Does Intolerance Dampen Dissent?
Macro-Tolerance and Protest in American Metropolitan Areas*

Christopher Claassen
Lecturer in Politics
School of Social and Political Sciences
University of Glasgow
Glasgow, G12 8QQ
United Kingdom
christopher.claassen@glasgow.ac.uk

James L. Gibson
Sidney W. Souers Professor of Government
Department of Political Science
Washington University in St. Louis
Campus Box 1063
St. Louis, MO 63130-4899
United States
jgibson@wustl.edu

Fellow, Centre for Comparative and International Politics
Professor Extraordinary in Political Science
Stellenbosch University (South Africa)

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ABSTRACT

Political tolerance has long been regarded as one of the most important democratic values because intolerant political cultures are believed to foster conformity and inhibit dissent. Although widely endorsed, this theory has rarely been investigated. Using multilevel regression with poststratification to measure levels of macro-tolerance in U.S. metropolitan areas, and event data to measure rates of protest, we test whether cultures of intolerance do indeed inhibit public expressions of dissent. We find that they do: levels of macro-tolerance are positively and strongly associated with higher rates of protest in American metropolitan areas. Our findings have implications for the study of political tolerance, for normative theories of free speech and other civil liberties, and for scholarship on protest and collective action.

POLITICAL TOLERANCE is widely recognized as one of the most important democratic values (e.g., Sullivan, Piereson, and Marcus 1982). At its heart, it is concerned with the belief that every adult citizen ought to be allowed to participate fully in the political process, regardless of her or his beliefs and opinions. Tolerant political cultures allow a wide range of ideas to be publicly expressed and freely circulated. Intolerant political cultures, in contrast, disapprove of the public expression of opinions that are judged to be objectionable. Scholars have long thought that this disapproval creates a fear of dissent and a creeping conformity. A conformist political culture of this sort is widely believed to have adverse consequences for democratic politics (e.g., Gibson 1989; McClosky 1964; Prothro and Grigg 1960; Sullivan, Piereson, and Marcus 1982).

However, despite a voluminous literature, only a handful of studies has directly examined the question of whether political intolerance does indeed constrain the public expression of political beliefs. The primary purpose of this paper is to investigate this rarely tested hypothesis. Our overriding expectation is that an intolerant political culture discourages dissent and reduces levels of protest. This is a cross-level rather than a micro-level conjecture: feeling free to express one's views and participate in politics is a function of the level of intolerance in the geographic context in which one lives (e.g., Gibson 1995). Gibson (1989, 1992, 2008) has suggested that intolerance has this effect because it can create a spiral of silence (Noelle-Neumann 1984) in which individuals are reluctant to express their views because they fear the reactions of those around them. Damage to democratic deliberation can thus be dealt by ordinary citizens as well as repressive governments. When intolerance dominates a political culture, even majorities can be cowed into political quiescence (as in the infamous "silent majority" in the U.S.).

Our hypothesis implies a macro-level relationship between tolerance and protest, but macro-level measures of both of these variables are lacking. Political tolerance is typically

conceived of, and measured as an attribute of individuals, at the micro-level. In response, we use the rapidly developing method of multilevel regression with poststratification (MRP; Park, Gelman, and Bafumi 2004) to measure the political tolerance of 365 U.S. metropolitan areas over the period from 2007 to 2011 using existing survey datasets. Protest data suffers from the same deficit: although scholars have previously gathered U.S. urban and metropolitan measures of protest incidence (e.g. Spilerman 1970; Olzak, Shanahan, and McEneaney 1996), contemporary data are scarce. As such, we use event data from the GDELT project to measure the rate of protest in U.S. metropolitan statistical areas over the same time period covered by our measures of tolerance. These new measures of political tolerance and protest in metropolitan areas allow us to test whether cultures of intolerance do in fact dampen dissent.

The paper proceeds as follows. In the next section, we provide an account of why a tolerant political culture aids dissent. The following section examines the extant empirical literature on protest, and explains why we think contextual levels of tolerance ought to also shape the incidence of protest. Then, we describe our measurement of macro-tolerance and rates of protest. Tests of our hypothesis show that macro-tolerance does indeed shape the rate at which citizens protest across U.S. metropolitan areas: a move from a below-average to an above-average level of macro-tolerance results in a striking 77 percent increase in the rate of protest. We conclude with some observations about tolerance and protest in contemporary world politics.

THEORY

Tolerance and Dissent

Democracy is characterized by the principle of majority rule. But it is also concerned with minority rights; particularly those relating to expression and contestation (Dahl 1971). These

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rights require that opinions can be freely aired in the aptly named "marketplace of ideas." Such a marketplace of ideas strengthens democracy by facilitating citizen choice (Gibson 1992), encouraging deliberation and contestation (e.g., Ackerman and Fishkin 2004), and allowing all voices to be heard (Young 2000).

However, as the large literature on political tolerance has abundantly illustrated, many citizens (perhaps even most) in a wide cross-section of societies support limiting the rights of expression and contestation for certain unpopular groups (e.g., Erisen and Kentmen-Cin 2017; Duch and Gibson 1992; Gibson and Gouws 2003; Peffley and Rohrschneider 2003; Sullivan et al. 1993). In the present day, examples of such groups are neo-Nazis, the Ku Klux Klan, and radical Muslims (Gibson 2008; Kalkan, Layman, and Uslaner 2009); in the 1950s, communists were similarly as unpopular (Stouffer 1955). But more mundane groups also face opposition to the free expression of their points-of-view. For example, Gibson (2005) found that 48% of Americans are less than completely tolerant of atheists. And social commentators (e.g., Lukianoff and Haidt 2015) have argued that college campuses have become intolerant of conservative political views, particularly on cultural or "moral" issues.

