# Attitudes towards the Use of Violence against Police among Occupy Wall Street Protesters

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**Abstract** Although many social movement participants claim to embrace non-violent civil disobedience strategies, protesters tend to have heterogeneous views on the morality and utility of engaging in violence. In particular, protesters sometimes view violence against the police as warranted, especially if they perceive that police have treated them or their peers in a procedurally unjust or excessively forceful manner. This article examines the nature and correlates of attitudes towards the use of violence against police officers among Occupy Wall Street (OWS) protesters in New York City. Data were drawn from in-person surveys of 302 OWS participants on the 6-month anniversary of the movement in March 2012. Our findings reveal that in this context, respondents who perceive that police use unjust force against protesters are significantly more likely to endorse the use of violence against police.

## Introduction

Occupy Wall Street (OWS) was an influential protest movement that emerged in New York City's financial district in September 2011, quickly spreading throughout the USA and several other locations around the world. The movement was concerned primarily with social and economic inequality and focused heavily on issues like corporate greed and the excessive influence of corporations on government. One of the movement's defining characteristics was its occupation of public spaces, with protesters in many cities establishing 24-h encampments in parks, public squares, and other areas. Occupy participants also engaged in a variety of protests, marches, and other 'direct actions', often against banks, corporations, and government agencies. In many cities the Occupy movement resulted in significant conflict between police and protesters. This was especially the case in New York City, the epicentre of the movement and the site of the research reported here (Gillham *et al.*, 2013; Hammond, 2013).

From the outset, OWS's public statements emphasized the movement's 'firm and consistent commitment to nonviolence' (Schneider, 2011a). Yet, some participants resisted the idea of relying solely on non-violent strategies, arguing instead for

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a 'diversity of tactics' that involved the use of violence under certain conditions, particularly in response to perceived repression by police. As noted by Schneider (2011b), 'Since the early stages of the movement . . . those taking part have been in a deadlock on the question of making a commitment to nonviolence.' A survey of Occupy participants in Washington, DC revealed that a non-trivial subset of respondents found it reasonable to use violence against the police to achieve significant social change (Maguire *et al.*, 2016). This finding is noteworthy given that conflict between police and Occupy DC protesters was less frequent and intense than in many other cities, including New York City. Several bodies of research and theory suggest that conflict may increase the likelihood that social movement participants will embrace the use of violence against police as a legitimate protest tactic (e.g. Kritzer, 1977; Earl, 2003; Stott et al., 2008; Drury and Reicher, 2009; Maguire *et al.*, 2016). The present study examines the extent to which OWS protesters in New York City viewed violence against the police as reasonable to bring about meaningful social change. Moreover, drawing on a rich body of theory and research from criminology and social psychology, it seeks to explain variation in protesters' attitudes about the use of violence against police. While situated in the context of OWS, findings from the current study can inform broader discussions about policing protests and the factors that shape behaviours towards and attitudes about police.

## Social movements, violence, and police–protester dynamics

A vibrant multidisciplinary body of theory and research has sought to illuminate the nature and dynamics of police–protester relations. However, few studies have explicitly sought to delineate the antecedents of protesters' attitudes regarding the use of violence against the police. In exploring the nature and correlates of these attitudes, we draw on a

diverse body of scholarship from the study of social movements (e.g. Earl, 2003; Vitale, 2007), crowd psychology (e.g. Reicher, 1996, 2008; Stott and Drury, 2000), and procedural justice and legitimacy (e.g. Tyler, 1990; Maguire *et al.*, 2016).

In his well-known 1964 speech in Cleveland, OH, Malcolm X repeatedly noted that those involved in the struggle for racial equality would be forced to use either 'the ballot or the bullet' to achieve meaningful social change. He went on to explain that armed struggle could become a reality of the Civil Rights Movement if the movement encountered violent and unlawful opposition from the police. He noted that: 'We will work with anybody, anywhere, at any time . . . nonviolently as long as the enemy is nonviolent, but violent when the enemy gets violent' (X, 1964). He defended the use of violence in the face of illegitimate and repressive police tactics:

> . . . Whenever you demonstrate against segregation . . . the law is on your side, and anyone who stands in the way is not the law any longer. They are breaking the law; they are not representatives of the law. Any time you demonstrate against segregation and a man has the audacity to put a police dog on you, kill that dog . . . (X, 1964).

According to Malcolm X, violence in the pursuit of justice may be warranted in the face of perceived state repression, particularly when legal authorities behave unlawfully.

Violent confrontations between protesters and police are relatively commonplace within the context of social movements. Police use of force to disperse protesters and repress social movements has been well-documented (e.g. Marx, 1970; Stark, 1972; Moore, 1998; Ericsson and Doyle, 1999; McLeod and Detenber, 1999; Earl, 2003). In some circumstances, police use of reasonable force may be warranted. For instance, if protesters behave violently, police may be justified in responding with an appropriate and legally permissible level of force.

However, excessive use of force by police often backfires, triggering defiance and rebellion among protesters and undermining the perceived legitimacy and moral authority of the law and its agents. According to Maguire (2016, p. 104), 'police sometimes use officer safety concerns as a justification to use force against protesters. Ironically, the indiscriminate use of force by police may place officers at *greater* risk by increasing the number of angry people who view the use of violence against police as justifiable'. A sizeable literature from multiple disciplines has established that when police behave aggressively during protests without appropriate justification, they often end up instigating violence rather than preventing it (Reicher et al., 2004; Vitale, 2005, 2007; Maguire, 2016).

