Millions of individuals from around the world have now watched the murder of George Floyd by police officer Derek Chauvin on May 25th in Minneapolis, Minnesota. While much of the attention has been drawn to the activities of Chauvin and Floyd, others have paid attention to the (in)actions of the other officers present at the scene and, most relevant to the current investigation, some have begun to try and understand the attitudes and (in)actions of the 15+ ordinary people that watched the murder take place, live in real time.

Observing the onlooking crowd was fascinating as well as provocative because it prompts one to ponder what (if anything) they would do when confronted with a similar situation. As we saw in the video, responses varied. Initially, some stood in silence while some pulled out their phones and recorded while others walked away (with some returning). At one point, Charles McMillan (a 61 year-old African American) pleaded: "Your knee on his neck – that's wrong man." Some talked to the officers more aggressively. Nelson Williams (a black, "mixed martial artist") called Chauvin a "bum" at least 13 times and addressed all the officers present as "punks" and "murderers". At another point, one person took several steps towards the police (compelling an officer to push them back).

Was standing silently and verbal disapproval the most appropriate response to a police officer's knee at the neck of another American? What is the U.S. repertoire for ordinary people against this type of police behavior? Would the response have varied had different people been there, had the incident taken place in a city with a different history of coercion/violence or had a different police tactic been employed? To shed some light on these questions, the current article seeks to understand the variation in response to police activity at the individual level.

As conceived, our article draws inspiration from research that has been conducted on diverse forms of political conflict and violence (e.g., Francisco 2004; Valentino et al. 2004; Hess and Martin 2006; Sutton et al. 2014). Here, it is revealed that government tactics which are non/less violent in nature, prompt compliant responses from ordinary people whereas tactics which are violent and/or aggressive in nature, prompt ordinary people to engage in a wide range of anti-state behavior. While useful for understanding responses to Floyd's murder, however, this work is generally focused on overt, collective and often violent collective challenges to political authorities. Our study seeks to extend these investigations into the neglected areas of everyday policing (e.g., Soss and Weaver 2017) and everyday resistance (e.g., Scott 2008; Chenoweth and Cunningham 2013; Vinthagen and Johansson 2013; Chenoweth et al. 2017). Essentially, we maintain that ordinary people have an idea about how they

should respond to police action largely driven by what we call "asymmetrical acquiescence". Here, the coercive agent of the state is given wide latitude with regard to what they can do and ordinary people generally do nothing except within situations of especially egregious violent activity at which point diverse non-violent strategies would be used or, occasionally, some violent strategy. We also acknowledge that different racial groups, ideologies and ages might be more inclined to perceive different police tactics as problematic and more likely to deem different activities appropriate.

To explore this topic, we utilize a national survey of 5,630 respondents across 12 American cities conducted between 2020 and 2021. Interestingly, we find that most responses to police action are best described as asymmetrically acquiescent with tactics being largely non-violent in nature – regardless of what police do. Results disclose that most individuals believe that standing silently, taking a knee or sitting in are the most appropriate responses to most police tactics. Results also disclose that rather than African Americans, the political left and youth driving variation, whites, the political right, a range of ages and locations of prior government coercion/force play this role. From this research, what we saw on May 25th is attributed to the fact that the eyewitnesses were composed of individuals who viewed the police behavior encountered on that day as being worthy of a particularly set of responses and the place where it took place was not highly conflictual in the past.

The paper below discusses the similarities across forms of contention regarding the role played by ordinary people. Following this, we discuss the interaction between police and ordinary people, the logic behind what would influence perceptions regarding police action and appropriate responses. The next two sections present our original survey and empirical results. The conclusion highlights the importance of our work for research as well as public policy.

Background

Perusing through social science research concerned with political conflict – broadly conceived, it is clear that different literatures have highlighted the logic of tactical "appropriateness" and the problem of deviating from what is deemed appropriate for conflict onset, escalation and recurrence. By "appropriate" here we mean that which is believed to be acceptable to those within the relevant territorial jurisdiction for use in intrastate/domestic/civil conflict. The basic essence of such research is clear.

First, there are two "sides" with some actor(s) representing the government and some actor(s) representing a behavioral challenger (e.g., dissident/protestor, terrorist, insurgent, rebel or criminal). Second, acknowledging the 2-5% rule for participation in contentious politics, it is clear that most of the time ordinary people do not overtly select one of the sides – one could refer to this as the corresponding 98-95% rule for non-participation. While generally not playing an active role there are numerous references made to the role that ordinary people play in lending assistance to one side or the other - significantly changing the pace/direction of the relevant conflagration. Third, it is believed that ordinary people rank the tactics available to the different sides and as the different actors act, ordinary people evaluate the actions undertaken in order to determine how they feel about them as well as what (if anything) they should do. Specifically, when one side engages in tactical selections that are viewed as "appropriate," that actor will receive financial support and information or recruits. In contrast, when one side engages in behavior that is viewed as "inappropriate", that actor will receive withdrawals of financial support and departures. If both sides engage in behavior that is appropriate or inappropriate, then actors are believed to be neutral in terms of the tactics but their opinion will be driven by the substance of the diverse claims/objectives the different sides pursue.

Across diverse forms of political conflict/contention (civil war [Hobbes 1651/1968; Steinberger 2002; Valentino et al. 2004; Humphreys and Weinstein 2006]; protestprotest policing [Hess and Martin 2006; Sutton et al. 2014]; terrorism-counter terrorism [Bravo and Dias 2006; Piazza 2017]; as well as everyday domination-resistance [Scott 2008; Vinthagen and Johannson 2013]), methodologies, cases and time, there are slight variants on this theme.

Now, while useful in many ways, the literature above has some limitations as it relates to the subject of the current paper. First, existing literature tends to aggregate perpetrators as well as tactics. Consequently, we know relatively little about individual perpetrators of state violence – especially the police which are relatively understudied compared to militaries and paramilitaries. This has changed a little recently (e.g., Jackson et al. 2018; Eck at al. 2021). Second, we think it is fair to say that more attention has been given to collective as well as violent behavior compared against more individualized as well as less violent behavior – especially those taken by non-state actors (e.g., Chenoweth and Cunningham 2013; Chenoweth et al. 2017). Third, even when a specific form of state coercion/force is examined, it is never really broken down into discreet activities like the knee at the back of Floyd's neck, eliminating a certain degree of precision which a survey respondent or regular citizen would recognize. Fourth, specific responses to state coercion/force have never really been

examined in any detailed way like waterboarding against support for individual tactics of resistance like the bombing of a building or kidnapping of a public official.¹ Such comparisons are crucial for understanding what is done and why. Fifth, and finally, researchers have rarely acknowledged the asymmetrical nature of life within a nation-state whereby political agents have the predominant/exclusive ability (and even right) to engage in coercion/force, preferring to highlight the relatively rare situations when some behavioral challenge has emerged to overtly confront government authorities. This has left us with an incredibly biased conception of the opinions that ordinary people hold as we are querying them in the least ordinary situation. Indeed, this realization suggests that the work of James Scott (2008) is much more relevant to interactions between government and ordinary people than is generally acknowledged.