As Gibson (1989; 1992; 2008) points out, there are two mechanisms whereby intolerance may hinder collective action and protest. First, public intolerance toward a group may spur the government to pass legislation against that group. This has happened many times in American history (see Goldstein 1978). But of arguably greater importance is the direct effect of public intolerance. A climate of intolerance may discourage citizens from dissenting or expressing unpopular political views. And the more these views are left unexpressed, they less popular they appear to be. This dynamic creates what Noelle-Neumann (1984) refers to as a "spiral of silence", where people learn that it is best to keep their mouths shut. Moreover, as the logic of

the spiral metaphor suggests, an intolerant political climate results in the silencing not only of extreme and odious views, but other minority and dissenting voices too.

According to the spiral of silence theory, political tolerance works as a macro-level force that shapes political outcomes: it is a *culture of intolerance* surrounding those with dissenting opinions that matters for whether these views are expressed (Gibson 1995). Yet despite this theoretical justification for conceptualizing tolerance as a macro-level variable, existing literature almost entirely treats political tolerance as a micro-level attribute, and focuses mainly on its conceptualization, measurement, and origins (for reviews, see Gibson 2006 and Sullivan and Hendriks 2009). Only a few studies have examined the consequences of cultures of intolerance.

For example, Gibson (1988) finds that state-level political tolerance is not related to government repression of communists, while Gibson (1989) finds a surprising positive correlation between levels of tolerance and state restrictions on campus protest during the Vietnam era. He explains this positive effect of tolerance on repression by noting that tolerance increases the incidence of campus protest, which is followed by a subsequent backlash from state governments.

Gibson (1992) also examines the effects of contextual tolerance on individual perceptions of freedom of expression, finding a negative relationship. In a later study (1995) he shows that this increase in perceived freedom holds for black Americans even when tolerance is conceived to include tolerance of racists. These results provide evidence that intolerant contexts do indeed inhibit the perceived freedom of individuals living therein.

We extend that research by examining the effects of intolerant contexts on macro-level political behavior rather than on micro-level perceptions. If we draw out the logic of the spiral of silence to its full extent, the theory holds that intolerant cultures should be expected to dampen

not only micro-level *proclivities* to dissent, but macro-level *occurrences* of dissent as well. In particular, we hypothesize that the level of political intolerance of a geographic area should be negatively related to the rate at which citizens living in that area engage in political protest.

If not the micro-level, then which level of aggregation is best suited to testing our hypothesis? The effects of cultures of intolerance play out on a wider scale than neighborhoods, but require a smaller scale than states. Although there is a long tradition of research into the political culture of the U.S. states, considerable heterogeneity exists among them, as election-watchers frequently remind us. We ultimately settle on the metropolitan statistical area (MSA) as our unit of analysis. Although these are fairly large areas, spanning many counties in the largest cases, they are communities that exist in the perceptions, imaginations, and identities of most of their inhabitants – indeed, by definition, MSAs are communities that exist even in the commuting behaviors of their inhabitants.[1] Because the inhabitants of MSAs interact behaviorally, we expect that they should be a propitious geographic unit for examining the effects that people's cultural values play in constraining or facilitating the behavior of others.[2]

Tolerance and Protest

The most prominent way through which citizens of democracies can dissent is to participate in or organize protest. A long tradition of research in political behavior distinguishes between

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[1] MSAs are the counties adjacent to an urbanized core area of at least 50,000 people that have "a high degree of social and economic integration with the core as measured through commuting ties" (https://www.census.gov/geo/reference/gtc/gtc_cbsa.html).

[2] MSAs are also an attractive unit of analysis for efforts to explain protest incidence inasmuch as the study of protest in the U.S. – if not also protest itself – has primarily been an urban preoccupation. Significant studies that use cities or metropolitan statistical areas as the units of analysis include Eisinger (1973), Okamoto (2003), Olzak and Shanahan (1996), Olzak, Shanahan, and McEneaney (1996), and Spilerman (1970).

conventional, institutionalized actions related to the electoral process – such as volunteering for a campaign, contacting a politician, or voting – from non-routine, "unconventional" forms of political action – such as demonstrations, strikes, vigils, marches, and boycotts (e.g., Barnes and Kaase 1979; Dalton 2004; Finkel and Muller 1998; Muller, Jukam, and Seligson 1982). Although one may cast a "protest vote," the act of voting itself is entirely orthodox and culturally appropriate. Unconventional political action is different. Not only is a protest a manifestation of disagreement over policy or procedure, but these acts are themselves challenging and contentious, and publicly so.

Scholars have identified two sets of factors that work as determinants of protest incidence and protest participation: those that "push" individuals into protest and those that "pull" them in (McAdam 1986). Push factors drive individuals to organize and take part in protest by shaping their motivations, which galvanizes a large pool of would-be participants. Perhaps the longest-standing push factor associated with protest is grievances (Muller, Jukam, and Seligson 1982), including both absolute (Massey and Denton 1993; Piven and Cloward 1979) and relative deprivation (Eisinger 1973; Gurr 1968). Heighted competition over resources, especially between ethnic groups, has also been shown to trigger protest (Okamoto 2003; Olzak, Shanahan, and McEneaney 1996). Researchers have furthermore shown that left or liberal ideological leanings also push individuals to participate in protest (Dalton, Van Sickle, and Weldon 2010; Schussman and Soule 2005; Verba, Schlozman, and Brady 1995).

Pull factors, in contrast, represent structural forces that promote the organization of or participation in protest. They facilitate collective action by reducing its costs. Pull factors might take the form of individual resources, such as education or money, that enable individual protest participation (Schlozman, Verba, and Brady 2012). Or they might take the form of networks that

aid in the organization of protest and the recruitment of participants (McAdam 1986). Two likely network sources are civic organizations (Putnam 2000) and religious congregations (McAdam 1986; Schlozman, Verba, and Brady 2012).

Macro-tolerance is clearly a pull, rather than a push, factor because, according to the theory of the spiral of silence, macro-tolerance facilitates (or inhibits) protest by increasing (or decreasing) perceptions of having the freedom to dissent. We are aware of only one study that attempts to test the effects of tolerance on protest. Rapp and Ackermann (2016) show that national-level "social intolerance" decreases political participation, while individual-level intolerance increases participation. Although Rapp and Ackermann innovate in testing the effects of both individual-level and national-level intolerance, their measure of intolerance is effectively a measure of prejudice toward people of different ethnic groups. And, as Gibson (2006) reports, prejudice and political tolerance are entirely uncorrelated in such different contexts as South Africa and Russia. As such, our hypothesized dampening effect of a culture of political intolerance on protest behavior remains, in our view, untested.

