The Process of Revolutionary Protest: Development and Democracy in the Tunisian Revolution

Christopher Barrie

Revolutionary protest rarely begins as democratic or revolutionary. Instead, it grows in a process of positive feedback, incorporating new constituencies and generating new demands. If protest is not revolutionary at its onset, theory should reflect this and be able to explain the endogenous emergence of democratic demands. In this article, I combine multiple data sources on the 2010–2011 Tunisian Revolution, including survey data, an original event catalogue, and field interviews. I show that the correlates of protest occurrence and participation change significantly during the uprising. Using the Tunisian case as a theory-building exercise, I argue that the formation of protest coalitions is essential, rather than incidental, to democratic revolution.

Democratization from below is now a central pillar in in the theoretical and empirical scholarship on democratization (Beissinger 2013, 2022; Brancati 2016; Hellmeier and Bernhard 2023).[1] A large body of empirical work in the democratization literature nonetheless treats revolutionary protest—or revolutionary protest participation—as discrete, unitary events. In this article, I propose that this ontology is wrongheaded; protest is rarely revolutionary at its onset and the goals and orienting demands of protest waves can be generated in the context of contention. To illustrate my argument, I use both original and previously analyzed data, and take as my case the Tunisian Revolution of 2010–2011.

The Tunisian Revolution did not begin life as revolutionary. Starting with the self-immolation of Mohamed Bouazizi on December 17, 2010, protest during the uprising would gradually diffuse across diverse regions of the country, incorporating new constituencies, and advancing demands that were initially parochial and economic, but which culminated in expansive, revolutionary demands for democracy. This processual emergence of expansive contentious claims, I argue, is not specific to Tunisia. Variously parochial or disconnected contention can conduce to mass demands for democracy absent any organized campaign. By "parochial," I refer to demands that do not make national-level claims that might threaten the ability of incumbents to stay in power. When aired in authoritarian polities, demands for democracy are "revolutionary" because they necessarily threaten the ability of authoritarian incumbents to govern.

That democracy is the outcome of mass contention should not imply, however, that democratic demands motivated protest outbreak; mass mobilization and democratization are causally connected but conceptually distinct. This has profound implications for how we understand both revolutionary mobilization and democratization. Rather than assuming a set of collectively held grievances flowing from a set of structural conditions at a single point in time, scholars should redirect attention to the mechanisms governing the emergence of mass contention.

To support these claims, I use an original spatially and temporally disaggregated event dataset on protest occurrence during the 29 days of the Tunisian Revolution. I combine these with available ecological data to assess the changing correlates of "revolutionary" protest diffusion over the course of the uprising. I bolster these findings with evidence from available survey data, disaggregating temporally by the date of the respondent's first participation.

A list of permanent links to Supplemental Materials provided by the author precedes the References section.

**Data replication sets are available in Harvard Dataverse (Barrie 2023) at: https://doi.org/10.7910/DVN/TRMYO4*

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I find that a commonly cited structural precipitant for protest and democratic breakthrough—economic development—exerts effects that are far from constant, with its coefficient, in fact, reversing sign over the course of the protest cycle. A supplementary analysis demonstrates that several further measures of deprivation and development also exhibit strongly time-dependent effects. Consistent with this evidence of the changing correlates of protest, I show with a reanalysis of published findings from survey data that a commitment to democracy had no association with protest participation at the onset of protest, but was a substantively positive predictor by its close. Overall, the findings point to the endogenous emergence of democratic claims in a protest wave that nonetheless began life as parochial, unorganized, and divorced from broader political campaigns. In a final section I use data from field interviews to elaborate this claim. I use these interviews to focus on *how* questions—specifically, how brokerage functioned as a key mechanism governing the expansion of contention. I go on to argue that the formation of protest coalitions should become a central object of explanation in future scholarship.

The contribution of the article is twofold. The first is empirical; the second is theoretical. On the empirical level, I rigorously demonstrate, using multiple different sources, the processual logics of a revolutionary wave. On the theoretical level, I demonstrate how we can use this and other case material to build theory from the ground up. In so doing, I synthesize several important insights from the literature in contentious politics, social movements, and conflict. The theoretical account I propose argues for an alternative, processual understanding of revolution that recognizes a) that revolutionary protest often does not begin as revolutionary but incorporates new protestors over time and advances new demands, and b) that the formation of coalitions is an essential outcome to be explained if we are to understand how and why revolutions are able unfold.

Revolution for Democracy

For early generations of revolution scholars, the processual dynamics of revolutionary protest were central. In response to the "natural histories" school, James Rule and Charles Tilly advocated a renewed attention to revolution as political process and to "shifts in the form, locus, and intensity of conflict as the struggle for power continues" (1972, 62). Taking as their case the 1830 Revolution in France, and making early use of event data, these authors note that revolutionary protest was far from a unitary phenomenon, concluding that "other studies which have found strong relations between levels of conflict and structural variables at a single point in time may well have mistaken historically contingent relationships for general effects of structure" (Rule and Tilly 1972, 68; see also Tilly 1973). James Scott (1979) would similarly argue that labelling revolution as "nationalist," "communist," or otherwise obscures the process of its unfolding, ascribing to it characteristics that fail to represent the diversity of motivations animating the "revolution in the revolution." In the same year, Rod Aya warned against the assessment of revolutions on the basis of retroactively ascribed intentions or outcomes: "any viable conception of revolution," he argued, "must take into account that those who initiate, lead, provide mass support for, and ultimately benefit from revolutions are often very different groups of people" (1979, 45). From a structuralist perspective, the foremost statement against "intentionalism" in revolutions research came from Skocpol (1979). The notion that uprisings began life with the purposive intention of revolutionary overthrow was fallacious, Skocpol argued: "In fact, in historical revolutions, differently situated and motivated groups have become participants in complex unfoldings of multiple conflicts" (1979, 17).

More recent research comes in three main forms. The first cites macrostructural factors as key correlates in the outbreak of democratic revolution. Here, revolutionary protest constitutes a discrete event; any endogenous or processual elements of its unfolding are viewed as incidental to the larger structural determinants of its outbreak. Notably, key variables are theorized to have opposing effects; while some cite economic development or reduced inequality as predictive of mobilization or threat of mobilization for democracy (Inglehart and Welzel 2005), others find an association between economic downturn and democratization or democracy protest (Acemoglu and Robinson 2006; Brancati 2014). The implicit assumption in such analyses is that revolution is "everywhere in equilibrium" (Tsebelis and Sprague 1989). In other words, the effects of a covariate, or set of covariates, are assumed to be constant over the entire observation period. And yet, more recent scholarship in this vein concludes that macro-level political economic variables have only limited explanatory power for understanding the onset of democratic or "distributive conflict" transitions (Haggard and Kaufman 2016; Chenoweth and Ulfelder 2017).[2]

A second body of literature uses a formal modelling approach to account for the processual, endogenous dynamics of protest but again conceives of all participation as revolutionary. Here, the assumption is of common but varying "revolutionary thresholds" in a population that can be triggered as a function of the participation of others. Thresholds are heterogeneous within a population, and early-risers with lower participation thresholds have the capacity to impel the participation of higher-threshold groups in a recursive process (DeNardo 1985; Karklins and Petersen 1993; Kuran 1995). As such, all protest in such conceptions is revolutionary; what varies is the distribution of thresholds in a population. The assumption here, then, is that the participation calculus of protesters in a revolutionary wave can be modelled as a

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function of an underlying latent revolutionary propensity. These models are, however, difficult to reconcile with the empirical record of mass mobilization events and the observation that the targets and orienting demands of protest often change over time (Lohmann 1994).

A final body of work, particular to survey-based research, does recognize that revolutions involve diverse constituencies and are not driven by singular demands. A common finding from these cross-sectional analyses is that protesters are drawn from diverse class backgrounds and are motivated by diverse, and often divergent, motivations (Thompson 2004; Beissinger 2013; Rosenfeld 2017). As a result, Beissinger (2013) argues, we can only speak of a "semblance" of democratic revolution: in actuality, participants in such protests had multiple grievances that cannot be reduced to the post-hoc democratic master frame attributed to the protests. Rather, contemporary "urban civic" revolutions are characterized by "negative coalitions" of diverse protesting constituencies united only by anti-incumbency goals (Beissinger 2013; Dix 1984). Recent research, using two separate surveys and focusing specifically on the Tunisian Revolution, reaches a similar conclusion. Despite its ostensibly democratic character and ultimate democratic outcomes, these scholars argue, there is no evidence of an association between democratic convictions and protest participation during this episode (Doherty and Schraeder 2018).

While this more recent survey research recognizes the heterogeneity of revolutionary crowds, it remains silent on the *process* of democracy protest. That is, it implicitly treats as revolutionary any individual who has protested in a certain place during a certain time period. But what if the "negative coalitions" that Beissinger (2013) recognizes as central to mass revolutionary protest are an outcome rather than a precursor of mass mobilization? If it is the case that demands evolve during protest waves and democratic demands do not necessarily define protest onset, this means that the emergence of these coalitions must become central to understanding how and why democratic revolutions happen.

In making this claim, I take lessons from the social movements and contentious politics literature, as well as more recent contributions to the conflict scholarship. Research in the contentious politics tradition does place particular emphasis on political process and the evolving dynamics of protest (Tarrow 2022; McAdam, Tarrow, and Tilly 2001). I also take lessons from recent provocations in the ethnic violence literature. Lewis (2017) argues that data on *early* rebel mobilization are often omitted or lost in the historical record leading to faulty conclusions about the ethnic dimensions of violence (see also Kalyvas 2003, 2006). My contribution lies in the theoretical synthesis of these lessons as a way to problematize dominant understandings in the political science literature relating to revolution and democratization specifically. I make a related set of arguments: that a) demands develop endogenous to protest, meaning b) that protest at different stages has different drivers, but c) we often attribute democratic or revolutionary goals to protest that did not begin as revolutionary, and therefore d) that the emergence of mass coalitions making anti-incumbency demands must constitute a key object of explanation.