Interactions Between Police and Ordinary People

When one considers the last 40-50 year's worth of research regarding political conflict and violence, it is clear that almost all of the literature either it highlights perpetrators other than the police or it aggregates all perpetrators together. Both are problematic for cases like the Chauvin murder of Floyd because this specifically involves the police as the agent of the government and non-politically affiliated individual. It has been readily acknowledged that the police are the most common face of the modern nation state and with this acknowledgment there has been a recent turn in conflict studies to highlight this agent (e.g., Isaac 2015; Eck et al. 2021). While in its infancy, the literature specifically focused on the police and coercive/forceful behavior does point in a similar direction to that identified above with some noteworthy differences.

In terms of similarities, it is generally maintained that some (latent) conflict exists between the police (representing the government) as well as ordinary people (representing "potential" criminals and/or behavioral challengers). In terms of differences, the inclusion of ordinary people (not as some actor who could potentially play a role but, rather, as a central participant and target of action within the state project [Soss and Weaver 2017]) represents something of a major expansion regarding what as well as who is worthy of attention. Second, it is believed that ordinary people assess the tactics that each actor has available to them in order to determine which tactics are roughly equivalent to one another and which ones are not. Third, as the different sides in the conflict engage in behavior, ordinary people evaluate the actions undertaken in order to determine what (if anything) they will do. Here, tactical selections where one actor engages in behavior that is viewed as "appropriate" results in a reward being allocated for those maintaining the parameters of appropriateness. Tactical selections where an actor engages in behavior that is viewed as "inappropriate", however, results in a punishment being employed.

Evidence of the applicability of our argument outlined above in the police context is compelling but not definitive. For example, one of the most significant findings emerging out of the systematic evaluation of riots/disturbances/rebellions in America is the important role played by prior police behavior (e.g., Hinton 2021). Here, we see that there is something akin to the parameters of appropriateness discussed above where a certain type/form of police action is viewed as being inappropriate. When the parameters of police-ordinary people engagement are believed to be violated (i.e., when police use excessively violent behavior), then rioting/disturbances/rebellions are more likely to take place. When parameters of engagement are maintained, however, there is no rioting/disturbance/rebellion.

Interestingly, the logic of the argument regarding coercive/forceful evaluations by ordinary people, perceived appropriateness and the importance of deviation is revealed by police research concerned with the so-called "force continuum" (e.g., Terrill et al. 2013).² Within this work, there is a ranking that is offered regarding what police are confronted with (i.e., what ordinary people do) and what they should engage in given different activities of ordinary people.

The force continuum research clearly moves in the general direction pursued by the current research but there are numerous limitations with this work when considered. First, it is unclear precisely what the calibration of tactics is based upon. The catalog of activities and appropriate responses are just provided by police departments with some reference being made to magnitudes of threat/violence but no transparent way for determining how these determinations are made. Second, there is rarely a detailed catalog of specific actions that maps onto the categories employed within a force continuum – especially for citizen/subject behavior. This makes it difficult to determine what behavior would be equivalent to what - especially in the middle/intermediate categories. Third, and most important for the current investigation, one cannot simply use the subject/civilian behavior as a measure of response/resistance. Given the objectives of the force continuum which was created in order to understand as well as justify police behavior, reversing the scale is not really applicable. The activities of ordinary people police find "threatening" is distinct from behavior that is meant to signal dissatisfaction, disapproval, resistance and/or rebellion (to police as well as an observing audience). Taking a knee may be a form of "passive" resistance in Chicago but it has now become an extremely important symbolic form of "active" resistance to repression/oppression - globally. Related, defacing or destroying property may be

directly related to signaling dissatisfaction with police action but as this does not directly/physically involve police officers such behavior would not fit within the force continuum framework.

Addressing these concerns, the current paper attempts to initiate a more detailed and nuanced evaluation of what individuals believe could and should be done in response to diverse police action.

Argument

Within this article, we suggest that ordinary people have a relatively detailed listing of tactics in their mind regarding actions that can be undertaken by police as well as how ordinary people should respond to these activities. The ideas are developed from diverse sources: i.e., home, school, in churches/mosques/temples and in the media. In this view, individuals do not view tactics individually, in a vacuum, but instead they consider their placement within a repertoire. Here, one should think of all tactics that exist which could be undertaken. Ordinary people consider them and after reflecting, they categorize them as being appropriate and belonging to the relevant cultural repertoire or not belonging and not being appropriate and not belonging. Conceived in this manner, our approach seems to directly allow for what Tilly was talking about regarding which contentious activities were and were not deemed to be familiar, natural, right and just. While familiar to researchers, we deviate from traditional discussions of repertoires because these tend to focus on only challengers. We maintain that ordinary people do not only consider one side of a contentious interaction (i.e., governments on the one side and ordinary citizens or challengers on the other) but, rather, they consider both sides.

Such an approach allows us to identify four factors that will be useful for understanding everyday resistance to police action. First, we have the overall violent or non-violent orientation of people in terms of what they generally believe is appropriate for countering police action. Here, if people are generally "violent" or "non-violent" in nature (i.e., the tactics that are adopted are generally distinguished by the degree of coercion/force involved), then we would find responses to diverse police behavior clustered into one of these categories. If, however, people believe that a range of tactics is appropriate in the face of police action across violent and non-violent categories, then clustering would not be found. Second, we have the narrow or broad nature of the tactics believed to be appropriate within violent and non-violent categories. Here, individuals could select only a few tactics within and/or across categories as being appropriate or they could select a wide range of tactics within

and/or across categories. Third, we have the violent or non-violent nature of police behavior deemed necessary to respond to. This concerns the activities that individuals feel are most important to address. For example, some may believe that it is only violent police action that is worthy of a response (because these are the most egregious); some may believe that it is only non-violent action that is worthy of a response (because it might be safer to do so); and, some might believe that both are worthy of a response. Fourth, we have the narrow or broad nature of the police tactics that are deemed worthy of attention. Here, again we address the degree of selective attention with individuals either paying attention to only a few tactics within a category or a broad range of tactics. Configured in this way, we end up with an important way to describe as well as discuss the responses of ordinary people to police action.

