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The Role of Perceived Autonomy-Supportive Communications for Motivating Prejudice Reduction and Avoiding Defiant Backlash Within the Police Force Workplace

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Abstract

Workplace prejudice-reduction efforts tend to be short lived at best, and can even arouse defiance, or a desire to oppose requests or rules, in employees. The motivational approach of self-determination theory (SDT) describes how communicating about prejudice-reduction can be scaffolded in ways that inspire genuine motivation and avoid eliciting defensive responses. From an SDT perspective, such autonomy-supportive communications take the perspective of the employee, provide choice about how to best approach attitude change, provide a rationale or compelling reason for the importance of change, offer structure through explaining the consequences of bias, and avoid the use of shame to compel change. In two multi-wave studies with British police officers and staff, we hypothesized that employees would report lower prejudice (operationalized as having less antagonistic attitudes toward police forces investing in diversity) when they perceived forces to communicate about prejudice in autonomy-supportive ways (Studies 1 and 2). We also tested whether this association would be explained by lower defiance when perceiving autonomy-supportive communications (Study 2). Results supported the main effect of perceived autonomy support in communication, relating to lower prejudice in multi-wave (Study 1, n=1226) and longitudinal data (Study 2, n=232). We consider implications for communicating about prejudice-reduction efforts in the workplace.

Keywords: self-determination theory; autonomy; police; workplace; prejudice; defiance

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Motivating Prejudice Reduction and Avoiding Defiant Backlash in Policing

Prejudice-reduction efforts are widespread in organizational settings but have proven to be largely ineffective in motivating change (Dobbin & Kalev, 2016; 2018). The current paper tests a conceptual model informed by self-determination theory (Ryan & Deci, 2017) to examine whether perceiving communications about prejudice-reduction as supporting autonomy, people's core values and beliefs, rather than pressuring or forcing them to change, relates to lower prejudiced attitudes. We also tested one reason that perceiving communications to be autonomy-supportive might reduce prejudice: they may lower defiance, or a desire to oppose a request or rule. We focused on defiance because it is a motivationally specific and highly consequential form of backlash and is salient to the topic of prejudice reduction (Howell & Ratliff, 2017). For example, people respond defensively to feedback about their implicit prejudice when they are majority group members who hold discrepant explicit attitudes (Howell et al., 2017). Because of defensive processes, people prefer to avoid learning about their prejudiced attitudes, undermining efforts to communicate the need for change (Howell et al., 2013). Finally, we extended the scope of this work by testing the extent that perceived autonomy support when communicating about prejudice-reduction relates to prejudiced attitudes in a real-world organizational setting – policing, a context where prejudice reduction is of the highest priority to the organization and the public (Cooper & Fullilove, 2020). We first turn to review prior work on prejudice reduction and argue that motivation is a crucial ingredient missing from most prejudice-reduction efforts.

Prejudice-Reduction Efforts

A large number of prejudice-reduction interventions have been attempted in lab studies and organizational contexts, but they often show mixed success. For example in carefully controlled lab experiments, findings show small effects of bias training immediately after manipulations that decay 24-hours later (Lai et al., 2013; 2016). Outside of the lab, an

online diversity training course at a large organization improved attitudes but it did not significantly affect workplace behaviors in the follow up (Chang et al., 2019). Relevant to the current work, Worden et al. (2020) report findings of an Implicit Bias Awareness training in the New York Police Force that an impressive 58% of those trained reported using taught strategies in their work lives, but they did not find corresponding evidence of change in actual policing practices in follow-up assessments of the force. These examples fit with a trend in the literature: in an extensive review of the evidence, Paluck et al. (2021) highlighted that most prejudice-reduction interventions show modest effects immediately following the intervention but few lasting effects.

Most prejudice reduction work focuses on antibias training targeting individual bias, though there is building recognition that the broader social context employees operate in is critical (Stelter et al., 2022). The broader organization's commitment to promoting diversity, equity, and inclusion, demonstrated for example through hiring dedicated staff members or departments to DEI goals, there were stronger effects on improving diversity than antibias training (Kalev et al., 2006). While formal structural changes like these are critical for meaningful prejudice reduction (Carter et al., 2020), informal ways of changing the organizational culture around bias are important too. We focus here on one aspect of culture – how the organization communicates about bias reduction.

Researchers have called to embrace conversation as an opportunity for self-reflection and shared learning with others (Lambert, 1998). There is reason to believe conversations are effective in driving change. For example, in large-scale experimental studies canvassers having open conversations about transgender and undocumented immigrants were able to shift views of those visited in their homes, in comparison to a control condition where they talked about an unrelated topic (Broockman & Kalla, 2016; Kalla & Broockman, 2020). Their results highlighted the importance of perspective-taking in conversations that lead to

attitudinal change. In addition, work on allyship has relied on the premise that those in positions of privilege can use their influence to positively promote inclusive practices (Martinez et al., 2017). Indeed, research has identified the workplace as a key life context for changing attitudes (e.g., political) and that political discussions with dissimilar others at work can help shift attitudes toward more moderate or open positions (Mutz & Mondack, 2006).