Social movement scholars argue that protesters are more likely to endorse the use of violence or behave violently in response to the use of repressive tactics by agents of the state (Kahn, 1971; Blumenthal, 1973; Dercole and Davenport, 1974; Lichbach, 1987; White, 1989; Escobar, 1993; Gupta et al., 1993; Rasler, 1996). For example, a study of psychology students by Dercole and Davenport (1974) found that participants viewed violence by protesters to be appropriate in response to high levels of state repression. These findings are consistent with those of Kahn (1972), who found that, during the early 1970s, 20% of US men believed that 'some property damage or personal injury' was needed to achieve social change. About 10% of men believed that 'protest involving extensive damage and some death' was required to achieve social change. Similarly, Blumenthal (1973) found that college students who participated in street protests believed more strongly in the use of violence to produce social change than those with no protest experience.

These findings make sense when viewed through the lens of Kritzer's (1977) theory of unconventional political action. Kritzer argues that outbreaks of violence at protest events are the product of 'a dynamic process resulting from the interaction of police and protesters' (p. 630). He explains that protesters' use of violence results from a combination of normative attitudes towards violence, perceived efficacy of violence, and police provocation. Even deeply felt commitments by protesters to engage solely in non-violent civil disobedience—premised upon the notion that activists must adhere to non-violence if provoked by police—sometimes give way to justifications or rationalizations that support the use of violence in the face of state repression (Kritzer, 1977).

The interdependence of police and protester behaviour described by Kritzer (1977) is also a consistent theme in the crowd psychology literature. This robust body of research highlights the mechanisms through which police behaviour can influence the social identities of protest participants and, in turn, precipitate violent confrontations between police and protesters (e.g. Reicher, 1996, 2008; Stott and Reicher, 1998a,b; Drury and Reicher, 2009). According to the Elaborated Social Identity Model (ESIM), crowds are heterogeneous and consist of people with different social identities. When authorities behave indiscriminately, cracking down on whole crowds in response to the misdeeds of certain individuals in the crowd, police may inadvertently alter these social identities. Moderate members of the crowd may begin to side with more radical members in opposition to the police. This collective identity transformation can promote conflict and increase violence between police and protesters. As Drury and Reicher (2009, p. 713) explain, police action can create 'a strong unified crowd out of an initially fragmented collectivity'. The resulting sense of strength and unity among crowd members can then lead them to challenge the police.

For example, Reicher (1996) notes that the indiscriminate use of force by police against protesters can lead disparate groups of 'left'- and 'right'-wing protesters not only to adopt a common oppositional identity towards the police, but to act upon this identity through the use of physical force. Stott and Drury (2000) also find that protesters' attitudes and behaviours towards the police can be altered when they are subjected to

police use of force that is perceived as unjustified. As Drury and Reicher (2009) explain, when protesters believe their collective behaviour is lawful and constitutionally protected, police actions that are considered illegitimate may lead protesters to 'unite around a sense of opposition to the police and the authorities they are protecting' (p. 713). In these instances, moderate crowd members tend to join with more radical members in opposing authority, and may be more willing to defy, rebel, or use violence against the police (Stott and Drury, 2000; Reicher *et al.*, 2004; Maguire, 2016).

Research findings on police–protester dynamics from the social movement and crowd psychology literatures are also consistent with a more general body of scholarship on procedural justice and the perceived legitimacy of the police. Procedural justice refers to the fairness of the decision-making process used by an authority figure in making decisions that affect those who are subordinate to that authority. It is frequently applied in the context of encounters with the legal system and its participants (Thibaut *et al.*, 1974; Thibaut and Walker, 1975), but has also been explored in other settings, including the workplace (e.g. Bies and Shapiro, 1988; Blader and Tyler, 2003; Brockner *et al.*, 2001; Folger, 1977). In the criminal justice context, procedural justice theory asserts that people's internalized sense of duty or obligation to obey the law is influenced by the perceptions of the procedural fairness with which legal authorities treat those who are subject to their authority (Tyler, 1990; Tyler and Huo, 2002; Johnson *et al.*, 2014; Lowrey *et al.*, 2016). For instance, when people believe that police have treated them unjustly, they are more likely to view the police and perhaps the criminal law more generally as illegitimate and unworthy of cooperation and compliance (Tyler and Huo, 2002; Sunshine and Tyler, 2003; Tyler, 2003; Hinds, 2007; Gau and Brunson, 2010; Johnson *et al.*, 2014; Maguire *et al.*, 2016). Thus, people's decisions to obey the law or cooperate with legal authorities are shaped not only by instrumental considerations, such as the likelihood of being caught and

punished, but also by normative concerns, including whether or not the law and legal authorities are legitimate and worthy of voluntary cooperation and compliance (Pryce *et al.*, 2016). As explained by Tyler (2003, p. 1), the key factor that shapes public behaviour towards the law and legal authorities 'is the fairness of the processes legal authorities use when dealing with members of the public'.

In the policing context, legitimacy assessments are heavily influenced by people's perceptions of the extent to which police officers treat them in a procedurally just manner (Tyler, 1990; Tyler and Huo, 2002; Sunshine and Tyler, 2003; Johnson *et al.*, 2014; Lowrey *et al.*, 2016). Several factors are known to influence these procedural justice evaluations, including perceptions of the authority figure's behaviour (e.g. the extent to which the authority figure's behaviour is perceived as unbiased, ethical, honest, and respectful), voice (whether the person has the opportunity to speak and be heard), and opportunities for error correction, participation, and representation (Folger, 1977; Bies and Shapiro, 1988; Casper *et al.*, 1988; Tyler, 1988; Lind et al., 1990; Brockner *et al.*, 2001; Blader and Tyler, 2003). When police behave in an unbiased, ethical, honest, and/or respectful manner, and when they give people a chance to speak and be heard, they are perceived as more legitimate and deserving of compliance. In other words, by treating people fairly and respectfully, police are able to foster law-abiding and cooperative behaviour among citizens.

