

Social Disadvantage and the Self-Regulatory Function of Justice Beliefs

Kristin Laurin
University of Waterloo

Gráinne M. Fitzsimons and Aaron C. Kay
Duke University

Five studies support the hypothesis that beliefs in societal fairness offer a self-regulatory benefit for members of socially disadvantaged groups. Specifically, members of disadvantaged groups are more likely than members of advantaged groups to calibrate their pursuit of long-term goals to their beliefs about societal fairness. In Study 1, low socioeconomic status (SES) undergraduate students who believed more strongly in societal fairness showed greater intentions to persist in the face of poor performance on a midterm examination. In Study 2, low SES participants who believed more strongly in fairness reported more willingness to invest time and effort to achieve desirable career outcomes. In Study 3, ethnic minority participants exposed to a manipulation suggesting that fairness conditions in their country were improving reported more willingness to invest resources in pursuit of long-term goals, relative to ethnic minority participants in a control condition. Study 4 replicated Study 3 using an implicit priming procedure, demonstrating that perceptions of the personal relevance of societal fairness mediate these effects. Across these 4 studies, no link between fairness beliefs and self-regulation emerged for members of advantaged (high SES, ethnic majority) groups. Study 5 contributed evidence from the World Values Survey and a representative sample (Inglehart, Basañez, Diez-Medrano, Halman, & Luijckx, 2004). Respondents reported more motivation to work hard to the extent that they believed that rewards were distributed fairly; this effect emerged more strongly for members of lower SES groups than for members of higher SES groups, as indicated by both self-identified social class and ethnicity.

Keywords: justice beliefs, self-regulation, motivation, social disadvantage

An undeserving colleague gets promoted, while a deserving one is laid off. Employees' pension funds are stolen by greedy executives as the company goes under. Thousands of children in third world nations die of illnesses easily treated in the first world. Women receive less pay for equal work. Ethnic minorities face discrimination in the job market. If asked, most people could effortlessly produce a long list of injustices, some drawn from first-hand experience and others from society at large. And yet, despite this knowledge, most people tend to maintain a view of the world as relatively fair and just (Hafer & Bègue, 2005; Jost & Banaji, 1994; Lerner & Miller, 1978). Indeed, even people most at risk for unfair treatment—that is, members of socially disadvantaged groups, such as those low in socioeconomic status (SES) and minority group members—often believe that the world largely operates in a fair and legitimate manner (Crosby, 1982; Glick & Fiske, 2001; Jost, Banaji, & Nosek, 2004; Jost, Pelham, Sheldon, & Sullivan, 2003; Major, 1994; but see Major, Kaiser, O'Brien, & McCoy, 2007).

Are there any benefits to believing that an obviously unfair world is reasonably fair (Dzuka & Dalbert, 2002)? For those who typically perpetrate or benefit from injustice—members of advantaged groups—the benefits of such beliefs are easy to understand: These

beliefs permit continued unfair advantage on an interpersonal level (Walster, Berscheid, & Walster, 1973) and guiltless maintenance of the social hierarchy on a societal level (Montada, Schmitt, & Dalbert, 1986; Sidanius & Pratto, 1999). However, for those who typically suffer from injustice, the benefits of believing in societal fairness are less obvious (Callahan-Levy & Messe, 1979; Jost, 1997; Jost & Burgess, 2000; Jost & Hunyady, 2003; Jost & Thompson, 2000; Major, McFarlin, & Gagnon, 1984; Pelham & Hetts, 2002; Quinn & Crocker, 1999). Nonetheless, theory and research have suggested that members of these groups do not wholeheartedly abandon beliefs in societal fairness (Jost et al., 2004) and do not only experience negative outcomes as a result of those beliefs (Dzuka & Dalbert, 2002, 2007; Jost, Glaser, Kruglanski, & Sulloway, 2003, Study 5; Kluegel & Smith, 1986; Lane, 1962; Lipkus, Dalbert, & Siegler, 1996). This raises an intriguing question: What are the specific functions, if any, that these beliefs serve for members of disadvantaged groups? Experimentally derived answers to this question—demonstrations of precisely how these beliefs benefit members of such groups—remain sparse. In the current research, we hypothesize that the belief in societal fairness offers a specific self-regulatory benefit for members of socially disadvantaged groups, allowing them to more confidently commit to long-term goals. Specifically, by *disadvantaged group* we mean those social groups that have historically experienced adverse social and economic conditions, relative to other social groups, sometimes for illegitimate reasons. For instance, many ethnic and religious minority groups can be described as socially disadvantaged groups, along with more generally, any groups of low SES.

Believing in the Fairness of the World

According to a huge body of literature within social, personality, and organizational psychology, people are motivated to believe

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Kristin Laurin, Department of Psychology, University of Waterloo, Waterloo, Ontario, Canada; Gráinne M. Fitzsimons and Aaron C. Kay, Department of Management, Fuqua School of Business, and Department of Psychology & Neuroscience, Duke University.