In our conception, we expect that ordinary people identify a tactic undertaken by police and then they consider a range of options regarding what could/should be done in response in an effort to signal disapproval/counter it and in a manner deemed appropriate. As conceived, people in the United States will generally tend to give the police wide latitude in their activity. This situation exists because ordinary people reside within nation states which by definition represents a situation where political authorities maintain a preeminent position with regard to the use of coercion/force. This is clearly a situation of asymmetry and it is worth noting that this is quite distinct from a situation of less asymmetry that is normally studied in the area of political conflict and violence. The asymmetry is important to identify because within normal situations it would be rational for individuals to acquiesce. Such a position makes sense because state actors have the wherewithal to negatively impact those within the relevant territorial jurisdiction - up to the elimination of life altogether. Accordingly, we would expect that under normal circumstances police action would not result in any response from ordinary people. This is not to say that they would never respond. Indeed, similar to other literature concerning conflict and violence, we would expect that especially violent behavior would be more likely to elicit a response. Even here though, not just any behavior will be used. Rather, we expect that individuals would draw upon the predominant repertoire within the nation and culture which we suggest in the United States in particular and the West in general is non-violence.

Variation in Responses

We do not maintain that all people within the U.S. (or any nation-state for that matter) will respond to police behavior in a comparable manner invariant to time or context. Instead, we would argue that both potentially influence it – acknowledging what Tilly (2010: 35) reminds us that "(r)epertoires vary from place to place, time to time, and pair (of tactics) to pair (of tactics). But on the whole when people (engage in contentious politics), they innovate within limits set by the repertoire already established for their place, time, and pair." Understanding this variation amidst stickiness, we are led to consider some factors that may help us understand when deviation from the societal repertoire of asymmetric acquiescence might occur.

Demographic Characteristics

Historically, it is generally presumed that the widest range of police tactics deemed worthy of attention as well as the widest range of tactics to counter police behavior viewed as appropriate would be advocated by those with the biggest number of grievances with the U.S. political-economic system and/or by those with the most damning critique of this system. As such there are three characteristics that have been identified as relevant: i.e., race, political orientation/ideology and age. Different opinions exist however with reference to how these matter.

The Traditional View. For much of American history we would anticipate that black people (in particular) would view a wide range of police tactics as being worthy of response. This is largely explained by the fact that the police have consistently been viewed as a problem in the black community (e.g., Peck 2015; Soss and Weaver 2017). In addition to this, we would expect that African Americans would be extremely ready and willing to do whatever was necessary to challenge political authorities. In large part this is because different contentious activities have figured so prominently into the African American experience (e.g., White and Bierenfeld 2014). Indeed, the history of such activity is something of field in and of itself (e.g., Meier et al. 1971; Hinton 2021).

In contrast, the traditional view would lead us to expect that whites (who have largely benefitted from the existing political-economy) would be less inclined to see as problematic the activities of the police and viewing them as largely legitimate. Additionally, they would adopt a relatively narrow range of non-violent strategies – likely choosing the most non-violent among them.

Within this traditional view, we would anticipate that those affiliated with the political left would view as appropriate a wider range of tactics (especially confrontational ones) against the widest range of police behavior. Given the historical use of diverse contentious activity by those within this group as well as the general objectives maintained by them regarding challenge/changing political authorities, such a position makes sense.

Finally, the traditional view would also lead us to highlight the importance of youth. Within work commonly referred to as "biographical availability" (e.g., Giugni 2004), researchers have consistently noted that younger people generally have less to lose, are less invested in the status quo and have less fear as well as understanding of consequences. As a result, they would tend to be more willing to suggest a wider variety of tactics when contemplating what would be appropriate to counter a wider variety of police behavior.

A Newer View. More recently, the consideration of the characteristics identified above has shifted. Now, it is not such much that we believe that those with the biggest number of grievances with the U.S. political-economic system and/or the most damning critique is no longer relevant. Rather, we believe that the individuals occupying the category of most aggrieved/most damning has changed.

Thus, recent history and newer discussion would lead us to believe that it is not African Americans that would have the most expansive conception of appropriateness regarding how to counter police action as well as the most expansive conception of police action that is worthy of being countered, but white folk (e.g., Outten et al. 2012). In this context, whites view themselves as being at war with a demographic opponent that will (consistently) remove from them political, economic as well as socio-cultural predominance. As the agent of the status quo, police would clearly be expected to shift in their allegiance and in such a situation many (if not all) of the actions that they engage in would be deemed illegitimate as well as unacceptable. This would increase the range of police action deemed worthy of response. Related, as "war" would be the nature of the engagement, it is expected that a broad range of responses would be deemed acceptable – including those deemed outside the parameters of appropriateness within the predominant non-violent repertoire.

In contrast to this, within this more recent framing African Americans would be expected to adopt a narrower range of appropriate responses to police action as well as a narrower range of police action that would be deemed worthy of attention. Interestingly, it is the same focus on institutions and historical experience that explains this outcome but with an important twist. Here, rather than the presence and guidance of organizations leading blacks to adopt a particular understanding of what they should do as well as against what/whom, it is the lack of organizations that provides guidance (e.g., Smith 1996). Without powerful national institutions which either were dissolved or destroyed during the 1960s and 1970s, African Americans have been largely left within their communities to understand and respond to police action on their own or with smaller/less well resourced localized organizations. As such blacks have essentially been defeated organizationally and in this space they have adopted a nonconfrontational posture with regard to police represents an extreme version of asymmetric acquiescence. Now, one might think that this was not demonstrated within the recent Black Lives Matter movement but we would highlight the fact that African American activity in this campaign has not only been non-violent but those that have engaged in anything but non-violence have been severely criticized by blacks (as well as whites).

Of course, race is not the only characteristic that has shifted in its perceived importance. In recent history and newer discussion, researchers have been led to focus on the political right as the ideological orientation where more responses to police action would be seen as acceptable as well as where more police activities would be seen as worthy of response (e.g., Kleinfeld 2021). Here, individuals on the right maintain that they are explicitly involved in a pitched battle with authorities to save their position and status. Accordingly, very few limitations are placed on how they should engage with the agents of the current (as well as coming) state and the most encompassing conception of threats as well as intrusive actions from government agents would be maintained.

Finally, rather than young people being highlighted as the major agents of change in recent discussion and work, a broader range of ages is now expected to be involved. This is partly explained by the memories that older individuals carry regarding the past that they perceive as being under attack. It is also relevant that older individuals would have greater resources to cushion the blow from engaging in challenging activity. This is a very different take from the "biographical availability" literature but one that is worth noting. Additionally, older individuals maintain a greater awareness of when the tactical repertoire in America was larger. It is common to think of more recent generations as being educated and socialized to adopt a non-violent strategy but this is much less the case for older individuals who have seen a broader range of tactics being adopted by both behavioral challengers as well as the police.

In addition to the characteristics noted above, there is one more that we wish to explore.

Prior Conflict/Contention

Acknowledging the work regarding variation within the same territorial units, we find it important to consider the previous history of political conflict and violence within a particular locale. Invoking Tilly, this is important because in places where there was

some contention previously, we would expect the range of state behavior as well as response tactics to be greater compared to places where no such activities took place. This is simply a matter of experiential trial and error because in places where conflict and violence had occurred earlier, there would have been attempts at using different tactics (by both sides) in an effort to gain a greater advantage over an opponent. In contrast, within places that had no such experience, the range of police actions deemed problematic and appropriate response from ordinary people should be more constrained.