Finally, a fair amount of research has linked protest to other forms of political culture. Inglehart (1977), for example, shows that post-material values were associated with the rise of new social and protest movements in Western democracies during the 1960s and 1970s. Muller, Jukam, and Seligson (1982) find that protest participation is triggered by a lack of diffuse support for the political system, which they call political alienation. Yet these explanations differ fundamentally from the hypothesis we are proposing. The theories of Inglehart and Muller, Jukam, and Seligson are best regarded as *individual* ideological or value commitments that *push* people into protest. In contrast, we regard tolerance as a contextual factor that pulls individuals into protest. We now turn to our strategy for measuring contextual levels of tolerance – or

"macro-tolerance," as we refer to it.

MEASURING MACRO-TOLERANCE

Measuring public opinion within small geographic areas is best accomplished using a bespoke

survey, with a sample large enough to ensure sufficient respondents within each area. Recent

survey projects that used this method to measure opinion within the U.S. states, such as the

National Annenberg Election Survey (Romer et al. 2006), interviewed more than 50,000

respondents. Such surveys may produce high quality data, but they are hugely expensive, require

collaboration across many investigators, and consequently are rare. On top of that, existing

surveys of this design have not included measures of political tolerance.

Another approach has been to aggregate existing survey data over an extended period of

time to build a "mega-poll," as in the method used by Erikson, Wright, and McIver (1993) in

their ground-breaking work on macro-opinion. Alternatively, Gibson (1988; 1989) disaggregated

the Stouffer (1955) and Nunn, Crockett, and Williams (1978) national surveys to create state-

level measures of mass and elite political intolerance. Brace et al. (2002) followed suit by using

aggregated General Social Survey data to measure political tolerance at the state level.[3] Yet even

after aggregating 24 years of survey data, Brace et al. find that only 41 states have samples of at

least 100 respondents, and only 38 states include two or more primary sampling units over this

entire period of time. Consequently, it is not surprising that, as Lax and Phillips (2009) and

Pacheco (2011) have shown, estimates produced using this method of disaggregation are

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[3] We follow Lax and Phillips (2009) and Warshaw and Rodden (2012) in using
"disaggregation" when the sample of one poll is divided by geographic areas; "aggregation"
refers to adding multiple polls together prior to dividing them into geographical areas.

unreliable in small states. These difficulties are only compounded when one is interested, as we are, in measuring opinion in geographic areas even smaller than states.

Faced with these limitations, scholars are increasingly turning to a method of model-based estimation known as multilevel regression with poststratification (MRP). Pioneered by Gelman and Little (1997) and Park, Gelman, and Bafumi (2004), MRP utilizes a multilevel model to predict the average opinion of thousands of demographic-geographic categories (such as Hispanic, college-educated women who are aged 18-29 and live in Colorado). These raw opinion estimates are then weighted by the population sizes of each demographic-geographic category and aggregated by state to create a post-stratified estimate of opinion.

MRP has been extensively used for measuring state-level opinion. Some have urged caution (Buttice and Highton 2013), but the estimates has been validated using a variety of external data, including election results (Park, Gelman, and Bafumi 2004) and large aggregated polls (Lax and Phillips 2009; Pacheco 2011). In particular, Lax and Phillips (2009) find MRP can reliably measure state-level opinion using national survey samples of as few as 1,500 respondents.

Fewer scholars have attempted to use MRP to measure opinions in areas smaller than states, which is what we intend to do. An important exception is Warshaw and Rodden (2012), who test the accuracy of MRP opinion estimates for congressional and state legislative districts compared with both a mega-poll and state referendum results. They conclude that "MRP produces very reliable estimates of congressional districts' public opinion with a national sample of just 2,500 people, and it yields reliable estimates for state senate districts with a national sample of 5,000 people" (204). Since MSAs, on average, have virtually the same population as the average congressional districts (692,400 and 711,000, respectively), and since our survey

sample of 3,133 metropolitan area residents exceeds the minimum sample of 2,500 that Warshaw and Rodden recommend, we conclude that we can indeed use MRP to measure macro-tolerance within U.S. MSAs. We describe our approach below.

Survey Data

Our survey data come from the Freedom and Tolerance Surveys (FATS), which were conducted every year between 2007 and 2011. Since we do not expect a measure of political culture such as macro-tolerance to vary much from year to year,[4] we aggregate the five annual surveys to produce one sample. Respondents were sampled from all 48 contiguous U.S. states and from 317 out of the 366 metropolitan statistical areas. The sample sizes within MSAs ranged from 1 (various) to 177 (New York-Northern New Jersey-Long Island), with a mean of 10.3. The 87 respondents who refused to provide information for key demographics and the 817 additional respondents who lived outside an MSA were excluded from the dataset. We also removed another 65 respondents who lived in the Washington, D.C. MSA because this metropolitan area proved to have extremely high levels of protest, which is likely due, in part, to a particular form of measurement error associated with automated event data. We are left with a sample of 3,133 respondents for our analysis.[5]

The MRP procedure requires cross-classifiable population data on the demographic and geographic variables of interest. The joint demographic-geographic distributions are required,

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[4] Using a one-way ANOVA, we find no statistically significant difference across survey years in micro-level political tolerance ($F = .91$, df $= 4$, $p = .46$). See below for the measurement of micro-tolerance.

[5] It is commonplace to use listwise deletion of missing data in MRP analyses. See, for example, Ghitza and Gelman (2013) and Lax and Phillips (2009).

not merely the marginal distributions for each of these variables. However, the census bureau

provides the joint distributions of only three demographic variables at the MSA level. This

creates a problem for us as there are at least four demographic variables we would like to include

as predictors and post-stratification factors: age, education, race, and gender.

