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Developing critical awareness: the consequences of action and reflection for perceptions of group injustices

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Abstract

Individuals often cannot address (objective) group injustices until they develop a (subjective) *critical awareness* of them. In three studies, we tested two potential psychological pathways toward critical awareness: *Reflection* (deductive, knowledge driven) and *action* (inductive, action driven) mindsets. Across studies, participants were exposed to an objectively unjust event, enacted by the experimenter. Based on a pilot study ($N = 31$) and first experiment ($N = 28$), we developed the hypothesis that action (vs. reflection) mindsets increase group entitativity (due to their reliance on expectancy effects), but not necessarily (subjective) critical awareness of (objective) group injustice. Study 2 ($N = 121$) confirmed this hypothesis. We discuss the difficulties of developing (subjective) critical awareness of (objective) group injustices.

“Oppressive reality absorbs those within it and thereby acts to submerge human beings consciousness . . . one must emerge from it . . . by means of the praxis: reflection and action upon the world in order to transform it.” (Freire, 1996, p. 33)

It is often assumed that structural inequalities and injustices will not be tolerated by those who fall victim to them (e.g., ethnic, religious, or minority groups). At the same time, however, it has also been observed that humans can have a profound capacity to tolerate other groups’ power abuse, corruption, or gross inequity. One reason for this is that individuals’ subjective awareness of such objective group injustices may be limited. For example, many women in the mid-20th century were consciously aware of inequalities such as a gender pay gap (i.e., whereby women earned lower salaries than men) and viewed it as legitimate and, thus, acceptable. Among other reasons, men were seen as the breadwinners so responsible for and justified to earn more than women, a practice which is in many countries now illegal and viewed as illegitimate (i.e., gender discrimination). Thus, the same objective disadvantage may be perceived as legitimate or illegitimate, which gives rise to the question how such changes in perceived legitimacy come about.

This shift from seeing disadvantage as legitimate to illegitimate is important, because according to different psychological theories (e.g., relative deprivation and social identity theories), individuals must subjectively recognize objective

group injustices before they can imagine alternatives to the status quo, and social change becomes a psychological possibility. Often, however, injustice is engrained in a social reality that is experienced as natural and, therefore, acceptable (Dovidio, Gaertner, & Saguy, 2009; Sidanius & Pratto, 1999). Thus, objective injustices do not only externally “submerge” the self, as Freire suggests, but can also become internalized *within* the self as just and appropriate (Downing & Roush, 1985; Jost, & Banaji, 1994; see also Tajfel & Turner, 1979). As a consequence, critical awareness (defined as the subjective awareness of objective group injustice; e.g., when an individual becomes aware that gender inequalities are illegitimate) may not come easily.

For this reason, we focused on two potential pathways toward “desubmergence” of the self, namely through “reflection” and “action” on the world. Indeed, one could begin to subjectively recognize objective group injustices through reflecting on the situation, or through enacting one’s group identity. We operationalized these processes by empirically assessing the potential of *action* (inductive, action driven) and *reflection* (deductive, knowledge driven) mindsets to promote the group and injustice aspects of critical awareness across three empirical studies. The Pilot and Study 1 helped to generate and develop the hypothesis that action (vs. reflection) mindsets increase recognition of the group but not of the injustice—a hypothesis confirmed in Study 2. Although this can be interpreted as a rather pessimistic

hypothesis (because it suggests critical awareness is indeed hard to achieve), one can also interpret this as supporting the notion that, on the road to critical awareness, the most functional first path to take is that of action.

How action and reflection mindsets may evoke the “us” in injustice

Critical awareness consists of the psychological intersection of group and injustice. Whereas collective action seeks social change (Wright, Taylor, & Moghaddam, 1990), critical awareness pinpoints what needs changing. Indeed, objective *injustice* forms the basis of perceived disadvantage and discontent. Structurally, injustice often emerges in power asymmetries that facilitate the imposition of “legitimate” disadvantage and a social reality on the less powerful group (Mikula, 1986; e.g., male-dominated governments promoted policies which encouraged women to stay at home rather than work). Thus, objective injustice must become subjective injustice for critical awareness to develop (Crosby, 1976). In addition, the subjective awareness of the *group* nature of this injustice is crucial for social change to occur; transforming individual-level (e.g., I was treated unfairly) into group-level deprivation (e.g., women are treated unfairly; Crosby, 1976; Smith, Spears & Oyen, 1994), for example, by self-categorising as a group member (Tajfel & Turner, 1979; Turner, 1985). Thus, to develop a sense of critical awareness we believe two things need to combine: The formation of a group “in and of itself,” and the awareness of injustice that allows the group to become an active agent of change “for itself” (cf. Gurin, Miller & Gurin, 1980; Lukács, 1923). In this way, critical awareness is the first step on the road to collective action; both distinct from and a potential precursor to group consciousness, which comprises the further progressed components of power discontent and commitment to action (Gurin et al., 1980). Although neither group nor injustice need occur first (each can promote the other; Drury & Reicher, 2005, 1999, 2000; Smith & Spears, 1996; Smith et al., 1994), they must become psychologically bound together, transforming a group “in and of itself” into a group “for itself.”

One could argue that critical awareness is needed most when objective group inequality and injustice are accepted within society or culture as legitimate (e.g., large income inequalities in society; the caste system in India). It is within such a context of objective injustice that we examine whether particular cognitive mindsets promote critical awareness. Mirroring sociological and psychological interest in group-level *informational framing* in movement mobilization (e.g., Benford & Snow, 2000), we consider individual-level *cognitive framing* by pitting *reflection* and *action* mindsets against each other. These can be viewed as key cognitive modes, which play distinctive roles directing perceptions (Fiske, 1992) and behaviors (Koriat, 2006; Strack & Deutsch, 2004; Vallacher &

Wegner, 1985). We suggest that both have the potential to promote critical awareness, but for different reasons.

Reflection mindsets

Reflection mindsets (also referred to as deliberative) may help perceive subjective injustice because they promote more cognitively intense information use, specializing in integration and learning (Mezirow, 1981). According to Gollwitzer and Bayer (1999), reflection mindsets stimulate heightened short-term memory storage, and an open-minded approach to and systematic analysis of information. This fosters systematic processing of new information, decreases reliance on heuristics and fosters the integration of knowledge (e.g., Gilbert, Pelham, & Krull, 1988). All these processes could help expose inconsistencies in dominant cultural ideologies (cf. Rao, Monin & Durand, 2003) or recombine otherwise disconnected knowledge, norms and experiences (Brodsky, 1973; Hamilton & Mineo, 1996; Rokeach, 1968), aiding the rejection of current norms and generation of cognitive alternatives (Collins, 1990). For example, reflection mindsets could help women critically reassess the acceptability of the gender pay gap. Such a reappraisal requires a shift away from established cultural norms about the value of gendered work to developing new social standards of payment according to workers’ performance and abilities. Thus, reflection is required to recombine information, potentially stimulating subjective injustice perceptions.