Correspondence concerning this article should be addressed to Aaron C. Kay or to Gráinne M. Fitzsimons, 100 Fuqua Drive, Box 90120, Durham, NC 27708-0120. E-mail: aaron.kay@duke.edu or g.f@duke.edu

that their social worlds operate fairly—that is, that people get what they deserve and deserve what they get (Adams, 1965; Jost et al., 2004; Lerner, 1980; van den Bos & Lind, 2002; Walster et al., 1973). Early empirical investigations of the “belief in a just world” demonstrated that exposure to innocent victims elicits a motivated response: When people cannot restore actual justice, they will restore *psychological justice* by altering their perception of the situation so that it appears fair (e.g., Lerner, 1965; Lerner & Miller, 1978). For example, numerous studies have demonstrated that when people cannot provide innocent victims with compensation, they derogate or blame the victims for their misfortune (e.g., Lerner & Simmons, 1966). On the basis of these early findings, Lerner developed just-world theory, which proposes that people have a need to believe that their world is one in which people get what they deserve and deserve what they get (Lerner, 1980). Subsequent research has supported the pervasive influence of this need to maintain fairness beliefs, showing that people tend to rationalize unfairness even when it impacts them personally (for better or worse; see Hafer & Bègue, 2005; Jost & Kay, 2010, for reviews). Research on system justification theory (Jost & Banaji, 1994), in fact, has directly noted the tendency for members of disadvantaged groups to judge their social systems as fair and legitimate, despite the fact that these systems contribute to their disadvantage (Jost et al., 2004).

If humans are motivated to believe that their world is just, this belief likely serves one or more functional purposes, providing benefits to the believer. The present research complements recent social psychological work beginning to explore these benefits. Dalbert and her colleagues (Dalbert, 2002; Dzuka & Dalbert, 2002, 2007; Lipkus, Dalbert, & Siegler, 1996; Otto & Dalbert, 2005) suggested that believing in a just world functions as a positive illusion, and as such that it is correlated with increased well-being and mental health, as well as decreased delinquent behavior (cf. Jost & Hunyady, 2003; Jost & Thompson, 2000). Other theorists have suggested that fairness beliefs can serve to help people cope with feelings of uncertainty (van den Bos, 2001; van den Bos & Lind, 2002), to help satisfy people’s need to feel like autonomous agents (van Prooijen, 2009), to serve needs to identify with and belong to social groups (Lind & Tyler, 1988; Tyler, 1989), and, in the case of system justification, to satiate a range of existential, epistemic, and relational needs (Jost et al., 2004). Thus, research has begun to elucidate benefits that may accompany beliefs in fairness. In the present set of studies, we contribute to this growing body of research by testing the hypothesis that fairness beliefs can also encourage commitment to the pursuit of long-term goals, especially for members of disadvantaged groups (Hafer, 2000; Hafer, Bègue, Choma, & Dempsey, 2005). Before we explain our hypothesis in more depth, we provide a brief background of research on long-term goal pursuit, to situate the contribution of the current research.

Pursuing Long-Term Goals

The pursuit of long-term goals is fundamental to the maintenance of psychological and physical well-being: To build relationships, to provide for family, and to maintain good health, people need to set, initiate, and pursue goals over time (Baumeister, Schmeichel, & Vohs, 2007; Emmons, 1989; Zirkel & Cantor, 1990). However, goals can rarely be accomplished without a

considerable investment of resources: Merely hoping for a wind-fall or a lucky break will likely not help people successfully save for retirement, lower blood pressure, or earn a promotion. Instead, people need to invest effort, self-control, and material resources, typically over an extended period of time (Baumeister, 1998; Baumeister, Vohs, & Tice, 2007; Carver & Scheier, 1990; Heckhausen & Schulz, 1995). Indeed, the goals most often reported as highly important—career goals, financial goals, family goals, and health goals—can take months, years, and decades to achieve (Emmons, 1989; Zirkel & Cantor, 1990).

Research on self-regulation has uncovered a number of internal psychological processes that predict successful goal pursuit over time. For example, the beliefs that people hold about their goals, traits, and abilities can have a strong impact on how willing and interested they are in engaging in long-term goals (Bandura, 1986; Dweck, Chiu, & Hong, 1995). Other variables, such as feelings of power, can also influence how well people are able to regulate their behavior in pursuit of their goals. For example, Guinote (2007) induced some participants to feel powerful by asking them to remember a time when they evaluated others and controlled their outcomes, or by asking them to assume a managerial role relative to another participant’s employee role. Participants led to feel powerful were quicker to both set and act on goals, relative to participants made to feel powerless.