Recently, there have been calls to attend to motivation when attempting to intervene on bias (Carter et al., 2020; Hagiwara et al., 2020), and evidence is mounting that people's internally-driven motivation to evaluate and address their own biases is key to change (Dunton & Fazio, 1997; Glaser & Knowles, 2008; Plant & Devine, 1998). The current paper builds on this research and explores perceptions of being motivated versus demotivated during conversations about prejudice within the organization using the motivational principles of self-determination theory (SDT; Ryan & Deci, 2017).

SDT has been applied in a similar way in previous research: a study closely related to the present research, Legault et al. (2011) experimentally tested different ways of communicating about bias reduction using the SDT finding that communicating about bias reduction in ways that supported their autonomy decreased bias. Conversely, communicating in ways that thwarted autonomy backfired and showed relatively increased levels of bias compared to a neutral condition. This study was a promising first step in demonstrating how motivating communications about prejudice reduction could be effective in lowering bias, but it remains unknown whether effects are sustained over time and if they will appear in a real-world organizational setting.

A Better Understanding of Motivating Change

Self-determination theory (SDT; Deci & Ryan, 1985; 2000; Ryan & Deci, 2017) offers a useful framework for understanding workplace communications related to prejudice, which posits that people are motivated to change when they receive support for their

autonomy – a universal human need characterized by feeling volitional and acting from one's true values and beliefs. By contrast, when people feel controlled, coerced, or manipulated, this need for autonomy is thwarted, and as a result people are less motivated to change. We applied autonomy support to the topic of prejudice reduction, operationalizing the construct through five strategies identified in the SDT literature: the absence of pressure and shame, and the provision of structure, perspective-taking, a rationale, and choices (e.g., Baard et al., 2004; Black & Deci, 2000; Ryan & Deci, 2017; Weinstein, 2014).

From an SDT perspective, autonomy support requires motivators to foster an open interpersonal space where people feel that they can drive their own actions meaningfully; for this reason, although communicators may be tempted to reduce prejudice by *pressuring or shaming* employees, this strategy directly undermines autonomy (see Deci et al., 2017). Using pressure and shame has shown short-term effects in the form of minimal compliance because people feel they *have* to change (Katz & Assor, 2007). More commonly, pressure and shame fail to change attitudes (e.g., Thijs et al., 2016), or worse, they can counterproductively breed more prejudice (Legault et al., 2007; Legault et al., 2011). Whereas feeling pressured or shamed by others tends to focus motivation outside the self (to alleviate external pressure or avoid shame; Tangney & Dearing, 2003), perceiving oneself as choiceful in one's actions helps to produce desired behavior change (Murray et al., 2018; Williams et al., 2006). This is because perceiving choicefulness allows individuals to consider for themselves the extent to which they are willing to endorse and pursue meaningful change in their attitudes (Katz & Assor, 2007). In organizational contexts, employees are free to commit to reduce their own prejudiced attitudes, and to find their own way to turn prejudiced attitudes into more positive actions. Or alternatively even when

explicit prejudice is punished, they can select to express bias in subtle, often undetectable ways (e.g., negative evaluations or recommendations for promotions that are influenced by an employee's protected characteristic; Deitch et al., 2003).

Limiting pressure and providing choice creates the motivational space for change, but to inspire individuals to invest effort to reduce their prejudiced attitudes, motivators must also provide a *rationale* for the reasons that it is important to reduce prejudice (Reeve et al., 2002; Vansteenkiste et al., 2014). A meaningful rationale provides employees the opportunity to better understand the reasons for, and therefore, accept the importance and legitimacy of the requested change (Jang, 2008). Work by Parker et al. (2018) has demonstrated the benefits of providing a rationale in the context of a sexism intervention: being presented with evidence of one's own gender bias increased one's concern to manage their bias in the future. While effective in increasing their concern to manage their bias, confronting individuals with evidence of their own bias also tended to elicit defensive reactions in respondents, suggesting potential mixed motivational effects. Normalizing biases and the cognitive, interpersonal, and structural forces that shape them (Devakumar et al., 2020) could help provide a rationale that may also be experienced as less threatening.

Yet even when explaining the reasons to change, communications can further support autonomy by aligning themselves with employees, *taking their perspective* (Ryan & Deci, 2008). Perspective-taking helps people feel validated and understood, and fosters openness and receptivity to both self-reflection and change (Rogers, 1957). Prior work has successfully used perspective taking as a core feature of prejudice-reduction interventions, though it has centered on building the participant's understanding *for outgroup members* (e.g., Broockman & Kalla, 2016; Kalla & Broockman, 2020; Okonofua et al., 2021). While we believe this can

be extremely effective, we believe it could be as important to take the perspective *of the employee* as they adjust to new workplace policies and do the difficult work of confronting and managing their biases. Importantly, perspective-taking does not involve validating prejudiced attitudes, but instead, feelings that may come up for people as they contemplate prejudice they hold and the difficulty of changing.