However, reflection mindsets may not foster a subjective sense of group, thereby preventing feelings of *group-based* injustice. Indeed, reflection on the group may undermine unity rather than shore it up. For example, detailed consideration of group similarities and differences could draw attention to intragroup comparisons and interpersonal differences (Turner, 1985). So, even though there is a potential for a common experience of injustice to enhance solidarity (e.g., via common fate), inducing a reflection mindset may stunt this process (e.g., encouraging individuals to see generic cases of gender discrimination as individual cases, caused by the situation or unique attributes of the victim involved). Indeed, experiencing an acute individual-level injustice may obscure the “group” aspect necessary for fraternal deprivation and may, therefore, obstruct critical awareness (Runciman, 1966). Thus, although a reflection mindset may transform objective injustice into subjective injustice, it may undermine a sense of group, suggesting that it may not suffice to promote critical awareness.

Action mindsets

Action mindsets may be best suited to producing group action *within* accepted norms (e.g., societal or cultural norms). Gollwitzer and Bayer (1999) argue that action (i.e., implemental) mindsets promote goal-directed behaviors,

causing selective information use in the service of goal achievement. For example, action can cause attitudes to develop (Bem, 1972) and strengthen (Zaller & Feldman, 1992), create motivation (Becker, 1963), and guide what people see (Hilton & Darley, 1991). In this way, action mindsets might function like a self-fulfilling prophecy, strengthening a sense of group through their reliance on expectancy effects and behavioral guidelines (Shapiro & Hilton, 1988, cited in Hilton & Darley, 1991): Knowing that you are part of a group may create the expectation that group members will behave as a group and feel solidarity which stimulates this behavior. In this case, being treated as a group (e.g., by powerful outgroups) is likely to cause group action and strengthen the group's identity (e.g., increasingly solidarity and satisfaction with being a group member; Jans, Leach, Garcia & Postmes, 2013). Action is, thus, a means through which group identity can be realized and strengthened (Drury, Cocking, Beale, Hanson & Rapley, 2005; Koudenburg, Postmes, & Gordijn, 2011). For example, an action mindset should encourage women to act in line with their gender identity, which should help them to feel more like a woman and more connected to other women. Moreover, within action mindsets, group action is likely to be (perceived as) shared. Expectations of group should encourage perceptions that other members are acting in "groupy" ways (Hilton & Darley, 1991), transforming individual-based group action into group-based action. Thus, an action mindset is likely to strengthen a socially shared and meaningful sense of group.

However, unfortunately this does not mean that objective injustices will be subjectively recognized more often: When a group's treatment is socially acceptable and perceived as just, one has available and can put to use generally accepted norms or behavioral guidelines that actually *enhance* compliance with the status quo (Stott & Drury, 2004). For example, women may feel that paternalistic treatment that discourages them from working is proper and "right." In contrast, when a group's treatment is perceived as anti-normative and unexpected, behavioral guidelines can no longer be utilized, so social unity should strengthen negative reactions to this treatment (see also Abrams, Marques, Bown & Henson, 2000; Gabarro, 1978; Koole & Jostmann, 2004). Thus, action mindsets are unlikely to promote perceptions of group injustice unless outgroup behavior is clearly anti-normative. As such, action mindsets may be most likely to produce group action *within* societal or cultural norms, unless obvious system violations prompt *action upon* a faulty system. This implies that action mindsets may stimulate a strong group, but undermine awareness of injustice.

The present studies

Our analysis suggests that *reflection* mindsets may best produce *thinking outside* system norms whereas action mindsets

may best produce group reaction within system norms, unless obvious violations prompt *action upon* a faulty system. However, because our literature review suggests that neither mindset evokes both aspects of critical awareness (i.e., an awareness of group injustice), we did not have a strong a-priori hypothesis. Rather, we decided to develop a manipulation in a pilot study and then explore its effects in a theory-generating, or exploratory, experiment (Study 1). We then tested our hypothesis confirmatively in a follow-up experiment (Study 2). Across the studies, participants were provided with the external (group and injustice) conditions necessary for critical awareness to emerge. The experimental context was the psychology lab (a context with a powerful group—experimenters—and less powerful group—participants); pairs of participants were exposed to our mindset manipulation and an objectively unjust event enacted by the experimenter aimed at the participant group. Participants then self-reported their group and injustice perceptions using a questionnaire.

Pilot

Thirty-one psychology students (9 males, 22 females) aged 17–27 ($M = 21.94$, $SD = 2.33$) took part in a short study about participant and experimenter "roles in the lab" in exchange for a chocolate bar. Participants were randomly allocated to an action or reflection mindset condition, in which they were instructed to write six things that an experimenter does when in the lab. The action condition instructed participants to "*Describe these actions*"; and therefore, aimed to focus participants on implemental (Gollwitzer & Bayer, 1999), relatively automatic (Häfner & Trampe, 2009) behaviors (Koriat, 2006). The reflection condition was instructed to "*Describe their motivations*"; and therefore, aimed to focus participants on deliberative (Gollwitzer & Bayer, 1999), knowledge based (Strack & Deutsch, 2004), informationally intensive (Koriat, 2006) processes. This pilot focused specifically on the effects of the mindset manipulation (i.e., it did not provide the ingredients for group injustice, although most participants were recruited in a group context of the canteen). Following the manipulation, participants answered a questionnaire. All items were rated on 7-point scales (1 = strongly disagree, 7 = strongly agree).

First, participants completed a manipulation check. Two items measured *reflection* tendencies (This questionnaire makes me think about: why laboratory roles are the way they are/the factors underlying laboratory roles; $r = .37$). Two items measured *action* (This questionnaire makes me think about: what laboratory roles are like/what action takes place in the lab; $r = .38$). Cognitive consequences of the manipulation were assessed with Cacioppo, Petty and Kao's (1984) *need for cognition* scale (6 items, e.g., I would prefer complex to simple problems; $\alpha = .76$). The main dependent variables assessed group-based and subjective injustice components of

Table 1 Means, Standard Deviations, and Independent Samples *t* Test Exploring the Effect of Condition (Pilot)

	Condition		T Test		
	Action	Reflection	T value	CI of difference	Cohen's <i>d</i>
Cognition effects					
Action check	5.03 (0.74)	4.41 (1.24)	1.42	−0.12, 1.38	0.51
Reflection check	4.13 (0.81)	3.63 (1.15)	1.69	−0.23, 1.24	0.61
Need for complexity	4.31 (0.81)	5.14 (0.55)	3.41**	−1.34, −0.33	2.14
Social effects					
Entitativity scale	3.97 (1.04)	2.97 (1.34)	2.31*	0.11, 1.88	0.83
Authoritative expectations	5.23 (0.82)	5.78 (0.77)	1.91 [~]	−1.13, 0.04	0.69
Collective efficacy	4.13 (0.61)	4.25 (1.45)	0.29	−0.94, 0.71	0.10

[~]*p* < .07, * *p* < .05, ** *p* < .01.

critical awareness. Two items measured *entitativity* between participants (Participants are a unit; There is a great togetherness between participants; $r = .61$). *Collective efficacy* was measured with four items (e.g., I think that participants together can change power relations in the lab; $\alpha = .81$). Finally, obedience tendencies were assessed with a two-item measure of *authoritative expectations* (It is normal for participants to do what the experimenter asks when taking part in a lab experiment; I would expect to follow the experimenter's orders while I was in the lab; $r = .44$). Finally, demographics of age, gender, nationality, and number of experimental studies participated in were measured.