The Tunisian Revolution

Protest broke out in Tunisia on December 17, 2010, at around midday in the central region of Sidi Bouzid.[3] Initial protests were spurred by the actions of one individual—Mohamed Bouazizi, a fruit and vegetables vendor—who had set himself on fire outside the municipal Governorate (*Wilaya*) building in protest at his treatment by a local police officer. In response to Bouazizi's extraordinary act, a crowd assembled who collectively vowed to avenge him with the chant "*b-il-rūḥ. b-il-damm, nafdīk yā Moḥammed*" [We will give our blood and souls for you, Mohamed] (Salmon 2016, 79). That evening, crowds dispersed peacefully. Meanwhile, members of a hastily assembled "Committee for the Defence of the People of Sidi Bouzid" were interviewed on France 24 and Al Jazeera. Bouazizi's act would soon take on wider significance. The following day, at the prompting of local trade union activists, protesters began to proclaim "*al-tashghīl istiḥāq yā 'issābat as-sarrāq!*" [Work is a right, you gang of thieves!]. What is more, Bouazizi would be identified to news media as an unemployed graduate; an untruth propagated by local activists with the intention of associating Bouazizi's act more directly with problems of underdevelopment and unemployment in Tunisia and Sidi Bouzid specifically (Lim 2013). On December 20, protest spread to two southern delegations of Sidi Bouzid: Meknassy and Menzel Bouzaiane. These were the first protests to occur outside the centre of Sidi Bouzid. The following day, protest was seen in three further regions of Sidi Bouzid: Jilma, Sidi Ali Ben Aoun, and Regueb.

With the exception of some small, isolated protests at the local offices of Tunisia's national trade union federation (UGTT) in the governorate of Kasserine on December 22, protest did not leave the Sidi Bouzid governorate until December 24, when protests broke out on the island of Kerkenah in Sfax and the city centres of Sousse and Bizerte. On this day the first martyr of the uprising was recorded in Menzel Bouzaiane when Mohamed Ammari was shot dead by the National Guard during violent clashes with police. On December 25, protest reached Tunis for the first time, with a small protest outside the UGTT head offices called by the Secondary Education Union. At this stage, the National Executive of the UGTT disavowed any connection with the protests.

For much of the early and middle periods of the uprising, protest was concentrated in mid-western and southern regions of Tunisia (referred to locally as the

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"interior"). In the intervening week from January 3–January 10, school children and university students would also begin to participate more forcefully in the uprising, as schools and universities reopened after a December holiday period (see also Mabrouk 2011). For this period, there are records for 135 separate student protest events. Over time, protest did gradually diffuse to more affluent urban centres of northeastern coastal regions (known as the "Sahel"). It would not be until January 12–January 13, however, that large-scale protest was witnessed in major urban centres, as mass demonstrations and strikes were witnessed in all of Gabes, Jendouba, Kairouan, Kasserine, Sfax, and Sidi Bouzid.[4] January 14—the day of Ben Ali's ouster—was the first time that large-scale protest was witnessed in the Tunisian capital.

The diffusion of protest is visualized in figure 1. In total, 148 of Tunisia's 264 delegations (represented by single hexagons) would see protest of some form over the course of the revolution. The importance of the spatial patterning of protest is rehearsed in debates over naming rights to the revolution. For some, since the revolution only latterly incorporated the Sahel, the "Alfa Grass Revolution"—a type of grass specific to the Tunisian interior—is a more appropriate moniker than the more common "Jasmine Revolution"—a plant grown and sold in the north (Ayeb 2011, see also Daoud 2011). As can be seen in figure 1, most of the protest in the northeast and capital city came in the final five days of the uprising. Until that time, participation in the isolated protests that did occur in the northeast and the capital numbered in the tens or hundreds, and were launched in solidarity with the demands of those protesting in the interior.

The sudden growth in protest size in the final days of the Tunisian Revolution coincided with the brutal repression of demonstrations in Kasserine and Thala on January 8 and January 9, during which at least 18 were shot dead at

Figure 1
Diffusion of protest during the Tunisian Revolution

Note: Hexagons in bold represent delegations in the capital city, Tunis

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the hands of the police—the bloodiest two days of the uprising (see also Allal 2010). It was following these events, and the subsequent decision by the National Executive of the UGTT to launch regional general strikes, that we see a surge in protest size, with protest participation growing from the hundreds to the thousands and the tens of thousands. It was also only after these events that the chant "*assha'b yurīd isqāt an-nizām*" [The people demand the fall of the regime] was first heard. On January 14, after a massive protest in Tunis city center, Tunisia's authoritarian president of over 20 years, Zine El-Abidine Ben Ali, fled the country. Ten months later, Tunisia would see its first elections.

Twitter and newspaper data provide another lens onto these dynamics. Analysis of the content of a Twitter sample streamed during the course of the revolution and the text of news articles (from news aggregation platform turess.com) reveals a marked increase in the percentage of democracy-related words over the course of the uprising (figures 2 and 3).[5]

Comparing the final five days of the uprising (stage 3) to the first 14 days (stage 1), we see that words related to democracy and elections are significantly more likely to be used during stage 3 than stage 1.[6] This is displayed in panel B of figures 2 and 3: keyness is a term used to describe whether relative word frequencies are significantly larger in one ("target") corpus versus another ("reference") corpus (Smith 1993). Here, our target and reference corpus refer to tweets or news text from stage 3 and stage 1 respectively.[7]

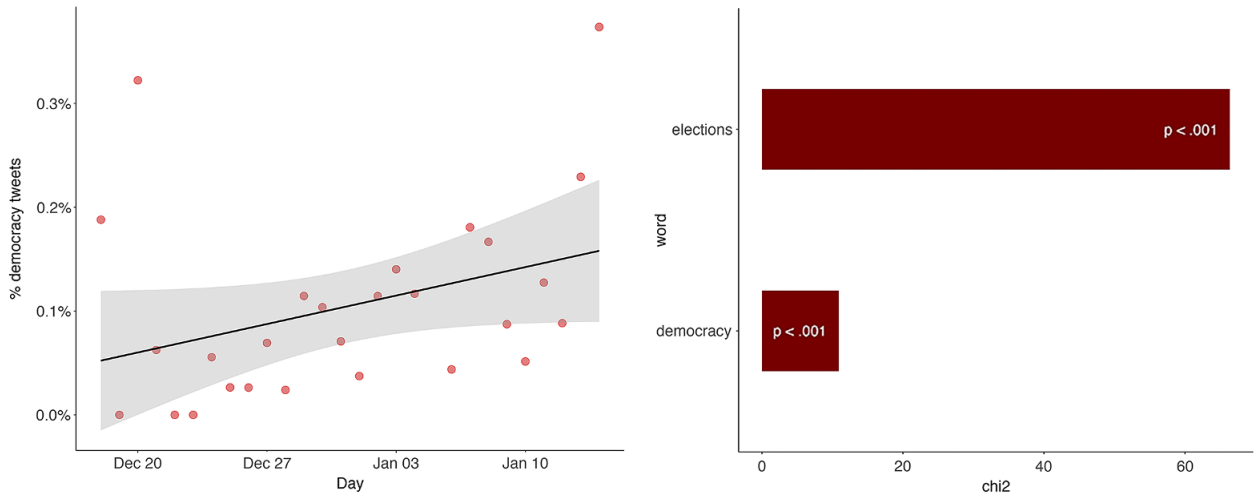
The foregoing account should alert us to the omissions involved in understanding "revolutionary" protest as a unitary phenomenon. The Tunisian Revolution demonstrates that variously parochial, unorganized, economic protest may, over the course of a revolutionary protest wave, lead to mass mobilization for democracy. On December 17, 2010, a revolutionary overthrow of Ben Ali would have been unthinkable. During the ensuing weeks, protest took diverse forms, incorporated different protesting constituencies, and included significant rioting, violence, strikes, peaceful demonstrations, and occupations. The demands advanced by protesters also shifted drastically over the course of the brief uprising. Originating in an act of voiceless protest by one individual, subsequent protests took up broader economic demands and were concentrated in deprived regions of the Tunisian interior. Over time, protest would diffuse to more developed regions of the Tunisian Sahel. It was only in the wake of institutional support, on the part of the UGTT—itself provoked by the repression of protest in Kassserine governorate—that protest swelled and took up more expansive political demands. It was also only at this later stage that large-scale protest reached Tunis and other major urban centers. In short, only in the final days of the uprising did protest begin to resemble a mass participation, urban civic, democratic revolutionary event. How should we study protest and participation dynamics over the course of such events?

Data and Method

Sources

For the main analysis, I primarily use an original event catalogue constructed using multiple online and offline source materials. Scholars conventionally make use of local and national print news media in the construction of event

Figure 2
Twitter data analysis



Frequency of words related to democracy in #sidibouzid data (% of total)
Relative democracy word keyness by stage (1 versus 3)

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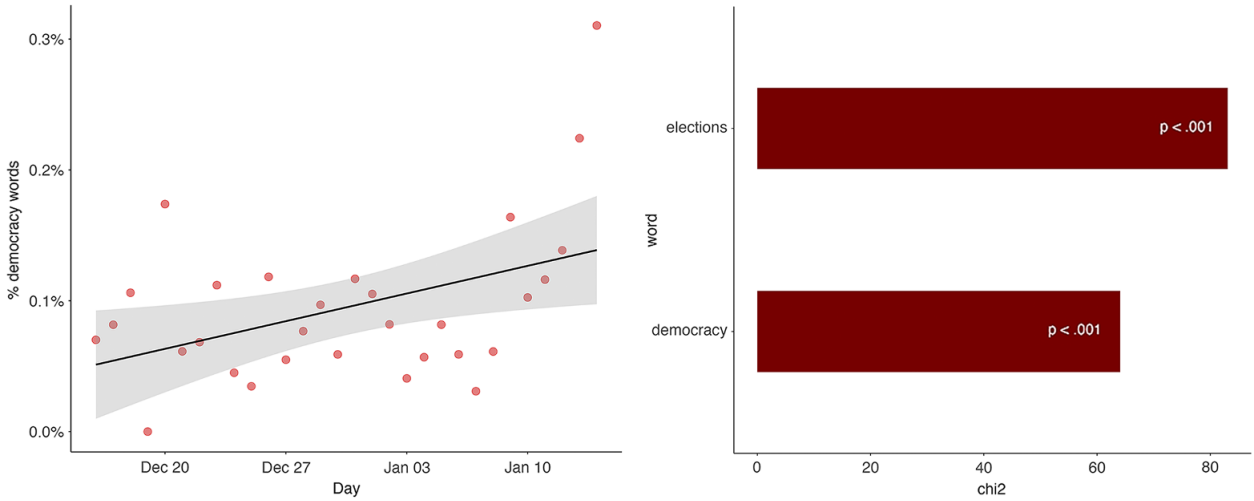
Figure 3
News data analysis