To overcome this obstacle, we use the method of Leemann and Wasserfallen

(forthcoming), who propose creating a *simulated* joint distribution matrix using combinations of

marginal and joint distributions. Specifically, we obtain the estimates of the joint gender-age-

education-MSA distributions from the 2007-2011 American Community Surveys, and then

combine these estimates with the joint race-MSA distributions from the same source to create a

simulated joint distribution matrix of all five demographic and geographic variables. We ensure

that these variables are identically coded in both this post-stratification dataset and in the survey

dataset.

Measuring Political Tolerance at the Micro-Level

MRP has thus far been applied to a fairly limited range of opinions: electoral preferences

(Gelman and Little 1997; Ghitza and Gelman 2013; Park, Gelman, and Bafumi 2004),

partisanship (Pacheco 2011), policy preferences (Lax and Phillips 2009; Warshaw and Rodden

2012), and policy "mood" or ideology (Caughey and Warshaw 2015; Enns and Koch 2013).

While electoral and policy preferences are typically measured with single dichotomous

indicators (but see Enns 2016), multiple indicators are required to reliably and validly measure

latent constructs such as political tolerance. Before estimating tolerance at the metropolitan level,

we need to first measure it at the individual level.

Gibson (2013) describes three approaches to measuring political tolerance: the least-

liked, fixed-group, and support for civil liberties methods.[6] All three have been used to measure "the degree to which citizens will support the extension of civil liberties to all, including groups advocating highly disagreeable viewpoints and ideologies" (Gibson 2013, 46), which suggests that the three approaches could be regarded as tapping a single latent construct we might call "general political tolerance." However, Gibson (2013) also finds that correlations between the three additive scales are modest, which casts some doubt on this assumption.

Our approach is something of a compromise between the various measurement techniques. The fixed-group approach is ill-suited for measuring tolerance at the state-level because it asks about groups, such as "people who are against all churches and religion" and "religious fundamentalists," with which some respondents might identify, and toward which others might even be sympathetic. Such groups would not satisfy the "objection precondition" required to validly measure political tolerance. Moreover, the extent to which individuals identify with or feel sympathetic toward such groups likely varies considerably by metropolitan area. We therefore do not consider the fixed-group approach further, and instead focus on the question of whether the least-liked and support for civil liberties items can be used together to validly and reliably measure general political tolerance.

Following Sullivan, Piereson, and Marcus (1982), the least-liked items ask respondents whether they would allow three acts of political participation (making a speech, running for office, and holding a demonstration) by groups that they dislike a great deal. The five civil

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[6] Briefly, fixed-group measures of tolerance are those in which the questions refer to political groups selected by the researcher (e.g., Stouffer 1955). Least-liked measures allow the respondents themselves to identify the groups (e.g., Sullivan, Piereson, and Marcus 1982). Support for civil liberties refers to attitudes about whether certain types of activities, irrespective of the groups involved, ought to be allowed (e.g., giving certain types of inflammatory speeches; see Davis 2007 and Gibson and Bingham 1985).

liberties items ask respondents about their support for policies such as the institution of a national identity card, government monitoring of citizens' communications, and police investigation of protest participants.[7]

To test the reliability and validity of the two-factor model, we specify and fit a two-factor confirmatory factor analysis (CFA), with one factor specified for the three least-liked items and the other for the five civil liberties items. These two factors are then modelled using a higher-order, general tolerance factor.[8] The model fits the data well (robust $\chi^2 = 134.38$, df $= 17$, $p <$ .001; RMSEA $= .042$; full results are reported in the online appendix). The two tolerance scales – least-liked and support for civil liberties – thus clearly appear to tap a latent construct of general political tolerance that combines attitudes toward tolerance of everyone with attitudes toward tolerance of hated groups. We therefore proceed to use general political tolerance at the individual level as our outcome variable in the MRP model.

The MRP Model

MRP estimation begins with a multilevel model of individual opinion. Our model is similar to those used in existing research (e.g. Lax and Phillips 2009, Warshaw and Rodden 2012); we model tolerance as a function of a number of demographic and geographic categories (gender, race, age group, level of education, and MSA – further details on the MRP model are available in the Online appendix). Our approach is also typical in that the MSA effects are nested within a higher-order geography (census region in our case) and include MSA-level covariates (the

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[7] For analysis of these measures at the micro-level, see Gibson (2013).
[8] In addition, because two of the survey items were asked in the "reverse" direction to the others, we allow the residual error for those two items to be correlated.

percentages of the MSA population that are black, religious, and hold a bachelor's degree).[9]

This model is used to predict levels of political tolerance within each of the 73,000 demographic-geographic "types." The estimate for each type is then weighted by the proportion of the MSA's population that falls within that demographic-geographic type, before it is then aggregated by MSA to yield a post-stratified estimate of metropolitan-level political tolerance. Finally, the estimates are transformed to range from 0 to 1.

The resulting measure of macro-tolerance displays a regional pattern within the U.S., with intolerance pervasive in southern MSAs and tolerance generally increasing as one moves north (we include a map of the estimates in the online appendix). This geographic pattern is largely consistent with existing state-level estimates of macro-tolerance (Brace et al. 2002; Gibson 1988; 1989). The most tolerant MSAs include northern college towns such as Boulder, CO, Ithaca, NY, and Corvallis, OR. The least tolerant are smaller southern MSAs such as Sumter, SC and Albany, GA, as well as a few larger MSAs in Texas such as Brownsville-Harlingen and McAllen-Edinburg-Mission.

Macro-tolerance is quite distinct from the partisan and ideological orientations that animate the familiar "red-state, blue-state" divide. Macro-tolerance is correlated at .32 with the percentage of an MSA that voted for Obama vote in 2012, for example. While liberal MSAs are somewhat more tolerant, intolerance can and does exist on both the left and right. As such, we can be sure that any observed relationship between macro-tolerance and protest is not merely another manifestation of partisan and ideological divides.