Given that this analysis was explorative, we focus on confidence intervals rather than significance levels, although both are reported in Table 1. Results revealed that the manipulation functioned largely as expected. The action measure moved in the predicted direction, with a mean difference that is substantially positive, only slightly overlapping with zero. Although effects on the reflection check moved in the opposite direction than expected, need for cognition provided some support for the effective functioning of the manipulation: Need for cognition was higher in the reflection condition - with mean differences being quite substantial - indicating that reflection mindsets increased the desire to engage in complex thought, as expected. Furthermore, group entitativity was higher in the action condition than the reflection condition, which provides preliminary support for our theoretically based expectation that the action mindset promotes a sense of group. However, this stronger sense of group did not extend to collective efficacy, and—although authoritative expectations were marginally lower in the action condition than the reflection condition—anticipated obedience remained high overall, suggesting that critical awareness was absent. This is unsurprising, however, given that students may (thankfully) not perceive experimenter-participant relations as unjust. Thus, we conclude that the manipulation appears to have the predicted effects. But we also noted that participants listed very

different experimenter behaviors. Study 1, therefore, adjusted the manipulation slightly, to keep actions constant. Moreover, Study 1 also combined the mindset manipulation with experimental conditions, which provided a group context and unjust treatment. Thus, the “objective” conditions in which critical awareness could emerge were satisfied, allowing us address our central research question of how action and reflection mindsets influence the development of a subjective sense of group injustice necessary for critical awareness.

Study 1

Method

Sample, design, and procedure

Twenty-eight Dutch Psychology students (6 males, 22 females) aged 18–51 ($M = 19.82$, $SD = 6.18$) participated for course credit. Two participants were removed because they already knew the purpose of the study. There were two conditions, as in the pilot (Mindset: Action vs. Reflection). Participants arrived in the lab in pairs and were allocated to condition randomly but pair-wise. The study consisted of three parts, but participants were only informed about parts one (manipulation questionnaire) and three (main questionnaire). After participants completed the manipulation and associated questionnaire, they were unexpectedly confronted with an “unjust” event. Subsequently they completed a “faculty evaluation form” which ostensibly assessed participant satisfaction but also contained the dependent variables.

Manipulation and questionnaire

Materials were programmed in Qualtrics and completed individually on a computer. Participants first completed a questionnaire containing the manipulation. Five specific experimenter actions were presented (e.g., Gives instructions

for the experiment to the participants). Participants were then asked to describe these actions, following a cue which varied between conditions. In the Action condition participants completed the sentence stem “The experimenter does this by...,” while the Reflection condition completed the stem “The experimenter does this because...” Participants were given an example answer to ensure accurate completion and maximize similarity of response styles over conditions.

Participants then completed a three-item *manipulation check* including two reflection items (The previous task made me think about: ... precisely what an experimenter is trying to achieve in the lab; ... the exact intentions of experimenters in the lab; $r = .49$) and one action item (... the precise actions that experimenters perform in the lab).

To measure potential *relational* effects we used a pictorial measure that consists of two non-intersecting circles (=1) that progressively intersect until they overlap completely (=7) (Schubert & Otten, 2002). We presented this scale twice: once to assess the individual's relation between “me” and “the experimenter” and once to assess collective relations between “participants” and “experimenters.”

To measure *cognitive* effects, a *memory task* asked participants to recall 25 words (e.g., ear, roof, news), after a maximum of two minutes memorization. Furthermore, participants completed a *Global versus Local Geometric Task* (Kimchi & Palmer, 1982) testing for differences in abstractness of thought expected in manipulations of Construal Level. Twelve stimulus triads were presented on screen individually, in randomized order. Subjects were shown a target object and asked to judge which of the two comparison objects looked most similar. One matched the local components forming the target but mismatched the global shape, while the reverse was true for the second (for further details, see Gasper & Clore, 2002; Kimchi & Palmer, 1982).

Unjust event

After completing the questionnaire on PCs, participants moved to a central table where they were given evaluation forms and an official university envelope in which to seal it. Before participants could fill these out, they were exposed to an unjust event. The experimenter told the participants that she would like them to wrap some Christmas presents for her. Participants were informed that it was not necessary to wrap all presents, but were requested to spend approximately 5 minutes on this task. The experimenter then left the participants alone, to allow for interactions, and returned after 5 minutes. This task was designed to be an anti-normative and unethical request by an experimenter (exposing participants to power asymmetries and illegitimacy in the lab), which allowed for compliant individual responses (wrapping presents individually) compliant collective responses (organized wrapping with a division of labor, e.g., one does the

wrapping and one the tape), or noncompliant responses (i.e., refusal). Unobtrusive video recordings were taken of the present wrapping task and coded by two independent raters. There was no difference in the number of presents wrapped between the action ($M = 2.17$, $SD = .81$) or reflection ($M = 2.37$, $SD = .19$) condition ($t(26) = .52$, $p = .61$, $d = .20$) or the type of response (i.e., collective or individual wrapping; $\chi^2(1, N = 28) = .10$, $p = .76$). Eye contact, smiling, and discussion were also coded. Inter-rater reliability was satisfactory at ($K = .49$).

Evaluation form

Items were measured on 5-point Likert-type scales (1 = Strongly disagree, 5 = Strongly agree). The questionnaire aimed to measure perceptions of group, injustice (required for critical awareness) and collective action. It consisted of two sections: Section one contained *situation-level* questions about the experimental situation itself (e.g., experimenter evaluations); Section two contained *system-level* questions (e.g., dissatisfaction with overall lab ethics). Evaluative and action oriented items were measured at each level.

