**Abstract**

Collective punishment (CP) is often considered unfair because it involves the punishment of group members not involved in the transgression. However, CP may be driven by utilitarian motives: The desire to deter other group members from committing offenses. This research investigated whether individuals’ tendency to punish for utilitarian motives predicts support for CP as a function of group malleability (the belief that groups can learn and change, i.e., a growth mindset). In Studies 1 and 2, we assessed utilitarian motives and manipulated the perceived malleability of groups. In Study 3, we assessed perceived group malleability and manipulated motives for justice (deterrence vs. retribution). Across studies, the dependent variable was participants’ support for CP. Results consistently showed that utilitarian (but not retributive) motives increase support for CP, and this was amplified by belief in a growth mindset. We discuss the relevance of these findings for social justice and malleability mindset literature.

Keywords: utilitarian motives, collective punishment, malleability mindset, deterrence, intergroup relations

**When Growth Mindset Backfires:**

**The Effect of the Perceived Malleability of Groups and Utilitarian Motives on Support for Collective Punishment**

Collective punishment refers to punitive acts taken against an entire group for a transgression committed by one or a few individuals, even though the other group members bear no responsibility (Falomir-Pichastor, Staerklé, Depuiset, & Butera, 2007; Miceli & Segerson, 2007; see also Cushman, Durwin, & Lively, 2012; Gaertner, Iuzzini, & O’Mara, 2008). Contrary to collateral damage in which the punishment of innocent group members is often accepted as an unwanted but necessary means of ensuring justice and punishing the offender (e.g., Falomir-Pichastor, Pereira, Staerklé, & Butera, 2012), collective punishment means that all the other group members are intentionally punished for the offense conducted by one or a few of its members.

Collective punishment is therefore at odds with laypeople's moral intuition (e.g., Hart, 1968) and the International Humanitarian Law (e.g., Geneva Conventions, 1949). Furthermore, collective punishment can be counterproductive (Dickson, 2007), particularly in intergroup relations (Darcy, 2007). For instance, collective punishment often bears negative connotations, eliciting legal and moral aversion and sparking controversy. Collective punishment can also enhance group solidarity (Levinson, 2003), which may, in some circumstances, go against the goals of its supporters. Nevertheless, throughout history, collective punishment has been practiced, cutting across cultures, societies, and domains such as sports and education (e.g., Tavares, 2014). For example, entire nations suffer from retaliatory reactions to the wrongdoing of a few of its members, entire school classes are disciplined for the wrongdoing of one or two class members, and all members of an organized fan club are prevented from entering stadiums because of an act of violence or turmoil committed by some members of the club. These instances illustrate that collective punishment is an omnipresent phenomenon.   
 Surprisingly, research on collective punishment remains scarce despite its theoretical and practical relevance. The goal of the present research is therefore to increase our understanding of the processes associated with individuals’ support for collective punishment, namely by focusing on the belief that groups are able to learn and change (i.e., perceived group malleability). We will investigate people’s support for collective punishment within actual as well as fictional intergroup conflict contexts. By using different scenarios, we aim to extend the scope of inquiry to different situations that, despite their differences, reflect what we conceptualize as collective punishment.

Normative theories about punishment can be differentiated into two broad approaches: a deontological/retributive approach, in which punishment should be proportional to the offense, and a teleological/utilitarian approach, which contends that punishment is justifiable to the extent that it deters others from committing future offenses. These two approaches also resonate with people’s individual motives (or punishment goals). Retributive motives aim at closing the injustice gap by giving wrongdoers (or their representatives) what they deserve for their deeds. By contrast, utilitarian motives aim at controlling and changing the future behavior of actual or potential wrongdoers, that is, deterrence. Notably, punishment as deterrence only makes sense if the punished wrongdoer, or anybody who witnesses the punishment, learns that this is the result of misbehaving. In other words, utilitarian motives for punishment necessarily depend on perceiving the target as being able to learn and change—as malleable. Perceiving a target as unable to learn and change (fixed) would render utilitarian punishment pointless.

Research suggests that utilitarian motives are also relevant for collective punishment (e.g., Berent, Pereira, & Falomir-Pichastor, 2017; Heckathorn, 1988, 1990; Weiss, Cortright, Lopez, & Minear, 1997). In the present research, we contend that the utilitarian motives driving support for collective punishment are contingent on the belief that group characteristics and behaviors are malleable—that the group is able to (morally) learn and change. Past research refers to beliefs about the capability of individuals and groups to change as a mindset of malleability, which ranges from a *fixed mindset* in which people are perceived as unable to learn and change, to a *growth mindset* in which people and groups are perceived as able to learn and change. Despite the apparent relevance of the beliefs about group malleability for punitive motives (Yeager, Miu, Powers, & Dweck, 2013; Paul, 2019; Peleg-Koriat, Weimann-Saks, & Halperin, 2020), little research has addressed the relationship between perceptions of group malleability and punitive preferences (and justice-related motives) in the context of punishment—with a few exceptions, which are discussed below (e.g., Moss, Lee, Berman, & Rung, 2019). Therefore, our research sought to investigate whether the relationship between utilitarian motives for collective punishment is moderated by people’s belief in the capacity of group members to learn and change (i.e., perceived group malleability).

**Why Do We Punish Uninvolved People?**

In the face of a transgression, different motivations may lead both victims and third parties to seek punishment for the offender (e.g., Boonin, 2008; Tan & Xiao, 2018; Vidmar & Miller, 1980; Carlsmith, & Darley, 2008). Among these motivations, retribution constitutes one of the most important motives for punishment (see Carlsmith, 2006). Accordingly, past research shows that the motivation to punish an offender depends on offender responsibility (e.g., Darley & Pittman, 2003; Darley & Schultz, 1990; Feather, 1996; Miller, 2001) and the severity of the offense (Carlsmith, 2006). Retribution also plays a role in the support for collective punishment (Berent et al., 2017). For instance, collective punishment can be justified by attributing responsibility to the entire group for the misbehavior of one or a few of their members (e.g., passive or indirect responsibility; Lickel et al., 2000), or by considering the entire group as a relevant target for punishment given the strong perceived association between the offender and the other group members (e.g., Cushman et al., 2012; Lickel, Miller, Stenstrom, Denson, & Schmader, 2006; Gaertner et al., 2008; Sjöström & Gollwitzer, 2015). Accordingly, support for collective punishment may be related to the perception that group members seem interchangeable (i.e., group entitativity; Pereira & van Prooijen, 2018). Finally, when it is impossible to only punish the offender (e.g., because the offender is unidentified or unreachable), to serve justice, the punishment can be directed towards the whole group including both the offender and uninvolved or innocent individuals (see the concept of collateral damage; Falomir-Pichastor et al., 2012). However, contrary to collective punishment, collateral damage accepts the punishment of innocent individuals as a regrettable but necessary means to punish the offender.