Study

To explore our argument, we fielded a Qualtrics survey between September 9, 2020 and March 29, 2021 with a total of 5,630 respondents across 12 cities.

City	Number of	Past Conflict
	Respondents	
Atlanta, GA	461	High
Charlotte, NC	337	Medium
Chicago, IL	440	High
Columbus, OH	423	Medium
Dallas, TX	455	Medium
Denver, CO	455	Medium
Fresno, CA	385	Low
Los Angeles, CA	481	High
Milwaukee, WI	369	Low
New York, NY	968	High
Portland, OR	496	Low
Raleigh, NC	380	Low

Table 1. Respondents by City

We selected the cities based on their previous history of contention. To do this, several data sources were used (by date and city) in order to identify prior experience with individual-level as well as collective forms of political conflict/violence: e.g., police shootings and mass shooting incidents at the individual level as well as protest and protest policing, the number of protestors, the number of arrests, the number injured or killed on the collective level.³ Aggregating across datasets, we had 102,656 identifiable episodes across 27,545 cities from 1861 to 2018. Following this, we paired these data down to cities with over 450,000 residents in 2018 according to U.S. Census

Bureau projections and restricted the lower end of the temporal range to 1950. This resulted in 28,403 episodes across 42 cities. We then summed and took the mean across events, using multiple imputation by chained equations to impute any missing data and then collapse the data to a single completed dataset.⁴ We then used *k*-means cluster analysis to identify potential clusters of observations.

Figure 1 shows the scree plot for the cluster analysis which reveals three clusters which map on to low, medium and high levels of previous conflict. With this information, we then chose four cities from each group based on concerns regarding geographic dispersion and the ability of Qualtrics to meet our quotas. We used independent quotas on gender (Male/Female), Race (White, Black, Hispanic, Asian, Other), Income (<\$25k, \$25-50k, \$50-75k, \$75-100k, \$100-150k, >\$150k), Education (<HS, HS graduate, some college, 2 year degree, 4year degree, graduate degree) and age (18-24, 25-34, 35-44, 45-54, 55-64, 65+).

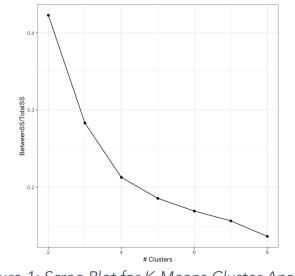


Figure 1: Scree Plot for K-Means Cluster Analysis

For purposes of comparison, we used the targets in Table 2 to guide the sampling.

(Insert Table 2 about here)

Ultimately, we fell short of the targets in several demographics. We use the weights described in the manuscript to generate population-level inferences for these cities. Using the weights, we are within a percentage point of all targets except for gender in LA (which 48% Male, 52% Female, instead of 50/50) and the race target in Fresno, which has 65% rather than 63% in the other category. As a result, the Black and White categories are about a percentage point larger than expected. So, the weighted results in the paper (all the figures and tables are using the weighted data) should give U.S. population representative estimates.

Appropriate Responses to Police Action

To evaluate the reactions of ordinary people to a wide array of police activity, we used a survey experiment. Specifically, we asked respondents the following:

You see a police officer and an individual talking to each other. Seemingly without provocation, the officer <Does X>. In your opinion, please rate the appropriateness of each of the actions the individual could take in response.

We initially asked all participants to consider two police actions – 1) restraining the individual in handcuffs in a seated position on the ground and 2) using pepper spray on the individual. We also randomly included four other police actions as well. These alternatives were obtained through a detailed evaluation of historical cases as well as tactics identified in diverse research projects over the last 40 years including:

- stand silently,
- take a knee,
- motion for the individual to stop,
- block path to leave,
- yell orders,
- yell insults
- forcibly restrain individual using the officer's body kneel on neck/back,
- arrest an individual,
- pull out a nightstick,
- fire tear gas,

- use a taser, and
- shoot with live ammunition.

In response to the behavior of the police, the respondents were asked to evaluate the appropriateness of the following:

- stand silently,
- engage in a sit-in,
- take a knee,
- yell insults at officer,
- yell demands at officer,
- engage in a hunger strike,
- burn a flag,
- deface property with graffiti,
- turn and run away (which we do not view as a strategy of resistance/rebellion),
- throw rocks at the officer,
- destroy property with graffiti,
- throw Molotov cocktails at officer,
- legally display a weapon, and
- shoot at the officer with live ammunition.

As designed, the respondents indicated the level of appropriateness of all actions by moving sliders that recorded the response on a 0-100 scale.⁵

Results for Individual-Police Interaction

We start by considering the extent to which respondents considered each response appropriate for each police action. To do this, we identified the highest ranked response. This makes different response profiles comparable. Some people like respondent 20 used the whole range from 0-100 while others, like respondent 76, used a much smaller range (1-30). For this part of the analysis, we want to know which response was most appropriate, even if no responses were deemed highly appropriate. Here, we calculated the weighted probability that it was considered the most appropriate response. To report results and make the figures below, we first developed a set of rake weights using the anesrake (Pasek 2018) package in R. We used the proportions above as the targets for the weighting, except for race, where Other, Asian and Hispanic were grouped together to avoid having groups that were too small. We also grouped together those who had not graduated high school and those who had only graduated high school because there were too few of the former in our survey. Lastly, we grouped together those making \$100,000-150,000 and those making more than \$150,000 per year for the same reason. Figure 3 displays these probabilities for every combination of police action and individual responses. As found, results in the figure disclose several interesting points.

First, there appears to be general support for asymmetric acquiescence. Unlike what we expected, we do not see any police action being deemed as unworthy of a response – they all do! In line with our argument though we see that appropriate responses to police action are not only non-violent but they are the most non-violent available. For example, standing silently, taking a knee and engaging in a sit-in would be the most popular which is directly consistent with the non-violent tradition.

Second, representing a different aspect of asymmetrical acquiescence, most people did not consider a violent response to police action to be the most appropriate response, even in the face of violent police action. The response to the Floyd murder by those who stood before it was thus completely in keeping with U.S. public opinion. This said, it is important to note that we do see some individuals who view some violent strategies as appropriate in particular circumstances. For example, displaying a firearm is deemed appropriate in response to pulling out a nightstick, yelling insults at an individual, restraining someone with handcuffs and forcibly restraining someone with their body. Some advocate throwing Molotov cocktails in response to police blocking a path as well as yelling orders (which seems like an over-response). Fewer advocate Molotovs in response to police yelling insults, firing tear gas and using pepper spray, while some advocate throwing Molotov cocktails, when police are standing silently, which is clearly an instance of over-response.

Third, the situation that resulted in the murder of George Floyd – an officer restraining someone with their knee elicited one of the more equitably varied responses with seemingly no one strategy predominating. Additionally, while we see the general predominance of a non-violent repertoire, there are some police tactics that elicit support for a more violent response (e.g., burning a flag and displaying a firearm).