At the situation-level, *experimenter evaluations* were measured concerning nine dimensions of the experimenter's group values regarding positive ingroup (i.e., participant) treatment (e.g., whether she was; helpful, professional, fair; $\alpha = .90$). *Outcome fairness evaluation* with credit allocation was measured with two items as an index of distributive justice (e.g., The credit(s) I was offered for my participation were fair; $r = .39$). Eight items measured *complaint tendencies* concerning experimental conditions (e.g., I felt like withdrawing from the study; $\alpha = .72$). Additionally, social effects of the manipulation were measured using a two item *entitativity* scale (The other participant(s) and I felt united; acted as one; $r = .74$).

At the system level, *dissatisfied ethical evaluations* were measured with two items (Do you think more should be done to protect participant welfare, Ethical standards are not enforced strictly enough; $r = .45$). Three items measured *action tendencies*, but only two were included in the final scale due to low alpha reliability (Take steps to tighten ethical standards and related policies aimed at participant welfare protection; Increasing initiatives to make participants more aware of what is acceptable experimental content; $r = .41$). Participants were also asked to give their age, gender and number of studies currently participated in. At the end of the study participants were debriefed.

Results and discussion

Manipulation check

First, we verified participant responses to the questions: 98.15% of answers matched the condition-based

Table 2 Bivariate Correlations for Action (Upper Diagonal) and Reflection (Lower Diagonal) Conditions (Study 1)

	1	2	3	4	5	6
1 Entitativity	–	–0.03	–0.42	0.12	–0.05	0.20
2 Experimenter evaluation	–0.54*	–	0.51	–0.73**	–0.42	–0.58*
3 Outcome fairness evaluation	–0.41	0.60*	–	–0.29	–0.75**	–0.68*
4 Complaint tendencies	0.30	–0.66**	–0.26	–	0.31	0.51
5 Dissatisfied ethics evaluation	0.46	–0.18	–0.02	0.48 [~]	–	0.62*
6 System-level action tendencies	0.50 [~]	–0.19	0.25	0.05	0.22	–

[~] $p > .08$, * $p < .05$, ** $p < .01$.

instructions. Independent samples t tests revealed that in the action condition, individuals thought substantially more about the experimenter's actions ($M = 5.83$, $SD = .39$) than in the reflection condition ($M = 4.38$, $SD = 1.36$; $M_{\text{difference}} = 1.46$, $SE = .41$, 95% CI: .62, 2.29, $t(26) = 3.69$, $p < .002$, $d = 1.46$). Surprisingly, the difference in thinking about experimenter intentions was opposite than expected, although only a weak effect ($M_{\text{action}} = 5.00$, $SD_{\text{action}} = .56$; $M_{\text{reflection}} = 4.63$, $SD_{\text{reflection}} = 1.62$; $M_{\text{difference}} = .38$, $SE = .44$, 95% CI: $-.54$, 1.29 , $t(26) = .77$, $p = .45$, $d = .31$).

Additional checks on the manipulations were also carried out. The relational measures showed no differences in collective relations between participants and experimenters ($M_{\text{action}} = 2.50$, $SD_{\text{action}} = 1.09$; $M_{\text{reflection}} = 2.88$, $SD_{\text{reflection}} = 1.41$; $M_{\text{difference}} = -.38$, $SE = .49$, 95% CI: -1.38 , $.63$, $t(26) = .77$, $p = .45$, $d = .30$), although for individual relations between the participant and experimenter an effect seems more plausible given the only very slight overlap with zero ($M_{\text{action}} = 2.67$, $SD_{\text{action}} = .98$; $M_{\text{reflection}} = 2.00$, $SD_{\text{reflection}} = .82$; $M_{\text{difference}} = .67$, $SE = .34$, 95% CI: $-.03$, 1.37 , $t(26) = 1.96$, $p = .06$, $d = .74$). Overall, the manipulation did not appear to strongly alter the proximity of relations between participants and experimenters. Perhaps more importantly, both the mean differences in total correct recall of the memory task ($M_{\text{action}} = 16.00$, $SD_{\text{action}} = 3.02$; $M_{\text{reflection}} = 16.88$, $SD_{\text{reflection}} = 3.96$; $M_{\text{difference}} = -.88$, $SE = 1.37$, 95% CI: -3.70 , 1.95 , $t(26) = .64$, $p = .53$, $d = .25$), and the global local task ($M_{\text{action}} = 5.83$, $SD_{\text{action}} = 1.03$; $M_{\text{reflection}} = 5.69$, $SD_{\text{reflection}} = 1.45$; $M_{\text{difference}} = .15$, $SE = .49$, 95% CI: $-.86$, 1.16 , $t(26) = .30$, $p = .77$, $d = .12$)¹ strongly overlapped with zero. This confirms that abstract and concrete processing were not induced, but instead reflection and action mindsets. We consequently conclude that the manipulation was adequate: The action mindset functioned as expected, and although the reflection manipulation check was not wholly satisfactory, further checks confirmed that our manipulation did not induce unwanted effects of construal-level or altering the relation between experimenter and participant.

¹This result was replicated in Study 2; there were no substantive differences between the action condition ($M = 4.86$, $SD = 1.86$) and the reflection condition ($M = 4.64$, $SD = 1.55$; $t(118) = 0.70$, $p = .49$, $d = 0.13$).

Main analysis

Relations within action and reflection mindsets

There were only two strong cross-mindset differences: Fairness evaluation was more strongly negatively related to unethical evaluations ($r_{\text{difference}} = .76$, 95% CI: .14, .95) and action tendencies ($r_{\text{difference}} = .79$, 95% CI: .22, .96) within an action mindset, suggesting that action mindsets may encourage distinct aspects of one construct (i.e., situational and system injustice) to become more interchangeable. No other notable effects emerged ($r_{\text{difference}} < .49$, 95% CI: $-.29$, .89). However, within the reflection condition, there was a tendency to show strong positive associations between group (i.e., entitativity) and injustice awareness (e.g., lower experimenter evaluation, higher action tendencies) that were absent within the action mindset (see Table 2). This suggests that, reflection mindsets may more readily induce relations across qualitatively different (i.e., group and injustice) constructs.

Critical awareness: group and injustice effects

Table 3 shows that the action condition engendered higher feelings of entitativity compared to the reflection condition, an effect that seems quite strong (see Figure 1). Analysis of video-recorded interactions complement those findings by showing that the action condition also showed higher sociality (elevated levels of eye contact during instructions; $\chi^2(1, N = 28) = 7.00$, $p < .009$). Conversational engagement and smiling during conversations showed ceiling effects that prevented analyses (i.e., there was not enough variance in these behaviors to support analyses). Thus, participants in an action mindset felt and behaved as more interconnected with one-another, than participants in the reflection condition.

Despite this, no differences emerged for the injustice variables, and low levels emerged overall, indicating the absence of critical awareness. Given this it is unsurprising that no sizeable effects emerged on tendencies toward collective action.