To our knowledge, only two studies have directly examined the influence of procedural justice on people's attitudes towards the use of violence. Both studies suggest that perceptions of procedural justice play an important role in shaping attitudes towards the use of violence (Jackson *et al.*, 2013; Maguire *et al.*, 2016). In a study of London residents, Jackson *et al.* (2013) found that procedural justice had an indirect effect (through perceived legitimacy) on attitudes towards the acceptability of using violence in achieving political goals. Ultimately, Jackson *et al.* (2013, p. 490) concluded

that aggressive police tactics may weaken beliefs that it is wrong to use violence, potentially encouraging the use of 'private or extralegal force to achieve certain goals'. Maguire *et al.* (2016) tested the relationship between procedural justice and attitudes towards the use of violence in the context of protests. Based on a survey of 136 Occupy DC participants, they found that protesters' attitudes towards the use of violence against police were heavily influenced by the perceived level of procedural justice exhibited by police in the area of the protests. They noted that protesters who perceived the police as behaving in a procedurally unjust manner were more likely to view the use of violence against the police as reasonable. Maguire *et al.* (2016, p. 12) concluded that 'both protesters and police appear to be enmeshed in a toxic dynamic, each responding to the perceived missteps or misdeeds of the other'.

Although research and theory on procedural justice and legitimacy provide a promising foundation for the thinking about police–protester relations, certain theoretical and conceptual issues still need to be addressed. For instance, Maguire *et al.* (2016) note that the procedural justice literature focuses primarily on individual-level cognitive, affective, and behavioural processes. Yet, protests typically occur in crowd settings. In such settings, decisions about whether to comply with the law:

> . . . may be more complex due to both group-level dynamics and perceived anonymity (McPhail, 1991). Little is known about the nature and effects of procedural justice judgments in group or crowd settings. Integrating procedural justice theory (which operates primarily at the individual level) with theories of crowd behavior could provide some useful insights about how crowd participants perceive and respond to police and other authority figures . . .

Although procedural justice theory represents a promising perspective for understanding police–

protester dynamics, it has not yet been adapted to the unique characteristics associated with crowd settings.

Similarly, Radburn *et al.* (2016) note that most applications of procedural justice theory in the context of policing are based upon research examining police–citizen dyads, 'within which one party (the police officer) has considerably more power than the other (the 'citizen')'. Yet, in a crowd context, procedural justice judgements may be significantly more complex than those that occur in individual-level encounters such as traffic or pedestrian stops. Radburn *et al.* (2016, p. 2) also stress that procedural justice theory has ignored what they refer to as '*relational identification* . . . [or] the extent to which those being policed identify with the police as a social category in their own right'. In two separate laboratory studies in which observers viewed video footage of conflict between police and crowds, Radburn *et al.* (2016) found that relational identification with the police mediated the relationship between perceived procedural fairness and self-reported willingness to cooperate with the police. It is unclear to what extent these social identity dynamics may also influence other outcomes such as people's willingness to defy, rebel against, or use violence against the police.

An important contribution of procedural justice theory is the idea that people are more likely to rebel or become defiant when they perceive that they have been treated unjustly by the police or other legal authorities (Sherman, 1993, 2010; Paternoster *et al.*, 1997). As Sunshine and Tyler (2003, p. 514) explain, 'unfairness in the exercise of authority will lead to alienation, defiance, and noncooperation'. Recent research suggests that procedural justice may also explain people's attitudes about the extent to which the use of violence is an acceptable means for achieving social change (Jackson *et al.*, 2013; Maguire *et al.*, 2016). Thus, procedural justice theory may provide a useful explanation for how individual protesters may come to view violence against the police as an acceptable or morally defensible option. Here we test the

influence of procedural justice and other potential explanations on OWS protesters' attitudes towards the use of violence against the police.

## Data and methods

On 15 March and 17 March 2012, we administered paper-and-pencil surveys to 302 OWS participants. The first data collection effort took place on 15 March, when we administered 50 surveys to OWS participants during a New York City General Assembly (GA) meeting held in the Atrium at 60 Wall Street. The second data collection effort took place on 17 March when we administered 252 surveys to OWS participants during a protest event held in Zuccotti Park, the site of the original OWS encampment prior to the 'eviction' by the New York City Police Department (NYPD) on 15 November 2011. We chose that day because it was the 6-month anniversary of OWS and protesters planned to 'reoccupy' the park. The survey respondents represent a convenience sample of OWS participants. The sampling frame comprised anyone over the age of 18, present at either the GA meeting or the 6-month anniversary protest in Zuccotti Park, who self-identified as an OWS

participant. We attempted to reach the entire pool of active OWS participants by inviting all Occupiers present to participate. However, we have no way of knowing to what extent our sample represents the population of OWS participants.[1]

Our goal was to reach as many OWS participants as possible, not to select a sample of them. This was very difficult for a number of reasons. First, there is no reliable master list of OWS participants that can be used as a sampling frame. Secondly, the group's boundaries were porous and ill-defined, with people regularly floating in and out of the movement. A core set of participants attended most events or actions. Others participated less frequently, though their commitment to the cause may have been no less intense. The group also attracted a significant number of fringe participants who attended only one or two events in person or who participated primarily online. We believe the survey data represent the perspectives of the movement's most active participants, but may not as adequately capture the perspectives of those whose involvement was more limited.[2] At Zuccotti Park, there was qualitative evidence that we had saturated the population, with many people reporting to our survey team that they had already filled out the