Frequency of words related to democracy in turess.com news data (% of total)
Relative democracy word keyness by stage (1 versus 3)

catalogues (see Earl et al. 2004). The national news media in Tunisia were almost exclusively pro-regime and the national dailies did not report on the unfolding of protest until the final days of the uprising. In the absence of reporting by national news media, however, Tunisians took to the Internet to post details of unfolding protests on dedicated Facebook pages.[8] I systematically coded protest reports from four of these pages. In addition to these Facebook pages, some local and national news media did report on protest. One Radio Station—*Radio Kalima*—founded in 2008 as one of the few oppositional outlets in Tunisia and run by human-rights campaigners, published multiple reports daily of the escalating wave of protests in Tunisia, which were archived by online news aggregator turess.com. These reports were also coded. By the closing stages of the revolutionary uprising, when protest was particularly widespread, national news media, and one newspaper in particular, *Al Chourouk*, did begin to report on protest. Articles from these issues were also obtained from turess.com and coded. Finally, multiple international news sources, a post-revolution investigatory commission (detailed later), and the digital archive of the Tunisian Revolution were consulted for further information on protest occurrence.

In all, 29 separate sources of protest event data were consulted, systematically coded for each day of the revolution, and triangulated with each other. The online methodological appendix gives fuller details of the pages and coding criteria used. Table A.2 in the appendix details each source, as well as the number of events that derive from each in the event catalogue. In identifying protest events, I follow Horn and Tilly's (1988) definition of contentious gatherings as "occasions on which at least ten or more persons assembled in a publicly accessible place and either by word or deed made claims that would, if realized, affect the interests of some person or group outside their own number." Records were located for some 670 separate protest events over the 29 days of the revolution.

Alongside these data, I include data on repression from the "Bouderbala Commission," an investigatory commission launched in the aftermath of the revolution that eventually was published in May 2012, a list of deaths and injuries during the uprising and its aftermath. Overall, the investigatory commission provides data verified by either family visits or medical records (both for the overwhelming majority) for 98 deaths at the hands of security forces. This is almost certainly an undercount, but nonetheless tallies very closely with reports of the occurrence of deaths in the event catalogue. For the purposes of the analysis, only the Bouderbala data is used to provide a measure of repression.

Finally, I include delegation-level ecological data. The principal ecological variable of interest is a regional development index (IDR) developed in the immediate aftermath of the revolution by the Tunisian Ministry of Regional Development and Planning to provide a composite measure of regional inequalities in economic development. The index ranges from 0–1, with 1 representing the most developed delegation and 0 the least. I use this as a measure of economic development. Figure 4 displays the diffusion of protest during the Tunisian Revolution alongside this measure of local economic development (by quantile). As should be clear, it is only in the final stages of the uprising that protest begins to diffuse to more developed regions. Alongside these measures, I use data

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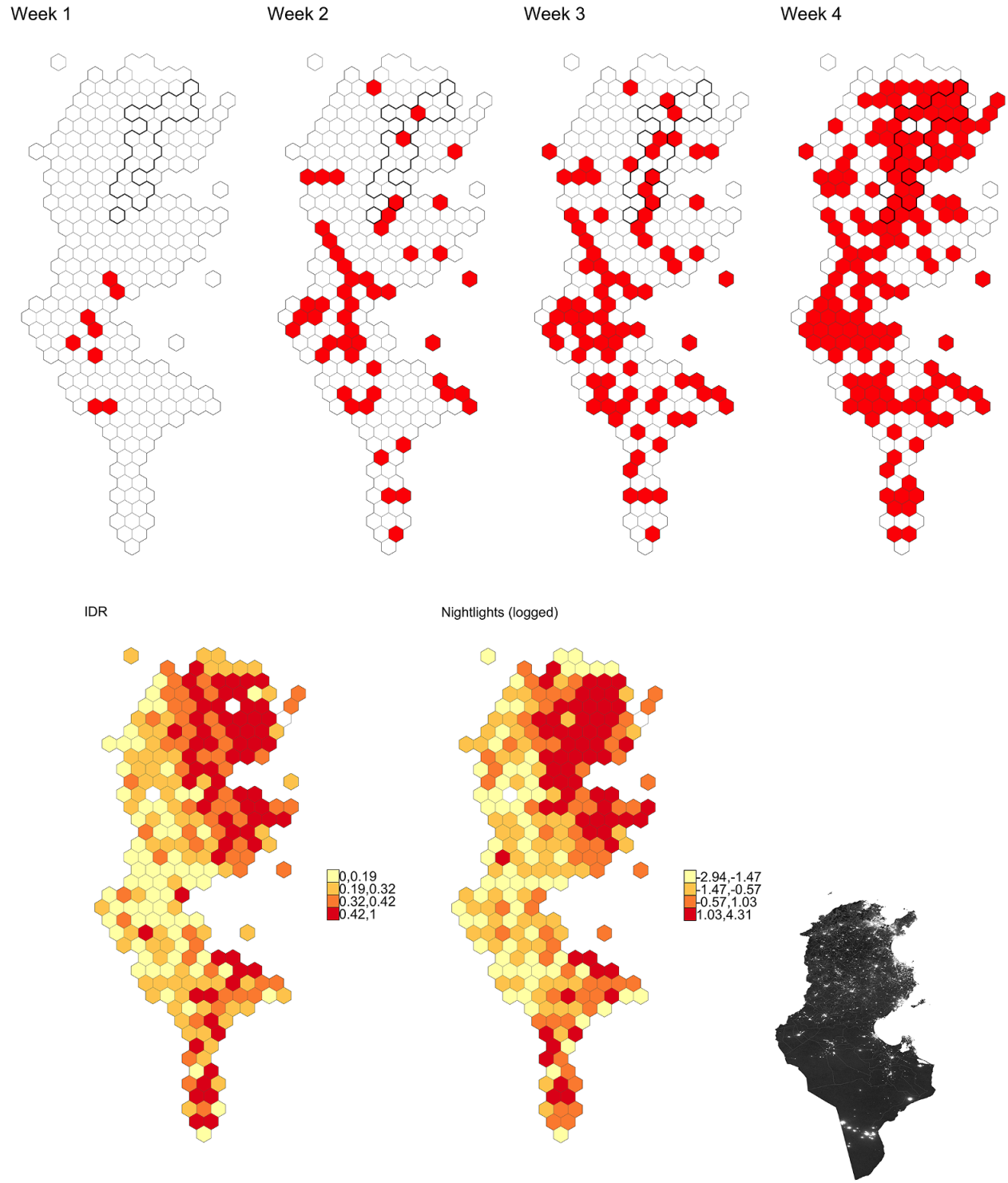
Figure 4
Protest diffusion and regional development



Diffusion of protest during Tunisian Revolution, weeks1-4
Local economic development (IDR) by quantile
Nightlights (logged) by quantile; inset: VIIRS DNB nightlights raster from April, 2012

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deriving from censuses conducted in 2004 and 2014.[9] Full details of the sources used for these data are provided in the online methodological appendix.

Two concerns can be raised about the choice of the main independent variable. While the majority of district-level measures used to construct the IDR predate the revolutionary events of 2010–2011, some do postdate them. Several of those that predate the uprising were taken in 2004. This temporal distance raises concerns around measurement error. A second potential source of measurement error relates to the political context. Scholars have provided evidence to be skeptical of the reliability of labor market indices supplied by authoritarian regimes (Martinez 2022). Since several of the variables used to construct the IDR measure date from the period of the Ben Ali dictatorship, this concern applies to the current paper. In the absence of alternative development indices taken from a period more temporally proximate to the Revolution, I follow Martinez (2022) in using nighttime lights data as a test of the accuracy of the IDR measures. Data are taken from the Visible Infrared Imaging Radiometer Suite (VIIRS) Day/Night Band Nighttime Lights.[10] Following recent contributions (Michalopoulos and Papaioannou 2013), I take the natural log of mean nighttime lights at the delegation level. The correlation between this proxy for economic development and IDR is strong (r=.81). Given the wealth of evidence that nighttime lights data provide a reliable proxy for economic development (Bruederle and Hodler 2018), this gives us greater confidence in the reliability of our IDR measure. For the event history analyses that I go on to describe, I repeat each analysis with the nighttime lights proxy measure to verify the consistency of findings.

Event History Analysis

For the main analysis, I use discrete-time event history analysis to estimate the conditional, time-varying effects of ecological covariates on protest diffusion during the 29 days of the Tunisian Revolution (December 17, 2010–January 14, 2011). Standard errors are clustered at the delegation level. The aim of this first analysis is to determine whether we can credibly use static structural variables to model protest events unfolding in time.

If it is the case that revolutionary processes are at equilibrium throughout the protest cycle, we can assume the existence of what the statistical literature refers to as "proportional hazards"; that is, we can assume covariate effects to be constant over time. To investigate this assumption, I estimate covariate effects with and without time interactions of the key ecological covariate of interest. This allows us, first, to test for "time dependence", that is, if the effects of covariates are constant over time or not. It also makes it possible to gauge improvement in model fit resulting from the inclusion of a time interaction. The interpretation of interactions is complicated in nonlinear models (Ai and Norton 2003). To aid interpretation, I aggregate the ecological measure into quartile bands and reenter it (as an interaction) in the same model used in Model 2 in the first analysis, displaying predictive margins over the course of the uprising. Additionally, I calculate and plot the marginal effects of the time interaction. For ease of interpretation, and to facilitate comparison with the survey analysis that follows, I split time into three stages corresponding to the three time periods analyzed in the Arab Barometer data.