In sum, Study 1 replicated findings from the pilot. Analyses of the manipulation indicate that the action manipulation is sound. There is consistent support for the efficacy of the

Table 3 Means, Standard Deviations, and Independent Samples *t* test Investigating the Effect of Condition (Study 1)

	Condition		T Test		
	Action	Reflection	T value	CI of difference	Cohen's <i>d</i>
Social effects					
Entitativity	3.79 (0.69)	3.07 (1.05)	2.09*	0.01, 1.43	0.81
Injustice effects					
Experimenter evaluation	4.03 (0.39)	3.94 (0.61)	0.43	−0.33, 0.50	0.17
Outcome fairness evaluation	4.64 (0.39)	4.44 (0.48)	1.19	−0.15, 0.55	0.46
Complaint tendencies	1.58 (0.55)	1.51 (0.33)	.451	−0.27, 0.42	0.17
Dissatisfied ethical evaluations	2.29 (0.75)	2.03 (0.46)	1.13	−0.21, 0.73	0.42
Collective action effects					
Action tendencies	3.17 (0.62)	2.88 (0.87)	0.99	−0.31, 0.93	0.39

Note. Scales were tested with equal variances assumed (all Levene's tests p 's < .08). There was one exception, the mindset conditions evidenced significantly different variances for entitativity ($F(1,24) = 6.36$, $p < .02$), which was, therefore, tested with equal variances not assumed. Testing assuming equal variances resulted in a marginally non significant result ($t(24) = 2.02$, $p = .054$).

* $p < .05$.

Figure 1 Entitativity according to condition (Study 1), with error bars.

action manipulation, with effects across the pilot and Study 1 suggesting that the real difference may be in the range of 0.62–1.38. Support for the reflection manipulation is much weaker, with both estimates of mean differences containing zero. Importantly, the group effects of mindset were consistent across both studies: Participants in the action mindset

condition evidenced stronger entitativity compared to those in the reflection mindset condition (indicating a potentially substantial difference between action and reflection mindsets in the range of 0.11–1.43). This did not, however, contribute to substantively higher subjective injustice: no critical awareness emerged.² The social effects of action versus reflection across the pilot and Study 1, thus, suggest that action mindsets consistently and quite strongly increased group unity.

To gain a deeper insight into the underlying process motivating these social effects, Study 2 manipulated category membership (ingroup vs. outgroup) and mindset (action vs. reflection). If observed social effects evidenced by the action mindset are group-based, they should occur in contexts with a-priori shared category membership (i.e., participants are ingroup), but not when there is no such shared category (i.e., participants are outgroup). We consequently hypothesized that action mindsets would promote group entitativity, but only in ingroup (i.e., not outgroup) settings.

Study 2

Method

Sample and design

One-hundred-and-twenty international psychology students participated in exchange for course credit. Two participants who failed the group manipulation check were removed, leaving 118 participants (32 male, 81 female, 5 unspecified) aged 18–47 ($M = 20.99$, $SD = 3.23$). Participants were

²This is unsurprising given that participants were highly suspicious of the present wrapping task (as evidenced in video recording and debriefing), and greeted it as welcome variation in often monotonous study participation.

randomly allocated to a 2 (Mindset: action vs. reflection) $\times$ 2 (Group: ingroup vs. outgroup) between-participants design. Allocation to mindset condition was random but pair-wise, whereas the second factor was completely random.

Procedure

Participants entered the lab in pairs to take part in ostensibly two separate studies: the first on “perceptions in and of the lab,” the second on creativity. Participants first worked individually on a computer, completing the same manipulation and action and reflection ($r = .50$) manipulation check as in Study 1. Participants then progressed to the creativity study, which supposedly sought to explore the consequences of two key processing styles (postductive or antiductive) on creativity, but actually sought to manipulate the group factor of the experiment. First, participants completed the online PTQ:02.17—supposedly a validated questionnaire to distinguish postductive and antiductive processors. They were then (randomly) told they had the same (i.e., ingroup) or different (i.e., outgroup) processing styles by the experimenter: this was the group manipulation. The experimenter then led participants to a central table for two creativity tasks, placing a sign with participants’ processing style in front of each.

Unjust event

Participants completed a 1-minute speed-drawing task, in which they drew a cup and pencil set. The experimenter then thanked participants, collected their drawings and visibly screwed them up and threw them in the bin. This disrespectful action comprised the unjust event. Participants then completed a 5-minute Lego building task, during which the experimenter left the room to make a phone-call. This gave participants the opportunity to interact and use the opportunity to code their task-behavior as individual or collective—however, all participants worked individually, thus, we excluded this from the analysis.

Measures

Participants then completed a “creativity questionnaire,” designed to measure group identity and work satisfaction. All items were scored on a 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree). Measures included *entitativity* (Jans, Postmes & Van der Zee, 2011, 4 items; $\alpha = .93$) and *identification* with the participants (Postmes, Haslam & Jans, 2013; 4 items, e.g., I identify with this group of participants; $\alpha = .88$).

The faculty evaluation form was a shortened version of that used in Study 1 focusing on perceptions of injustice and collective action tendencies. The *situation-level* section contained one evaluative and two action orientated scales.

Participants rated their *affective evaluations* of their study experiences using three items (Participating in this study made me feel, happy (recoded), angry, anxious; $\alpha = .71$). *Complaint tendencies* were measured with three items (I felt uncomfortable, felt misled, thought about complaining; $\alpha = .69$), and two items measured *situation-level action tendencies* (Revising the content of this study, Sanctioning the experimenter hosting this study; $r = .32$). The *system-level* section asked about the laboratory system. *Dissatisfied ethics evaluation* was measured with three items (Ethical standards are not enforced strictly enough, Ethical standards effectively protect participants (recoded), Do you think more should be done to protect participant welfare; $\alpha = .60$). Finally, *system-level action tendencies* contained two items measuring support for setting up a new student committee which would give students a greater say about the lab (To what extent would you support the formation of this committee, would you be interested in joining the student committee; $r = .60$). Finally, participants were debriefed.

Results and discussion

Manipulation check

An independent samples t test indicated that participants in the action mindset condition scored marginally significantly higher on the action check ($M = 5.68$, $SD = .96$) than the reflection condition ($M = 5.35$, $SD = .87$; $M_{\text{difference}} = .32$, $SE = .17$, 95% CI: $-.01, .66$, $t(116) = 1.93$, $p = .06$, $d = .36$). The reflection check (with equal variances not assumed according to Levene’s test; $F(116) = 4.77$, $p < .04$) also moved in the expected direction, though more weakly ($M_{\text{action}} = 5.03$, $SD_{\text{action}} = 1.18$; $M_{\text{reflection}} = 5.28$, $SD_{\text{reflection}} = .96$; $M_{\text{difference}} = -.25$, $SE = .20$, 95% CI: $-.64, .15$, $t(106.48) = 1.24$, $p = .22$, $d = .23$). Thus, manipulation checks revealed expected differences, quite clearly for action and more weakly for reflection.