Finally, communicating about prejudice must also involve providing *supportive structure*, or clear guidance and skills needed to meet the challenges of undertaking behavioral changes. This increases employees' confidence because they can successfully make the desired change once they decide to do so (Matosic et al., 2016; Sierens et al., 2009; Urdan & Schoenfelder, 2006). Indeed, providing concrete strategies to employees to help them manage their biases is a key recommendation from reviews of workplace antibias interventions (e.g., Carter et al., 2020)

1) **Autonomy-Supportive Strategies to Reduce Prejudice Lower Defiance**

Several studies have found unintended and counterproductive consequences of prejudice-reduction efforts actually *increase* prejudice (e.g., Hagiwara et al., 2020; Legault et al., 2011), and in the current research, we examine the possibility that one reason autonomy-supportive strategies may be effective in reducing prejudice is because it tends to dampen feelings of defiance. Defiance (also termed, reactance) is defined as a desire to do the opposite of what is being requested, when a motivating communication is held in contempt (Vansteenkiste et al., 2014). It is a type of defensiveness that occurs when individuals are motivated to reassert their freedom in an environment that is otherwise low in autonomy (Brehm, 1989). Communicating about prejudice reduction can elicit strong emotions in people who may see these efforts as potentially threatening (Kite & Whitley, 2016). People

may not believe that they, or their workplaces, have a problem with prejudice in the first place (Dover et al., 2020). They are also defensively motivated to avoid learning about their own biases (Howell et al., 2013), particularly if they come from a majority view or hold internal conflict (Howell et al., 2017). Thus, diversity initiatives or other workplace efforts to reduce prejudice may elicit a defensive response if people interpret them as an accusation (e.g., "I'm not a racist"), which may lead to defiance (Srivastava, 2005).

Because this is such a charged topic, perceiving autonomy support may help to reduce defensiveness of those being asked to consider prejudice-reduction. Specifically, autonomy support creates a nonjudgmental climate which allows people to critically examine and reflect on assumptions they hold (Itzchakov et al., 2020). When individuals feel understood and accepted, they are less likely to reject messages from motivators and remain open to the possibility of change (Vansteenkiste et al., 2014). The strategies of perspective taking and avoiding shame are important for helping people remain open to the possibility of change; without this, individuals stop responding because they feel like they are not understood (Myers, 2000).

Examining defiance is particularly useful when a high-pressure rule or prohibition is set, like in the UK, where policing is charged with the priority of reducing prejudice (HMICFRS, 2017), amidst increased public scrutiny (see also Graziano & Gauthier, 2018; Mason et al., 2017; Schaap, 2020). This is in line with lab research showing that while autonomy-supportive contexts lower prejudice, shame and pressure can actually backfire and *increase* prejudice (Legault et al., 2007; 2011), where the researchers theorized but did not test an indirect effect of defiance.

Present Studies

This research was conducted in the context of U.K. policing**,** where high-profile incidents have cast a spotlight on the pervasive problem of prejudice (Abi Deivanayagam et al., 2021; Vomfell & Stewart, 2021). While theory is relevant across workplace contexts, tremendous pressure has been placed on the institution of policing, including large-scale public protests (e.g., Black Lives Matter), criticism in the press, and individual and class action litigation (Flores, 2020). As a result, police forces across the U.K. and U.S. have increasingly been confronting issues of prejudice among their employees (Fryer, 2018; Lammy, 2017; Miller, 2021). Taking this together, policing is a poignant example of an organization that has invested in reducing prejudice, but one that continues to be plagued by prejudice–where strategies to enhance its prejudice-reduction efforts are greatly needed.

Considering the evidence base reviewed above, we tested, within the police force workplace, three hypotheses that concerned autonomy-supportive communications to reduce prejudice (hereafter: autonomy support to reduce prejudice) as a holistic, multidimensional construct reflecting its treatment in conceptual and empirical work we discuss above. We anticipated that these communications would relate to lower prejudiced attitudes in employees:

Hypothesis 1) Perceiving more autonomy support to reduce prejudice would relate to less prejudice, operationalized in terms of lower antagonism toward policing investing in diversity (main effect; Studies 1 and 2).

Hypothesis 2) Defiance would mediate the effects of perceiving autonomy support to reduce prejudice on lower prejudiced attitudes. (mediation; Study 2).

Study 1

In Study 1 assessments were collected in a multi-wave approach such that predictors were assessed at Time 1 (baseline), and outcome measures were evaluated one month later

(Time 2); the use of lagged dependent variables in this study was helpful in reducing single-source biases (Keele & Kelly, 2006).