Dependent Variable

The unit of analysis is the delegation-day. Tunisia is split into 24 governorates (*wilayāt*) and 264 delegations (*mu'tamadīāt*). For the purposes of the analysis, a dataset was constructed to include rows for each delegation and day of the 29 days of protest that preceded Ben Ali's fall. Protest events were located in their delegation, making possible the inclusion of the delegation-level ecological data in the analysis. From this, a dataset was constructed to measure the diffusion of protest. Here, the data is structured in split-spell format wherein only the first occurrence of an event in a given delegation is recorded (see, e.g., Andrews and Biggs 2006). After its first occurrence, the delegation drops out of the analysis. The dependent variable is binary and records the day that a given delegation first witnessed protest. In sum, 116 delegations saw no protest over this time period (i.e., were censored at day 29). In order to investigate time effects, I interact ecological covariates of interest with a linear function of time (measured in days).

Independent Variables

The choice of structural variables to include in the analysis is informed by the existing scholarship on the Arab Spring and democratic revolution generally. As noted earlier, while some see economic development as predictive of mobilization for democracy (Lipset 1959; Inglehart and Welzel 2005), others cite economic downturn and deprivation as precipitants of democratic transition or democracy protest (Acemoglu and Robinson 2006; Brancati 2014). The research on Tunisia specifically points to deprivation in the interior and regional inequalities in development as a key factor in the outbreak of protest (Ayeb 2011; Hibou 2011). I use the local development index (IDR)—detailed earlier—as the key measure of economic development at the delegation level.

Scholars have also pointed to the considerable youth population (or "youth bulge") and attendant underemployment in the Middle East and North Africa (MENA) as central factors in the uprisings (Campante and Chor 2012; Malik and Awadallah 2013). Thus, I also test a measure of delegation youth population (% population aged 20–29).

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In an online appendix robustness section, I test for time dependency in three alternative delegation-level measures of development and deprivation. These are illiteracy rate (% illiterate population aged 10 or over); graduate unemployment (% unemployed with higher education certificate); and internet usage (% households connected to Internet).

Control Variables

In order to parse structural effects and contagion, I construct a general protest diffusion variable capturing all nearby protest. I follow previous research on protest diffusion (e.g., Andrews and Biggs 2006) in using an inverse square root distance weighted sum of nearby protest days at time *t-1*.[11] I also include a control for repression, entered as the square root of deaths resulting from protest repression (taken from the Bouderbala data) at day *t-1* at the national level. Finally, I include a control for delegation population-size (logged).

Survey Analysis

In a secondary analysis, I use Arab Barometer data, replicating the analysis of recently published research but disaggregating by date of the respondent's first participation. Wave II of the Arab Barometer asked respondents a battery of questions relating to participation in the Tunisian Revolution and its aftermath. The survey includes responses for 1,196 respondents.

Respondents were asked first "Did you participate in the protests against former president Zain Al Abdeen Ben Ali between December 17, 2010, and January 14, 2011?" For those who answered in the affirmative, they were then asked "Did you participate in any of the following protests?" and were offered three time intervals: "December 17, 2010, to January 1, 2011"; "January 2–January 9, 2011"; and "January 10–January 14, 2011." I will refer to these as stages 1, 2, and 3. Of the 192 respondents who reported protesting at some stage, 75 reported only protesting in the final stage of the uprising (i.e., 39%).[12] This would accord with the earlier account of the uprising. Only in its final stages did protests in the Tunisian Revolution become mass participation phenomena articulating explicitly anti-incumbency demands.

I use these questions to generate several separate outcomes relating to participation. A first uses the initial question that does not disaggregate by time and measures whether the respondent protested at any stage. This is the question used in published research to date (e.g., Hoffman and Jamal 2014; Doherty and Schraeder 2018). I then use the questions probing the stage at which the respondent first participated to convert this outcome measure to an ordinal scale measuring the date of first participation. This allows us to test whether we can be confident of "proportional odds"—i.e., whether we can impose a threshold interpretation on participation. Since the odds in an ordinal model can be interpreted as corresponding to the odds of exceeding a certain category, the categories of an ordinal scale have a threshold interpretation (Winship and Mare 1984). A violation of this assumption would mean that the odds of participating at each stage of the revolution were *not* proportional to each other, and would thus provide evidence against the conceptualization of protest in revolution as a unitary outcome of interest.[13] Using a Brant test of odds proportionality, I find first that an ordinal scale is not appropriate as an outcome scale.[14] The variable that most strongly violates odds proportionality is that measuring commitment to democracy.

The variable I use to measure commitment to democracy is a mean index used in previous published research (Hoffman and Jamal 2014; Doherty and Schraeder 2018; Ketchley and El-Reyyes 2019) constructed using responses to three statements relating to democratic governance in the survey. A response scale of 1–4 was offered, with 1 indicating strong agreement, 2–agreement, 3–disagreement, and 4–strong disagreement. The questions were worded as follows: "Democratic regimes are indecisive and full of problems"; "A democratic system may have problems yet it is better than other systems"; "Democracy negatively affects social and ethical values in [Tunisia]." Together, responses to these questions are used as a measure of commitment to democracy. The index was scaled such that higher values indicate stronger commitment to democracy. Missing values were coded as 2, giving a 0–4 scale, which was then indexed by its mean.[15] Using this index, I replicate the results of Doherty and Schraeder (2018) but test for the robustness of their findings with the temporally disaggregated participation outcomes.

Results

Full results for the event history models with and without time interactions are displayed in table 1. In a first model, I include all covariates of interest but do not interact our measure of economic development (IDR) with time. In a second model, I include a time interaction with IDR. As should be clear, we have evidence of significant time dependence. While high levels of local development are initially negatively associated with protest diffusion, this association gradually weakens over time. The coefficient on the lagged protest control is positive, as expected, indicating significant protest contagion. Repression has a negative and significant effect on protest diffusion. Delegations with larger populations are also more likely to have witnessed protest. Youth population, on the other hand, is consistently predictive of protest diffusion over the course of the uprising.[16]

In sum, covariate effects on protest diffusion are conditional on the stage of the uprising. This provides compelling initial evidence that understanding

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Table 1
Discrete-time logistic regression of IDR with and without time interaction, cluster robust standard errors

Variables	Model 1: Without time interaction	Model 2: With time interaction
Lagged protest	0.621**	0.370**
	(0.201)	(0.141)
Time	—	−0.012
		(0.030)
IDR	−1.209	−6.895***
	(0.782)	(2.092)
IDR*Time	—	0.318***
		(0.096)
Youth pop.	0.080	0.086
	(0.044)	(0.049)
Population (logged)	0.874***	0.924***
	(0.169)	(0.183)
Repression	0.241***	-0.021
	(0.049)	(0.066)
Constant	−13.964***	−14.018***
	(1.837)	(2.018)
Observations	5,921	5,921
AIC	1288	1245
BIC	1328	1298
McFadden's R^2	0.0732	0.108

Notes: Robust standard errors in parentheses
*** p<0.001, ** p<0.01, * p<0.05

"revolutionary" protest as a unitary outcome measurable at a single point in time is wrongheaded. The substantive size of these effects is difficult to ascertain from raw regression outputs. As such, in figure 5a I aggregate the IDR into quartile bands and plot adjusted predictions for its upper and lower quartiles over the course of the 29 days of the uprising. In figure 5b, I visualize marginal effects at each stage of the uprising, using the same dates of stages used in the survey data analyzed later. These plots display the difference in predicted probabilities of protest at representative values of our ecological covariate of interest at different stages of the uprising.[17] The horizontal line at y=0 represents no difference between stage 1 and the stage in question.

Figure 5a demonstrates that the effect of IDR is far from constant over time. While a low level of development is initially more predictive of protest, the association reverses over the course of the uprising. Similarly, in figure 5b we see that during the closing stage of the uprising, protest was significantly more likely in developed regions than it was in the first stage.[18] These findings provide strong evidence that the structural correlates of protest can shift dramatically over the course of an uprising. They also accord with the qualitative case detail given earlier: it was only in the closing stages of the uprising that protest emerged in more developed regions.

If the correlates of protest occurrence change over time, what about the correlates of protest participation? Table 2 displays the number of observed sequences of participation and percentage of total respondents corresponding to each sequence in the Arab Barometer survey data. Stage 1 corresponds to participation in a first stage (December 17, 2010–January 1, 2011), Stage 2 to participation in a second stage (January 2–January 9, 2011) and Stage 3 to participation in a third stage (January 10–January 14, 2011). As noted earlier, a large proportion of those who protested began protesting only at Stage 3.[19]

I estimate a multinomial logit model where no assumptions are made about the ordinality of outcomes and coefficients correspond to the probability of belonging to a particular category. Full results are displayed in online appendix table A.10. In order effectively to visualize the relationships between categories and the underlying predictors of membership in each, I provide a link plot (see figure 6a), which visualizes differences between all pairs of outcomes (i.e., not just with the base category). Here, the distance between two outcomes reflects the magnitude of the contrast in coefficients between two categories for a range change in the independent variable of interest (i.e., from its lowest to highest values). If a coefficient is not significantly different from 0 at the .05 level, a line connects the two outcomes.[20] I select for display four independent variables that show particularly pronounced differences: commitment to democracy, education, age, and student status.[21]

Notable contrasts are enlarged inside a square border in the link plot. We can clearly see that, while a commitment to democracy has a weakly negative and insignificant (relative to the baseline category of no protest) association with protest participation in stages 1 and 2, in stage 3 it is strongly positively predictive of participation. We also see that more highly educated individuals, as well as students, are more likely to protest at stage 2 (relative to stage 3 and the baseline category). This accords with what we know about the process of the Tunisian Revolution, with students participating in large numbers in the middle period of the uprising. Finally, and consistent with the results for the event history analysis where youth population consistently predicted protest diffusion, younger individuals are consistently more likely to have participated in two of the three stages relative to those who did not participate (the contrast between stage 2 and the baseline is significant at the .1 level (p =.092)). Figure 6b displays adjusted predictions for each stage of the uprising at representative values of the democracy index. Here, we see clearly that while in stages 1 and 2 there was no, or a weak negative, association between commitment to democracy and protest participation, in stage 3 there is a strongly positive association.[22]