Main analysis

Relations within action and reflection mindsets

As in Study 1, bivariate correlations indicate that group and injustice variables tended to be unrelated within the action mindset, regardless of shared category membership (see Table 4). However, different aspects of group (i.e., entitativity and identification) were significantly more strongly related in the action ingroup ($z = 3.08$, $p < .002$) than action outgroup. No differences were found concerning relations within injustice (all p ’s $> .09$). Thus, an action mindset encourages distinct aspects of group to become more interchangeable in a group context only.

Table 4 Bivariate Correlations for Action (Upper Diagonal) and Reflection (Lower Diagonal) in the ingroup (top half) and outgroup (bottom half) conditions (Study 2).

	1	2	3	4	5	6	7
Ingroup condition							
1 Entitativity	–	.91**	.11	.11	.09	–.08	.20
2 Identification group	.72**	–	.11	.05	.10	–.11	.31
3 Experience evaluation	.51**	.54**	–	–.45*	–.27	–.35 [^]	–.15
4 Complaint tendencies	–.37*	–.45*	–.52*	–	.14	.31	.07
5 Situation-level action tendencies	–.29	–.45*	–.47**	.67**	–	.09	.31
6 Dissatisfied ethics evaluation	–.34 [^]	–.17	–.33 [^]	.39*	.45*	–	–.04
7 System-level action tendencies	.35 [^]	.15	.28	–.24	–.16	–.03	–
Outgroup condition							
1 Entitativity	–	.57**	–.31	.12	.30	–.01	–.22
2 Identification group	.81**	–	–.02	.53**	.19	.15	–.05
3 Experience evaluation	.39*	.47**	–	–.28	–.09	–.25	.31
4 Complaint tendencies	–.18	–.25	–.66**	–	.30	.44*	.19
5 Situation-level action tendencies	.31	.12	.19	.03	–	–.15	.10
6 Dissatisfied ethics evaluation	–.18	–.08	–.31	.31	–.35 [^]	–	–.12
7 System-level action tendencies	.12	.13	.15	.11	–.09	–.24	–

[^] $p > .08$, * $p < .05$, ** $p < .01$.

Stronger (negative³) interrelations between group and injustice variables were found in the reflection mindset, ingroup condition only. However, in most cases the differences between ingroup and outgroup conditions were not significant.⁴ Despite this, shared group categorization appears to somewhat facilitate relations between different indices of injustice, which were generally significantly positively related, but marginally related and at times negative in the outgroup condition. Indeed, situation-level action tendencies were significantly more positively associated with complaint tendencies ($z = 2.92$, $p < .004$) and overall system-level ethical dissatisfaction ($z = 3.16$, $p < .002$) in the ingroup than outgroup condition.

Critical awareness: Group and injustice effects

Results largely confirmed our hypothesis. Strong and consistent evidence indicated that group identity was especially high in the *ingroup action* condition (see Table 5). There were no main effects of mindset, and all group main effects

were qualified by a two-way interaction. Unsurprisingly, ingroup conditions tended to score higher on group identity variables than outgroup conditions, but importantly only the ingroup action condition varied from the outgroup (Mean difference_{entitativity} = 1.51, $SE = .40$, $p < .001$; Mean difference_{identification} = 1.26, $SE = .35$, $p < .001$), this was not the case for the reflection in/outgroup difference (Mean difference_{entitativity} = .38, $SE = .38$, $p = .36$; Mean difference_{identification} = .41, $SE = .33$, $p = .22$). But importantly, this effect was driven by the *ingroup action* condition: The ingroup action condition showed greater entitativity (see Figure 2) and identification with fellow group members, as compared to the outgroup action condition. Action mindsets thus promoted a stronger group identity (across diverse indicators of groupness), but only when they were activated in the presence of another ingroup member. Notably, however, and in line with the previous study, there was no effect of condition on injustice.

Critical awareness and collective action orientations

Although there was no significant influence of conditions on the action variables, system-level action tendencies displayed a marginally significant cross-over interaction ($p < .06$), whereby the ingroup reflection and outgroup action condition showed the greatest support for the establishment of a new student committee. In line with correlational evidence within the reflection mindset condition, groups with lower entitativity were most likely to feel the need for greater student control over ethical guidelines.

To test possible suppression effects of entitativity, a moderated mediation model (Model 8; Hayes, 2013) was run

³This may be because the more positive group experiences in the action condition reduced injustice perceptions. A mediation model was consistent with this reasoning: Entitativity positively predicted affective experience ($B = 0.11$, $SE = 0.04$, $t(115) = 2.97$, $p < .005$), and negatively predicted dissatisfaction with ethics ($B = 0.08$, $SE = 0.04$, $t(115) = 2.04$, $p < .05$). This latter effect was fully mediated ($B = 0.05$, $SE = 0.04$, $t(114) = 1.23$, $p > .21$) by immediate affective experience ($B = 0.30$, $SE = 0.10$, $t(114) = 2.99$, $p < .004$; $z = 2.11$, $p < .05$). This final model explains 10.5% of variance in ethical dissatisfaction, $F(2,114) = 6.69$, $p < .003$.

⁴There were two exceptions: in the ingroup condition, compared with the outgroup condition, action tendencies were more negatively related to entitativity ($z = 2.27$, $p < .03$) and identification ($z = 2.26$, $p < .03$). These effects should not be overstated given capitalization on chance.

Table 5 Means, Standard Deviations and Analysis of Variance Testing the Effect of Mindset and Group Condition (Study 2)

	Action		Reflection		ANOVA			Partial eta		
	Ingroup	Outgroup	Ingroup	Outgroup	Mindset (M)	Group (G)	M × G	M	G	M × G
Social effects										
Entitativity	3.71 (1.76)	2.20 (1.06)	2.81 (1.68)	3.16 (1.35)	0.01	4.38*	11.22***	.00	.04	.09
Identification group	3.91 (1.45)	2.65 (1.24)	3.10 (1.18)	3.51 (1.32)	0.01	3.14^	11.91***	.00	.03	.09
Injustice effects										
Experience evaluation	5.55 (0.54)	5.33 (0.63)	5.41 (0.78)	5.36 (0.62)	0.19	1.19	0.49	.00	.01	.00
Complaint tendencies	1.69 (0.67)	1.74 (0.84)	1.62 (0.75)	1.83 (0.8)	0.00	0.81	0.30	.00	.01	.00
Dissatisfied ethics evaluation	2.82 (0.67)	3.07 (0.8)	2.89 (0.61)	2.8 (0.74)	0.60	0.39	1.67	.01	.00	.01
Collective action effects										
Situation-level action	2.09 (0.78)	2.38 (0.88)	2.07 (0.87)	2.03 (0.77)	1.44	0.65	1.06	.01	.01	.01
System-level action	3.45 (0.77)	3.54 (.96)	3.87 (.83)	3.38 (.93)	.06	1.54	3.21^	.01	.01	.03