Finally, it is often the case that running away is viewed as being highly appropriate except in two instances (i.e., police using a nightstick and firing tear gas). Although focused on resistance it would be useful to further consider survival as well.

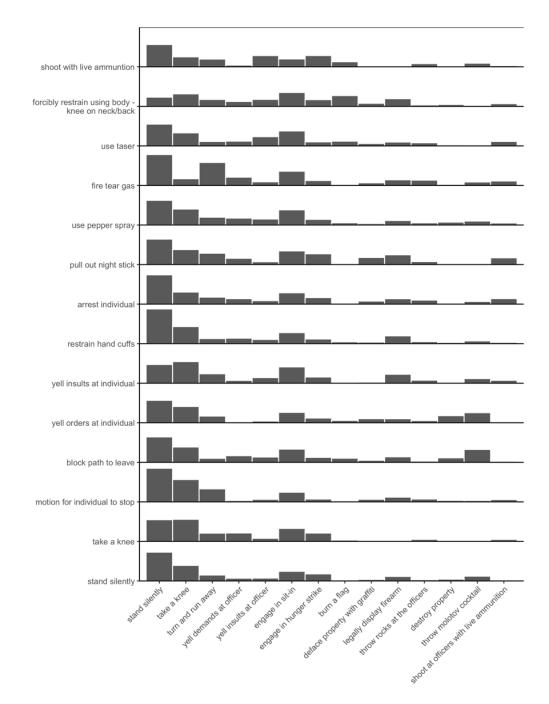


Figure 2: Probability of Most Appropriate Response: Individual Actions

Note: Each bar represents the weighted probability that the action identified on the x-axis is identified as the most appropriate response to the police action identified on the y-axis; range of values from 0 to .5.

Results for Individuals Across Characteristics and Contexts

As analyzed, it is possible that reported findings mask important differences within the sample. Toward this end, we consider race (black, white), ideology (left, right) and age (18-34, 35-54, 55+). As we view our study is initial and foundational, the results here are descriptive in nature – they highlight significant differences in preferences and perspectives across dominant socio-demographic and political groups. We still find such an effort useful as it sets the stage for future research that could probe identified differences further.

Race

Figure 4 shows the difference for black and white respondents in the probability of being the most appropriate response to police action. Statistically significant differences are identified with dark/bold-faced bars while faded bars represent situations where there was no statistically significant different between blacks and whites. The height of the bar represents the probability with which white respondents identified the response as most appropriate minus the same figure for black respondents. As found, results are generally in line with traditional expectations with one exception.

Reflecting the general satisfaction with the American political order in general and police action specifically, when confronted with most police tactics white respondents are more likely to think that diverse forms of non-violence are most appropriate. Deviating from traditional as well as newer expectations, but supporting the idea that there is a nationally representative asymmetrical acquiescence, many of these responses are shared with African Americans. Indeed, interestingly, there are no unique responses for blacks found within the analysis (i.e., in no situation are African Americans the only race associated with a particular response).

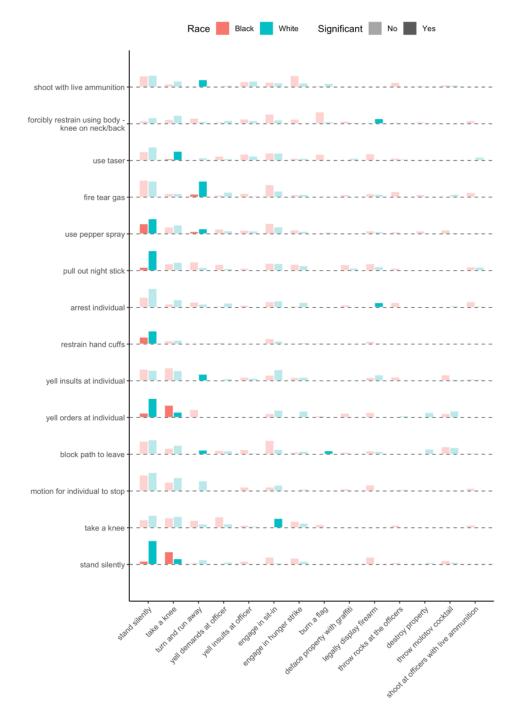


Figure 3 Differences in Appropriate Individual Response: White vs Black Respondents; Note: the height of bars indicates the probability with which white and black respondents identified each response as most appropriate; range of values from 0 to .65.

For example, both whites and blacks advocate standing silently at comparable levels when police take a knee, motion for individuals to stop, block a path, yell insults, arrest,

fire tear gas, use tasers, forcibly restrain individuals with the body and shoot. Both blacks and whites view yelling demands at officers, yelling insults, engaging in hunger strikes, using graffiti, throwing Molotovs and shooting at police at comparable levels across multiple police tactics.

There are few race-specific findings. For example, whites are more likely to view as appropriate standing silently in the face of police standing silently, yelling orders, using handcuffs, pulling out a nightstick and using pepper spray. Whites also view as appropriate engaging in a sit in when police take a knee.

Perhaps slightly more violent in nature but at a relatively low probability, Whites view burning a flag as appropriate when the police yell at individuals. Finally, revealing something of an overresponse, whites view displaying a firearm as appropriate in response to police arrest and forcibly restraining an individual.

Ideological Orientation

We provide the same type of analyses as above with left-right ideology, coding respondents as "left" if they were <3 on the 11-point liberal-conservative scale and as "right" if they were > $7.^{6}$



Figure 4 Differences in Appropriate Individual Response by Left-Right

Note: the height of bars indicates the probability with which ideologically left and right respondents identified each response as most appropriate; range 0-1.0.

Differing from the previous analysis where we found a large amount of commonly held opinions across races, in the case of ideological orientation, we see a large number of differences. In line with newer expectations, we find that being on the right generally influences the perceived appropriateness of non/lesser violent tactics but there is some influence on more violent ones as well. The two exceptions to the right predominance is when being on the left increases the probability of standing silently while confronting the police standing silently and engaging in a sit while confronting police arrests.

Considering the influence of the political right, numerous results are worth noting. For example, individuals on the right generally view as more appropriate standing silently in the face of police standing silently – direct parity, but they are also more likely to view as appropriate standing silently in the face of the police motioning to stop an individual, blocking a path, yelling insults, arresting someone, pulling out a nightstick and forcibly restraining an individual with some part of the body – these probabilities are actually quite reasonably sized unlike many obtained. While the importance of the orientation was as expected, we did not anticipate the degree of non-violence. Taking a knee is viewed as more appropriate in the face of police yelling orders, tear gas and forcibly restraining an individual but the probability is lower than that above. Engaging in a sit in is viewed as appropriate for the widest range of police activity (excluding yelling insults, pepper spraying, restraining by handcuffs and shooting which are not significant). A hunger strike is more appropriate in response to police use of standing silently, taking a knee, yelling insults, firing tear gas and shooting. Again, probabilities here are low.