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[9] Such areal-level covariates have been shown to significantly improve MRP estimates (Warshaw and Rodden 2012). Our choices – religiosity, education, and racial diversity – have been linked with tolerance at the individual level (e.g., on religion, see Gibson 2010; on education, see Bobo and Licari 1989; on race, see Davis 1995).

MEASURING PROTEST INCIDENCE

Scholars of protest and collective action have typically gathered their data from newspaper reports (e.g., Okamoto 2003; Olzak, Shanahan, and McEneaney 1996). Although the traditional method of collecting such data was for a team of research assistants to spend many hours poring over newspaper back issues (Earl et al. 2004), researchers now use computer programs to automatically extract event data from news reports (for an introduction, see Schrodt 2012 and the other papers in the 2012 special issue of *International Interactions*). Such automated data are believed to be at least as accurate as human-coded events data, and – because they are far less expensive to gather – they are far more comprehensive (King and Lowe 2003).

We use data from one of these automated event data projects, the Global Database on Language and Tone (GDELT), to measure the incidence of protest in MSAs. GDELT codes political events beginning in 1979 and continuing until the present day, using a corpus of news sources including *Agence France Presse*, *Associated Press*, *Google News*, *New York Times*, and *Xinhua*. Events are identified, parsed, and linked across news stories, with the type and location of action and the type and identities of actors recorded to the greatest extent possible (see Leetaru and Schrodt 2013 for further details).

GDELT has attracted a fair amount of criticism in its short life, so we pause to address these concerns. First, commentators have claimed that GDELT has poor and varying coverage across non-Western countries (Hammond and Weidman 2014; Keeting 2013). Our focus on the U.S., with its virtually saturated news coverage, means we avoid this problem altogether.

A second criticism of GDELT, which is relevant to our analysis, is the degree to which the data contain misclassification errors. Raw GDELT event counts are thought to include a large

number of false positives. The program either misinterprets the language in some news reports, falsely counting an event where none existed, or it fails to link together separate news reports of a single event, thus counting one event more than once (Leetaru and Schrodt 2013).[10] This propensity toward false positives may have increased over time (Ward et al. 2013).

A few researchers have evaluated such concerns by comparing GDELT counts of protests to data obtained from other sources. Hanna (2014), for example, compares the monthly GDELT count of the incidence of protests in the U.S. between 1979 and 1995 with hand-collected data over the same period from the Dynamics of Collective Action (DCA) project (see Earl, Soule, and McCarthy 2003 for further details on this project). She finds that the two time-series are poorly correlated ($r = -.11$). Ward et al. (2013), on the other hand, find that GDELT counts of daily protests in Egypt during the months of November 2011 and November 2012 are strongly correlated ($r = .84$) with the counts of the Integrated Crisis Early Warning System, another automated event-coding dataset. These two tests both examine the longitudinal accuracy of GDELT protest data, but they arrive at very different conclusions.

Our research design and data needs however, are cross-sectional. We have reason to suspect that GDELT provides better cross-sectional measures of protest incidence than it does longitudinal measures, because the false positive rate might be expected to occur in all cross-sectional units under investigation. To verify this intuition, we conducted our own validation exercise. We follow Hanna (2014) in comparing GDELT and DCA data. We diverge in that we are interested in cross-sectional, not longitudinal correlations. Because DCA does not include information on the MSA in which a protest took place, we instead measure and compare the state

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[10] Ward et al. (2013) provide the illustration of international trade or currency "wars" that might be counted as conflict events.

rates of protest between the two sources of data. Specifically, we compare the total incidence of protest for each of the 48 contiguous states obtained from GDELT with those obtained from the DCA dataset. The timeframe is 1979 to 1995, both inclusive, which is the period that GDELT and DCA overlap. Even using the raw GDELT protest counts, we find a Spearman's rank-order correlation with the annual counts of protest as measured by the DCA dataset of .83. This is a very encouraging finding given the different sources of data and slightly different definitions of collective action used in each.

Since it appears that GDELT data can be used to reliably estimate protest incidence in U.S. states, there should be no special problems with using these data to measure protest incidence in metropolitan areas.[11] Nevertheless, in an effort to further reduce the prevalence of false positives, we follow the advice of Yonamine (2013) and filter the raw GDELT data in various ways to remove false positives. We remove would-be protest events that (1) are not mentioned in the first paragraph of a news report, (2) are mentioned in only one news report, and (3) code the protagonist as being a government, media, or international actor. Events are also automatically removed if they lack the necessary geo-code for us to locate them in an MSA. The resulting, "filtered" annual incidence of protest is our main dependent variable.[12]

According to this measure, the annual incidence of protest between 2007 and 2011 ranged from 0 (in seven MSAs: Anderson, IN; Coeur d'Alene, ID; Elkhart-Goshen, IN; Idaho Falls, ID; Jackson, TN; Midland, TX; and Winchester, VA-WV) to 306 in San Francisco-

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[11] Indeed, we might expect that MSAs, being urban areas, exhibit more homogenous levels of media density than states, which vary in their degree of urbanization. As such, newspaper based measures of protest incidence might in fact be more accurate at the MSA-level than the state-level.

[12] We also test the robustness of our results when using raw, unfiltered measures of protest incidence – see the online appendix.

Oakland-Fremont. Incidence however, is partly a function of the size of the population of the metropolitan area. It is therefore necessary to adjust for the increasing opportunities for protest associated with larger populations by modelling the rate of protest rather than the raw incidence (e.g., Gelman and Hill 2007). There are two ways to do this. The first, and perhaps simplest, option is to calculate the rate directly by dividing protest incidence by the population of the MSA. Since the resulting rate is highly skewed, it is desirable to then apply a logarithmic transformation. The second option is to use a count model with incidence of protest as the outcome variable and the log of the MSA population as an offset. The use of logarithmic transformations – for rate of protest in the first instance and for MSA population in the second – allows each of these approaches to be interpreted clearly and cleanly in terms of the other.[13] When we model the determinants of protest using a multivariate regression, we use the second approach. For plotting the data, where continuous measures are more revealing, we use the first approach.