^ $p < .08$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 2 Entitativity according to mindset and group conditions (Study 2), with error bars.

with mindset (action = 1, reflection = 0) entered as the independent variable, group (ingroup = 1, outgroup = 0) as the moderator, entitativity as the mediator, and system-level action as the outcome variable (See Figure 3). This model reflects our theoretical expectations that, relative to reflection mindsets, action mindsets suppress injustice responses, but can increase them indirectly, though a sense of entitativity. Significant interaction effects indicated that both direct effects (of mindset on system-level action tendencies; $t(113) = 2.70$, $p < .009$) and indirect effects (through entitativity;

$t(113) = 3.67$, $p < .0005$) were moderated by group (see Figure 3). The significantly negative direct effect of action mindset in ingroup conditions on system-level action intentions ($B = -.58$, $SE = .23$, 95% CI: -1.03 , $-.12$, $p > .02$) was somewhat counteracted by the significantly positive indirect path through entitativity ($B = .10$, $SE = .06$, 95% CI: $.01$, $.29$, $p < .05$). Both direct ($B = .32$, $SE = .22$, 95% CI: $-.13$, $.78$, $p = .16$) and indirect ($B = -.09$, $SE = .09$, 95% CI: $-.25$, $-.01$, $p < .05$)⁵ effects of action mindset in outgroup conditions were negative and more marginal. Thus, although action mindsets increase the group component of critical awareness (relative to reflection mindsets), they suppress the injustice component.

In sum, results supported our hypothesis that action mindsets evoked a stronger sense of group unity and identification, but only when individuals shared a group categorization. In contrast, if anything a reversal of this pattern was observed in reflection mindsets, whereby the reflection outgroup condition had a slightly elevated sense of group in comparison to its ingroup counterpart. Although few effects emerged for group injustice and thus critical awareness, findings suggest that the same action mindset that evoked a sense of group may suppress a sense of group injustice, but only in an ingroup context. Indeed, a moderated mediation model confirmed that entitativity suppressed system-level action tendencies.

General discussion

Across three studies, we examined the relative efficacy of action and reflection mindsets to evoke critical awareness (i.e., the subjective awareness of objective group injustice). We used the pilot and first experiment to develop the hypothesis

⁵We tested the same model for situation-level action tendencies, but no notable relations were found.

Figure 3 Moderated mediation model regressing system-level action tendencies on Mindset (action = 1, reflection = 0), group (ingroup = 1, outgroup = 0), and entitativity (Study 2), * $p < .05$, ** $p < .01$.

that action (rather than reflection) mindsets are more efficacious in promoting group entitativity, although this may not translate into subjective injustice and thus critical awareness. This hypothesis was supported in Study 2, which also confirmed the group-based nature of this effect: Action mindsets increased group entitativity and identification, but only when individuals shared an ingroup categorization. However, even though our experimental procedure exposed participants to (at least what we thought was) blatantly inappropriate treatment, injustice perceptions were low, and thus critical awareness did *not* emerge. We discuss below whether this illustrates the inherent difficulties in getting people to challenge existing power structures, known so well from research on collective action and system justification.

Implications

Two aspects of critical awareness: Group and injustice

Our findings highlight that evoking critical awareness can be a challenge. In some sense this may not be so surprising: many have reflected on the remarkable tolerance for group-based injustice, even concerning the disadvantaged group themselves. Indeed, merely recognizing inequality or disadvantage is not the same as experiencing it as subjective injustice (see also Ellemers, 1993; Wright et al., 1990). Although much research has focused on how to translate critical awareness into collective action (Duncan, 2012; van Zomeren, 2013), the current findings suggest that mere awareness may not be a strong enough basis. Importantly, developing critical awareness may require the incorporation of a normative and action-oriented identity into the self-concept, in a similar way as collective action does (Simon & Klandermans, 2001); which presents an interesting bridge between the discrimination and collective action literatures.

More intriguing is the main finding of these studies, that action mindsets increased group entitativity, whilst suppressing perceptions of injustice. The implication is that where the

group aspect of critical awareness is evoked, this can actually be an *obstacle* to de-submerging the self from an oppressive social reality. This could be reflected in, for example, women in the mid-20th century rallying together to support each other in fulfilling their disadvantaged roles, rather than stand against them. Thus, the emergence of a sense of community (or group entitativity) may actually prevent individuals from perceiving objective injustices. This may be because motivations to maintain a positive image of the ingroup (Tajfel, 1982) or the social system (Jost & Hunyady, 2002) or to prevent awareness of injustice (Crosby, Iyer & Sincharoen, 2006). To legitimize the system or superordinate ingroup, groups can endure substantial and prolonged instances of disadvantaging and prejudiced behavior.

But since we did not find any direct evidence for any of these plausible explanations, it is clear that this intriguing finding merits follow-up research. Such follow-up research could also take into account the existence of possible moderators of this effect. One explanation for why participants did not perceive injustice in our studies is a lack of clear, normative group standards, which could have alerted group members to illegitimate treatment. Most prominently, in Study 2 the minimal groups utilized had no normative standards to guide judgments of the acceptability of treatment and appropriate collective responses. Indeed, a meaningless group would struggle to produce meaningful behavior required for collective action (Livingstone & Haslam, 2008). Thus, our studies hint at a key factor moderating the role groups can play promoting injustice: the normative content of a group's identity (van Zomeren, Postmes, & Spears, 2008).

Two (action and reflection) mindsets

In general, we found that action and reflection mindsets played different roles evoking the two group/injustice aspects of critical awareness. This also opens the door to a host of interesting possibilities for follow-up research. The action mindset consistently evoked a stronger sense of group. Moreover, Study 2 identified a necessary condition for this: ingroup categorization. Only when individuals shared a group categorization with the other participant did the action mindset significantly increase entitativity and identification: a combination of mindset and context are required to obtain this effect. Although it is possible that the expectation of being a group simply led to a confirmation bias in social perceptions (i.e., over interpreting signals as consistent with "groupy" behavior), video recordings from Study 1 found evidence for increased social contact in the action condition. This could suggest that action mindsets rely on intuition and expectation to drive social behavior, not just social perceptions (Häfner & Trampe, 2009). Thus, when action mindset and context (i.e., ingroup categorization and interaction

opportunities) align, action mindsets can be highly efficacious in evoking a sense of group.