[1] Some scholars recommend using systematic selection methods to approximate a random sample of people at protest events (e.g. Fisher, *et al.*, 2005; Walgrave and Verhulst, 2011). For instance, Fisher *et al.* (2005) selected every 5th protester in an effort to achieve a 'field approximation of random selection'. This method may be feasible at events in which the crowd is very large (thus enabling researchers to exclude some participants and still generate a sufficient sample size), and static or orderly in its movements. This method would not have worked well here for three reasons. First, we surveyed participants at an indoor meeting and an outdoor protest event. The methods used to sample a crowded outdoor protest event are less applicable in an indoor meeting where we surveyed nearly every participant. Secondly, compared to mass demonstrations that attract tens of thousands of participants, the OWS protest we attended was relatively small. Many who attended, including observers, sympathizers, and journalists, were not part of the movement. After factoring in these types of attendees, we determined that sampling from the remaining portions of the crowd would not enable us to retain a large enough sample size for the analyses we planned. Thus, we sought to survey the entire population of protesters present at the two events we attended. Thirdly, the outdoor protest was chaotic and dynamic. Tracking refusals was not feasible in this environment because such refusals were often temporary. People who refused on one occasion often later agreed to participate. Therefore, it was not possible to calculate a meaningful refusal rate. The two events at which we gathered data were well attended and very busy, particularly the protest event on 17 March. During calm and orderly events, it may be possible to develop sampling strategies that approximate random sampling. However, during chaotic and dynamic events like the 6-month anniversary protest, such strategies are unlikely to succeed.

[2] The first question on the survey asked respondents to self-identify as either 'nonparticipants' (which we defined as observers, sympathizers, or supporters), 'partial or occasional participants', or 'full or regular participants'. Only people selecting the latter two categories were permitted to fill out the survey. Forty-five people initially agreed to fill out the survey but were then excluded after self-identifying as observers, sympathizers, or supporters, rather than as participants.

survey. We chose to end the survey process when it seemed that we were beginning to wear out our welcome by asking people repeatedly to participate who had already done so.[3]

The survey instrument consisted of one sheet of paper with questions printed on both sides. All but one of the questions were closed-ended. The survey instrument was formatted as a customized optical mark recognition (OMR) form, thus enabling participants to provide responses by filling in bubbles. The completed surveys were later processed using an OMR scanner to minimize data entry errors. The questions on the survey instrument focused primarily on respondents' perceptions of, observations of, and interactions with 'police in the area,' which the instrument defined as police officers located in and around the area where Occupy protests took place. For OWS, this referred primarily to the NYPD, although numerous other law enforcement agencies also have a presence in New York City and sometimes played a role in policing the Occupy protests. The questions about police were not focused on a single event or interaction, but on respondents' cumulative experiences with police in the area throughout their involvement with OWS. The survey also asked a series of questions about the respondents, including their degree of involvement in the movement and their general demographic characteristics.

Using the survey data, we test a multivariate model that seeks to explain variation in Occupy protesters' support for the use of violence against police officers. The two primary independent variables of interest in the model are generalized perceptions of the extent to which the police behave in a procedurally just manner and more specific perceptions of the extent to which the police use force unjustly. In addition, we include four control variables in the model. The full multivariate model to be tested is shown in Fig. 1. We rely on two types of structural equation modelling methods to estimate the model, including a multiple imputation approach that is well suited for handling missing data. In the sections that follow, we describe our dependent variable and our independent variables.

## Dependent variable

The dependent variable in this study measures the extent to which respondents view the use of violence against the police as reasonable 'in order to bring about meaningful social change'. Our measure of this concept is an additive index based on the responses to three survey questions about the use of minor forms of violence (pushing, shoving), moderate forms of violence (hitting, kicking), and severe forms of violence (throwing harmful objects, using a weapon). Respondents could choose from five ordinal response options, each coded 1 to 5, for an overall possible index score that ranged from 3 to 15. Higher scores on the index reflect a stronger belief in the idea that it is reasonable to use violence against the police to bring about meaningful social change.[4] Descriptive statistics for the three survey

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[3] Estimating the size of OWS is challenging for many reasons. The principal reason is that it was not a single event at which all participants were present and available to be counted. Well-established methods exist for estimating the size of crowds at individual events, including protests, political rallies, and mass demonstrations (McPhail and McCarthy, 2004). However, OWS consisted of hundreds (perhaps thousands) of events. Its participants attended some events but not others. Many of these events attracted other participants who were not directly affiliated with the movement and therefore crowd estimates from these events are not particularly useful. Moreover, crowd sizes in these dynamic events often tended to fluctuate throughout the day, so an estimate taken at one point in time may not accurately describe the size of the crowd size at other times. Thus, while methods exist for estimating the size of the crowd at an individual event, it is more difficult to estimate the size of an ongoing movement like OWS.

[4] We rely on formative rather than reflective logic in constructing this index because the indicators are cumulative. In a reflective measurement model, which forms the underlying basis for exploratory and confirmatory factor analysis, the indicators are essentially interchangeable (Diamantopoulos and Winklhofer, 2001). Put differently, replacing indicators in a reflective model does not alter the fundamental meaning of the construct. The same is not true for formative models, in which 'omitting an indicator is omitting a part of the construct' (Bollen and Lennox, 1991, p. 308). For that reason, we used an additive index to measure the dependent variable rather than confirmatory factor analysis.
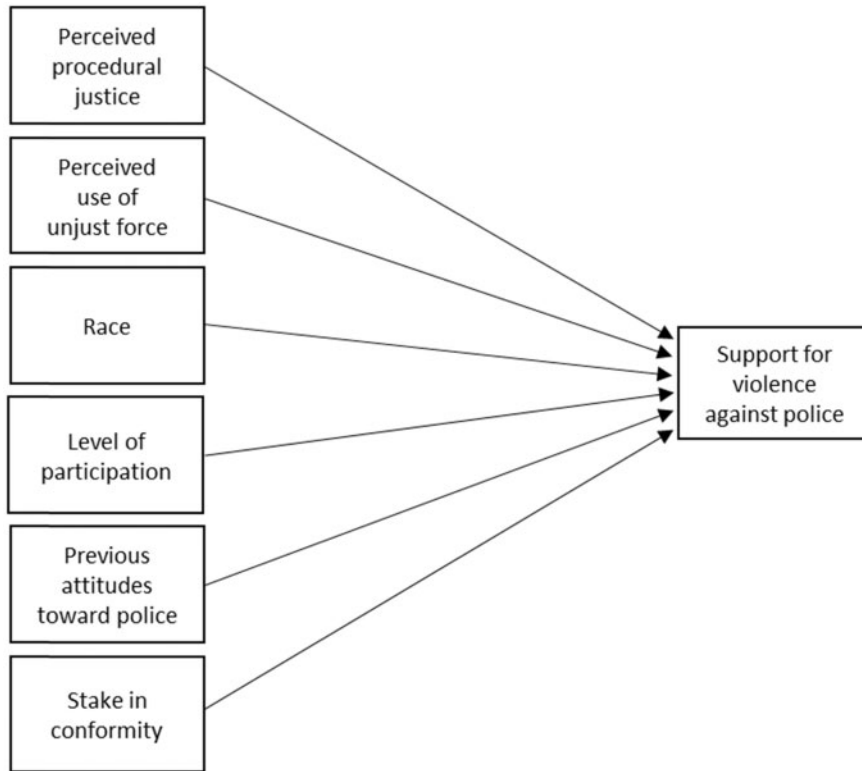
**Figure 1:** Multivariate model.