Once again, then, we see the importance of proper temporal disaggregation when assessing the correlates of

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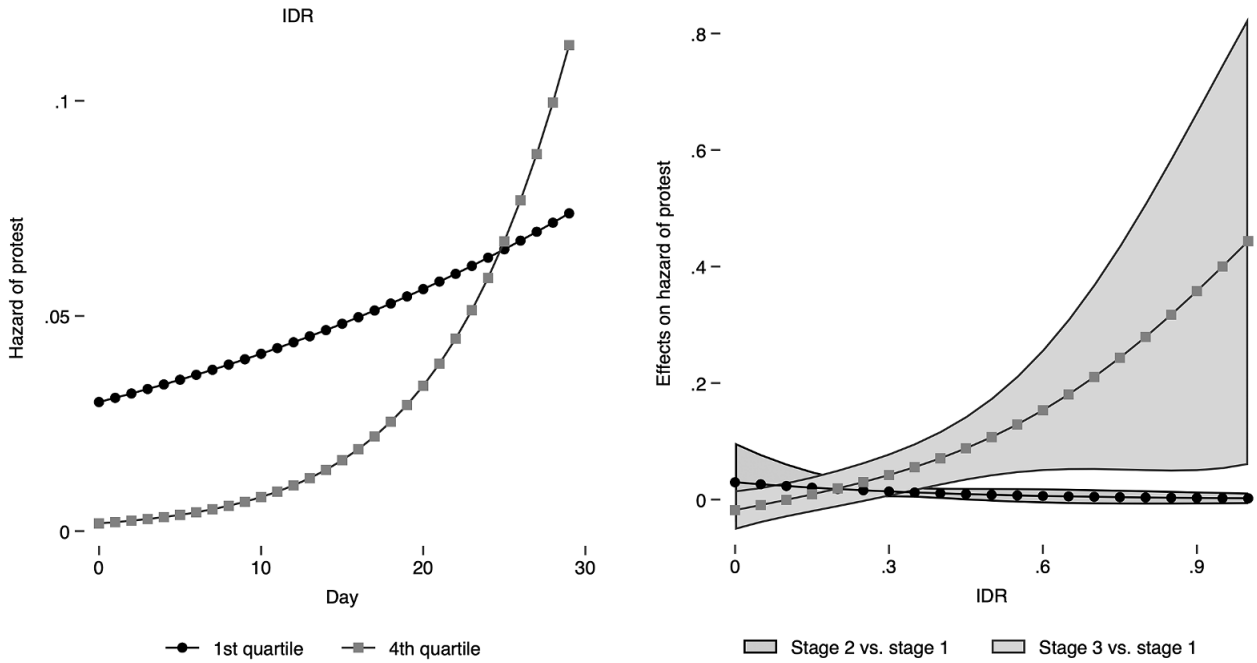
Figure 5
Development and probability of protest over time



Predictive margins of IDR over time, upper and lower quartiles
Marginal effects of IDR by stage of uprising, with 95% CIs

Table 2
Sequences of participation in the Tunisian Revolution from Arab Barometer Wave II

	Stage 1	Stage 2	Stage 3	Number	Percent
No stage	0	0	0	933	84
Stage 3	0	0	1	74	7
	0	1	0	10	1
Stage 2					
	0	1	1	21	2
	1	0	0	10	1
	1	0	1	5	0
Stage 1					
	1	1	0	1	0
	1	1	1	54	5
Total			1,108	100	

protest. Analyzed in the aggregate, a commitment to democracy exhibits no predictive power. But given what we know of the origins and development of the Tunisian Revolution, this should be unsurprising. The uprising did not begin life as revolutionary nor as motivated by broader democratic aspirations; over its course, the correlates of both protest occurrence and participation shifted significantly. The implications of these findings for a processual understanding of democratic revolution are discussed next.

Discussion

Revolution as Process

Do the dynamics observed in the Tunisian Revolution represent an aberration? Mass protest in Tunisia was not prompted by a political opening or episodes of brutal state violence, did not follow immediately from stolen elections or from an economic downturn, and was not spurred by uprisings in neighboring countries—all factors commonly cited for explaining such events (McAdam 1982;

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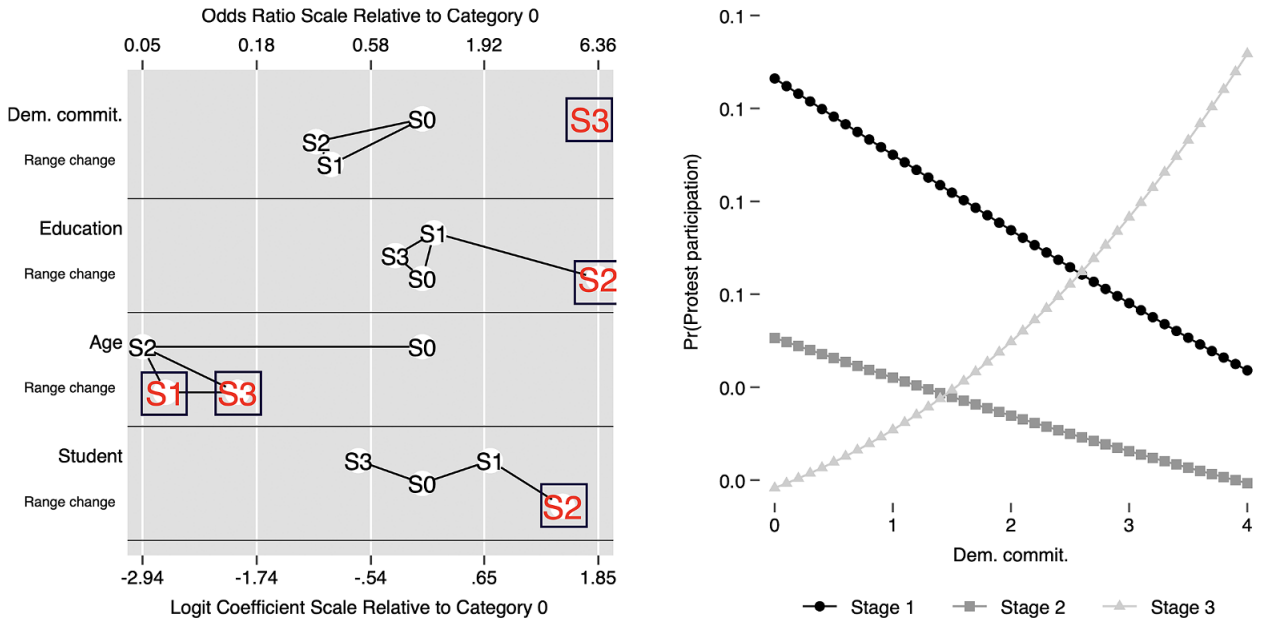
Figure 6
Protest participation by stage of revolution



Multinomial logistic link plot of coefficient contrasts for separate predictors
Note: Joining lines indicate no significant difference at .05 level; SO = base outcome; S1 = Stage 1; S2 = Stage 2; S3 = Stage 3; Dem. commit. = Commitment to democracy
Predictive margins of commitment to democracy on protest participation Multinomial logistic regression by stage of first participation.
Note: Multinomial logistic regression by stage of first participation

Goodwin 2001; Acemoglu and Robinson 2006; Tucker 2007; Bamert, Gilardi, and Wasserfallen 2015).[23] In this, one could suggest that the revolutionary overthrow of Ben Ali was, in various respects, atypical. But understood at the more general level—as an uprising wherein demands emerged endogenous to protest and new types of protestor began to participate—it shares characteristics with numerous other episodes of mass protest both historical and more contemporaneous.[24]

The French Revolution did not begin life as an assault on feudalism; anti-seignurial sentiment developed not over centuries but during the three-year period after the onset of protest (Markoff 1997). In the nine months preceding the convocation of the Estates General in May 1789, 12% of all "insurrectionary events" involved anti-seigneurial claims, while the overwhelming majority concerned basic subsistence; by January 1790, after peasants formed common cause with the bourgeoisie, 87% of events were anti-seigneurial in character (Markoff 1997, 1121-1122).

The 1871 Paris Commune, posthumously awarded the title of working-class revolt, had more to do with the defense of municipal liberties. Moreover, the impulse to defend municipal liberties developed through organizational ties forged during the insurrection itself (Gould 1995).

What became the Bolshevik Revolution in 1917 Russia was precipitated by a wave of labour protest. Motivating these strikes, historians have documented, were over 250 separate demands, leading them to conclude that it would be "innacurate to conceptualize strikes in 1917 simply as revolutionary episodes" (Koenker and Rosenberg 1989b, 73-89). In fact, the social contexts of protest shifted dramatically from March-July and July-October as semi-skilled workers were incorporated into an emerging "mass movement" (Koenker and Rosenberg 1989b, 319). This very fact of "constant change" during the revolutionary year of 1917 "raises further problems about using constant [time-invariant] figures" to estimate the statistical correlates of protest (Koenker and Rosenberg 1989a, 170).

The Iranian Revolution was a site of multiple competing mobilization attempts on the part of diverse ideological groups (Ahmad and Banuazizi 1985; Rasler 1996). This revolution "came in heaving waves," the second of which would align the urban intelligentsia with the merchant (*bazaari*) class (Ahmad and Banuazizi 1985, 4). Absent organizations with the capacity to direct the flow of demands, religion came to provide the ultimate infrastructure and orienting frame of revolt (Bayat 1998).

Protests in East Germany from 1989 onwards would variously incorporate radicals and moderates, with the targets and demands of protests shifting at each stage of

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the cycle. Support for unification goals increased over this conjuncture and, through a recursive process, the attitudes of protesters often led those of the population (Lohmann 1994).