Method

Questionnaires were sent out to a police force within England. We asked the police officers and staff to rate their perceived autonomy-supportive strategies in the force at Time 1. Four weeks later (described as Time 2), we asked them to rate their levels of antagonism toward investing in diversity. We received 1226 valid responses in Time 1 and 1218 responses in Time 2 (retention rate = 99.3% of initial sample). Among the 1218 participants (698 male; 520 female), 4.4% of them aged between 18-24 years, 20.1% aged 25-34 years, 30.6% aged 35-44 years, 32.2% aged 45-54 years, and 12.7% aged 55 years and above. Eight percentage of them worked in policing less than 1 year, 10.7% worked between 1-2 years, 7.4% worked between 3-5 years, 7.6% worked between 6-10 years, 39.3% worked between 11-20 years, and 27% worked over 20 years. Of respondents, 602 (49.4%) were police officers and 616 (50.6%) were police staff.

Measures

Perceived Autonomy-support to reduce prejudice. Perceived autonomy support to reduce prejudice was measured with ten items at Time 1. Item development was informed by existing scales that measure autonomy-supportive climates (Learning Climate Questionnaire; Black & Deci, 2000; Work Climate Questionnaire; Baard et al., 2000), but with two major changes. First, to stay true to the underlying construct of autonomy support, we did not include items frequently used in past scales that more closely measured relationship quality (for example, items concerning felt trust or perceived caring), as these may confound any effects of autonomy support. Second, we adapted for the unique context of prejudice-

reduction. For example, this context required a more nuanced item to measure the dimension of choice than a typical item assessing choice (e.g., "I felt I had choices"), as police personnel may feel they do not fully have a choice about expressing prejudice at work. Similarly, it was important that the dimension of perspective-taking was not interpreted by participants as empathy and understanding for prejudices they hold, but instead empathy and understanding for the feelings that may come up for people as they reflect on their prejudice.

Items were paired with a 1 (*Strongly disagree*) to 7 (*Strongly agree*) scale. The scale measured choice (e.g., "People at work encourage me to find my own way of treating individuals from diverse groups as equals") ($\alpha = .78$), rationale (e.g., "Good reasons are provided when new guidance on acting impartially towards individuals from diverse groups is introduced") ($\alpha = .79$), perspective-taking (e.g., "When explaining new rules for behaving in an impartial manner to individuals from diverse groups, others at work understand my views and feelings") ($\alpha = .89$), supportive structure (e.g., "The force helps me understand how to act without prejudice towards individuals from diverse groups") ($\alpha = .88$), and pressure and shame (e.g., "People at work try to make me feel ashamed in order to get me to act without prejudice towards individuals from diverse groups") ($\alpha = .61$). The decision to use the term 'diverse groups' was made together with policing contacts with the goal of maximizing inclusion of the groups under question in this early stage of the research. After reverse-coding pressure and shame items, the overall scale showed high internal reliability with an overall Cronbach's $\alpha = .82$. Higher scores reflect perceiving workplaces as using more autonomy-supportive strategies when communicating about prejudice.

Antagonism toward investing in investing in diversity. We measured a proximal form of prejudice, antagonism towards the force investing in diversity initiatives (Al-Khouja

et al., 2020) at Time 2. This scale comprised of four items: "The force puts too much emphasis on issues faced by individuals from diverse groups," "I would not mind if a suitably qualified individual from a diverse group was appointed as my immediate supervisor (reversed)", "Individuals from diverse groups demand too much from the force", and "Over the past few years the force has paid more attention to individuals to diverse groups than they deserve". Items were rated on a scale of 1 (*Strongly disagree*) to 7 (*Strongly agree*) and showed adequate reliability ($\alpha = .75$). Higher scores on this scale thus reflected more *antagonism* toward investing in diversity in a policing context.

Control variables. A number of control variables were included in our analyses, all assessed at Time 1. First, because prior research shows that males and females differ in their levels of sensitivities and reactions towards discrimination (Kravitz & Platania, 1993), we controlled for respondents' sex (0 = *male*; 1 = *female*). We also controlled for age (0 = *18-24 year*s to 4 = *55 years and above*) because past research has reported that older adults are less able to regulate implicit racial attitudes (Gonsalkorale et al., 2009). Following Crandall et al.'s (2002) research which found that as job tenure increases, the perception of external pressure to conform on diversity issues decreases, we controlled for job tenure in policing (0 = *less than 1 years* to 4 = *over 10 years*). Further, since police staff are responsible for providing professional support and organizational services behind the scenes, which are different to the responsibilities of police officers who have more direct communication with citizens, we controlled for job role (0 = *police officers*; 1 = *police staff*).

Results

Correlations. Bivariate correlations, means and standard deviations, are presented in Table 1. These results indicated links between all five factors that comprised our autonomy-supportive strategies composite and antagonism, as well as a correlation between the

autonomy-supportive strategies composite an antagonism (r = -.34). These correlations supported our first hypothesis.

Primary Model. To test the first hypothesis accounting for potential confounds, multiple regression analyses were conducted to estimate the effect of perceived autonomy-supportive strategies in reducing prejudice on antagonism to invest in diversity, our indicator of prejudice. Covariates (sex, age, tenure in policing, and role) were defined in Step 1 and perceived autonomy-supportive strategies to reduce prejudice (aggregated) was defined in Step 2.