questions used to construct the index are shown in Table 1. If we combine the 'somewhat reasonable' and 'very reasonable' categories for ease of interpretation, 28.8% of respondents find it reasonable to use minor forms of violence against police, 14.5% find it reasonable to use moderate forms of violence against police, and 12.1% find it reasonable to use severe forms of violence against police.

### Independent variables

The first research question in this study is the extent to which protesters' support for the use of violence against police is associated with their generalized perceptions about whether the police in the area behave in a procedurally just manner. Thus, our first key independent variable is a composite measure of perceptions of procedural justice based on the six items shown in Table 2. We treat the

measure as a latent variable using confirmatory factor analysis. The measurement model fits the data well (fit statistics are reported below) and the loadings are all strong and positive, ranging from 0.67 to 0.95, with a mean and median of 0.82. Descriptive statistics for the six items are shown in Table 2. If we combine the 'agree' and 'strongly agree' categories for ease of interpretation, only 1.4% of respondents view 'police in the area' as honest and trustworthy, only 5.2% believe they treat people with respect, and only 2.4% believe they treat people fairly. These findings reveal disturbing deficits in OWS participants' perceptions of the extent to which police in the area behave in a procedurally just manner.

The second research question in this study is the extent to which protesters' support for the use of violence against police is associated with their perceptions of the extent to which the police use force

**Table 1:** Occupier attitudes about the use of violence

| 'Please indicate the extent to which you find the following actions reasonable in order to bring about meaningful social change ... ' | Very unreasonable (%) | Somewhat unreasonable (%) | Neutral (%) | Somewhat reasonable (%) | Very reasonable (%) | n |
|---|---|---|---|---|---|---|
| Using minor forms of violence against the police (pushing, shoving) | 32.9 | 14.0 | 24.3 | 13.4 | 15.4 | 292 |
| Using moderate forms of violence against police (hitting, kicking) | 53.1 | 15.5 | 16.9 | 4.5 | 10.0 | 290 |
| Using severe forms of violence against police (throwing harmful objects or using a weapon) | 66.2 | 7.9 | 13.8 | 4.5 | 7.6 | 290 |

Note: $n$ = number of observations.

**Table 2:** Occupier perceptions of procedural justice by police

| 'Police in the area ... ' | Strongly disagreed (%) | Disagree (%) | Neutral (%) | Agree (%) | Strongly agree (%) | n |
|---|---|---|---|---|---|---|
| Treat people with respect | 42.4 | 31.3 | 21.2 | 5.2 | 0.0 | 288 |
| Take time to listen to people | 49.7 | 31.8 | 14.3 | 3.8 | 0.3 | 286 |
| Treat people fairly | 51.7 | 31.3 | 14.6 | 2.4 | 0.0 | 288 |
| Respect people's rights | 61.2 | 26.6 | 10.7 | 1.4 | 0.0 | 289 |
| Are honest and trustworthy | 51.7 | 27.3 | 19.6 | 1.4 | 0.0 | 286 |
| Explain their actions and decisions | 68.0 | 21.3 | 8.2 | 2.4 | 0.0 | 291 |

Note: $n$ = number of observations.

unjustly. Thus, our second key independent variable is a composite measure of perceptions of unjust use of force by police based on the seven items shown in Table 3. While the previous measure focused on generalized perceptions of procedural justice, this measure focuses specifically on perceived injustice in the police use of force. Because we view the relationships between the items and the overall construct as formative rather than reflective in this case, our measure of this concept is an additive index.[5] Descriptive statistics for the seven items are shown in Table 3. According to the survey findings, 55.5% of respondents believe that police in the area have frequently threatened to use force against a protester unjustly; 59.1% believe that police have frequently grabbed, pushed, hit, or kicked a protester unjustly; and 81.6% say police have frequently arrested a protester unjustly. The survey results also suggest that the unjust use of firearms or police dogs against protesters is quite rare. Taken together, these findings reveal a clear sense among OWS protesters that police in the area frequently use unjust levels of force against them or their peers.

In addition to the two primary independent variables, we also included four control variables in the model. These included the respondent's race (white = 1, else = 0); the respondent's self-reported level of participation in the Occupy movement ('full or regular' participation = 1, 'partial or

[5] In measurement modelling, the distinction between formative and reflective specifications refers to the direction of effects between a latent construct and the indicators used to represent it (Diamantopoulos and Winklhofer, 2001). In reflective models, which are more commonly used, the latent construct is thought to have a causal effect on its indicators. In formative models, the indictors are thought to have a causal effect on the latent construct. These two specifications are based on very different assumptions about the social phenomena they are intended to represent. In this case, a formative specification makes more sense because perceptions of the extent to which the police have used unjust force against protesters would seem to develop as a result of having observed or otherwise learned about the specific types of behaviours listed in Table 3.