Somewhat more violent/aggressive, results disclose that the political right views as more appropriate yelling demands at an officer when they take a knee, block an individual's path, pull out a nightstick, use pepper spray and tear gas, forcibly restrain an individual and shoot.

Finally, the right influences the probabilities of more violent/aggressive responses. For example, individuals on the right view burning a flag as more appropriate when police forcibly restrain an individual, throwing rocks as more appropriate when police yell insults, arrest, fire tear gas and use a taser but (again) at incredibly small probabilities. The political right view as appropriate throwing rocks in the face of police yelling orders at an individual and displaying a firearm when police yell insults, arrest, use a taser as well as fire tear gas and they are more likely to see as appropriate displaying a firearm in the face of police yelling insults, restraining by handcuffs, arresting, pulling out nightsticks, using pepper spray and forcibly restraining individuals with the body. Again, the probabilities here are smaller than those found with regard to standing silently or engaging in a sit in but they are still worthy of note as any value on such a measure is important. Finally, for the political right shooting at an officer is viewed as more appropriate in the face of police pulling out a nightstick – an instance of overresponse.

Age

Lastly, we consider the impact of age on the perceived appropriateness of responses to police action. Specifically, we identify three categories: 1) 18-34 years old, 2) 35-54 years old and 3) $55+^{7}$.

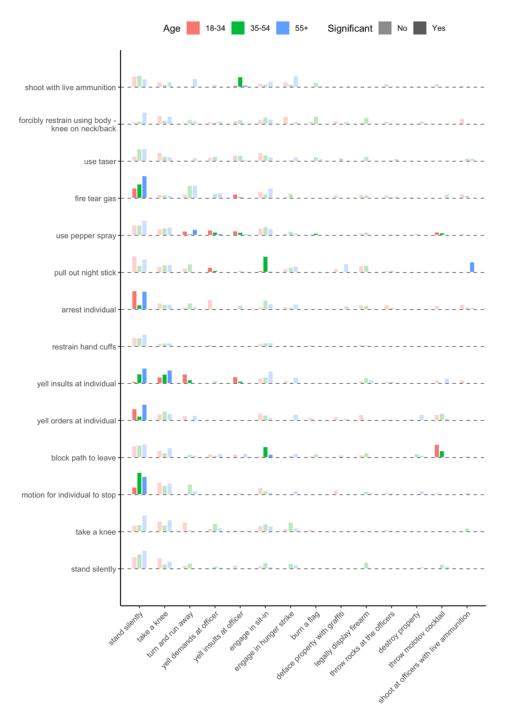


Figure 5 Differences in Appropriate Individual Response by Age

Note: the height of bars indicates the probability with which different aged respondents identified each response as most appropriate; range 0-.7.

In traditional literature, it is normally expected that younger people would respond to the most number of police actions (across categories of violence and non-violence) and they would view as appropriate the widest range of tactics in response. More recently, older people have been highlighted for their contentiousness as well. From our investigation, we found that both views have some merit but not always in ways that have been discussed. Overall, there are few police tactics where age appears to influence the perceived appropriateness of a response – generally in the non-violent category. This said, there are as many situations where there are no statistically significant differences between age groups especially with regard to the most violent police tactics.

In line with analyses conducted above, we find that the youth (18-34) respond to the widest range of police tactics but these responses are largely limited to non-violence. Again, standing silently is viewed as appropriate in response to police arrest, yelling orders, firing tear gas, motioning to stop and yelling insults at individuals – decreasing in the probability of being selected across these tactics. Taking a knee is deemed an appropriate response to yelling insults at individuals.

On the somewhat more violent end of police tactics, individuals 18-34 respond to police use of pepper spray with running away but, more aggressively, they also view as appropriate yelling demands as well as insults at the police. Yelling demands at the police is again viewed as being appropriate in response to pulling out a nightstick and yelling insults is viewed as being appropriate in response to firing tear gas.

The notable exceptions to these findings are found with regard to blocking an individual's path to leave and using pepper spray which younger people tend to see as being worthy of throwing a Molotov cocktail.

Individuals between the ages of 35 and 54 are generally found to focus on a similar wide range of police action with a comparably limited range of responses being viewed as appropriate. Differences can be found in three ways. First, there is a higher magnitude of appropriateness identified regarding standing silently when confronting police motioning for an individual to stop. Second, slightly older individuals view engaging in a sit in as more appropriate when in the face of being blocked by the police as well as the police pulling out a nightstick. Third, individuals 35-54 view yelling insults at the police as being more appropriate in response to police shooting with live ammunition.

Finally, individuals age 55 and above are (again) found to employ a non-violent and narrow reportorial response to police action. Here, they mirror the tactical selections of other ages (generally favoring standing silently in the face of most tactics as well as favoring a number of responses to police use of pepper spray) but with a few interesting twists. For example, older people maintain the highest levels of appropriateness for standing silently in the face of diverse police activity except for arrest which is equivalent with the youngest category and motioning for individuals to stop which is slightly below the 18-34 category. Second, they maintain the highest level of appropriateness for taking a knee when confronted with police yelling. Third, they are the only age where shooting at the police is viewed as being appropriate in response to police pulling out a nightstick – perhaps the clearest instance where ordinary people tactically over-respond.

Previous Conflict/Contention

Lastly, we consider how prior conflict might affect the appropriateness of responses to subsequent police action. Recall from our earlier discussion that we collected diverse types of information about contentious political interactions in each decade since 1950. To generate a summary measure, we calculated a per-capita measure for each and then summed across the decades. Finally, we standardized the resulting values to have mean zero and unit variance. In the cities of interest, the number of people killed and injured are quite highly correlated (.75), the number arrested and the number of protesters are quite highly correlated (.91) and the number of killed. We choose to use the number of protesters arrested and the number of individuals killed by police as measures of historical context as they are the least correlated pair (0.44).

To investigate the effect of historical conflict on evaluations of appropriateness, we use a Bayesian multilevel linear regression model. Specifically, we estimate the following:

$$\begin{aligned} Appropriateness_{ijc} &= \sum_{\substack{k \in individual \\ responses}} a_{kc} + \varepsilon_{ijc} \\ a_{kc} &= g_{0kc} + g_{1kc} \# Killings_c + g_{2kc} \# Protesters_c + \nu_{kc} \end{aligned}$$

In the model above, *i* is an index for individuals, *j* is an index for the individual tactical response and *c* is an index for city. The a_{kc} represent the random coefficients on the dummy regressors for each different individual tactical response. The *g* coefficients relate the contextual variables (killings and protester arrests) to the average level of appropriateness for each individual tactical response. We use the brm function from

the brms package in R to estimate the model's parameters. We use the rake weights identified above to weight the likelihood contributions to the model.