Examining the rates of protest (i.e., incidents of protest per capita), we find that the most protest-prone MSAs are Carson City, NV, and Topeka, KS, with 98 and 80 protests per million residents per year. San Francisco-Oakland-Fremont, CA, the first large urban area on the list, has the third highest rate of protest (71 protests per million residents per year). The seven MSAs with no recorded protests between 2007 and 2011 naturally also have zero rates of protest, and they take up the last seven places on the rankings.

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[13] See the online appendix for more details on our modeling approach. One caveat is that it is necessary to add a small constant to the directly calculated rate measure to avoid undefined values arising from logarithms of zero. This tactic is not necessary when modelling the rate using incidence with an exposure offset. As such, the presence of a few zero counts in the data clouds the mutual interpretability of the two approaches somewhat.

TESTING THE EFFECT OF MACRO-TOLERANCE ON PROTEST

We turn now to the primary contribution of this paper: testing whether macro-tolerance shapes

the rate of protest in American metropolitan areas. We begin by examining a scatterplot that

depicts the bivariate relationship between macro-tolerance and rate of protest (Figure 1). The

scatterplot reveals a positive and moderate relationship between macro-tolerance and protest ($r =$

.35): the rate of protest, in other words, is generally higher in metropolitan areas that have more

tolerant political cultures, just as we hypothesized.

[PLACE FIGURE 1 ABOUT HERE]

To address the question of whether this relationship persists once we adjust for other

known determinants of protest, we specify a negative binomial model of the rate of protest, as

shown in Table 1. The primary purpose of this model is to test the robustness of the association

between tolerance and protest when we adjust for other factors scholars have found are also

determinants of protest participation and protest incidence. Although we include measures of a

number of other determinants of protest, their role here is primarily to serve as controls for

possible factors confounding the relationship between the rate of protest and macro-tolerance.

[PLACE TABLE 1 ABOUT HERE]

Our control variables include factors that "push" people into protest, as well as those that

"pull" them in. First among the push factors is a measure of the ideological color of the MSA:

the percentage of the 2012 presidential vote Barack Obama won in the area. Analysis of survey

data has shown that a left or liberal ideology is associated with protest participation (Schussman

and Soule 2005; Verba, Schlozman, and Brady 1995), although a similar effect has not yet been

established at the aggregate level. We also include the Gini coefficient as a measure of the

areas's income inequality, which has long been proposed (but seldom demonstrated) as a determinant of civil conflict, if not necessarily protest (Lichbach 1989). Next, as measures of heightened competition over material resources in the MSA, we include the average unemployment rate over the 2007 to 2011 period and the rate of population growth between 2000 and 2010 (Olzak and Shanahan 1996).

Our other measures of push factors relate to processes of competition and threat between racial and ethnic groups. The ethnic fractionalization index measures the diversity of the MSA; we would expect protest to be positively associated with ethnic diversity to the extent that minority groups express greater demands as their numbers grow (e.g. Olzak, Shanahan, and McEneaney 1996; Spilerman 1970) or if the majority group becomes increasingly threatened by an increasing minority population (Enos 2016; Giles and Evans 1986). We also include the black-white dissimilarity index, which is used to measure racial segregation of neighborhoods within a MSA; in more segregated urban areas, groups find each other more threatening, all else being equal (Olzak, Shanahan, and McEneaney 1996; Uslaner 2012).

Moving on to pull factors, we include median household income and the percentage of the MSA with a high school diploma as measures of the supply of financial resources and civic skills, which as Verba, Schlozman, and Brady (1995; Schlozman, Verba, and Brady 2012) have shown are factors related to political activism. Protest also requires a supply of people who are "biographically available" to participate (McAdam 1986). We include the percentage of students in the MSA because students have both the time and the inclination for protest (Schussman and Soule 2005). We also include the percentage of the population that is under 18 years of ag, since MSAs with greater proportions of children also have greater proportions of parents, who are less available to protest (Verba, Schlozman, and Brady 1995). Finally, voluntary organizations have

repeatedly been shown to be crucial in recruiting and mobilizing protest participants (Klandermans 1997; McAdam 1982; Putnam 2000). We use data on the number of charitable organizations and religious congregations per capita.

The first model in Table 1, which we label the "Protest Incidence Model," shows that the positive and significant relationship between macro-tolerance and protest persists when we control for all these other "push and pull" determinants of protest incidence. The effect of macro-tolerance is substantially significant: a two-standard deviation increase in macro-tolerance is associated with a 77 percent increase in the metropolitan rate of protest. For a larger MSA – one that is a standard deviation above the mean MSA population (or approximately the size of Bridgeport-Stamford-Norwalk, CT) – this corresponds to an increase from 8.2 to 14.6 protest incidents a year. For an MSA that is one standard deviation below the mean MSA population (or approximately the size of San Angelo, TX), this corresponds to an increase from 1.0 to 1.8 protest incidents a year (see the online appendix for a graph displaying these effects).

Some of the other covariates in Model 1 also show significant effects. First, ethnic fractionalization has a positive association with the rate of protest, echoing Olzak and Shanahan's (1996) finding that the size of the non-white population is related to the occurrence of "race riots." Our result differs in that our measure of protest incidence includes *all* forms of protest, race-related or not. As such, our finding additionally calls to mind Hero and Tolbert's (1996) argument regarding the centrality of ethnic diversity in affecting state politics. Ethnic diversity also appears to be a key variable for understanding MSA political behavior as well.

Second, the share of the MSA electorate that voted for Obama in 2012 has a positive relationship with the incidence of protest. This effect shows that contextual ideology influences dissent, with liberal metropolitan areas being more likely to protest than conservative ones. Past

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research has shown the same effect but at the individual level – i.e., left-leaning individuals are more likely to participate in protest (Dalton, Van Sickle, and Weldon 2010; Schussman and Soule 2005). This study is the first to show such an effect for metropolitan protest incidence.