That being said, collective punishment can be motivated by utilitarian motives such as the prevention of future offenses (Berent et al., 2017; Heckathorn, 1990; Nagin, 1998; Carlsmith, Darley, & Robinson, 2002). For instance, collective punishment can facilitate cooperation (Gao, Wang, Pansini, Li, & Wang, 2015). Collective punishment can also be supported to deter group members from committing future offenses (Berent et al., 2017). Indeed, deterrence-based punishment can be directed not only at previous offenders (to prevent recidivism), but can also result in general deterrence directed at prospective future offenders. In that sense, collective punishment would convey a message to the offender, the offender’s ingroup (including potential future offenders), and society in general that such offenses are not tolerated (e.g., Gollwitzer et al., 2014; Sjöström et al., 2018). Consequently, this utilitarian understanding of collective punishment reflects rather forward-looking considerations (i.e., preventing future offenses), whereas retributive motives reflect rather backward-looking considerations (Carlsmith et al., 2002; Goodwin & Gromet, 2014).

In this research, we suggest that the extent to which utilitarian motives (i.e., deterrence) increase support for collective punishment should depend on the extent to which people believe that the group to which the offender belongs is capable of “moral change” (e.g., Weimann-Saks, Peleg-Koriat, & Halperin, 2019). The extent to which offenders are perceived as more (malleable) or less (fixed) able to learn and change can shape punitive attitudes (e.g., Carroll, Perkowitz, Lurigio, & Weaver, 1987: Cochran, Boots, & Heide, 2003). Therefore, examining the role that beliefs about group malleability play in the link between utilitarian motives and the endorsement of collective punishment is paramount to understanding these complex processes. Accordingly, we turn now to the extensive work on people’s implicit theories (Dweck, 2008) and consider whether perceived group malleability could shape the relationship between utilitarian/deterrence motives and support for collective punishment.

**Malleability Mindset of Groups**

A growth, malleable, or incremental mindset, as opposed to a fixed mindset, refers to the belief that people can learn and that characteristics like intelligence, personality, or moral character can therefore change over time (Dweck, 2008; Rattan & Georgeac, 2017). General perceptions regarding the nature of groups as being able to learn and change constitute a continuous dimension (from a fixed versus malleable mindset) along which people tend to be normally distributed (Gervey, Chiu, Hong, & Dweck, 1999). Research has shown that beliefs about the malleability of human nature are related to different outcomes in different fields (e.g., academics, social relationships, and physical health; Lüftenegger & Chen, 2017). Although implicit beliefs may be regarded as a relatively stable characteristic (e.g., Dweck et al., 1995), experimental research suggests that they can be situationally manipulated by different means (e.g., Burkley, Curtis, & Hatvany, 2017; Goldenberg et al., 2018; Halperin, Russell, Trzesniewski, Gross, & Dweck, 2011; for replicability concerns see Li & Bates, 2019; Mueller & Dweck, 1998; Dweck 2008).

Beliefs about the malleability of personal abilities and characteristics appear to be domain-specific (Dweck, Chiu, & Hong, 1995; Levy et al., 2001; Hughes, 2015). Of particular relevance for this research, past research indicates that belief in malleability can also be group-specific. Beliefs about group malleability refer to the fact that social groups have basic moral values and beliefs that can be significantly changed (Halperin et al., 2011), which can have real consequences for intergroup relations (Levy et al., 2001; Rattan & Georgeac, 2017). For instance, individuals who tend to perceive groups as able to learn and change, rather than as fixed, construe intergroup settings as less threatening (Simão & Brauer, 2015).

Regarding individuals’ responses to wrongdoing, past research has shown that perceptions of group malleability are related to less aggressive desires (Yeager et al., 2013), lower expectations of recidivism, less punitiveness (Tam, Shu, Ng, & Tong, 2013; Erdley & Dweck, 1993; Gervey et al., 1999; Yeager, Trzesniewski, Tirri, Nokelainen, & Dweck, 2011), a greater willingness to forgive (Iwai & Carvalho, 2020), and more compassionate legal assessments (Weimann-Saks et al., 2019). Perceived group malleability is also related to greater support for restorative and rehabilitative measures (Paul, 2019; Peleg-Koriat, Weimann-Saks, & Halperin, 2020), negotiation and education over punishment (Chiu, Hong, & Dweck, 1997), restorative justice meetings, and rehabilitation over punishment (Moss et al., 2019.) However, past research has shown that perceptions concerning group malleability can both positively and negatively relate to an endorsement of punishment and that this link is moderated by factors such as gender (Confino, Schori-Eyal, & Falomir-Pichastor, 2023) and political orientation (Confino, Schori-Eyal, Gur, & Falomir-Pichastor, 2022).

Past research shows that perceptions of malleability are, in general, negatively related to harsher punishment and positively to more lenient, restorative punishment. However, past research also suggests that these beliefs can relate differently to punishment as a function of individuals’ motivations, indicating that more research is needed to better understand the role that a belief about malleability can play in punishment motives. This need appears to be of particular relevance regarding specific beliefs about the malleability of groups on the one hand, and support for collective punishment on the other. According to the revised literature, we reasoned that support for collective punishment can be particularly driven by utilitarian motives such as deterring innocent members of the group from committing an offense in the future and that this effect should be stronger when perceptions of group malleability are high (i.e., when individuals believe group members can learn and change).

**Overview and Hypotheses**

The present research aims to increase our understanding of people’s support for collective punishment by investigating the specific joint contribution of utilitarian motives and the malleability mindset of groups. We reasoned that beliefs in group malleability constitute a potential and relevant moderator of the effect of utilitarian motives on support for collective punishment. More specifically, the link between deterrence motives and support for collective punishment should be strengthened when individuals’ perception of group malleability is high.

We conducted three studies to test this hypothesis. Since we consider that our reasoning applies to different contexts, we decided to test this hypothesis in different situations and methods. Therefore, we employed different scenarios depicting either a real incident (Study 1) or a fictional incident (Studies 2 + 3) and recruited relatively involved (Study 1) or uninvolved (third-party observers, Studies 2 &3) participants. In Studies 1 and 2, we manipulated the malleability mindset of groups (malleable vs. fixed) and measured utilitarian motives. To test the specific role of utilitarian motives, in both studies we also assessed participants’ endorsement of retributive motives. In Study 3, we assessed participants’ malleability mindset of groups (malleable vs. fixed) and experimentally manipulated justice motives (deterrence vs. retribution). We then informed participants about an intergroup offense that was conducted by a handful of group members who acted on their own responsibility. Then, we asked participants to indicate the extent to which they would support a punitive response targeting all group members, including those uninvolved in the initial offense (i.e., collective punishment). In Study 1, participants belonged to the victim group of the initial offense; in Studies 2 and 3, they were prompted to picture themselves as uninvolved observers.

Our main hypothesis is that participants’ perception of group malleability moderates the relationship between utilitarian motives and collective punishment—a perceived group malleability by utilitarian motives interaction effect. Since perceptions of group malleability refer to the belief that group members can learn and change, utilitarian motives such as the prevention of future offenses should predict support for collective punishment to a greater extent in a malleable mindset compared to a fixed mindset. Accordingly, we also assumed that perceived group malleability should not—or should to a lesser extent—moderate the link between retributive motives and support for collective punishment.