**Table 3:** Occupier perceptions of unjust uses of force by police

| 'Police in the area have unjustly … ' | Never (%) | Rarely (%) | Occasionally (%) | Frequently (%) | n |
|---|---|---|---|---|---|
| Threatened to use force against a protester | 4.2 | 5.7 | 34.6 | 55.5 | 283 |
| Grabbed, pushed, hit, or kicked a protester | 2.8 | 10.5 | 27.6 | 59.1 | 286 |
| Used pepper spray or another chemical agent against a protester | 20.4 | 21.8 | 30.6 | 27.1 | 284 |
| Used a TASER or stun gun against a protester | 66.4 | 18.6 | 8.0 | 6.9 | 274 |
| Used a K-9 against a protester | 75.3 | 14.9 | 6.5 | 3.3 | 275 |
| Pointed a gun at a protester | 74.9 | 16.7 | 4.7 | 3.6 | 275 |
| Arrested a protester | 4.3 | 2.5 | 11.7 | 81.6 | 282 |

Note: $n$ = number of observations.

occasional' participation = 0); the respondent's recollection of his or her attitudes towards police before joining the Occupy movement (measured on a five-category Likert scale); and a composite measure of the respondent's stake in conformity. We included the latter variable because criminologists have found that people with a greater stake in conformity are less likely to embrace violence (Toby, 1983, Sherman and Smith, 1992, Paternoster *et al.*, 1997). We computed a proxy measure for stake in conformity using three indicators: whether the respondent is a college graduate (yes = 48.7%), whether the respondent is employed full time (yes = 35.4%), and the respondent's age (mean = 33.4, s.d. = 13.0). For parsimony, we combined these three variables into a single measure using principal components analysis. The results of this analysis suggest that the three variables comprise one component.[6] A higher principal component score reflects a greater stake in conformity.

# Findings

We estimated the model using two different methods. First, we used a robust weighted least squares (WLS) estimator that relies on pairwise present estimation (Asparouhov and Muthén, 2010). Based on this approach, we retained only 245 of the 302 cases due to missing data on one or more items. Secondly, we estimated the model again using a robust WLS estimator, but this time we relied on the use of multiple imputation to address missing data.[7] We imputed 10 independent data sets, retaining an average of 298 cases from each imputed data set. Consistent with the rules proposed by Rubin (1987), we averaged the parameter estimates across the imputed data sets. The results from both approaches are presented in Table 4. Both models fit the data well based on several fit statistics.[8] Regression diagnostics confirmed that these models were not significantly influenced by either heteroscedasticity or multicollinearity.[9]

[6] One component explained 44.1% of the total variance, and only one eigenvalue was greater than one. The component loadings range from 0.40 to 0.78, with a mean of 0.64.

[7] The multiple imputation method used here 'is based on a Bayesian estimation of an unrestricted model which is then used to impute the missing values' (Asparouhov, 2010, p. 6).

[8] We assessed model fit based on four well-known fit statistics, including the root mean square error of approximation (RMSEA), the confirmatory fit index (CFI), the Tucker-Lewis index (TLI), and the weighted root mean square residual (WRMR) (Brown, 2006). The first model, which did not rely on multiple imputation, fit the data well according to all four fit statistics (RMSEA=0.061; CFI=0.976; TLI=0.966; WRMR=0.782). The second model, which did rely on multiple imputation, also fit the data well (RMSEA=0.063; CFI=0.977; TLI=0.967; WRMR=0.807).

[9] We assessed heteroscedasticity by examining scatterplots of covariates versus outcomes and residual versus predicted values. The scatterplots revealed no evidence of heteroscedasticity. We assessed multicollinearity by computing variance inflation factors (VIFs) for every covariate. The largest VIF was 1.72, suggesting that multicollinearity was not problematic in the models tested here (Belsley *et al.*, 1980).

**Table 4:** Regression results (fully standardized coefficients)

| Independent variables | WLS without imputation | WLS with imputation |
|---|---|---|
| Perceptions of procedural justice | −0.09 | −0.02 |
| Perceptions of unjust police use of force | 0.28*** | 0.34*** |
| Race (white=1, else=0) | −0.02 | 0.00 |
| Level of participation in Occupy (full=1, partial=0) | −0.10 | −0.03 |
| Attitudes towards police before joining Occupy | −0.13* | −0.15** |
| Stake in conformity | −0.11 | −0.13* |
| Explained variance ($R^2$), % | 16.8 | 19.3 |
| Number of observations ($n$) | 245 | 298 |

*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$.

Contrary to expectations, the findings from the initial model (which did not involve imputation) reveal that perceptions of the extent to which 'police in the area' behave in a procedurally just manner did not have a statistically significant influence on protesters' support for the use of violence against police ($\beta = -0.09$, $P = 0.265$). However, perceptions of unjust use of force by police had a strong, positive impact on support for the use of violence against police ($\beta = 0.28$, $P < 0.000$). Protesters who perceive that police use force unjustly against protesters are significantly more likely to find the use of violence against police officers reasonable in the pursuit of social change. Only one of the control variables had a statistically significant effect on support for the use of violence against police. Protesters who recall entering the Occupy movement with positive feelings about the police are less likely to support the use of violence against police officers ($\beta = -0.13$, $P = 0.025$).[10] Overall, the variables included in this model explained 16.8% of the variance in support for the use of violence against police.