Table 2 showed that covariates explained .02% of the variance in diversity antagonism scores, and an additional 10% of variance was accounted for by the five perceived autonomy-supportive strategies aggregated, β = -.33, $t(1217)$ = -12.01, $p < .001$. Thus, we saw support for Hypothesis 1, that perceived autonomy-supportive strategies to reduce prejudice is related to lower antagonism. The same pattern of results remained when control variables were removed.[1]

Study 2

In Study 2, we sought to replicate findings of the first study (Hypothesis 1). We also extended this work by assessing antagonism at two separate time points, allowing us to estimate through autoregressive modelling the directional pathway (Gollob & Reichardt, 1987) characterizing the impact of perceived autonomy-supportive strategies in reducing prejudice on antagonism over time. Further, we assessed defiance to test Hypothesis 2 – that defiance would mediate the link between perceived autonomy-supportive strategies and lower prejudiced attitudes to reduce prejudice.

[1] Without including any covariates, the relationship between autonomy-supportive strategies and antagonism remained significant (β = -.34, $t(1217)$ = -12.48, $p < .001$).

Method

In Study 2, respondents once again completed surveys at two time-points. At Time 1, participants reported their perceived autonomous-supportive strategies from the force and their levels of antagonism. Four weeks later (described as Time 2), we asked them to report their antagonism again. We received 217 valid responses at Time 1 and 214 at Time 2 (retention rate = 98%). Among the respondents (97 male; 117 female), 1.9% aged between 18-24 years, 11.7% aged between 25-64 years, 24.3% aged between 35-44 years, 36.9% aged between 45-54 years, and 25.2% aged 55 years and above. In terms of tenure, 3.3% worked in policing from less than 1 year, 17.3% worked between 1-5 years, 6.1% worked 6-10 years 39.3% worked between 11-20 years, and 34.1% worked 20 years and above. 72 (33.6%) respondents were police officers and 142 (66.4%) were police staff.

As in Study 1, autonomy support to reduce prejudice was measured with ten items, assessing perceived choice (.76), rationale (.78), perspective-taking (.77), supportive structure (.88), and pressure and shame (.62). The overall Cronbach's α for the ten items was .80.

Defiance. Defiance was measured using four items (Van Petegem et al., 2015; Vansteenkiste et al., 2014), and adapted to this context to assess a tense and resistant response to motivating communications. Items followed the prompt "Communications in the force on discrimination towards individuals from diverse groups…" and included four items of "trigger a sense of resistance in me", "feel like an intrusion", "make me want to resist attempts to influence me", "make me want to avoid individuals from minority groups". The Cronbach's α for this scale was .93.

To measure antagonism toward policing investing in diversity, we used a slightly different version of the scale following feedback from participants in Study 1. Specifically, a small subset of our Study 1 participants voiced a concern that the item ("I would not mind if

a suitably qualified individual from a minority group was appointed as my immediate supervisor" (reversed) was inappropriate and insensitive for the policing workplace. Instead of this item, we added two items ("Police officers and staff from minority groups overstate the level of unfairness they face at work", and "The need for achieving a diverse workforce in policing is overstated"). This scale demonstrated good reliability (α = .93 for Time 1, α = .93 for Time 2).

Results

Preliminary Results

Correlations. Bivariate correlations, means and standard deviations are presented in Table 2.

Primary Models

We first ran regression analyses to replicate results from Study 1. We then used Model 4 in SPSS Process Macro (Hayes, 2015) to test the proposed mediation effect through defiance. Table 4 shows the regression results. In SPSS Process, we specified autonomy support at Time 1 as the independent variable, antagonism at Time 2 as the dependent variable and defiance at Time 1 as the mediator. Demographics were included as covariates. In this model, we found that the total effect of autonomous supportive strategies at Time 1 relating to antagonism towards policing investing in diversity at Time 2 (*effect size* = -.74, *SE* = .12, t = -6.33, $p < .001$). Thus, Hypothesis 1 was supported.

In terms of the mediating role of defiance, as shown in Table 4, we found that autonomy support at Time 1 was negatively related to defiance at Time 1, b = -.56, *SE* = .11, $t(208) = -5.03$, $p < .001$; and defiance at Time 1 was positively related to antagonism at Time 2 in turn, b = .47, *SE* = .07, $t(207) = 7.15$, $p < .001$. The mediating effect of defiance linking autonomy support and antagonism was significant *effect size* = -.26, *SE* = .07, with confidence intervals (CIs) from using a 5000 bootstrapping resampling approach [-.41, -.13]

excluded 0. Therefore, Hypothesis 3 was supported. The same pattern of results remained when control variables were removed[2].