The coefficients in the table give the expected change in appropriateness of individual response to the indicated police action for a one standard deviation change in either police killings of individuals or police arrests of protestors. For example, consider the second row of Table 3. The coefficient in thus row is 6.1 which means that as police killings of individuals increase by one standard deviation, the appropriateness of engaging in a hunger strike in response to police motioning for individuals to stop is increased. Across the whole range of killings (about 3 standard deviations), the change in expected appropriateness is about 18 points (18% of the theoretical range of the variable).

(Insert Table 3 About Here)

Essentially, our results reveal that prior contention influences the perception of appropriateness regarding what is worthy of a response as well as what should be used when responding. The nature of the impact is mixed.

For example, prior police killings tend to decrease the range of tactics being used by people as they confront specific police tactics. Following a history of police violence, individuals are less likely to identify as appropriate engaging in a hunger strike when confronted with police blocking paths or defacing property in the face of police using their body to restrain someone. In addition to this, in the wake of police violence, ordinary people are less likely to identify as appropriate firing a weapon at police, legally displaying a firearm, defacing property and standing silently in the face of police using handcuffs.

Interestingly, prior police violence makes some responses more likely but for police tactics that are generally less violent in nature (i.e., prompting over-response). For example, in the wake of earlier killings, individuals are more likely to view as appropriate engaging in a hunger strike and less likely to see as appropriate running away when facing police motioning for them to stop. After police violence, ordinary people are more likely to advocate burning a flag in response to a police officer standing silently. Perhaps most interesting, in the wake of police violence, ordinary people are more likely to view as appropriate throwing a Molotov cocktail or shooting when an officer yells at them.

Differing from the results above, a history of protestor arrest tends to increase the range of tactics being used by ordinary people when they confront a specific number of police tactics. For example, in the wake of arrests, ordinary people are more likely to view engaging in a sit in as appropriate when confronting police use of pepper spray. Similarly, following a history of arresting protestors, police blocking a path is more likely to result in yelling being viewed as appropriate and pepper spray is less likely to result in running away being viewed as appropriate.

In the wake of protest arrests, more aggressive and violent tactics from the police are more likely to result in a violent response from ordinary people (i.e., limiting asymmetrical acquiescence). For example, where the police have earlier engaged in arresting protestors, police use of a taser increases the probability that rock throwing is viewed as appropriate. Additionally, in the same historical context, police restraint with handcuffs as well as yelling insults are more likely to result in legally displaying a firearm being seen as appropriate.

After a history of arrests at dissident events, several non-violent police actions are met with seemingly less/non-violent responses. For example, police taking a knee and standing silently are more likely to result in people viewing graffiti as being appropriate.

Interestingly, prior arrest at protest also decreases the probability that a few moderately violent tactics from ordinary people would be deemed appropriate in response to police tactics. For instance, in the wake protestors arrests, police motioning for individuals to stop are less likely to see yelling and burning a flag as being appropriate. Additionally, following a history of protest arrest, rock throwing is less likely viewed as appropriate to police restraint and displaying a firearm is less likely to be seen as appropriate in response to police yelling.

Conclusion

The paper began with an interest in understanding why the eyewitnesses to the murder of George Floyd by Officer Derek Chauvin responded in a way that they did. When consulting existing literature it is clear that existing work does not have much to say on the topic as it is much better at investigating as well as understanding larger-scale, collective and violent behavior – ignoring the more ubiquitous interactions between the police and ordinary people. To address this limitation, we developed an argument about why and how ordinary individuals respond to diverse police behavior. We presented our idea of "asymmetric acquiescence" where we maintained that most of the time ordinary people ignore most police action and when they responded it would be some non-violent response to the most egregious behavior. We also put forward that race, ideological orientation and age might make individuals more inclined to pay attention to a broader range of police activity and adopt a broader range of responses. These arguments were examined with an original survey of 5,630 respondents across 12 cities.

Overall, we find that individuals generally believe that all police activities identified were worthy of some response and the most appropriate responses were best described as non/less-violent. Exploring variation within the sample, we find that much of the time, there are few differences among respondents but we do find instances where there is variation within the population regarding the number of police activities found worthy of attention and the number of responses deemed appropriate. For example, deviating from expectations that African Americans, the political left and youth are most important, our results disclose that whites, the political right and a range of ages increase the range of police activities viewed as worthy of a response as well as the range of responses deemed appropriate – including non-violent as well as, occasionally, violent strategies. Our research also finds that previous contentious activity matters. In particular, we find that earlier police killings tend to decrease the likelihood that specific responses would be taken to police action and earlier police arrest of individuals at protest events tend to increase the likelihood of specific responses would be taken to police action. Taking us back to the Floyd example, we see what we did in this case because African Americans are generally more non-violent in their response to police action, individuals were more likely on the left, the group was younger reducing the range of activities and Minneapolis is on the lower end of prior contention.

As configured, our study prompts some easily identifiable extensions.

Technically, it is clear that it would be useful to more fully explore interactions between race, ideological orientation and age. It would also be useful to explore the influence of identity regarding who is policing, who is being policed and who is observing. We expect that different combinations would be important to understand.

Theoretically, it would be worth exploring whether everyday resistance to police action should be undertaken as it is up for discussion whether this challenges/undermines state power or merely represents one of the best ways to protect human rights. Empirically, it would be worth exploring whether asymmetrical acquiescence is adopted out of a position of weakness/defeat or strength. There is a debate in the literature and in the world regarding where non-violence comes from and this merits attention as it influences what individuals and institutions should do next. Related, it would be useful to explore sequences more explicitly as the reason why specific tactics are selected and how people respond to them might emerge from placing everything into its context.

And, finally, in terms of policy, it seems noteworthy that our research points to something of a citizen's guide to survival, thriving and resistance. There is some work that identifies that fighting against repressive forces enhances one's quality of life. If individuals do not fight back or fight back in ways that they do not feel are actually efficacious, then this could have negative health effects.

References

American Friends Service Committee. 1959. Intimidation, Reprisal, and Violence in the South's Racial Crisis.

Bixby, Derek, Kielmeyer, Amy, and Drake, Dallas. 2010. United States National Church Shooting Database, 1980-2005. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2010-03-30. https://doi.org/10.3886/ICPSR25561.v1.

Bravo, Ana Bela Santos and Carlos Manuel Mendes Dias, "An Empirical Analysis of Terrorism: Deprivation, Islamism and Geopolitical Factors," Defence and Peace Economics 17, no. 4 (2006): 329–341.

Center for Democratic Renewal. 1996. "Black Church Burnings: Research Report Hate Groups Hate Crimes in Nine Different States." http://www.hartfordhwp.com/archives/45a/121.html.

