(0.169)	(0.171)	(0.158)	(0.156)
Urban %	−0.012	−0.012	−0.012	−0.002	0.005	0.009
	(0.014)	(0.014)	(0.013)	(0.021)	(0.020)	(0.021)
Ethnic frac	−0.972	−0.977	−0.971	−0.911	−0.745	−0.775
	(0.651)	(0.656)	(0.667)	(0.849)	(0.888)	(0.860)
Mountainous % (log)	−0.093	−0.094	−0.093	−0.048	−0.022	−0.047
	(0.179)	(0.172)	(0.173)	(0.235)	(0.211)	(0.242)
End year	−0.018*	−0.019*	−0.019**	−0.021**	−0.020**	−0.025**
	(0.010)	(0.010)	(0.010)	(0.009)	(0.009)	(0.010)
Military personnel per capita	−0.027**	−0.028**	−0.029***	−0.006	−0.006	−0.019
	(0.011)	(0.012)	(0.011)	(0.011)	(0.011)	(0.012)
Leftist	−0.065	−0.183	−0.209	−1.394***	−1.558***	−0.262
	(0.546)	(0.550)	(0.612)	(0.481)	(0.474)	(0.538)
Vanguard party	−1.099	−1.120	−1.120	1.783*	1.884**	1.197
	(0.954)	(0.955)	(0.950)	(0.968)	(0.931)	(0.848)
Foreign sponsor	0.125	0.169	0.180	−2.413***	−2.338***	−1.358***
	(0.394)	(0.385)	(0.386)	(0.569)	(0.536)	(0.393)
Constant	3.817*	3.351	3.075	4.076	3.932	5.660
	(2.305)	(2.275)	(2.314)	(3.931)	(4.048)	(3.479)
Observations	110	110	110	59	59	59
Log Likelihood	−61.098	−61.290	−61.333	−25.834	−25.594	−24.173
Akaike Inf. Crit.	146.197	146.580	146.667	75.669	75.188	72.347

Note: *p<0.1; **p<0.05; ***p<0.01

A6: Set-theoretic analysis

In Section 6 of the paper I showed partial results from a set-theoretic evaluation of my hypotheses regarding revolutionary violence and counterrevolution. The 2x2 contingency table in the paper used only one of my violence measures (the revolutionary militia variable) and the aggregate counterrevolution outcome. In this appendix I show 2x2 tables using each of my violence variables and all three of the counterrevolutionary outcomes (the aggregate outcome, emergence, and success). I also elaborate on the method and the results, including the specific cases that appear to be exceptional.

Regarding the appropriateness of this method for my study, some scholars have argued that in situations of small or medium sample sizes it is better to use a set-theoretic or Boolean approach to studying causal relationships than a statistical one. In my study, once observations with missing data are removed, I have a dataset of 114 cases. In the final model, where I analyze counterrevolutionary success conditional on a challenge emerging, this sample size falls to 62. Though datasets of this size are generally still considered large enough for statistical modeling (with some caveats about potential biases, like those I discussed in the main paper and in Appendix A5 above), one could argue that a set-theoretic approach might be more appropriate for such a small sample. These studies are most often run on medium-n samples of between ten and fifty observations. Nevertheless, they can also sometimes be conducted on samples sizes of up to 100 or 200.

Below I lay out nine 2x2 contingency tables, which are constructed using my counterrevolutions dataset and my three variables measuring revolutionary violence: the number of deaths in the revolution, whether the revolution involved a civil war, and whether the new revolutionary regime had its own militia or armed force. Because 2x2 tables require binary variables, I convert my deaths measure into a binary variable by setting a cut-off point of 1,000 deaths (all revolutions above 1,000 deaths being considered violent, and all those below being considered nonviolent). I construct the 2x2 tables for each of my three counterrevolutionary outcomes: counterrevolution (aggregate outcome), counterrevolutionary emergence, and counterrevolutionary success. For each table, I also calculate the consistency and coverage scores.