The findings from the second model (which relied on multiple imputation) reveal once again that perceptions of the extent to which 'police in the area' behave in a procedurally just manner did not have a statistically significant influence on protesters' support for the use of violence against police ($\beta = -0.02$, $P = 0.765$). However, consistent with the initial model, perceptions of unjust use of force by police had a strong, positive impact on support for the use of violence against police ($\beta = 0.34$, $P < 0.000$). When protesters believe that police use force unjustly, they are significantly more willing to support the use of violence against police officers. Two of the control variables had a statistically significant effect on support for the use of violence against police. First, consistent with the initial model, protesters who recalled entering the Occupy movement with positive feelings about the police were less likely to support the use of violence against police officers ($\beta = -0.15$, $P = 0.004$). Secondly, protesters with a greater stake in conformity were less likely to support the use of violence against the police ($\beta = -0.13$, $P = 0.029$).

[10] An anonymous reviewer questioned our decision to include this variable given the possibility that respondents may have experienced difficulty separating their current and previous perceptions. This is a valid concern, although our conversations with several protesters led us to believe that some had clear recollections of their previous perceptions. One young man, for example, told us his father was a police officer and he had always had positive perceptions of police until witnessing police abusing their authority and violating people's civil rights during OWS protests. Others noted that they joined the Occupy movement due to concerns about corporations and the economy; they only turned their focus towards police after observing how the police handled the OWS protests. In response to the reviewer's concerns, we carried out a supplementary analysis in which we dropped this variable from the model. This change did not alter our inferences about the effects of the other independent variables in the model.

This variable was not statistically significant in the initial model ($\beta = -0.11$, $P = 0.057$), though its $P$-value was close to the threshold for judging an effect as statistically significant. Overall, the variables included in this model explained 19.3% of the variance in support for the use of violence against police.

## Discussion

In the context of OWS, police served as visible agents of the state power structure that protesters were targeting. In such contexts, it is crucial to understand the dynamic nature of the interactions between protesters and police because the behaviours of both are interdependent, each shaping the actions and reactions of the other (see Drury and Reicher, 2009; Kritzer, 1977; Reicher, 1996, 2008). Police accounts nearly always blame protesters when violence erupts between protesters and police, yet research has repeatedly shown that the actions of police during protests often have the effect of instigating individual and collective violence rather than preventing it (Maguire, 2016). Procedural justice theory provides a useful framework for understanding how police actions can reduce or enhance the chances of individual and collective disobedience and violence that is directed towards the police.

We tested the relationship between protesters' perceptions of the extent to which police behave in a procedurally just manner and protesters' views about the use of violence against the police. Our analysis relied on survey data collected from 302 OWS participants in March 2012 on the 6-month anniversary of OWS in New York City. Descriptive statistics computed from the survey data are valuable for understanding protesters' views on the police response to OWS in New York City. Seemingly large percentages of protesters approved the use of violence against police; 28.2% felt it was somewhat or very reasonable to use 'minor' forms of violence (pushing or shoving),

14.5% felt this way about the use of 'moderate' forms of violence (hitting or kicking), and 12.1% approved of 'severe' forms of violence (throwing harmful objects or using a weapon). It was also quite common for protesters to report experiencing or observing unjust uses of force by police (see Table 3). For example, 95.7% reported that they had experienced or observed an unjustified arrest; 97.2% had experienced or observed police grabbing, pushing, hitting, or kicking a protester unjustly; and 95.8% had experienced or observed police threatening to use force unjustly against a protester. Finally, the survey results also revealed significant deficits in the extent to which OWS participants viewed police as behaving in a procedurally just manner towards protesters. For instance, 73.7% of respondents disagreed or strongly disagreed that police in the area treat people with respect. Similarly, 83% disagreed or strongly disagreed that police in the area treat people fairly (see Table 2).

The multivariate results are consistent with the idea that protesters are more likely to endorse the use of violence or behave violently in response to the use of repressive tactics by agents of the state (i.e. Kahn, 1971; Blumenthal, 1973; Dercole and Davenport, 1974; Kritzer, 1977; Lichbach, 1987; White, 1989; Escobar, 1993; Gupta *et al.*, 1993; Rasler, 1996), but the results do not support the hypothesis that more generalized forms of procedurally fair treatment by police are associated with reduced support for the use of violence against police to bring about social change. While our measure of procedural justice was not associated with support for the use of violence against the police, protesters were more likely to support the use of violence against police if they reported observing or experiencing unjust force by police. These results suggest that OWS protest participants made a distinction between less serious and more serious forms of procedural injustice. Less serious forms of injustice such as treating people unfairly or disrespectfully were insufficient to explain variation in support for the use of violence against police.

However, more serious forms of injustice, such as making false arrests and using excessive force, were (taken together) able to explain variation in support for the use of violence against police.

These multivariate results are inconsistent with results obtained using similar survey data collected from Occupy protesters in Washington, DC between February and March 2012 (Maguire et al., 2016). Results from the Washington, DC study found the opposite pattern that we found here, namely that: (1) perceptions of procedural justice were associated with support for the use of violence against the police, but (2) experiencing or observing unjust police use of force was not associated with support for the use of violence against the police. The different patterns observed in these two settings may be attributed to differences in police responses to protesters in New York City and Washington, DC. In New York City, the police behaved in a forceful and aggressive manner, beating protesters, deploying chemical agents under questionable circumstances, and making mass arrests (Vitale, 2011; Knuckey et al., 2012; Gillham et al., 2013). In Washington, DC, allegations of serious abuse of authority were less frequent (Maguire et al., 2016). Protesters focused primarily on what they perceived as an ongoing campaign of disrespect and petty harassment by police.