Chenoweth E, Cunningham KG. Understanding nonviolent resistance: An introduction. *Journal of Peace Research*. 2013;50(3):271-276. doi:10.1177/0022343313480381

Chenoweth E, Perkoski E, Kang S. State Repression and Nonviolent Resistance. *Journal of Conflict Resolution*. 2017;61(9):1950-1969. doi:10.1177/0022002717721390

Dynamics of Collective Action. 2009. Stanford University. https://web.stanford.edu/group/collectiveaction/cgi-bin/drupal/.

Eck, Kristine, Courtenay R. Conrad, and Charles Crabtree. 2021. "Policing and Political Violence." *Journal of Conflict Resolution*, . <u>https://doi.org/10.1177/00220027211013083</u>.

Follman, Mark, Gavin Aronsen, and Deanna Pan. 2019. U.S. Mass Shootings, 1982-2019: Data From Mother Jones' Investigation. https://www.motherjones.com/politics/2012/12/mass-shootings-mother-jones-full-data/

Francisco, Ronald A. 2004. "After the Massacre: Mobilization in the Wake of Harsh Repression." Mobilization 9(2): 107-126.

Giugni, Marco. 2004. "Personal and biographical consequences." *The Blackwell companion to social movements* : 489-507.

Hess, David and Brian Martin. 2006. "Repression, Backfire and the Theory of Transformative Events." *Mobilization* 11(2):249-267.

Hinton, E., 2021. America on fire: The untold history of police violence and Black rebellion since the 1960s. HarperCollins UK.

Hobbes, Thomas (1651/1968). Leviathan. London: Penguin.

Humphreys, Macartan, and Jeremy M. Weinstein. "Handling and manhandling civilians in civil war." *American Political Science Review* 100, no. 3 (2006): 429-447.

Isaac JC. 2015. The American politics of policing and incarceration. *Perspect. Polit.* 13:609–16

Jackson, J.L., Hall, S.L. and Hill Jr, D.W., 2018. Democracy and police violence. *Research & Politics 5*(1): p.2053168018759126.

Kleinfeld, Rachel. 2021. "The Rise of Political Violence in the United States." Journal of Democracy 32(4): 160-176.

Meier, August, Elliott M. Rudwick, and Francis L. Broderick, eds. 1971. *Black Protest Thought in the Twentieth Century*. Vol. 56. Bobbs-Merrill.

National Consortium for the Study of Terrorism and Responses to Terrorism. 2018. Global Terrorism Database [Data file]. Retrieved from <u>https://www.start.umd.edu/gtd</u>.

Outten, H. Robert, Michael T. Schmitt, Daniel A. Miller, and Amber L. Garcia. 2012. "Feeling threatened about the future: Whites' emotional reactions to anticipated ethnic demographic changes." *Personality and Social Psychology Bulletin* 38(1): 14-25.

Pasek, Josh. 2018. Anesrake: ANES Raking Implementation. https://CRAN.R-project.org/package=anesrake.

Patterson, William L., ed. 1952. "We Charge Genocide: The Historic Petition to the United Nations for Relief from a Crime of the United States Government against the Negro People." Civil Rights Congress.

Peck, Jennifer H. 2015. "Minority Perceptions of the Police: A State-of-the-Art Review." *Policing: An International Journal of Police Strategies & Management* 38(1): 173-203. Piazza, James A. "Repression and terrorism: A cross-national empirical analysis of types of repression and domestic terrorism." *Terrorism and Political Violence* 29, no. 1 (2017): 102-118.

Smith, Robert C. 1996. We have no leaders: African Americans in the post-civil rights era. Suny Press,

Scott, James C., 2008. Domination and the Arts of Resistance. Yale university press.

Soss, Joe and Vesla Weaver. 2017. "Police are our government: Politics, political science, and the policing of race-class subjugated communities". Annual Review of Political Science 20: 565–591.

Spilerman, Seymour. 1970. Urban Racial Disorders: 1961-1968. University of Wisconsin.

Stanford Mass Shootings in America, courtesy of the Stanford Geospatial Center and Stanford Libraries.

Steinberger, Peter J. 2002. "Hobbesian resistance." *American Journal of Political Science*: 856-865.

Sutton, J., Butcher, C.R. and Svensson, I., 2014. Explaining political jiu-jitsu: Institutionbuilding and the outcomes of regime violence against unarmed protests. *Journal of Peace Research* 51(5): 559-573.

Terrill, William, and Eugene A. Paoline III. 2013. "Examining less lethal force policy and the force continuum: Results from a national use-of-force study." *Police Quarterly* 16(1): 38-65.

Tilly, Charles. 2010. *Regimes and repertoires*. University of Chicago Press.

Turchin, Peter. 2012. Dynamics of Political Instability in the United States, 1780–2009. *Journal of Peace Research* 4: 577-591.

Valentino, Benjamin, Paul Huth, and Dylan Balch-Lindsay. 2004. "Draining the sea: mass killing and guerrilla warfare". International Organization 58 (2): 375–407.

Vice News. Shot By Cops and Forgotten Database. 2018. https://github.com/vicenews/shot-by-cops/. Vinthagen, Stellan, and Anna Johansson. 2013. "Everyday resistance: Exploration of a concept and its theories." *Resistance studies magazine* 1(1): 1-46.

Vogood, Jan. 2008. *Race Riots and Resistance: the Red summer of 1919.* Vol. 18. Peter Lang.

Walsh, James I. and James A. Piazza. 2010. "Why Respecting Physical Integrity Rights Reduces Terrorism," Comparative Political Studies 43(4): 551–577.

White, John, and Bruce J. Dierenfield. 2014. A History of African-American Leadership. Routledge.

¹ Similarly, the ban of a political organization (i.e., the communist party) has never been viewed relative to specific actions undertaken by communists but rather it has been evaluated with some vague notion of a "communist threat".

² Approximately a hundred have been compiled by "The Use of Force Policy Database": <u>http://useofforceproject.org/database</u>.

³ The sources we used were: American Friends Service Committee (1959), Andres and Biggs (2015), Bixby et. al. (2010), Center for Democratic Renewal (1996), Dynamics of Collective Action (2009), Follman et. al (2019), Meyer (2004), National Consortium for the Study of Terrorism and Responses to Terrorism (2018), Patterson (1952), Spilerman (1970), Stanford Mass Shootings in America, Turchin (2012), Vice News (2018) and Vogood (2008).

⁴ Normally, we would not do this as the point of multiple imputation is to characterize the uncertainty due to imputation which can only be done with multiple imputations. However, in this case we only use imputation to complete data so they can be used in a cluster analysis.

⁵ Within other work we explore the degree to which this lists fits on a uniform scale of lethality/severity – gauging the degree to which individuals hold a uniform conception. Employing a national survey of the US population, we do find this to be the case. For the purposes of the current paper, we do not delve into this here.

⁶ In the Online Appendix, we also asked three questions regarding how much people thought the political, economic and social system in the US works (fine, and needs minor change are coded as "minor" and needs major change is coded as "major").

⁷ In the case of age, we mark changes as significant if any pair of values among the three exhibits a statistically significant difference.