More contemporaneously, in 2017, Cameroon witnessed a wave of protests that broke out in response to the hiring of Francophone judges in the Anglophone north of Cameroon. These protests were initially led by lawyers and teachers but gradually spread to take in large swaths of the population, developing into region-wide protests opposing the government of Paul Biya and calling for Ambazonian independence (Pommerolle and Heungoup 2017).

A sustained wave of mass mobilization more recently struck Sudan from 2018–2019, initially in response to the cutting of bread subsidies. Beginning with highly localized demonstrations in Atbara, protest would in time gain the backing of the Sudanese Professionals Association (SPA), before spreading across large parts of Sudan and culminating in the removal of dictator Omar al-Bashir on April 11 and calls for democratic transition (Berridge 2019).

In 2018, protests against social security reforms in Nicaragua gradually incorporated citizens from across broad swaths of society, including students, pensioners, and civil society groups. Against this backdrop, government mishandling of wildfires and repression of protest led to further escalation and explicit calls for the removal of president Daniel Ortega (Klein, Cuesta, and Chageli 2022).

In Lebanon, the proposal in 2019 to start taxing VoIP calls through cellphone applications such as WhatsApp, alongside tax hikes on tobacco and fuel, led to one of the most sustained and widespread protest movements in the country's history (Berman, Clarke, and Majed 2023).

In the same year in Iraq, localized protests in Basra over poor public services gradually incorporated students and civil society groups, escalating into a sustained protest movement against the government and Iranian influence in Iraqi politics (Berman, Clarke, and Majed 2023).

Democratization and Contention

A survey of the empirical record demonstrates, then, that the processual dynamics of the Tunisian Revolution are shared by multiple contemporary and historical instances of mass insurrection. Outcomes can rarely be read from origins and the grievances driving protest are often heterogeneous and develop over time. In other words, these episodes did not begin by airing "revolutionary" demands —demands that threaten the ability of an incumbent to govern. They also incorporated new groups of protestors over time as demands evolved. On the basis of these observations, I suggest that two key characteristics define such episodes: 1) that protest does not begin by articulating "revolutionary" demands; and 2) that new constituencies of protestors join in the protest wave over time.

If we take mobilization for democracy as a key stage in the onset of democratic transition (Acemoglu and Robinson 2006; Przeworski 2009; Teorell 2010; Haggard and Kaufman 2016; Kadivar and Caren 2016; Kadivar 2018), we must begin to conceptualize democratization appropriately as an arena of contentious politics. How should we go about this? I suggest that answering this question requires attention to generalizable causal mechanisms that inhere *within* episodes of mass insurrection (Tilly 1993). Foremost among these is brokerage, defined as "the linking of two or more previously unconnected social sites by a unit that mediates their relations with one another and/or with yet other sites" (McAdam, Tarrow, and Tilly 2001, 206).

Why brokerage? Literature on revolution almost universally recognizes episodes of revolutionary mass mobilization as characterized by the formation of contentious coalitions of diverse actors (Tilly 1973; Skocpol 1979; Dix 1984; Foran 1993; Goldstone 2001; Parsa 2001; Thompson 2004; Slater 2009; Beissinger 2013). Cross-class, or "negative" (Dix 1984; Beissinger 2013), coalitions of this sort are nonetheless generally considered epiphenomena of democratic revolution rather than the outcome to be explained. If we instead take these coalitions as the object of explanation, brokerage emerges as the key mechanism underpinning what I suggest are the defining characteristics of processual revolutions: the emergence of common revolutionary demands and the incorporation of new protestor groups into a common front.

Democratic Coalitions, Brokerage, and Ta'ṭīr

Here, the Tunisian case is again instructive in how this can happen. During the uprising, institutional support from the UGTT contributed to the scaling up of more limited forms of contention and to the uniting of diverse groups behind common anti-incumbancy demands. In this sense, abeyant organizational structures were key in transforming parochial forms of contention into mass-based demonstrations for democracy (Hmed 2012). A particular word used by trade unionists in Tunisia—*ta'ṭīr*—eloquently articulates this process. *Ta'ṭīr* can be understood in its literal translation as "framing" or in its French equivalent of *encadrement*, which implies monitoring or, more actively, bringing into the fold (of a given actor or institution) and the assumption of leadership (Yousfi 2015). Both translations capture something of its meaning and help us understand what is at stake in brokerage.

The first translation recalls the influential body of social movements scholarship on framing processes that conceives of movement actors not merely as vehicles for the channeling of existing grievances but as "signifying agents

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actively engaged in the production and maintenance of meaning" (Benford and Snow 2000, 613). In the Tunisian case, trade unionists recall making active efforts, in their choice of slogans and media communiques, to couple the economic demands that animated initial protest with explicitly political claims and to frame Bouazizi as a political martyr and victime of the regime (ICG 2011, 4; Yousfi 2015, ch. 2). As one militant member of the Tunis UGTT branch put it, trade unionists felt it their task "to give a meaning and clear aims to the movement.[25] Describing the role of the UGTT in times of crisis, Zied, a resident of Tunis, described the UGTT as an organization that both "follows and leads the street" [*qui suit et encadre la rue*].[26] In sum, *ta'ṭīr* meant, as one young protester from Sidi Bouzid put it: "making clear that we're organising together, [that] we have the same enemy."[27] In other words, the brokerage role of the UGTT was in defining the animating political grievances of an uprising that, at its onset, had yet to be articulated.

The second understanding of *ta'ṭīr*—as encadrement—invokes the coordination function of institutional actors and their role in brokering a collective mobilization effort. Local instances of the UGTT represented a "melting pot" (Hmed 2012) of civil servants and other public functionaries with the requisite networks to coordinate action and subsume otherwise unaffiliated youth or peripheral civil society actors under a common front (Yousfi 2015). As one interviewee put it: "you've got different sorts of people on protests, upstanding people and not so upstanding" and so it was necessary that the UGTT "*encadre* [yu'at.ir] the protestors."[28] In assuming this leadership role, UGTT members also made efforts to ensure that protest remained nonviolent.[29] That is, they "coordinated to control the situation," because young protesters, often involved in violent nighttime clashes, "did not coordinate with others or have any big project for society."[30] And it was not just young people who had no "big project for society." As described earlier, protests in the early stages of the revolution had no sense that "Ben Ali was going to fall … The [trade] unionists were realistic."[31] They would monitor events through local administrative committees, calling other offices sometimes every half an hour to calm down any violent confrontations, and provide "the knowledge of how to go about protests."[32] This coordination role would eventually prove decisive after the National Executive of the UGTT elected to side with protests, granting permission for branches to launch regionwide strikes (ICG 2011, 6). It was at this point that we see multiple new constituencies entered into the protest fold.

In sum, brokerage meant uniting the diverse and sometimes disparate constituencies on the street behind a common set of demands and coordinating a common set of protest tactics. At a more general level, the Tunisian case demonstrates the centrality of organization to episodes of popular insurrection. Notable recent contributions to the cross-national study of democratization share this concern with the organizational foundations of democratic mobilization (Butcher, Gray, and Mitchell 2018; Kadivar 2018; Usmani 2018; Haggard and Kaufman 2016).

Given the evidence that organizational strength is a key correlate of democratization, future scholarship should aim to unpack the microlevel mechanisms underpinning these macrolevel associations. The Tunisian case, and evidence from numerous empirical examples sketched out earlier, indicates that foremost among the candidates is brokerage; organizational brokerage helps explain why diverse groups are able to *unite* in episodes of contentious collective action. In this, it illuminates a central problematic in revolutions and democratization research—the formation of democratic coalitions. Specifying the object of explanation as this key dimension of mass protest brings into relief the analytical gap between antecedent conditions and democratic outcomes, and forces us to recognize democratic transitions as a domain of contentious politics (McAdam, Tarrow, and Tilly 2001). It is in and through mass mobilization, after all, that protests might give rise to broader democratic demands or, to paraphrase Tilly (1973), a "democratic situation."

Conclusion

The findings of this paper have important theoretical implications for the study of mobilization for democracy and democratization. Current theoretical frameworks treat democracy protest, and protest participation, as unitary outcomes amenable to cross-sectional analysis. These frameworks implicitly conceive of revolution as everywhere at equilibrium. The empirical record runs counter to such understandings. What emerges clearly from the discussion here is that revolution often does not begin as revolutionary; targets of protest emerge endogenously as common coalitions form and new opportunities arise. Revolution, in other words, is a process.

To support this argument, I show that the correlates of both protest occurrence and protest participation shifted drastically over the course of the Tunisian Revolution of 2010–2011. Despite being nominally a democratic revolution, a commitment to democracy positively predicts protest participation only in the final stage of the uprising. Consistent with this, the ecological correlates of protest diffusion effectively reverse over time. While in its early stages protest diffused mainly to deprived internal regions of Tunisia, by the closing stages of the uprising protest was more likely to occur in affluent, developed regions. These findings provide strong support for an understanding of revolution as process. Nor is the Tunisian case unique—numerous historical instances of mass insurrection share this fundamentally processual character.

The outlined insights should give us reason to reconsider the ontological underpinnings of existing work on

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mobilization for democracy. It should also give us pause to consider the reasons why recent scholarship has favored a unitary conception of revolutionary protest. Mass contention unites diverse actors advancing diverse claims. The emergence of mass mobilization and the mechanisms that give rise to democratic contention should constitute a new focus for future scholarship. Underpinning some of the association between organizational strength and democratization, I suggest, is brokerage, and the role of organizations in coordinating a common front and collective identity. In recognizing that dynamics internal to revolt may be decisive for democratic transition, we may also rescue multiple instances of attempted, but ultimately unsuccessful, mobilization for democracy from the ash heap of history. While protest in Tunisia managed to scale up and successfully advance democratic demands, numerous instances of mobilization in its wake, in all of Egypt, Morocco, Algeria, Yemen, Bahrain, Libya, and Syria failed ultimately to see similar outcomes. Salvaging such cases would both improve our empirical models and help disentangle the theoretical mechanisms governing the outcomes of popular struggle.

Supplementary Material

To view supplementary material for this article, please visit http://doi.org/10.1017/S1537592723002062.