The second component of critical awareness—subjective injustice—was not consistently evoked by either mindset, suggesting that this may be the largest obstacle in evoking critical awareness. Although we expected that reflection might expose injustices by evaluating and recombining information, we did not find evidence for this. Nevertheless, correlations within mindsets confirm that reflection mindsets did stimulate participants to make the predicted connections *between* group and injustice variables, weaving together these otherwise unrelated constructs. Thus, while our studies show that the overall level of entrenchment in the system was not overcome by reflection, they also show that reflection did encourage people to make the links between groupness and injustice. Together, these findings suggest that participants may have reflected *within* the system (e.g., reinforcing why things are the way that they are), which made it difficult for them to perceive group injustice. Moreover, within the reflection mindset, group indices were consistently *negatively* associated with injustice perceptions (especially in an ingroup condition; see Study 2), suggesting a suppression effect. Thus, the more individuals identified with their group, the less injustice they perceived, consequently offsetting any progress toward developing critical awareness. This aligns with the proposition in cultural theory that being part of the group (rather than separate from it) makes individuals more accepting of the group's position in the hierarchy (Douglas, 1978).

Notably, the mindsets explored in the present study are distinct from abstract and concrete level processing investigated in Construal Level Theory (CLT; Liberman & Trope, 1998; Trope & Liberman, 2010). Although some aspects seem related—for example, reflection and abstract processing are both linked to consideration (of often) superordinate goals, while action and concrete processing tend to focus on (often detailed) planning—these similarities apply only at surface-level (for a discussion on this topic see Büttner et al., 2014, p. 1257). Importantly, reflection and action mindsets rely on processes inherent in *both* abstract and concrete processing (e.g., reflection mindsets may require both consideration of desirability and feasibility information, linked to separate abstract and concrete levels, respectively; see Büttner et al., 2014). Furthermore, action and reflection mindsets are not linked to psychological distance as CLT requires. Thus, in combination with null effects obtained on the Kimchi and Palmer (1982) task (Study 1), we conclude that our findings apply to action/reflection mindsets, rather than processing levels.

In sum, this research highlights two potential psychological mechanisms through which structural group-based injustice may be perceived as (il)legitimate and (un)acceptable. First, illegitimacy may be ignored or overlooked, especially

when it (somewhat) aligns with group norms (e.g., following experimenter orders). This is likely driven by an action mindset. Second, reflecting on injustices may lead individuals to consider the rationalizations for disadvantage (Sampson, 1986), which justify (and, therefore, obscure) its existence (see also Costa-Lopes, Dovidio, Pereira & Jost, 2013), bolstering system support. Thus, neither action nor reflection, separately, may suffice to promote critical awareness.

Practical implications

The strong sense of group and weak sense of injustice associated with action mindsets suggests that they may be optimally suited for promoting movements of *crisis* (Kerbo, 1982). In crisis, injustices are blatant and in need of urgent response. Here, the narrowing of focus typical of an action mindset seems to be ontologically congruent with anger-motivated movements that emerge from crisis (Kerbo, 1982; van Zomeren, Spears, Fischer & Leach, 2004). In contrast, the theoretical basis of the reflection mindset suggests that it may be best suited for using its rich informational focus to promote ideologically motivated movements (e.g., movements of *affluence*; Kerbo, 1982). However, because social movements often seek to induce some combination of the two, action and reflection mindsets may be best utilized in iterative interaction (i.e., there is a time and a place for each). Whereas the reflection mindset may be particularly important in critical analysis of group relations and power structures (Kutlaca, van Zomeren & Epstude, 2015), the action mindset may be crucial in translating ideas into (group) practice. Thus, action and reflection—as Freire (1996) noted—may be most effectively evoked in interactive praxis.

Limitations and future research

Our studies serve as a reality check that reflection alone may not be sufficient to evoke critical awareness. Although we think it is valuable for the literature to explore cases both when critical awareness and action is not evoked, as well as those in which it is (a focus which currently dominates the literature; van Zomeren, 2013), null effects are notoriously difficult to interpret. It is, therefore, important to reflect on why we struggled to promote critical awareness through reflection. It appears that our focus on the psychology lab presented a substantial challenge in this domain. First, students' goals when participating in studies (to complete a study and gain credits) may often be incongruent with a reflection mindset and thus weaken the reflection manipulation. Conducting these studies in a context more conducive to promoting awareness may be wise. Second, relatively low means for action tendencies across all studies indicates that participants might expect (and, therefore, more readily accept) their lab experiences to be artificial contexts in which

they are asked to perform peculiar acts. Therefore, reflection on their experiences might be less likely to prime illegitimacy or injustice. Although we chose this context in part because it is interesting to study situations in which power differences exist that lend themselves quite well to (subtle or difficult to uncover) injustice, these studies may not provide the strongest test for a first exploration of our hypothesis. It would, therefore, be valuable if future research would focus on testing for benefits of the reflection mindset in environments in which (a) creative and critical thinking is encouraged (e.g., liberal arts colleges, think-tanks), and (b) there are clearer expectations for how the powerful group ought to behave.

Another limitation concerns our aim to evoke reflection and action independently. Although groups were often distinguishable in the extent that they thought about behaviors (i.e., action), they were less distinguishable with regards to the depth of their thought (i.e., reflection). This is likely because action more easily induces reflection than vice versa. Indeed, the literature shows many examples of interdependence between action and reflection (e.g., learning through action; Mezirow, 1981). Despite this, we are confident that our manipulation generated meaningful, theoretically relevant differences between action and reflection mindsets (for instance as evidenced by patterns of correlations within conditions). Nevertheless, future research could manipulate overlap between action and reflection to test whether their co-occurrence may evoke critical awareness.

To more fully understand collective action involvement, we believe we should consider the development of critical awareness as the first step of a mobilization attempt (Duncan, 2012; Klandermans, 1997), which paves the way for collective action through a normative and action-oriented identity (van Zomeren, 2013). Importantly, our findings emphasize that the practice of simply enacting group identi-

ties may only further entrench people in unjust systems. Development of (new) group meanings—for one's own identity and relation to other (powerful) groups and the system as a whole—therefore, appears to be crucial for enabling social change. Thus, echoing our original quote from Freire (1996, p. 33) it can be argued that the focus of action and reflection is not on the transformation of society *per se*, but the transformation of the self, which critically makes social change possible.

In sum, this research qualifies the prevailing view that social unity is a necessary precursor to collective action (e.g., the notion that solidarity or a sense of shared identity are essential preconditions for action; van Zomeren et al., 2008). Solidarity may surely be essential to undertaking effective collective action, once that course of action has emerged as being normative. But prior to this, solidarity may actually dampen the enthusiasm for system change. Notwithstanding its ambivalent effects, we believe that the demonstration of a causal relationship between action mindsets and the emergence of a sense of entitativity in intra-group collaborations is an important step ahead. The fact that once co-action is on one's mind, a sense of unity emerges is, we believe, of fundamental importance to understanding how collectives form, either to resist systemic injustice or, as the case may be, to reinforce the system by complying with it.

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