**Study 1**

The first study was conducted in response to real events that took place in January 2019 in the context of the Israeli-Palestinian conflict in which some policies of collective punishment were implemented (Khawaja, 1993; Jamjoum, 2002). Some of these practices may be perceived as acts of “collateral damage,” where there is tolerance to harm caused to innocent people during the pursuit of a target. However, these policies were explicitly directed against the whole group including both the offender and the uninvolved or innocent individuals, and therefore this research adhered to the concept of collective punishment (Falomir-Pichastor, Pereira, Staerklé, & Butera, 2012). Furthermore, in this study we tested our main hypothesis in the context of an intractable conflict in which the participants' ingroup was directly involved. Intractable conflicts correspond to conflicts that involve a long history of rivalry and failed attempts at peacemaking (Bar-Tal, 2001).

**Methods**

**Participants and Procedure**

The participants were all Jewish Israelis who were recruited by an Israeli sampling service. Originally, we aimed to recruit approximately 100 participants per experimental condition. However, due to technical issues relating to the sampling service, we could only collect data from 180 participants. In addition, following an IP address control, 21 participants were disqualified on suspicion that they filled out the questionnaire multiple times. To rule out the possibility of direct personal involvement, we removed an additional five participants residing in close proximity to the region where the incident depicted in the vignette (see below) took place (i.e., Judah and Samaria). The final sample consisted of 154 participants ranging in age from 19 to 74 years (*M* = 44.53, *SD* = 16.34), including 78 men and 76 women residing in different locations in Israel, mostly larger cities. Although the final sample (*N* = 154) was smaller than initially intended, a sensitivity power analysis conducted on G\*Power using a 2x2 ANOVA as a proxy of our quasi-experimental design and assuming an α of 0.05 (two-tailed) and a power of 0.80 revealed that this sample was sufficiently powered to detect a medium-sized effect (*f* = 0.22).

In the first phase of the study, we initially assessed participants’ endorsement of motives for justice, then randomly assigned them to one of the two experimental mindset conditions: malleable vs. fixed. Finally, we assessed their beliefs in group malleability (manipulation check). In the second phase, we asked participants to read a vignette describing intergroup aggression within the Israel-Palestine conflict and to indicate the extent to which they endorsed different Israeli responses to the transgression depicted in the vignette. Finally, participants completed demographic questions, were fully debriefed, and asked to provide their participation consent. The three studies described here were approved by the ethical commission of the first author’s institute.

**Materials and Measures**

*General justice concerns scale.*To assess the participants general tendency to seek justice independently of a specific context, we used a 9-item scale (Hirschberger, Pyszczynski, & Ein-Dor, 2015). Responses to these items were provided on a 7-point scale ranging from 1 (“strongly disagree”) to 7 (“strongly agree”). The items were designed to measure two motives: retribution and utilitarianism. An initial exploration of data suggests that participants possibly misunderstood one retributive item that was reverse-coded (i.e., “You don’t insist on being right if other people find it pointless”) due to convoluted phrasing that might have confused participants. This item was therefore removed from further analyses. Of the remaining 8 items, the following four assessed utilitarian motives (α = .58): “You conduct yourself by reason, and not by what feels right”; “Your friends know that you would never get into an argument that you couldn’t gain something from”; “You do things to achieve a specific goal, and not because it’s the right thing to do”; and "During an argument you try to be rational and practical." The other four measured retributive motives (α = .56): “Your feeling of justice is very important to you”; “You don’t insist on being right even if other people find it pointless”; “You are willing to incur losses for the sake of being right"; and "When somebody hurts you, you want to get back at them." Unfortunately, the internal consistencies (Cronbach’s Alpha coefficients) of both subscales were not satisfactory, which was also the case in the original study (Hirschberger et al., 2015), and we address this issue in the next study (see discussion). The correlation between the utilitarian and retribution motives was moderate, *r*(154) = .435, *p* < .001.[[1]](#footnote-2)

*Experimental manipulation of perceived group malleability.* To manipulate the belief in the malleability of groups, the study was presented to participants as a reading comprehension task (see Halperin, Russell, Trzesniewski, Gross, & Dweck, 2011). Participants read one of two versions of a text that was ostensibly based on a scientific article published in a prestigious psychological journal. The two versions of the text were identical except for key words or expressions, and both versions described research and case studies on the topic of aggressive tendencies in groups. Neither version referred directly to the Israeli–Palestinian context in any way. However, one article contended that groups are capable of change, whereas the other contended that groups are unlikely to change. Participants in the malleable condition learned that the detrimental characteristics associated with conflicts should not be seen as a fixed state but explained by context and circumstance (e.g., “The article’s findings show that the violence and hostility that accompanied most of the conflicts examined changed throughout the years”). Those in the fixed condition learned that conflicts cannot change (e.g., “The article’s findings show that the violence and hostility that accompanied most of the conflicts examined did not change over the years”). A minimum time of 90 seconds was applied to prevent participants from moving on to the next page without reading the text. This was followed by three multiple-choice items (e.g., "What is the message of the study?") that urged participants to reflect upon the text, thereby strengthening its message*.*

*Scenario*. The scenario described in a vignette was based on the accounts of a real event that occurred in Israel on December 13, 2018.[[2]](#footnote-3) The incident involved a shooting attack carried out by an unidentified Palestinian perpetrator or perpetrators against Israeli soldiers and citizens. The vignette was introduced as an abbreviated version of a real report that had been published in the Israeli news agency Ynet on the web edition. The abbreviated version follows: "Two IDF soldiers were killed and two other people were seriously wounded Thursday in a shooting attack in the West Bank, north of Jerusalem. . . . The military wing of the Hamas terror group praised the attack but stopped short of claiming responsibility." The vignette was a brief description and reminder of the event. Since the event took place roughly one month prior to the administration of the study and since it received wide publicity in Israel, we assumed that most (if not all) of the participants still remembered the occurrence. The vignette did not provide any reference to the actual response from Israel.

**Dependent Variables**

*Manipulation check.* We assessed beliefs in group malleability with a 4-item scale developed by Halperin et al. (2011; α = .84; e.g., “As much as I hate to admit it, you can’t teach an old dog new tricks. Groups can’t really change their basic characteristics”). Responses were provided on 6-point scales ranging from 1 (“strongly oppose”) to 6 (“strongly agree”). We computed an average score in such a way that higher scores reflect a higher perception of group malleability.

*Support for collective punishment.* Following the vignette, we asked participants to rate their support for three possible Israeli responses against all Palestinian groups: 1) “Israel should inflict closure on the main Palestinian cities in the West Bank,” 2) “Israel should install check posts on main roads connecting Palestinian villages,” and 3) “Israel should narrow down the provisions of unnecessary goods to the Palestinian authority.”[[3]](#footnote-4) Scales ranged from 1 (“strongly oppose”) to 7 (“strongly support”). We computed an average score of the three items (α = .81).

*Demographics*.Finally, we collected sociodemographic information about the participants including gender, age, and place of residence.

**Results**

*Manipulation check*. As expected, participants’ perceptions of group malleability were higher in the malleable condition (*M* = 3.98, *SD* = 1.18) than in the fixed condition (*M* = 3.17, *SD* = 1.17), *t*(152) = 4.28, *p* < .001, Cohen's *d* = .68.