Notes

1 In what follows, I refer to scholarship on "democratization." I recognize that democratization is itself a process with multiple stages. In this article, I focus on the initial ouster of incumbents that propels polities toward transition—i.e., democratic transition spurred by mass mobilization events against incumbents. It is to this initial stage of democratization I refer when speaking of "democratization."

2 It should be noted that this article does *not* make the claim that macro-level variables have no association with protest. Instead, it makes the more precise claim that we cannot assume a set of constant correlations over time—that is, while macrostructural factors might play a part in motivating one stage of a protest cycle, they may not play a part in the next.

3 Details of protest derive, unless otherwise stated, from the event catalogue. The online methodological appendix lists the source material and coding conventions employed in this data collection process.

4 I define large-scale protest as any event involving 10,000 individuals or more. See the Data and Method section and the online methodological appendix for event data coding criteria.

5 Full details of these Twitter and news data are provided in the appendix. While national news media did not report on protest, some of the news sources included in the sample did, such as: "babnet", "echaab", and "kalima."

6 For the purposes of comparison, periodization of "stages" is on the basis of those used in the survey data detailed in the Data and Method section. In using the same stages, I do not suggest that tweets are representative of broader public opinion. Rather, these data are used to demonstrate the way in which the protests being framed *during* the uprising rather than after the revolutionary outcome was known.

7 To estimate keyness, I use the quanteda.textstats R package (Benoit et al., 2018). One concern in these analyses is that tweets might not originate from Tunisia. I replicate the Twitter analysis using tweets by users from Tunisia and the same trends hold.

8 See also Dakhli 2011 for an account of the difficulties locating relevant archival source material for understanding events during the Tunisian Revolution.

9 Refer to the online appendix for further validation of these measures.

10 In the online appendix I provide a more detailed overview of these data and their use.

11 Refer to the online appendix for details on the construction of this variable.

12 Note that participation numbers detailed below are slightly reduced. This results from the use of a restricted sample in the analysis by Doherty and Schraeder 2018 that I am replicating.

13 Refer to the online appendix for fuller details of this statistical assumption.

14 Here 1 corresponds to those who began protesting at stage 1, 2 to those who began protesting at stage 2, 3 to those who began protesting at stage 3, and 4 to those who did not protest.

15 This is the same index used in Doherty and Schraeder 2018. An additive index of the form used by Hoffman and Jamal (2014) gives substantively identical results. Refer to the online methodological appendix for further details of alternative indices.

16 The inclusion of a time interaction with this measure showed no significant effect and did not improve the model fit. We also have evidence of significant improvement in model fit between Model 1 and Model 2: both the AIC and BIC are sizably reduced, while McFadden's R2 suggests that Model 2 explains significantly more of the variance in protest diffusion than the baseline Model 1. It is also worth noting that these time effects are not simply artifactual of the late arrival of protest in the capital, Tunis, where development and deprivation is comparatively lower. Excluding Tunis from the analysis, results are substantively identical. In online appendix table A.6 and figure A.5, I show that conclusions are substantively identical when using the nightlights proxy for development. Appendix table A.7 and figures A.6 and A.7

demonstrate that similar conditional covariate effects are found when using alternative measures of development and deprivation.

17 The only difference between this model and Model 2, in other words, is that IDR is interacted with a categorical variable measuring stages rather than a vector of days.

18 There are no significant differences between stages 1 and 2.

19 The restricted sample used in the replicated analysis reduces observations from 1,196 to 1,115. Of these, seven respondents are missing on this item, thus explaining the total of 1,108 given.

20 I use the *mlogitplot* command provided as part of Long and Freese's (2014) *Spost13* package in Stata to produce these plots.

21 Following Doherty and Schraeder 2018, the reference category for student is unemployed respondents.

22 An objection to this interpretation is that these attitudes were measured "post treatment." If this were the case, we might nonetheless have expected individuals to become more democratic across the board. That participants in stage 1 have less pro-democratic attitudes than participants in stage 3 (net of the battery of controls) accords with our broader understanding of the revolution: that new constituencies joined the uprising over time—and that these groups were distinct in terms of their attitudes. This nonetheless remains an important limitation and one that it is not able to overcome using available data.

23 This is not to deny the state violence committed by the Ben Ali regime. I instead mean that, in the period preceding the Tunisian Revolution, there were no headline instances of indiscriminate or brutal violence of the sort described by Goodwin 2001.

24 Case material for contemporaneous examples were sampled by replicating the analysis for figure 4 in Hellmeier and Bernhard 2023. Refer to the online appendix for details.

25 Personal interview by the author with Taha [alias] in Sidi Bouzid, March 17, 2017. All interviewees are anonymised because discussions involve participation in sensitive forms of political behavior.

26 Personal interview by the author with Zied [alias] in Tunis, March 31, 2019.

27 Personal interview by the author with Lilia [alias] in Sidi Bouzid, April 01, 2019.

28 Personal interview by the author with Aziz [alias] in Sidi Bouzid, March 21, 2017.

29 Personal interviews by the author with Yassine [alias] in Tunis, February 14, 2017; with Taha [alias] in Sidi Bouzid, March 17, 2017; and with Med and Ali [aliases] in Sfax, March 28, 2019.

30 Personal interview by the author with Firas [alias] in Sidi Bouzid, March 17, 2017.

31 Personal interview by the author with Yassine [alias] in Tunis, February 14, 2017.

32 Personal interview by the author with Yassine [alias] in Tunis, February 14, 2017

References

Acemoglu, Daron, and James A. Robinson. 2006. *Economic Origins of Dictatorship and Democracy*. Cambridge: Cambridge University Press.

Ahmad, Ashraf, and Ali Banuazizi. 1985. "The State, Classes and Modes of Mobilization in the Iranian Revolution." *State, Culture, and Society* 1(3): 3–40.

Ai, Chunrong, and Edward C. Norton. 2003. "Interaction Terms in Logit and Probit Models." *Economics Letters* 80(1): 123–29.

Allal, Amin. 2010. "Trajectoires révolutionnaires en tunisie: Processus de radicalisations politiques 2007-2011." *Revue Française de Science Politique* 62(5): 821–41.

Andrews, Kenneth T., and Michael Biggs. 2006. "The Dynamics of Protest Diffusion: Movement Organizations, Social Networks, and News Media in the 1960 Sit-Ins." *American Sociological Review* 71(5): 752–77.

Aya, Rod. 1979. "Theories of Revolution Reconsidered: Contrasting Models of Collective Violence." *Theory and Society* 8(1): 39–99.

Ayeb, Habib. 2011. "Social and Political Geography of the Tunisian Revolution: The Alfa Grass Revolution." *Review of African Political Economy* 38(129): 467–79.

Bamert, Justus, Fabrizio Gilardi, and Fabio Wasserfallen. 2015. "Learning and the Diffusion of Regime Contention in the Arab Spring." *Research & Politics* 2(3): 1–9.

Barrie, Christopher. 2023. "Replication Data for 'The Process of Revolutionary Protest: Development and Democracy in the Tunisian Revolution.'" *Harvard Dataverse*, https://doi.org/10.7910/DVN/TRMYO4.

Bayat, Asef. 1998. "Revolution without Movement, Movement without Revolution: Comparing Islamic Activism in Iran and Egypt." *Comparative Studies in Society and History* 40(1): 136–69.

Beissinger, Mark R. 2013. "The Semblance of Democratic Revolution: Coalitions in Ukraine's Orange Revolution." *American Political Science Review* 107(3): 574–92.

Beissinger, Mark R. 2022. *The Revolutionary City: Urbanization and the Global Transformation of Rebellion*. Princeton, NJ: Princeton University Press.

Benford, Robert D., and David A. Snow. 2000. "Framing Processes and Social Movements: An Overview and Assessment." *Annual Review of Sociology* 26(1): 611–39.

Benoit, Kenneth, Kohei Watanabe, Haiyan Wang, Paul Nulty, Adam Obeng, Stefan Müller, and Akitaka Matsuo. 2018. "quanteda: An R Package for the