Taken together, we concluded that our results were replicated, and all Hypotheses were supported in this study without taking Time 1 antagonism into consideration. Analyses showed that, when accounting for Time 1 antagonism, autonomy support at Time 1 was negatively related to defiance at Time 1, b = -.55, SE = .11, $t(207)$ = -5.03, $p < .001$, while defiance at Time 1 was not significantly related to antagonism at Time 2, b = -.10, SE = .06, $t(206)$ = -1.63, p = .10. The total direct effect was negative and significant: *effect size* = -.24, SE = .08, t = -2.90, $p <$. 01. However, the mediating relationship between autonomy support and antagonism via defiance was not significant *effect size* = .01, SE = .01, [-.01, .04].

Supplementary analyses

Our hypotheses did not consider potential reverse effect from antagonism to defiance. It is possible that employees act antagonistically in the first stage and then they become more defiant later. We used our data to test this possibility. We examined the link between antagonism at Time 1 and defiance at Time 2 by controlling the baseline of Time 1 defiance. We found a significant relationship from antagonism at Time 1 to defiance at Time 2 (B = .21, $p < .01$). This result suggested the causal relationship between defiance and antagonism was reciprocal.

General Discussion

The present investigation was aimed at broadening our understanding of how organizations might facilitate changing attitudes in police officers and staff members by communicating in ways that help embrace versus defy organizational prejudice-reduction

[2] When excluding the covariates, the total effect of autonomous supportive strategies at Time 1 relating to antagonism towards policing investing in diversity at Time 2 (*effect size* = -.75, SE = .12, t = -6.37, $p < .001$). Autonomous supportive strategies was negatively related to defiance at Time 1, b = -.58, SE = .11, $t(212)$ = -5.20, $p < .001$. Defiance at Time 1 was positively related to antagonism at Time 2, b = .52, SE = .061, $t(211)$ = 8.19, $p < .001$. The mediating effect of defiance linking autonomous supportive strategies and antagonism *effect size* = -.30, SE = .08, [-.46, -.16].

efforts. Raising awareness of prejudice is an important step to address cultural changes head on (Perry et al., 2015), but misguided efforts to raise awareness risk backfiring and undermining inclusive attitude changes (Legault et al., 2011). Two samples of police officers and staff members from English police forces were recruited to answer questions about this sensitive issue, allowing our team to systematically test a series of specific, theory-guided hypotheses. The final study did so using auto-regressive models to consider directionality by testing the temporality of the relations (Gollob & Reichardt, 1987; Little, 2013; Newsom, 2015).

Our first set of findings concerned the link between perceived autonomy support in communications to reduce prejudice and prejudiced attitudes using a sensitive measure of attitudes specific to policing, of individuals' antagonism toward policing investing in diversity. We found that police personnel who perceived more autonomy support to reduce prejudice in communications reported less antagonism toward investment in diversity initiatives. In Study 2 we observed that perceiving autonomy support to reduce prejudice related to reduced antagonism for diversity initiatives across time, which complements findings of short-term changes from a foundational laboratory intervention targeting prejudice reduction (Legault et al., 2011), and research in other applied contexts (i.e., Hodge & Lonsdale, 2011; Ntoumanis, 2012; Williams & Deci, 2001).

Defiance May Explain Relations between Autonomy Support and Prejudiced Attitudes

In Study 2 we further tested whether defiance – the desire to do the opposite of what is asked (Van Petegem et al., 2015; Vansteenkiste et al., 2014) – was responsible for the observed associations of perceived autonomy support to reduce prejudice and prejudiced attitudes. Our models showed that, as expected, defiance mediated links between autonomy support to reduce prejudice and prejudiced attitudes, though the indirect effect was marginal when examining changes over time.

The finding that defiance was lower when perceiving autonomy-supportive communications is salient in the context of policing given that prejudice-reduction efforts could be especially threatening or upsetting to police personnel relative to workers in other industries due to heightened public attention and anger (i.e., BLM protests focus on police, rather than baristas, teachers, or bankers). Nevertheless, more broadly, the provision of autonomy support to reduce prejudice may be important in any workplace environment, as addressing prejudice can feel universally threatening and uncomfortable (Kite & Whitley, 2016; Srivastava, 2005). The present data suggested that perceiving autonomy support to reduce prejudice might encourage officers and staff to embrace versus defy prejudice-reduction efforts, with potential benefits to both policing and the general public, a win-win.

Interestingly, additional unplanned analyses indicated a second pathway involving defiance: the relation between antagonism and defiance was reciprocal such that antagonism also increased defiance. Said another way, attitudinal individual differences influenced the extent to which communications were met with defiance. For this reason, when communicating about prejudice reduction informally or through formal education regarding workplace prejudice or bias, it may be important to account for attitudes at the outset. Some may be more defiant to these communications and ultimately, a different approach may need to be taken as a function of their initial attitudes, or 'readiness' for change. The finding echoes work in other behavioral change domains (Holt et al., 2010). It suggests that much as organizations can be more or less prepared to incorporate new information that drives engagement in beneficial change-focused action (Weiner et al., 2009), individuals may also vary on their readiness or alternatively, resistance.