Regardless of which violence measure we use, the story is the same. Looking at the aggregate outcome, there are a very small number of successful counterrevolutions following violent revolutions (4 or 5), and the consistency scores are nearly identical (0.92 or 0.93).

These results suggest that nonviolent revolution is a nearly necessary condition for a successful counterrevolution and that revolutionary violence is a nearly sufficient condition for no counterrevolution / counterrevolutionary failure. When we look at counterrevolutionary emergence, the consistency scores are low (0.46 to 0.51) suggesting no relationship of necessity or sufficiency. And for counterrevolutionary success, we see that all three consistency scores are 0.85, suggesting once again that nonviolent revolution is a nearly necessary condition for a counterrevolution to succeed. The relationships can best be summarized as follows: if a revolutionary government comes to power through violence it is virtually assured that any counterrevolution launched against it will end in failure (or, more simply, *if revolutionary violence then no counterrevolution*).

Another important finding worth mentioning is that while nonviolence may be a necessary condition for successful counterrevolution, it is *not* a sufficient condition. There are many cases of nonviolent revolutions where counterrevolutions either did not emerge or did not succeed. These findings lend support to the points raised in the Conclusion of the paper: that the key for nonviolent revolutionaries is devising strategies to bolster their regimes and protect them from counterrevolutionary threats.

What are the anomalistic cases, where violence is part of the revolutionary process and yet counterrevolutionaries manage to restore themselves in office? Three of these anomalistic cases can be found in all three tables: the Xinhai Revolution in China (1911), the Taliban Revolution (1996), and the First Chechen War (1996). The tables using the deaths and civil war variables both also capture the Yemeni Uprising of 2011. And the table produced with the revolutionary militia variable captures the Hungarian Revolution of 1919 and the Chechen Revolution (1991). As I explained briefly in Section 4 of the paper, these cases may well be the exceptions that prove the rule. In all but one of them (the Xinhai Revolution), counterrevolutions only succeed because they were either executed or directly assisted by powerful foreign armies (the Russians in Chechnya, the United States in Afghanistan, the Romanians in Hungary). The cases therefore suggest that it is only through very concerted and forceful foreign sponsorship (which, as noted in the paper, is an important alternative explanation for counterrevolution) that counterrevolutionaries can successfully overpower a revolutionary government that enjoys access to coercive resources.

Deaths *

* Violent revolution operationalized as deaths exceeding 1,000

Counterrevolution (aggregate outcome)

	Non-violent	Violent
No successful counterrev	50	51
Successful countterev	18	4

Consistency: 0.93

Coverage: 0.50

Counterrevolutionary emergence

	Non-violent	Violent
No counterrev emergence	30	28
Countterev emergence	38	27

Consistency: 0.51

Coverage: 0.48

Counterrevolutionary success

	Non-violent	Violent
Failed counterrev	20	23
Successful countterev	18	4

Consistency: 0.85

Coverage: 0.53

Civil war

Counterrevolution (aggregate outcome)

	Non-violent	Violent
No successful counterrev	56	45
Successful countterev	18	4

Consistency: 0.92

Coverage: 0.46

Counterrevolutionary emergence

	Non-violent	Violent
No counterrev emergence	35	23
Countterev emergence	39	26

Consistency: 0.47

Coverage: 0.40

Counterrevolutionary success

	Non-violent	Violent
Failed counterrev	21	22
Successful countterev	18	4

Consistency: 0.85

Coverage: 0.51

Revolutionary militia

Counterrevolution (aggregate outcome)

	Non-violent	Violent
No successful counterrev	43	58
Successful countterev	17	5

Consistency: 0.92

Coverage: 0.57

Counterrevolutionary emergence

	Non-violent	Violent
No counterrev emergence	29	29
Countterev emergence	31	34

Consistency: 0.46

Coverage: 0.50

Counterrevolutionary success

	Non-violent	Violent
Failed counterrev	14	29
Successful countterev	17	5

Consistency: 0.85

Coverage: 0.67