The survey data are consistent with these observations. Protesters in New York City reported higher levels of procedural injustice than in Washington, DC (see Table 2 in the current study and Table 2 in Maguire et al., 2016). For example, 87.8% of OWS participants in New York City disagreed or strongly disagreed that police in the area respect people's rights, compared with 70.1% of Occupy DC participants. Similarly, 83% of OWS participants in New York City disagreed or strongly disagreed that police in the area treat people fairly, compared with 70.8% of Occupy DC participants. Respondents in New York City also reported higher levels of police threatening to use force

unjustly, grabbing, pushing, hitting, or kicking people, using pepper spray, and making unjust arrests than respondents in Washington, DC. It may be the case that protesters in New York City were less concerned with subtler forms of procedurally unfair treatment because they faced significantly more aggressive and invasive forms of procedural injustice. Because forceful police actions occurred less frequently in Washington DC, the protesters may have been more sensitive to subtler forms of procedurally unjust treatment. The contrast between these two settings illustrates how variation in police responses to protests can have differential effects on protesters' attitudes, intentions, and behaviours.

Our findings have important policy implications for protest policing. They suggest that heavy-handed police responses to protests can increase a sense of support among protesters for using violence against the police. This finding is consistent with multiple bodies of research and theory from the study of social movements (e.g. Marx, 1970; Stark, 1972; Moore, 1998; Ericsson and Doyle, 1999; McLeod and Detenber, 1999; Earl, 2003), crowd psychology (e.g. Reicher, 1996, 2008; Stott and Reicher, 1998a,b; Drury and Reicher, 2009), and procedural justice and legitimacy (Jackson et al., 2013; Maguire et al., 2016). Several scholars have noted an increasing tendency among police worldwide to rely on invasive and aggressive protest policing strategies (McPhail et al., 1998; Vitale, 2005, 2007; Gillham et al., 2013). Most arguments against these approaches are based on normative concerns about human rights and civil liberties. Our findings suggest that instrumental concerns about officer safety may be another reason to reconsider the wisdom of heavy-handed approaches to policing protests and other crowd events (Maguire, 2016).

More speculatively, our findings also raise questions about the extent to which the object of a protest might be related to the likelihood that protesters engage in violence against the police. For example, protests that are focused on

allegations of police misconduct, such as those that are part of the Black Lives Matter movement, may result in greater protester violence than other types of protests. The Black Lives Matter movement is founded on the belief that the police systematically target African Americans with unjustified use of force. Our findings that those who believe police use force unjustly are more likely to support the use of violence against police, suggests that people attending these protests may be more likely to support the use of violence against the police from the outset.

Our findings also raise questions about whether the composition of protest groups may be associated with the likelihood of protester violence. Respondents with a greater stake in conformity were less likely to support the use of violence against the police. Thus, protests that attract people with a lower stake in conformity may be more likely to turn violent than those that attract people with a higher stake in conformity. Unlike earlier findings from Occupy DC, in which black respondents reported significantly greater support for the use of violence against police, race did not have a significant effect among OWS participants in New York City. One possibility, though admittedly speculative, is that the indiscriminate use of force against OWS protesters regardless of race may have rendered race less important in this specific context. While some prior research has focused on developing typologies of protester motivation and its relationship with violence (e.g. Möller *et al.*, 2009), few researchers have examined the attributes of protesters and the effects of these attributes on violent attitudes, intentions, and behaviours. Future research should further examine the influence of protester characteristics on cooperation and conflict between protesters and police.

Training and preparation for protest policing in the USA tends to focus heavily on tactical methods for handling riots. Unfortunately, there is an insufficient focus on broader strategies for preventing conflict and violence. Training needs to focus much more heavily on prevention and de-escalation strategies that minimize the need to use force and coercion. This recommendation follows from the multivariate results that show protesters are more likely to endorse the use of violence when police use repressive tactics. Current technology can play a role. Body worn cameras (BWCs) have been found to reduce police use of force and complaints against the police (e.g. Ariel *et al.*, 2015; Jennings *et al.*, 2015). Additionally, many BWCs include functionality that allow supervisors to review police actions remotely, allowing for informed oversight and greater accountability. In addition, procedurally fair treatment of protesters in the early phases of gatherings might reduce the need to deploy force tactics and thus reduce the likelihood that protesters will come to view violence as a reasonable option in the face of perceived injustice and state repression.

The research reported here is not without limitations. As noted earlier, sampling is very difficult in crowd settings. This is particularly true during dynamic events in which people are moving around in unpredictable ways and the composition and size of the crowd fluctuates regularly. As a result, we do not know with certainty to what extent our findings are generalizable to all OWS participants. Furthermore, our ability to draw strong inferences about cause and effect is limited because our data are cross-sectional. Finally, due to our interest in keeping the instrument brief (both sides of a single piece of paper), we were unable to measure certain phenomena that would have enhanced the analysis presented here. For instance, it would have been useful to learn more about the social identities of the respondents, including their relational identification with police (Bradford, 2014; Radburn *et al.*, 2016). Similarly, based on recent work on the role of emotion and affect in mediating procedural justice effects, it would have been useful to include a measure of anger (Barkworth and Murphy, 2015; Beijersbergen *et al.*, 2015). Future research should seek to elucidate the role of relational identification and anger in mediating the effects of procedural justice on support for the use of violence against police.

## Conclusions

Survey data collected from OWS protesters revealed that observing or experiencing unjust use of force by police increases support for the use of violence against police. Although we situated the study within procedural justice theory, this finding is also consistent with ideas advanced by social movement and crowd psychology scholars. Police and protesters are interdependent actors embedded in local contexts and their behaviours are mutually influential. Contrary to findings from earlier research in Washington, DC, less serious forms of procedural injustice, like treating people unfairly or disrespectfully, were not associated with support for the use of violence against the police. Procedural injustice in its relatively mild forms appears to matter less in this setting than more aggressive and intrusive coercive behaviours directed at protesters. Comparing the findings from New York City with those from earlier research in Washington, DC reveals that the effects of various forms of procedural injustice on support for the use of violence against police appear to vary by context.

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