Implications for Prejudice-Reduction Efforts in England and Abroad

Our focus was on policing within the U.K., and more specifically England, a fascinating context for this research because of the disconnect between the explicit anti-

prejudice values endorsed by the institution (College of Policing, 2014) and empirical evidence of pervasive prejudice (Lammy, 2017). Given the difficulty of finding effective strategies to reduce prejudice (Dobbin & Kalev, 2016; 2018), and the pressing need to find solutions to this problem, we replicated core findings in a second study, and tested autoregressive paths to evaluate change across time. Indeed, we found that policing employees who perceived more autonomy support in communications about prejudice had more positive, and less negative attitudes about the force investing in diversity and that it related to increases over time.

This work also speaks to organizational climates more broadly, because the dynamics related to addressing prejudice within policing are likely to reflect organizational processes in many different sectors, especially within service industries, characterized by employees directly interfacing with members of the general public. Given the increasing levels of globalization and workforce diversity (Bezrukova et al., 2012), intergroup tensions are especially worrisome in the corporate world, in terms of the functioning of organizations (e.g., McKay et al., 2008), the well-being of employees (e.g., Viitalaet al., 2015), and customer satisfaction (Hekman et al., 2010).

Despite tremendous resources being invested in prejudice training and other workplace diversity efforts, they seem to be largely ineffective in real-world settings (Dobbin & Kalev, 2016; Paluck & Green, 2009). Future research should explore whether perceived autonomy-supportive strategies to reduce prejudice may enhance training and other workplace diversity initiatives being implemented differently across and within organizations.

Limitations

These findings should be understood in light of several limitations. The most notable was the correlational nature of the research, which made it particularly difficult to determine

the causal direction of observed associations: Does perceiving autonomy support to reduce prejudice work to reduce prejudiced attitudes, or do individuals lower in prejudiced attitudes see their workplace as being more autonomy-supportive? Study 2 partially addressed this methodological limitation and the issue of directionality with a one-month longitudinal study controlling for baseline attitudes and defiance. However, future work should test these relations longitudinally a) using field experiments that train supervisors to use autonomy-supportive communications or which otherwise embed them in the workplace climate, and b) with larger longitudinal samples than the one we were able to obtain. Future work could also address questions causally by examining how perceiving autonomy support to reduce prejudice differentially impacts prejudice-reduction trainings. An important, testable hypothesis supported by the present research is that identical employee prejudice reduction trainings will produce very different results as a function of whether or not they are seen to provide autonomy support for employees to reduce prejudice. Even more sophisticated optimization designs (e.g., large factorial or fractional factorials) might identify with greater precision which autonomy-supportive strategies are most important in isolation or combination (Collins, 2018; Teixeira et al., 2020).

Further, this future work may benefit from subtle or automatic assessments of attitudes (e.g., behavioral measures such as force-level rates of stop and search practices or colleagues' perceptions of biased behaviors at work); rather than relying entirely on explicit self-report measures. These are particularly useful as they are more predictive of prejudiced behaviors, particularly in high intensity or fast-paced situations (Devine, 1989), which are especially common and often the most consequential in police work (Eberhardt et al., 2004). Similarly, it is critical that future work understands how any impact on attitudes may or may not translate to on-the-job-behaviors, especially policing decisions that are emotionally-driven and of high consequence (e.g., use of force). This is a difficult benchmark to reach that

most prejudice-reduction interventions fall short of (see Chang et al., 2019 for a broad workplace example; see Worden et al., 2020 for an example in policing), but it is nonetheless essential to show if we are to reach the translational goal of reducing disparities.

In addition, alternative mechanisms other than defiance should be examined, especially in light of the fact that it did not fully explain the link between autonomy support to reduce prejudice and prejudiced attitudes longitudinally in Study 3 (though it did cross-sectionally). Good candidates include autonomous motivation to regulate prejudice, following the model set out by Legault et al. (2011). Such tests of competing or even causally related mediators (e.g., defiance may be expected to undermine autonomous motivation following an ineffective intervention) would elucidate why these efforts reduce prejudice, not just whether or not they do so.

Conclusion

Communities in England, the US, and around the world, are actively struggling with how to reduce prejudice towards members of minority groups, and this problem is especially apparent within the institution of policing. Formalized efforts to reduce prejudice are becoming increasingly common in many workplaces, including in policing, yet, so far, there is little evidence these efforts are effective. The present research focused on a potential agent of attitude change that has received very little empirical attention, specifically how communicating about workplace prejudice-reduction efforts relate to attitudes. Those who perceived their force to communicate about prejudice in more autonomy-supportive ways reported less antagonism toward promoting diversity initiatives, and less defiance.

Those attempting to drive change in the policing organization, including both senior policy makers and grassroots activists, should consider the possibility that to effectively reduce prejudice, people must experience more autonomy around the issue of prejudice reduction. It is understandable that evidence of prejudice toward diverse groups, especially

by police (those charged with ensuring public safety and upholding equal protection under the law), frequently provokes strong reactions, including a desire to pressure and shame those responsible. However, the present studies suggest that while well-intentioned, these tactics may backfire. Instead, motivating prejudice reduction by bringing people on board with this goal seems more effective in reducing prejudice, a critical outcome within policing and for the public at large.