**Support for Collective Punishment**

Means, standard deviations, and correlations between dependent variables are presented in Table 1. To test our hypothesis, we used Hayes’ (2018 version 3.3) PROCESS bootstrapping command (model 1: 5,000 iterations). Motives for justice (standardized scores) was introduced as the predictor, and the experimental condition (-1 = fixed and +1 = malleable) was the moderator. In the first analysis we used utilitarian motives sub-scale, whereas in the second analysis we used the retribution sub-scale.

*Utilitarian motives*. The analysis using the utilitarian motives sub-scale revealed a significant unconditional effect for utilitarian motives (*b* = .46, *SE* = .12), *t*(150)= 3.75, *p* < .001, *CI* = [.22, .71], ηp2 = .086, but not for perceived group malleability (*b* = -.06, *SE* = .12), *t*(150)= 0.50, *p =* .61, *CI* = [-.30, .18], ηp2 = .002. As expected, the analysis revealed a significant utilitarian motives × perceived group malleability interaction effect (*b* = -.26), *SE* = .12, *t*(150) = -2.16, *p* = .03, *CI* = [-.51, -.02], ηp2 = .03. These results remained significant even when controlling for the effect of retributive motives.[[4]](#footnote-5) As shown in Figure 1, the simple effect of utilitarian motives on collective punishment was significant in the malleable condition (*b* = .73, *SE* = .18), *t*(150) = 3.93, *p* < .001, *CI* = [.36, 1.10], ηp2 = .093, but not in the fixed condition (*b* = .19, *SE* = .16), *t*(150) = 1.20, *p* = .23, *CI* = [-.12, .52], ηp2 = .010. Thus, participants in the fixed condition supported collective punishment regardless of their general utilitarian motives, whereas participants in the malleable condition supported collective punishment as a function of their general utilitarian motives: The higher the utilitarian motives, the higher their support for collective punishment.[[5]](#footnote-6)

*Retributive motives*. The analysis including the retribution sub-scale revealed a non-significant effect for retributive motives (*b* = .24, *SE* = .12), *t*(150)= 1.88, *p* = .062, *CI* = [-.01, .49], ηp2 = .023. The perceived group malleability main effect (*b* = -.07, *SE* =.12), *t*(150) = 0.56, *p* = .57, *CI* = [-.32, .18], and the retributive motives × malleability mindset of groups interaction effect (*b* = .17, *SE* = .12), *t*(150) = 1.38, *p* = .16., *CI* = [-.07, .43], ηp2 = .013, were also not significant. Finally, these results did not change when controlling for the effect of utilitarian motives**.**

**Discussion**

The goal of Study 1 was to test our hypothesis in the context of having a high relevance for participants, as they belonged, logically, to one of the victim groups of the initial offense in the vignette. First, we observed the main effect of utilitarian motives on support for collective punishment. More importantly, and in agreement with our main hypothesis, we found that perceived group malleability moderated the link between utilitarian motives and support for collective punishment. More specifically, utilitarian motives predicted support for collective punishment in the malleable condition but not in the fixed condition. Thus, the results of Study 1 suggest that the belief that groups are malleable played an important role specifically in the relationship between utilitarian (but not retributive) motives and support for collective punishment: Utilitarian motives are related to support for collective punishment provided that participants believe the target group can learn and change.

One important limitation of this study is the weak internal consistency of the utilitarian and retribution subscales. This limitation is not particular to the present research, but it has been an issue in Hirschberger et al.’s (2015) study. Therefore, we decided to conduct an alternative study in which we used another measure for justice motives. In addition, we embraced this opportunity to test our hypothesis in a completely different intergroup context using a different sample of less involved participants.

**Study 2**

**Methods**

**Participants and Procedure**

We recruited222 American adults through Amazon Mechanical Turk (MTurk; Buhrmester, Kwang, & Gosling, 2011). Participants were compensated according to the standards in MTurk (roughly equal to $1). As in Study 1, our aim was to have approximately 100 participants per experimental condition. Given the anticipated loss of participants who would not respond to the full questionnaire, we extended our initial sample size to 222. To be eligible, participants had to be over 18 years of age and reside in the United States. Out of the 222 participants, 169 completed the study. We removed 3 participants from the dataset because they failed a simple attention check (i.e., in one item the participants were instructed to “please choose to a moderate degree”). We also removed 32 cases due to unreasonably long completion times, which was defined as less than half the median completion time (549/2 = 274.5; 16 participants) or over twice the median time (549x2 = 1098; 16 participants). The final sample consisted of 134 participants ranging in age from 18 to 72 years (*M* = 37.89, *SD* = 12.05; 71 males and 63 females). Unless otherwise indicated, the procedure and materials were similar to those used in Study 1. Means, standard deviations, and correlations between measured variables are provided in Table 2. A sensitivity power analysis conducted on G\*Power using a 2x2 design as a proxy of our quasi-experimental design and assuming an α of 0.05 (two-tailed) and a power of 0.80 revealed that the final sample (*N* = 134) was sufficiently powered to detect a medium-sized effect of *f* = .24.

**Materials and Measures**

*Punishment Orientation Questionnaire.* To assess participants’ general tendency to seek justice with respect to an offender independent of the specific context, we used the 17-item scale developed by Yamamoto and Maeder (2019). Responses were provided on a 7-point scale ranging from 1 (“strongly disagree”) to 7 (“strongly agree”). This scale not only disentangles retribution from utilitarian motives, but also differentiates between subtypes of each (prohibitive versus permissive). This scale is comprised of four motives for justice subscales: 1) Prohibitive Utilitarianism, which refers to limiting punishment based on utility (e.g., "Punishment should be about looking forward to improve society, not backward to address the criminal’s misdeeds."; α = .86); 2) Permissive Utilitarianism, which refers to the willingness to give strict punishment based on the benefits thereof (e.g., "An overly harsh punishment may be necessary to prevent others from committing the same crime."; α = .88); 3) Prohibitive Retribution, which refers to an aversion to punishing innocent people (e.g., "Catching more guilty people isn’t worth the expense of false convictions."; α = .61); and 4) Permissive Retribution, which refers to the desire for just deserts (e.g., "Even if society would not benefit at all from punishing a guilty person, he should still be punished because he deserves it."; α = .85). Of course, our predictions focused on the utilitarianism scores, and we did not have specific predictions distinguishing between permissive and prohibitive utilitarianism. However, it is worth noting that both utilitarian subscales differ in the willingness to apply strict punishment to achieve that goal. We retained the original scale structure and computed four average scores—one for each sub-scale— in such a way that higher scores reflect stronger motive endorsement.

*Experimental manipulation of perceived group malleability.* We used the same manipulation of beliefs in group malleability employed in Study 1 (Halperin et al., 2011). However, in this study we merely asked participants to summarize the main message of the text in one sentence (instead of the 3 items used in the previous study) to strengthen the manipulation. This open-ended item appeared at the bottom of the page in which the reading text was presented.