Quantitative Analysis of Textual Data." *Journal of Open Source Software* 3(30). https://doi.org/10.21105/joss.00774.
Berman, Chantal, Killian Clarke, and Rima Majed. 2023. "Theorizing revolution in democracies: Evidence from the 2019 uprisings in Lebanon and Iraq." WIDER Working Paper Series wp-2023-51, World Institute for Development Economic Research (UNU-WIDER).
Berridge, W.J. 2019. "Briefing: The Uprising in Sudan." *African Affairs* 119(474): 164–76.
Brancati, Dawn. 2014. "Pocketbook Protests: Explaining the Emergence of Pro-Democracy Protests Worldwide." *Comparative Political Studies* 47(11): 1503–30.
Brancati, Dawn. 2016. *Democracy Protests: Origins, Features, and Significance*. Cambridge: Cambridge University Press.
Bruederle, Anna, and Roland Hodler. 2018. "Nighttime Lights as a Proxy for Human Development at the Local Level." *PLOS ONE* 13(9). https://doi.org/10.1371/journal.pone.0202231.
Butcher, Charles, John Laidlaw Gray, and Liesel Mitchell. 2018. "Striking It Free? Organized Labor and the Outcomes of Civil Resistance." *Journal of Global Security Studies* 3(3): 302– 21.
Campante, Filipe R., and Davin Chor. 2012. "Why Was the Arab World Poised for Revolution? Schooling, Economic Opportunities, and the Arab Spring." *Journal of Economic Perspectives* 26(2): 167–88.
Chenoweth, Erica, and Jay Ulfelder. 2017. "Can Structural Conditions Explain the Onset of Nonviolent Uprisings?" *Journal of Conflict Resolution* 61(2): 298–324.
Dakhli, Leyla. 2011. "Une lecture de la révolution tunisienne." *Le mouvement social* 236(3): 89–103.
Daoud, Abdelkarim. 2011. "La révolution tunisienne de janvier 2011: une lecture par les déséquilibres du territoire." *EchoG´eo*. https://doi.org/10.4000/echogeo.
DeNardo, James. 1985. *Power in Numbers: The Political Strategy of Protest and Rebellion*. Princeton, NJ: Princeton University Press.
Dix, Robert H. 1984. "Why Revolutions Succeed & Fail." *Polity* 16(3): 423–46.
Doherty, David, and Peter J. Schraeder. 2018. "Social Signals and Participation in the Tunisian Revolution." *Journal of Politics*. https://doi.org/10.1086/696620.
Earl, Jennifer, Andrew Martin, John D. McCarthy, and Sarah A. Soule. 2004. "The Use of Newspaper Data in the Study of Collective Action." *Annual Review of Sociology* 30(1): 65– 80.
Foran, John. 1993. "Theories of Revolution Revisited: Toward a Fourth Generation?" *Sociological Theory* 11(1): 1–20.
Goldstone, Jack A. 2001. "Toward a Fourth Generation of Revolutionary Theory." *Annual Review of Political Science* 4(1): 139–87.
Goodwin, Jeff. 2001. *No Other Way Out: States and Revolutionary Movements, 1945 to 1991*. Cambridge: Cambridge University Press.
Gould, Roger V. 1995. *Insurgent Identities: Class, Community, and Protest in Paris from 1848 to the Commune*. London: University of Chicago Press.
Haggard, Stephan, and Robert R. Kaufman. 2016. *Dictators and Democrats: Masses, Elites and Regime Change*. Princeton, NJ: Princeton University Press.
Hellmeier, Sebastian, and Michael Bernhard. 2023. "Regime Transformation from Below: Mobilization for Democracy and Autocracy from 1900 to 2021." *Comparative Political Studies*. https://doi.org/10.1177/00104140231152793.
Hibou, Béatrice. 2011. "Tunisie. Economie politique et morale d'un mouvement social." *Politique Africaine* 121(1): 5–22.
Hmed, Choukri. 2012. "Abeyance Networks, Contingency and Structures: History and Origins of the Tunisian Revolution." *Revue française de science politique (English)* 62(5): 797–820.
Hoffman, Michael, and Amaney Jamal. 2014. "Religion in the Arab Spring: Between Two Competing Narratives." *Journal of Politics* 76(3): 593–606.
Horn, Nancy, and Charles Tilly. 1988. "Contentious Gatherings in Britain, 1758–1834." Technical report, University of Michigan. https://doi.org/10.3886/ICPSR08872.v2.
ICG. 2011. "Popular Protests in North Africa and the Middle East (IV): Tunisia's Way." Technical Report 106. TUNIS/BRUSSELS: International Crisis Group.
Inglehart, Ronald, and Christian Welzel. 2005. *Modernization, Cultural Change, and Democracy: The Human Development Sequence*. Cambridge: Cambridge University Press.
Kadivar, Mohammad Ali. 2018. "Mass Mobilization and the Durability of New Democracies." *American Sociological Review* 83(2): 390–417.
Kadivar, Mohammad Ali, and Neal Caren. 2016. "Disruptive Democratization: Contentious Events and Liberalizing Outcomes Globally, 1990–2004." *Social Forces* 94(3): 975–96.
Kalyvas, Stathis N. 2003. "The Ontology of "Political Violence": Action and Identity in Civil Wars." *Perspectives on Politics* 1(3): 475–94.
Kalyvas, Stathis N. 2006. *The Logic of Violence in Civil War*. Cambridge: Cambridge University Press.
Karklins, Rasma, and Roger Petersen. 1993. "Decision Calculus of Protesters and Regimes: Eastern Europe 1989." *Journal of Politics* 55(3): 588–614.

Ketchley, Neil, and Thoraya El-Reyyes. 2019. "Unpopular Protest: Mass Mobilization and Attitudes to Democracy in Post-Mubarak Egypt." *Journal of Politics* 83(1). https://doi.org/10.1086/709298.

Klein, Graig R, José Cuesta, and Cristian Chagalj. 2022. "The Nicaragua Protest Crisis in 2018–2019: Assessing the Logic of Government Responses to Protests." *Journal of Politics in Latin America* 14(1): 55–83.

Koenker, Diane, and William G. Rosenberg. 1989a. "Strikers in Revolution: Russia, 1917." In *Strikes, Wars, and Revolutions in an International Perspective: Strike Waves in the Late Nineteenth and Early Twentieth Centuries*, ed. Leopold Haimson and Charles Tilly. Cambridge: Cambridge University Press.

Koenker, Diane, and William G. Rosenberg. 1989b. *Strikes and Revolution in Russia*, 1917. Princeton, NJ: Princeton University Press.

Kuran, Timur. 1995. "The Inevitability of Future Revolutionary Surprises." *American Journal of Sociology* 100(6): 1528–51.

Lewis, Janet I. 2017. "How Does Ethnic Rebellion Start?" *Comparative Political Studies* 50(10): 1420–50.

Lim, Merlyna. 2013. "Framing Bouazizi: 'White Lies', Hybrid Network, and Collective/Connective action in the 2010-11 Tunisian Uprising." *Journalism* 14(7): 921–41.

Lipset, Seymour M. 1959. "Some Social Requisites of Democracy: Economic Development and Political Legitimacy." *American Political Science Review* 53(1): 69–105.

Lohmann, Susanne. 1994. "The Dynamics of Informational Cascades: The Monday Demonstrations in Leipzig, East Germany, 1989–91." *World Politics* 47(1): 42–101.

Long, J. Scott, and Jeremy Freese. 2014. *Regression Models for Categorical Dependent Variables Using Stata*. Texas: Stata Press.

Mabrouk, Mehdi. 2011. "A Revolution for Dignity and Freedom: Preliminary Observations on the Social and Cultural Background to the Tunisian Revolution." *Journal of North African Studies* 16(4): 625–35.

Malik, Adeel, and Bassem Awadallah. 2013. "The Economics of the Arab Spring." *World Development* 45: 296–313.

Markoff, John. 1997. "Peasants Help Destroy an Old Regime and Defy a New One: Some Lessons from (and for) the Study of Social Movements." *American Journal of Sociology* 102(4): 1113–42.

Martinez, Luis R. 2022. "How Much Should We Trust the Dictator's GDP Growth Estimates?" *Journal of Political Economy* 130(10). https://doi.org/10.1086/720458.

McAdam, Doug. 1982. *Political Process and the Development of Black Insurgency, 1930–1970*. Chicago: University of Chicago Press.

McAdam, Doug, Sidney Tarrow, and Charles Tilly. 2001. *Dynamics of Contention*. Cambridge: Cambridge University Press.

Michalopoulos, Stelios, and Elias Papaioannou. 2013. "Pre-Colonial Ethnic Institutions and Contemporary African Development." *Econometrica* 81(1): 113–52.

Parsa, Misagh. 2001. *States, Ideologies, and Social Revolutions: A Comparative Analysis of Iran, Nicaragua, and the Philippines*. Cambridge: Cambridge University Press.

Pommerolle, Marie-Emmanuelle, and Hans De Marie Heungoup. 2017. "The "Anglophone Crisis": A Tale of the Cameroonian Postcolony." *African Affairs* 116 (464): 526–38.

Przeworski, Adam. 2009. "Conquered or Granted? A History of Suffrage Extensions." *British Journal of Political Science* 39(2): 291–321.

Rasler, Karen. 1996. "Concessions, Repression, and Political Protest in the Iranian Revolution." *American Sociological Review* 61(1): 132–52.

Rosenfeld, Bryn. 2017. "Reevaluating the Middle-Class Protest Paradigm: A Case-Control Study of Democratic Protest Coalitions in Russia." *American Political Science Review* 111(4): 637–52.

Rule, James, and Charles Tilly. 1972. "1830 and the Unnatural History of Revolution." *Journal of Social Issues* 28(1): 49–76.

Salmon, Jean-Marc. 2016. *29 Jours de Révolution*: *Histoire du soulèvement tunisien, 17 décembre 2010–14 janvier 2011*. Paris: Les Petits Matins.

Scott, James C. 1979. "Revolution in the Revolution: Peasants and Commissars." *Theory and Society* 7(1-2): 97–134.

Skocpol, Theda. 1979. *States and Social Revolutions: A Comparative Analysis of France, Russia, and China*. Cambridge: Cambridge University Press.

Slater, Dan. 2009. "Revolutions, Crackdowns, and Quiescence: Communal Elites and Democratic Mobilization in Southeast Asia." *American Journal of Sociology* 115(1): 203–54.

Smith, S.A. 1993. "Workers and Supervisors: St Petersburg 1905–1917 and Shanghai 1895–1927." *Past & Present* 139(1): 131–77.

Tarrow, Sidney. 2022. *Power in Movement: Social Movements and Contentious Politics*. Cambridge: Cambridge University Press.

Teorell, Jan. 2010. *Determinants of Democratization: Explaining Regime Change in the World, 1972–2006*. Cambridge: Cambridge University Press.

Thompson, Mark R. 2004. *Democratic Revolutions: Asia and Eastern Europe*. London: Routledge.
Tilly, Charles. 1973. "Does Modernization Breed Revolution?" *Comparative Politics* 5(3): 425–47.
Tilly, Charles. 1993. *European Revolutions*, 1492–1992. Oxford: Blackwell.
Tsebelis, George, and John Sprague. 1989. "Coercion and Revolution: Variations on a Predator-Prey Model." *Mathematical and Computer Modelling* 12(4-5): 547–59.
Tucker, Joshua A. 2007. "Enough! Electoral Fraud, Collective Action Problems, and Postcommunist Colored Revolutions." *Perspectives on Politics* 5(3): 535–51.
Usmani, Adaner. 2018. "Democracy and the Class Struggle." *American Journal of Sociology* 124(3): 664–704.
Winship, Christopher, and Robert D. Mare. 1984. "Regression Models with Ordinal Variables." *American Sociological Review* 49(4): 512–25.
Yousfi, Héla. 2015. *L'UGTT: Une Passion Tunisienne. Enquête Sur Les Syndicalistes En Révolution (2011–2014)*. Tunis: Kathala.

https://doi.org/10.1017/S1537592723002062