Compliance with Ethical Standards

The authors disclose they have no direct conflicts of interests. However, five authors [masked/to be replaced with initials] have received partial funding for other research from U.K. policing forces. This research was not funded. The research was approved by the University of [masked] Business School ethics committee. the study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments. Participants gave informed consent and participated voluntarily. Data were collected anonymously.

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Table 1

Study 1 Descriptive Statistics and Correlations Between Major Study Variables.

	M(SD)	1	2	3	4	5	6	7	8	9	10
1. Sex	--	--									
2. Age	--	-.12**	--								
3. Tenure in policing	3.41(1.59)	-.10**	.62**	--							
4. Role	--	.25**	.14**	-.13**	--						
5. Choice	4.07(1.29)	.05	-.11**	-.18**	.06*	--					
6. Rationale	4.68(1.25)	.07*	-.03	-.14**	.11**	.55**	--				
7. Perspective-taking	4.59(1.12)	.04	-.08**	-.12**	.03	.51**	.69**	--			
8. Supportive structure	4.85(1.26)	.05	-.04	-.13**	.08**	.34**	.63**	.56**	--		
9. Pressure and shame	3.63(1.26)	-.08**	-.04	.04	-.09**	-.15**	-.03	.02	.11**	--	
10. Total autonomy support	4.36(.84)	.09**	-.07*	-.18**	.11**	.75**	.85**	.79**	.71**	-.31**	--
11. Antagonism	2.97(1.12)	-.10**	.11**	.10**	-.05	-.21**	-.30**	-.27**	-.27**	.10**	-.34**

Notes. Sex was coded 0 for male and 1 for female; Role is coded 0 for police officer and 1 for staff;
*$p < .05$; **$p < .01$

Table 2

Study 1 Regression Analyses of Perceived Autonomy-Supportive Strategies on Antagonism.

	Antagonism (T2)	
	Model 1	Model 2
Control Variables (T1)		
Sex	-.08**	-.06*
Age	.09*	.11**
Tenure in policing	.03	-.04
Role	-.04	-.02
Independent variables		
Autonomy-supportive strategies (T1)		-.33**
Adjusted R^2	.02	.12
ΔR^2	--	.10***

Note. N = 1218. T = Time. Standardized regression estimates are reported. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Table 3

Descriptive Statistics and Correlations Between Major Study Variables in Study 2.

	M(SD)	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Sex	--													
2. Age	--	-.10												
3. Role	--	.20**	.17**											
4. Tenure in policing	3.84(1.17)	-.15*	.54**	-.24**										
5. Choice	3.97(1.20)	.12	.03	.15*	-.13									
6. Rationale	4.69(1.16)	.18**	.09	.18**	-.06	.37**								
7. Perspective-taking	4.50(0.92)	.04	-.01	.06	-.10	.50**	.60**							
8. Supportive structure	4.71(1.18)	.06	.03	.19**	-.15*	.39**	.76**	.56**						
9. Pressure and shame	3.67(1.23)	.01	-.09	-.12	.01	-.14*	-.05	-.09	-.05					
10. Total autonomy support	4.29(0.75)	.12	.08	.24**	-.16*	.72**	.82**	.72**	.78**	-.32**				
11. Defiance (T1)	2.74(1.23)	-.27**	.16*	-.09	.12	-.12	-.34**	-.26**	-.23**	.21**	-.33**			
12. Defiance (T2)	2.97(1.32)	-.31**	.15*	-.15*	.17*	-.18**	-.41**	-.30**	-.35**	.11	-.38**	.61**		
13. Antagonism: force (T1)	3.34(1.37)	-.28**	.07	-.11	.13*	-.20**	-.37**	-.27**	-.25**	.26**	-.39**	.71**	.70**	
14. Antagonism: force (T2)	3.51(1.31)	-.29**	.09	-.05	.12	-.23**	-.42**	-.31**	-.32**	.18**	-.40**	.59**	.67**	.78**

Note. Sex was coded 0 for male and 1 for female; Role is coded 0 for police officer and 1 for staff; T1 = Time 1; T2 = Time 2.
*$p < .05$; **$p < .01$

Table 4

Study 2 SPSS MACRO Analyses of the Mediating Effect of Defiance Linking Perceived Autonomy-supportive Strategies on Antagonism.

	Defiance (T1)	**Antagonism (T2)**
Control Variables (T1)		
Sex	-.24***	-.16**
Age	.17*	.01
Tenure in policing	-.06	.01
Role	-.05	.08
Independent variables		
Autonomy-supportive strategies (T1)	-.32***	-.26***
Mediator		
Defiance (T1)		.43***
Adjusted R^2	.18	.37

Note. N = 214. T = Time. Standardized regression estimates are reported. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.