*Scenario.* The scenario depicted a made-up intergroup conflict between two fraternities in an unspecified American university on the East Coast. Prior to the description of the incident, participants were informed that the two fraternities had a history of "vehement competition over different issues…" and that "Despite the mutual dislike and suspicion, no violent incidents were recorded between the two fraternities." The incident involved a violent act carried out by unidentified members of one fraternity against the members of the adversarial fraternity. As a result of that incident, two members of the offended fraternity were injured and required medical care. As the perpetrators could not be identified, no individual sanctions could be imposed on them.

**Dependent Variables**

*Manipulation check*. Following the experimental manipulation, we assessed beliefs about whether groups have a malleable versus fixed nature as we did in Study 1 (see Halperin et al., 2011). However, in the current study, scales ranged from 1 (“strongly oppose”) to 7 (“strongly agree”). We computed an average score so that higher scores reflect a higher perception of group malleability (α = .93).

*Support for collective punishment.* To increase the external validity of our findings, in this study we assessed support for collective punishment in a different way, without explicitly stating the way collective punishment would be implemented. Following the description of the offense, we first asked participants to rate their support for inflicting a sanction on the entire fraternity to which the perpetrators were affiliated on a single-item scale (i.e., "In your opinion, to what extent should all the members of Gamma fraternity be sanctioned in one way or another?" (1= “not at all agree” to 7 = “absolutely agree”). Subsequently, participants were also asked to respond to 3 additional items in which they had to evaluate a collective punishment response as legitimate, fair, and understandable (1 = “not at all” to 7 = “absolutely”). These three items were used to have a more comprehensive assessment of participants’ support for collective punishment (see Berent et al., 2017; study 3). Given the high correlation between these four items, we computed an average score across all of them (α = .93).

*Demographics.*Finally, we asked participants to provide demographic information such as gender and age.[[6]](#footnote-7)

**Results**

**Manipulation check**. First, we tested the effectiveness of the experimental manipulation. As expected, the perception of group malleability was higher in the malleable condition (*M* = 4.63, *SD* =1.52) as compared to the fixed condition (*M* =3.54, *SD* = 1.66)*, t*(132) = 3.94, *p* < .001*, CI* [.54, 1.63].

**Support for collective punishment**. To test our predictions, we used Hayes’ (2018 version 3.3) PROCESS bootstrapping command (model 1: 5,000 iterations). Four analyses were conducted with each of the four justice motives subscales (standardized scores) as predictors, and the experimental manipulation (-1 = fixed and +1 = malleable) as the moderator.

*Permissive utilitarianism.* The analysis including the permissive utilitarianism scale revealed a significant unconditional effect for permissive utilitarianism (*b* = .66, *SE* =.11), *t*(130) = 5.62, *p* < .001, *CI* = [.43, .89], ηp2 = .196, but no significant unconditional effect for perceived group malleability *t*(130) *=* -1.37, *p* = .17, *CI* = [-.39, .07], ηp2 = .014. As expected, the permissive utilitarianism × group malleability interaction was significant: (*b* = .28, *SE* = .11), *t*(130) *=* 2.40, *p* = .018, *CI* = [.05, .51], ηp2 = .042. As shown in Figure 2, the simple effect of permissive utilitarianism was significant both in the malleable condition (*b* = .94, *SE* = .17), *t*(130) *=* 5.38, *p* < .001, *CI* = [.60, 1.29], ηp2 = .183, and in the fixed condition (*b* = .38, *SE* = .15), *t*(130) *=* 2.41, *p* < .017, *CI* = [.06, .69], ηp2 = .043. However, this effect was stronger in the malleable condition. Thus, as compared to the fixed condition, permissive utilitarian motive predicted to a greater extent support for collective punishment in the malleable condition: The higher permissive utilitarian motive, the higher support for collective punishment.[[7]](#footnote-8)

*Prohibitive utilitarianism.* The analysis including prohibitive utilitarianism did not reveal any significant unconditional effects, neither for prohibitive utilitarianism (*b* = -.02, *SE* = .13), *t*(130) *=* 0.20, *p =* .83, *CI* = [-.29, .23], ηp2 < .001, nor for the manipulation of perceived group malleability, *t*(130) *=* 1.28, *p =* .20, *CI* = [-.43, .09], ηp2 = .013. Furthermore, the prohibitive utilitarianism × group malleability interaction effect was not significant: (*b* = .016, *SE* = .13), *t*(130) *=* 0.12, *p* = .90, *CI* = [-.24, .27], ηp2 < .001.

*Permissive retribution*. In the case of permissive retribution, the analysis revealed a significant unconditional effect for permissive retribution (*b* = .71, *SE* = .11), *t*(130) *=* 6.20, *p* < .001, *CI* = [.48, .94], ηp2 = .228, but no significant unconditional effect for the perceived group malleability (*b* = .17, *SE* = .11), *t*(130) *=* 1.49, *p* = .11, *CI* = [-.05, .39], ηp2 = .017. In addition, the permissive retribution × group malleability interaction effect was not significant: (*b* = -.18, SE = .11), *t*(130) *=* -1.62, *p* = .103, *CI* = [-.41, .03], ηp2 = .020.

*Prohibitive retribution*. The analysis revealed a significant unconditional effect for prohibitive retribution: (*b* = -.34, *SE* = .12), *t*(130) *=* 2.66, *p =* .009, *CI* = [-.59, -.08], ηp2 = .052. However, the unconditional effect for the group malleability manipulation, *t*(130) *=* 1.47, *p* = .14*,* *CI* = [-.43, .06], ηp2 = .016, and the prohibitive retribution × group malleability interaction effect (*b* = -.24, *SE* = .12), *t(130) =* 1.93, *p* = .055, *CI* = [-.50, .01], ηp2 = .028, were not significant.

**Discussion**

In this study, we sought to examine our main hypothesis in a different intergroup context while using a different measure of utilitarian concerns. Results provided additional support for the hypothesis that beliefs in group malleability play an important role in the extent to which utilitarian motives predict support for collective punishment. Specifically, we found that participants’ general tendency to punish for permissive utilitarian motives overall increased support for collective punishment. As expected, this effect was stronger in the malleable condition than in the fixed condition.

This study extends the findings of Study 1 in three different ways. First, Study 2 was conducted with an American sample using a completely different scenario, showing that the main hypothesis is confirmed across different societies, contexts, and offenses. Second, this study used a different measure of motives for justice compared to Study 1. Third, and unexpectedly, this study elucidates the specific type of utilitarian motives that account for the predicted interaction: permissive versus prohibitive. More specifically, the present results show that the predicted interaction between the malleability mindset of groups and utilitarian motives on the support for collective punishment was significant only for permissive utilitarian motives. This result suggests that perceived group malleability increases support for collective punishment specifically when people have a greater inclination to dole out punishment for utilitarian reasons (i.e., punishment based on benefits to ensure public safety and deterrence). The interaction including prohibitive utilitarianism was not significant. Even though the distinction between prohibited and permissive utilitarianism was not the focus of the present research, these findings seem of great relevance, and future research is welcome to better understand the effect of perceived group malleability as a function of specific utilitarian motives.