Third, as expected, the share of the MSA population under 18 years of age is negatively related to the incidence of protest. This is likely due to two separate effects: children seldom participate in protest themselves and, as such, MSAs with greater proportions of children have smaller pools of potential protestors. In addition, the presence of more children implies the presence of more parents, and as Verba, Scholzmann and Brady (1995) find, having children reduces one's free time and thus also limits political participation.

Finally, we find that the number of charitable organizations per capita is associated with protest activity. A plentiful supply of such organizations provides at least two channels for protest mobilization. First, voluntary organizations teach their members civic skills such as how to run a meeting or make a speech (Verba, Schlozman, and Brady 1995; Putnam 2000). These skills then be used to organize and sustain a protest. Second, voluntary associations help facilitate protest participation because they create horizontal ties between members (McAdam 1986). Indeed, perhaps the most powerful predictor of protest participation is simply being asked directly by someone else to take part (Schussman and Soule 2005).

The most important finding from Model 1, though is that macro-tolerance retains a positive and significant effect even in a well-specified model (and across other specifications of the model). Having controlled for some potential correlates of protest and state politics, we can conclude that the relationship between macro-tolerance and protest is robust.[14]

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[14] We note that our results hold when (1) using the raw, unfiltered measure of protest incidence and (2) removing three MSAs (Carson City, NV; Houma-Bayou Cane-Thibodaux, LA; and

Nevertheless, there is still reason to doubt whether these results reflect a causal effect of macro-tolerance on protest. In particular, one might suspect that macro-tolerance may be endogenous to levels of protest. On the one hand, a heightened incidence of protest, particularly if it is aggressive or violent, might dampen popular tolerance for future protest (e.g., Gibson 1989); according to this story, protest can actually *decrease* tolerance. On the other hand, however, participation in protest may increase support for civil liberties and thus political tolerance (Peffley and Rohrschneider 2003); according to this second story, protest could *increase* tolerance.

To control for the possible endogeneity of macro-tolerance to previous levels of protest, we also include a lagged dependent variable in a second model (Model 2, Table 1): the incidence of protest in the MSA in the five years immediately prior our 2007-2011 period of analysis. Although useful for bolstering causal conclusions, this is not an ideal specification inasmuch as including a lagged dependent variable shifts the analysis to one of *change* in incidence of protest. And since macro-tolerance, being a form of political culture, changes slowly over time, we suspect that it is more weakly related to five-year *changes* in protest incidence than to contemporaneous *levels* of incidence.

Nevertheless, as Model 2 demonstrates, macro-tolerance remains positively and highly significantly associated with protest incidence, even when controlling for past levels of protest. These findings substantially reduce (but do not entirely eliminate) our concern that the association we observe between macro-tolerance and protest is merely a function of the influence of protest on tolerance. Indeed, all the evidence points toward our hypothesized effect: the

Provo-Orem, UT) that were influential outliers as defined by their Cook's Distances. These results are reported in the online appendix.

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contextual level of political tolerance shapes the rate at which protest occurs in U.S. urban areas.

DISCUSSION AND CONCLUDING COMMENTS

This paper has shown that metropolitan-area political tolerance is associated with heightened rates of protest. These findings have implications for debates around the exercise of civil liberties such as the freedoms of speech and assembly, which have leapt back onto the agenda in the U.S. and other long-standing democracies. In particular, concerns about everyday speech and behavior that might be interpreted as prejudiced, "blasphemous," or politically incorrect or extreme, have strengthened the argument *against* the freedoms of speech and assembly, or at least for limiting these freedoms. While our evidence does not suggest where exactly these limitations should lie, if at all, it does bolster the argument *for* putting up with a variety of unwelcomed speech if the goal is to legitimize and facilitate dissent and protest.

Indeed, one reason that one might put up with unpopular speech is the link our findings imply between tolerance and the vitality of democracy. While the level of protest expressed in a polity may not correspond in a linear fashion with the health of its democracy, protest is undoubtedly a necessary condition for democratic vitality. It is the ability for citizens to freely gather, march, protest, and express their opinions outside of routinized (and often controlled) political channels that separates democracy from the various authoritarian facsimiles in circulation today. By dampening protest, cultures of intolerance undermine the health of democracy.[15]

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[15] Gibson and Gouws (2003) acknowledge that at the very extreme, increases in tolerance may be harmful to democracy. As a practical matter, they also argue, this is of little consequence because we have never observed a polity characterized by extreme levels of political tolerance.

Our findings are consistent with the classic theory of the spiral of silence, which holds that intolerance toward those holding unsavory political opinions not only stifles these unpopular voices, but also risks creating a broader culture of conformity in which all minority and dissenting views are quieted. We come back to a vital finding of Gibson's (1995): blacks believe they have greater political freedom in communities with greater tolerance of racist speech. Gibson points out that this, of course, does not mean blacks want to be subjected to racism. But where racist speech is tolerated, so too are other "unusual" or "extreme" views, providing for a broadly tolerant culture that allows citizens to feel free to express their points of view.

Although we are attracted to the theory of the spiral of silence as a micro-theory linking background cultures to individual political actions, our research has obviously not directly investigated that theory. The full story of how tolerance relates to dissent may begin with the political culture of the areas in which citizens reside, and may end up with macro-occurrences of protest, but it surely takes a detour through the micro-level perceptions and orientations of the citizens themselves. As such, although we have tried to carefully tailor our conclusions to our macro-level analysis, we certainly recognize that important micro-level linkages remain.

We also fully recognize the limits that result from thinking about a dynamic longitudinal process in cross-sectional terms. Both political tolerance and protest levels change over time, probably in interconnected ways. Gibson's (1989) cross-sectional research gives a hint about this interaction, in his suggestion that tolerance makes campus-level protests possible, but that campus-level protests then stimulate the passage of repressive legislation. Cross-sectionally, political tolerance is therefore associated with political repression, even if there is obviously more to the causal story. We have shown that a culture of political tolerance generates more protest activity, but there is undoubtedly more to be said were we to try to understand how the

relationships evolve over time.