Despite the encouraging results obtained in Studies 1 and 2, both studies had a central limitation: We used a quasi-experimental design in which we always measured (instead of manipulated) utilitarian motives for justice. Another limitation of these two studies relates to the fact that the endorsement of utilitarian motives is strongly correlated to the endorsement of retributive motives and that the reliability of the scales was weak (mainly in regard to Study 1). Finally, we always introduced the scale at the beginning of the questionnaire, and this measure was therefore assessed unrelated to the offense and the punishment context. Therefore, to provide consistent evidence to our main hypothesis while manipulating motives for justice in a way related to the offender and punishment context, we conducted a third study. In Study 3, we first assessed individuals' beliefs in group malleability and then experimentally manipulated the motives for justice (i.e., utilitarian vs. retributive motives).

**Study 3**

To provide a more informative test about the role of justice motives, in this study we manipulated the salience of utilitarianism versus retributive motives, but we also included a control condition. Therefore, our design consists of three conditions (retribution vs. deterrence vs. control) and a measured (but not manipulated) continuous moderator: participants' perceptions of group malleability. Finally, the offense scenario of support for collective punishment was like that used in the previous study.

**Methods**

**Participants and Procedure**

We recruitedAmerican adults through MTurk. In exchange for their participation, participants received monetary compensation (approximately $0.5), in accordance with the standards on MTurk. To be eligible, participants had to be over 18 years of age and reside in the United States. To determine the sample size of the present study, we conducted an *a-priori* power analysis using G\*Power3 (Faul, Erdfelder, Buchner, & Lang, 2009) in which we used a 3x2 ANOVA as a proxy of our quasi-experimental design (6 groups and *df* = 2). We assumed a power of 80% and an alpha value of .05. Despite the differences between this study and the previous study regarding the experimental design, we used the effect size observed in Study 2 for the predicted interaction between utilitarian motives and malleability mindset of groups effect (ηp2 = .039, *f* = .20). This analysis suggested a sample size of 241 participants.

Of the 249 participants who completed the study, 227 passed the approved screening items, which indicated they had completed the survey diligently and we could use their data. As in Study 2, this study was conducted on Mturk. We removed 53 participants for excessively short or long duration times, which was again defined as less than half the median time (380/2 = 190; 22 participants) or more than twice the median time (380x2 = 760; 31 participants, see Leys, Ley, Klein, Bernard, & Licata, 2013). Finally, inspection of the data via SPSS’s Explore (stem-and-leaf plots and extreme statistics) indicated the presence of 11 outliers who scored over 6.5 on the malleability mindset or under 3.3 on the support for collective punishment, whom we removed from the main analyses (see Results). The final sample consisted of 163 participants ranging in age from 22 to 67 years (*M* = 34.93, *SD* = 10.08; 105 males and 56 females; two participants did not indicate their gender). Despite the high and unexpected dropout observed in this study, a sensitivity power analysis conducted on G\*Power and using a 2x3 design as a proxy revealed that the study was sufficiently powered even with the reduced sample size to detect a medium-sized effect of *f* = .24.

**Materials and Measures**

*Beliefs in group malleability*. Prior to the manipulation of justice motives, we assessed beliefs about whether groups have a malleable versus fixed nature with the same four items as in the two previous studies (see Halperin et al., 2011). As in Study 2, we used a 7-point scale, but relabeled them as 1 (“strongly disagree”) to 7 (“strongly agree”).[[8]](#footnote-9) As in previous studies, we computed an average score so that higher scores reflect higher groups' malleability (α = .74*; M* = 2.88, *SD* = 1.11).

*Experimental manipulation of the salience of justice motives.* We manipulated the salience of justice motives by asking participants to reflect on either retribution or deterrence. We developed this manipulation based on the rationale that priming people with the attributes of justice motives would activate the respective motive. The attributes were taken from previous research showing that retributive motives imply a focus on the severity of the offense and the intentionality of the deed, whereas utilitarian motives imply a focus on the publicity of the punishment and the likelihood of repeat offenses (see Carlsmith, 2006; Carlsmith & Darley, 2008). Building upon these findings, participants in the retributive motive condition were prompted to focus on the severity of the offense and the means to do justice; participants in the deterrence condition were prompted to focus on the possibility of future offenses (recidivism) and the means to prevent them. More specifically, participants in the retribution condition were instructed to think about "the extent to which the offense was severe and challenged general justice and how university authorities could make justice for what happened." In contrast, those in the deterrence condition were instructed to think about "the possibility this might happen again and how university authorities could prevent potential recidivism." A minimum time restriction was set to ensure that participants spent adequate attention on the manipulation page. We also invited participants to write down their thoughts. Participants in the control condition did not receive any instructions. The inclusion of a control condition was made to distinguish the specific effect associated with each motive.

**Dependent Variables**

*Support for collective punishment.* Following the manipulation of the motives for justice, we first asked participants to rate their support for inflicting a sanction on the entire fraternity to which the perpetrators belonged. Given that the items used in Study 2 could be considered as justifications for collective punishment, rather than a measure of support for it, in this study we used a different, newly developed 3-item scale ("All members of Gamma should be punished," "I support punishing all members of Gamma," and "Punishment should be taken against all members of Gamma"; response scales ranged from 1 (“strongly disagree”) to 7 (“strongly agree”). We computed an average from the responses to the three items (*M* = 5.59, *SD* = .77; α = .53). The internal consistency of this scale was unexpectedly low given the strong similarity between the items, and it increased by removing the second item (α = .62), which was weakly correlated to the other two (*r* =.15 and *r* = .22, respectively), whereas the other two items were correlated moderately (*r* =.45). However, given that the results were similar regardless of whether or not we included this second item, we describe the results including the original three items.

*Demographics.*Finally, we asked participants to provide demographic information such as gender and age. Due to the nature of the scenario, we also asked participants to indicate whether they were members of any fraternity.

**Results**

**Support for Collective Punishment***.* To test our predictions, we computed two orthogonal (Helmert-coded) contrasts from the three justice motive conditions. The first contrast (C1) compared the retribution (-1) and deterrence (+1) conditions (where the control condition was coded as 0). The second contrast (C2) compared the control condition (-2) to the retribution (+1) and deterrence (+1) conditions. We then regressed participants’ support for collective punishment on mindset (standardized continuous variable ranging from fixed to malleable), C1, C2, and the two interactions between mindset and each contrast, respectively.

The analysis revealed a significant main effect for perceived group malleability: (*b* = -.24, *SE* =.06), *t*(157)= 4.04, *p <* .001, *CI* = [-.35, -.12], ηp2 = .095. Support for collective punishment decreased as perceived group malleability increased. As expected, the C1 (retribution vs. deterrence) × group malleability interaction effect was also significant (*b* = .21, *SE* = .06), *t*(157) = 3.20, *p* = .002, *CI* = [.08, .35], ηp2 = .062, whereas the interaction between C2 (control vs. others) and group malleability was not significant (*b* = -.01, *SE* = .04), *t*(157) = 0.16, *p* = .86, *CI* = [-.09, .08], ηp2 < .001. As shown in Figure 3, the simple effect of C1 was only significant when beliefs in group malleability were high (i.e., 1 SD above the sample mean; *b* = .24, *SE* = .09), *t*(157) = 2.57, *p* = .011, *CI* = [.05, .43], ηp2 < .040, but not when they were low (i.e., 1 SD below the sample mean; *b* = -.19, *SE* = .09), *t*(157) = 1.95, *p* = .053, *CI* = [-.38, .01], ηp2 < .024. Thus, participants primed with a deterrence motive supported more collective punishment than those primed with a retributive motive, and perceived group malleability amplified this effect.[[9]](#footnote-10)

**Discussion**

In Study 3 we manipulated motives for justice and assessed perceived group malleability. As expected, results showed that perceived group malleability moderated the effect of utilitarian motives on support for collective punishment. Specifically, we found that participants who were primed with utilitarian (deterrence) motives supported collective punishment more as they believed in group malleability.

**Mini Meta-Analysis[[10]](#footnote-11)**

Overall, the results observed in the three studies were in alignment with our main hypothesis. However, it is worth mentioning that, due to exclusion criteria, each sample size fell short of the initially intended sample (Studies 1 & 2) or the a-priori power analysis (Study 3). In addition, in Study 2 we used two subscales to assess utilitarian motives, and a more detailed inspection of the results indicates that we obtained empirical evidence in support of our main hypothesis across 3 out of the 4 conducted tests. Therefore, we decided to conduct a mini meta-analysis to examine directly whether the present data supported our main hypothesis across the three studies (see Goh, Hall, & Rosenthal, 2016). We used fixed effects in which the mean effect size (i.e., standardized *b*) was weighted by sample size. All effect sizes were Fisher-z transformed for analyses and converted back to Pearson correlations for presentation. Across the three studies, the utilitarian motives × perceived group malleability interaction was significantly associated with support for collective punishment (*M*r = .198, *p* < .001). We then compared the effect of utilitarian motives as a function of perceived group malleability. The effect of utilitarian motives was stronger when perceived group malleability was relatively high (*M*r = .921, *p* < .001) compared to when it was low (*M*r = .254, *p* < .001).

**General Discussion**

In the present research, we sought to test the hypothesis that beliefs in group malleability moderate the impact of utilitarian motives on support for collective punishment. We manipulated (Studies 1 & 2) or assessed (Study 3) participants’ perceptions of group malleability. In Studies 1 and 2, we measured utilitarian and retribution motives. Both motives were measured by two different decontextualized scales introduced at the beginning of the questionnaire. Study 3 was designed to replicate Study 2 by using an experimental strategy for manipulating justice motives. Moreover, we used samples of involved individuals in Study 1 and uninvolved observers (third-party individuals) in Studies 2 and 3 from different countries (Israeli and American participants). It should therefore be noted that the scenarios employed across the three studies differed in their relevance to the participants and with regard to the transgression context. While Study 1 used a real-life scenario, Studies 2 and 3 used fictional scenarios. Therefore, the scenarios depicted different instances of intergroup conflict: an intractable conflict and a more mundane form of intergroup conflict.

Taken together, and despite the diverse methods used, the three studies provided consistent and convergent evidence in alignment with our main hypothesis. Utilitarian motives increased support for collective punishment when people perceived groups as malleable compared to when they perceived groups as fixed. Furthermore, a mini meta-analysis confirmed this conclusion across the three studies. Finally, either by additionally measuring participants’ retributive motives (Studies 1 & 2) or by manipulating them (Study 3), we were able to show that beliefs in group malleability specifically moderate the impact of utilitarian motives on support for collective punishment, but not the impact of retributive motives.

Overall, the results regarding the moderating role of perceived group malleability are of particular interest as past research suggests that the belief that people can learn and change is related to lower punitiveness (e.g., Yeager et al., 2013). However, the present research specifically showed that perceived group malleability moderates the effect of utilitarian (e.g., deterrence) motives on the support for collective punishment. Therefore , according to our main hypothesis, utilitarian motives are overall related to higher support for collective punishment, but this pattern was strengthened specifically when participants believed that groups can learn and change compared to when they believed that group characteristics and behaviors cannot change (i.e., they are fixed).

We based our hypothesis on the understanding that people characterized by high levels of utilitarian motives are oriented toward future implications of an offense (e.g., recidivism) and the means to prevent future offenses (deterrence; Goodwin & Gromet, 2014), compared to those with higher retributive motives who focus more on the past (e.g., the severity of the offense) and how to close the injustice gap. Accordingly, we expected that when utilitarian (vs. retributive) motives are dominant, support for collective punishment (e.g., to prevent future offenses) would be stronger when the members of the punished group are perceived as able to change (i.e., they are able to learn from punishment and thus not commit future offenses ). However, when people perceive that members of the punished group are not able to change (i.e., they will not learn from punishment and, therefore, collective punishment will not be effective in preventing future offenses). Thus, perceived group malleability may lead people to support collective punishment to fulfill utilitarian motives, such as exercising behavioral control (e.g., Vidmar & Miller, 1980).

The present research contributes to social justice literature in two ways. First, it adds to our understanding the factors that motivate people’s support for punishment and in particular collective punishment. Whereas past research examined the role of different motives for collective punishment (e.g., utilitarianism and retribution) on uninvolved observers (third-party paradigm, e.g., Berent et al., 2017), the present findings extend them to involved observers (Study 1). To our knowledge, this research also contributes to social justice literature by showing for the first time that people’s support for collective punishment is driven by utilitarian motives requiring the mindset that uninvolved group members can change and, therefore, will learn something from collective punishment. The findings can be translated into practical knowledge in the service of improving intergroup relations. It can be achieved, among other things, by tailoring the messages that are delivered in the wake of intergroup hostility.

Alongside the importance of these findings, it is necessary to highlight some methodological limitations. First, the present research does not allow us to determine with certainty the specific role played by perceived group malleability. We contended that these findings are observed because participants’ utilitarian motives focus on the prevention of future offenses and therefore require the mindset that group members, including uninvolved ones, can change to avoid future offenses and punishment. However, future research should investigate the assumption that when the perception of group malleability is high, individuals anticipate that collective punishment would motivate group members to avoid future offenses, as well as rule out alternative explanations underpinning this observed effect.

Another limitation relates to the manipulation of the motives for justice. As they may be correlated (Orth, 2003), manipulating one motive exclusively looms large. Previous research has employed different procedures, such as providing motive-congruent information (Carlsmith et al., 2002) or instruction (Confino, Schori-Eyal, Gur, & Falomir-Pichastor, 2022). In Study 3, we chose a less common manipulation for justice motives—one that builds directly on the literature that shows retributive motives imply a focus on the past (e.g., offense severity) while utilitarian motives imply a focus on the future (e.g., recidivism). In any case, it seems unlikely to attribute the observed effects to the specific manipulation that was used in Study 3 because we observed the same pattern of results when we assessed utilitarian motives in a different fashion (as in Studies 1 & 2).