Finally, our understanding of protest is also under-theorized regarding institutional influences, particularly the role of law and courts. All metropolitan areas are governed, of course, by the nation's first amendment, but not all local judges embrace those freedoms with equal vigor. Even today, states differ in their promulgation of hate-speech laws, laws that are often used to limit the rights of political dissidents (e.g., Gibson and Bingham 1985). In the same vein, protests do not take place in metropolitan conglomerations, they take place in more finely-grained and localized communities, and throughout American history local communities have passed countless ordinances making protest more or (usually) less difficult. In this paper, we have expanded the model of protest activity to include the effects of political culture, but the model could certainly stand additional enlargement.

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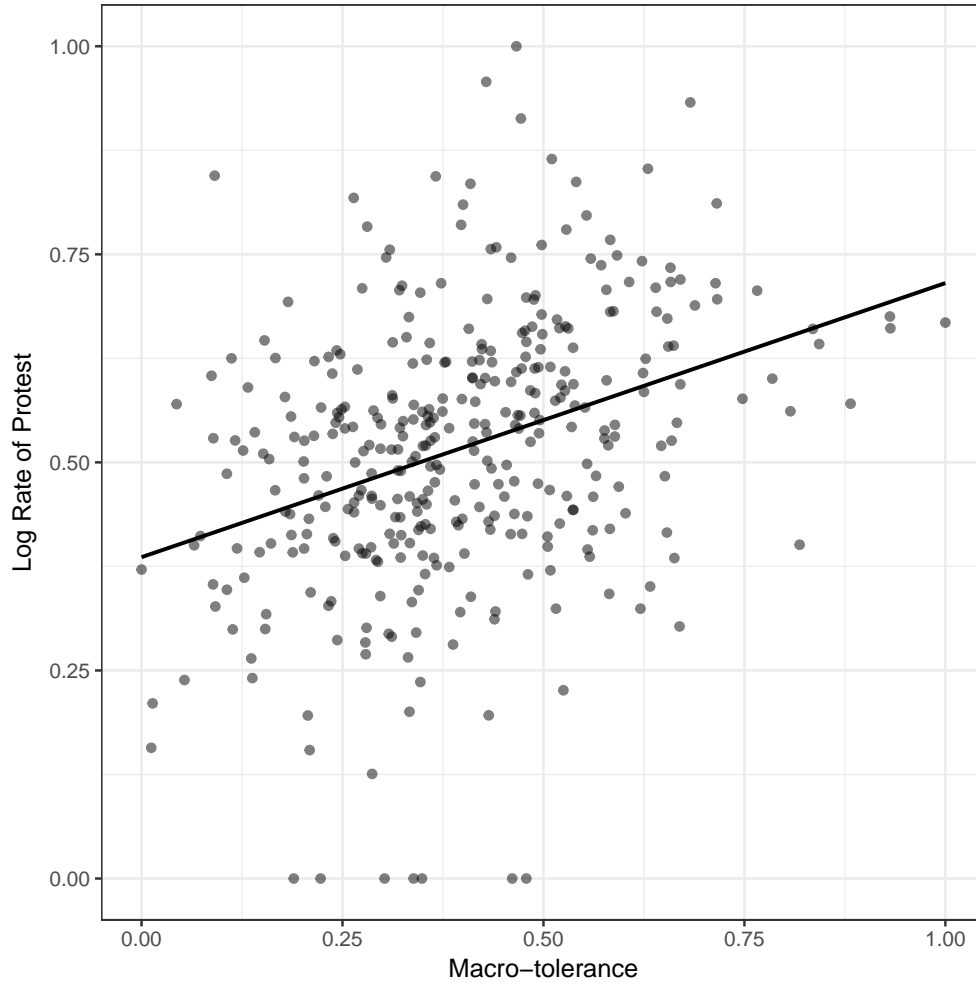
Figure 1. Scatterplot of rate of protest and macro-tolerance. $N = 365$ MSAs. The solid line indicates a least squares regression fit. To calculate the log rate of protest we divide the annual MSA incidence of protest by MSA population in millions, and then find the natural logarithm. A small constant value (1) is added to all cases before taking the logarithm so as to avoid the undefined values that would result from taking the log of zero. We avoid having to take this step in our multivariate analyses of the determinants of protest because we model the protest counts directly. Both variables are standardized to range from 0 to 1.

Table 1. Negative Binomial Models of Protest Incidence in Metropolitan Statistical Areas, 2007-2011

	Protest Incidence Model (1)	Lagged Protest Incidence Model (2)
Push factors		
Percent Obama vote 2012	.54 (.27)*	.46 (.27)
Gini coefficient	−.26 (.29)	−.41 (.28)
Black-white segregation (dissimilarity index)	−.14 (.25)	−.28 (.24)
Ethnic fractionalization	.53 (.23)*	.43 (.23)
Percentage population increase 2000-2010	−.89 (.45)	−.81 (.44)
Unemployment rate 2007-2011	−.37 (.28)	−.35 (.27)
Pull factors		
Median household income	.59 (.43)	.28 (.42)
Percentage students	−.61 (.32)	−.48 (.31)
Percentage under 18 years old	−.75 (.34)*	−.76 (.34)*
Percentage with high school diploma	−.62 (.42)	−.38 (.41)
Charitable organizations per person	.52 (.22)*	.55 (.21)**
Religious congregations per person	.41 (.28)	.33 (.27)
Macro-tolerance (MRP estimate)	1.67 (.54)**	1.35 (.53)*
Lagged incidence of protest 2002-2006		1.56 (.38)***
Intercept	3.82 (.52)***	4.02 (.50)***
Variance parameter	2.76 (.24)	2.93 (.26)
Akaike Information Criterion	2822.8	2809.0
N	365	365

Note. Negative binomial coefficients with standard errors in parentheses. Models include log of MSA population as an offset (i.e. with coefficient fixed to 1). All explanatory variables are standardized to range from 0 to 1.

$^{*}p < .05.$

$^{**}p < .01.$

$^{***}p < .001.$