To conclude, beliefs regarding the malleability of groups constitute a factor that should be considered in the process of intergroup conflict. One important takeaway from this research is that perceived group malleability is not always related to reduced punishment or to more lenient forms of punishment like restoration, at least when it comes to collective punishment. Indeed, once laypersons are driven by utilitarian considerations, they are particularly sensitive to the conditions preventing and promoting recidivism or future similar offenses. Therefore, when people believe that groups can learn from punishment and change their future behaviors accordingly, they will be particularly willing to support collective punishment to deter future offenses. Put differently, this research points out a possible downside of malleability beliefs. Whereas interventions developing individuals’ perceptions of group malleability can improve intergroup relations and reduce punitive motives, in some circumstances, such intervention can also lead people who are strongly motivated by utilitarian concerns to support the punishment of innocent people (i.e., collective punishment) to deter them from engaging in future offenses.

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Table 1.

Means, SDs, and correlations of the main variables (Study 1).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Mean (SD) | 2 | 3 | 4 |
| 1. Perceived group malleability | 3.56 (1.24) | -.374\*\* | -.200\* | -.220\*\* |
| 2. Utility | 4.51 (1.08) | - | .435\*\* | .272\*\* |
| 3. Retribution | 4.58 (1.00) |  | - | .146 |
| 4. Collective punishment | 5.16 (1.59) |  |  | - |

*Note:* \**p < .05,* \*\* *p* < .01

Table 2.

Means, SDs, and correlations of the main variables (Study 2).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean (SD) | 2 | 3 | 4 | 5 | 6 |
| 1. Perceived group malleability | 4.08 (1.68) | .298\*\* | -.528\*\* | -.016 | -.507\*\* | -.278\*\* |
| 2. Prohibitive retribution | 4.99 (1.08) | - | -.431\*\* | .329\*\* | -.488\*\* | -.208\* |
| 3. Permissive retribution | 4.49 (1.39) |  | - | -.121 | .764\*\* | .481\*\* |
| 4. Prohibitive utilitarianism | 4.98 (1.15) |  |  | - | .110 | -.019 |
| 5. Permissive utilitarianism | 4.02 (1.58) |  |  |  | - | .419\*\* |
| 6. Collective punishment | 4.86 (1.51) |  |  |  |  | - |

*Note:* \**p < .05,* \*\* *p* < .01

Figure 1. Estimated means for support for collective punishment as a function of experimental conditions (perceived group malleability: fixed vs. malleable) and utilitarian motives (-1*SD* = Low and +1*SD* = High; Study 1).

Figure 2. Estimated means for support for collective punishment as a function of experimental conditions (perceived group malleability: fixed vs. malleable) and Permissive utilitarianism (-1*SD* = Low and +1*SD* = High; Study 2).

Figure 3. Estimated means for support for collective punishment as a function of experimental condition of justice motive and perceived group malleability (-1*SD* = Fixed and +1*SD* = Malleable; Study 3).

1. The internal reliability of the retributive score (but not that of the utilitarian score) improves when deleting one item (α = .65). Given that results did not change when using this 3-item score, we decided to describe results with the original 4-item score. [↑](#footnote-ref-2)
2. <https://www.haaretz.com/israel-news/four-reported-seriously-wounded-by-gunfire-near-west-bank-settlement-1.6743674> [↑](#footnote-ref-3)
3. Two additional items were used to assess support for relatively lenient forms of collective punishment: "To deprive temporarily entry permits from Palestinians who work in Israel" and "To freeze the monetary aid to the Palestinian authority." As these forms represent frequently used practices that regularly affect a part of the Palestinian population, we excluded these two items from our main dependent variable. [↑](#footnote-ref-4)
4. The analysis additionally introducing retributive motives as a covariate showed a significant unconditional effect for utilitarian motive (*b* = .44, *SE* = .13), *t*(149)= 3.20, *p* < .01, *CI* = [.16, .71], ηp2 = .066, but no unconditional effect for perceived group malleability (*b* = .06, *SE* = .12), *t*(149)= 0.50, *p* = .61, *CI* = [-.18, .30], ηp2 = .002. As expected, the analysis revealed a significant utilitarian motives × perceived group malleability interaction effect (*b* = -.26, *SE* = .12, *t*(149) = 2.13, *p* = .034, *CI* = [-.51, -.02], ηp2 = .030, *ΔR2* = .10. [↑](#footnote-ref-5)
5. Given that preliminary analyses via SPSS’ Explore (stem-and-leaf plots and extreme statistics) indicate the presence of outliers, the main hypothesis was also tested via a robust regression analysis (MASS package from R). The results of this analysis were similar to those of the ordinary least squares (OLS) regression, and the critical utilitarian motives × group malleability interaction remained significant:  *t*(150) = 2.27, *p* < .03, suggesting that the outliers did not actually influence the results of the OLS regression. Furthermore, the residual standard errors for the robust regression model (1.71) and for the ordinary OLS regression (1.52) were similar. Accordingly, we decided to describe the results of the OLS regression in the main document. [↑](#footnote-ref-6)
6. Due to the nature of the scenario, we also asked participants to indicate whether they were members of a fraternity. Forty-three participants (32.1%) indicated they belong to a fraternity. Since the reported results did not vary when controlling for this membership, we did not consider this variable in the manuscript. [↑](#footnote-ref-7)
7. Preliminary analyses indicated again the presence of outliers. Thus, we also tested the main hypothesis via a robust regression analysis as in Study 1. The results of this analysis were again similar to those observed in the OLS regression, and the critical permissive utilitarian × groups malleability interaction remained significant: *t*(130) =2.16, *p* < .04, suggesting that the outliers did not actually influence the results of the OLS regression. Finally, the residual standard errors for the robust regression (1.00) and for the ordinary OLS regression (1.35) were similar. Therefore, for simplicity reasons, we decided again to describe the results of the OLS regression in the main document. [↑](#footnote-ref-8)
8. In this study we also included three items assessing the belief in malleability in general terms: "What has been in the past will continue in the future and there is no way to really change the future"; "Certain negative phenomena can be changed, but the basic ways of the world cannot be changed" ; and "The world has a certain order and there is nothing that can be done to change it" (Cohen-Chen, Crisp, & Halperin, 2015). These items were only used to convince participants that the first section of the questionnaire constituted a separate study dealing with beliefs about malleability. [↑](#footnote-ref-9)
9. As in Studies 1 and 2, preliminary analyses also indicated the presence of outliers (*n* = 11). The main OLS regression conducted while keeping these outliers revealed that the predicted interaction between perceived group malleability and C1 was not significant, *t*(157) = 0.19, *p* = .84, whereas the robust regression showed that this interaction was significant, *t*(157) = 2.03, *p* = .05. Therefore, these findings suggest that, conversely to the previous two studies, in this study the outliers influenced the results. The same analyses conducted after removing the 11 outliers showed the same results and revealed as significant the predicted interaction: *t*(157) = 3.20, *p* < .01 for the OLS, and *t*(157) = 3.42, *p* < .01 for the robust regression. Furthermore, both analyses showed similar residual standard errors (0.72 and 0.58, respectively). Accordingly, in the present study, we decided to describe the results of the OLS as in Studies 1 and 2, but after removing the 11 outliers. More information about these analyses can be obtained from the first author.  [↑](#footnote-ref-10)
10. We would like to thank Christina Moses Passini for her help in conducting this small size meta-analysis.

    [↑](#footnote-ref-11)