In addition, recent research has uncovered routes through which features of the social environment, external to the individual, can predict successful long-term goal pursuit (Drigotas, Rusbult, Wieselquist, & Whitton, 1999; Finkel et al., 2006; Finkel & Fitzsimons, 2010; Fitzsimons & Finkel, 2010; Rawn & Vohs, 2006). For instance, achieving goals over time is easier in a supportive social environment (Fitzsimons & Shah, 2008), and people’s motivation to pursue their goals is likely higher in such environments (Fitzsimons & Finkel, 2010). In the current article, we extend this theorizing about goal-supportive environments to the domain of societal fairness. Although fairness may not directly help people achieve their goals in the way that supportive others do, fairness makes it sensible for people to invest time, effort, and material resources in pursuit of their goals. Thus, just as people may prefer to pursue goals when immersed in close relationships that they see as promoting their goal progress, we suggest that they will also be more motivated to pursue goals when in social contexts that they see as operating fairly. In the current article, we test how people’s beliefs about the fairness of the social environment impact their motivation to pursue long-term goals.

Linking the Fields of Justice and Self-Regulation: How Believing in the Fairness of the World May Promote the Pursuit of Long-Term Goals

In an early precursor to the thinking tested in the current article, Lerner (1980) suggested that people’s motivation to pursue long-term goals may be dependent on their beliefs in the fairness of the world. In particular, he theorized that people develop a *personal contract* with society, whereby they agree to invest time and effort in order to attain long-term rewards (Lerner, 1977, 1980; Lerner, Miller, & Holmes, 1976). Because people’s lives are organized around important goals, and because pursuing those goals is a costly endeavor, requiring the investment of substantial time and effort, Lerner argued that people need to be confident that sacri-

fices made in the present will pay off in the future. The belief that one's environment is fair provides exactly this assurance: It gives people confidence that their efforts will be duly rewarded, which allows them to continue investing resources in the absence of immediate gain.

Lerner's theorizing implies that fairness is an important part of any goal-supportive environment. Indeed, it suggests that believing in societal fairness is actually necessary to commit to long-term goal pursuit. This implication leads to a hypothesis that has as yet not been explored: People's beliefs about fairness should determine, at least in part, their motivation to pursue their long-term goals. Because achieving most important goals requires the commitment of resources over an extended period of time, people need to believe that their actions will be fairly rewarded to commit self-regulatory resources toward a long-term goal (Hafer, 2000; Lerner, 1980). If goal-directed efforts are not generally rewarded with deserved outcomes, setting and pursuing goals is unlikely to be effective. Imagine a man who hopes to ultimately earn the position of CEO at his father-in-law's company. If he believes that his chances of earning that position are based on his own performance over the years—that is, if he believes that his father-in-law will make an unbiased choice of successor—he will be likely to try hard, putting in extra hours and giving his all to the job, to achieve his long-term goal. However, if he believes that his chances of earning the position are also based on other factors—that is, if he believes that his father-in-law might choose his biological son out of family loyalty, or choose a particular colleague because of a long-standing romantic attraction—he will be less likely to work hard to achieve this long-term goal. In other words, when committing one's efforts to long-term goal pursuit, fairness should matter (Hafer, 2000; Lerner, 1980).

Prior research provides initial support for the importance of fairness beliefs in self-regulation. First, a correlational field study of young male prisoners found that fairness beliefs were positively associated with greater confidence in personal goal achievement (goals such as starting professional training, becoming rich, avoiding future incarceration, etc.; Otto & Dalbert, 2005). Second, research on victim derogation has found evidence that long-term goal focus increases fairness concerns. Merely writing about long-term academic goals (which presumably increases one's focus on long-term goals) led to greater victim derogation (Hafer, 2000). Similarly, people high in chronic orientation toward future goals demonstrated more victim derogation, but only if they were low in *primary psychopathy*, that is, only when they valued deserving their obtained outcomes (Hafer et al., 2005). Thus, although experimental evidence for the hypothesis that people actually calibrate their motivation to pursue long-term goals to their beliefs about societal fairness does not yet exist, there is good support for the general notion that long-term goal focus and justice concerns are psychologically linked.

The Special Case of Members of Disadvantaged Groups

Societal injustice does not carry equal implications for everyone: Objectively speaking, members of certain groups—namely, socially disadvantaged groups—are far likelier to be victims of societal unfairness than members of other groups. In other words, societal unfairness is likely to have more obvious personal impli-

cations for the outcomes of members of disadvantaged groups, which have historically been victims of discrimination. For this reason, we suggest that the link between fairness and self-regulation may be stronger for members of disadvantaged groups. That is, because members of disadvantaged groups are likely more aware than members of advantaged groups that their ability to successfully achieve goals (and recoup their investments of effort and time) could be negatively impacted by unfairness, we propose that they will calibrate their goal investments tightly to their beliefs about societal fairness. Conversely, members of advantaged groups may be aware that societal injustice largely targets others. If so, members of advantaged groups should be less likely than members of disadvantaged groups to consider societal fairness when deciding how much to invest in long-term goals.

This hypothesis is consistent with basic theorizing about the role of expectations in the goal-pursuit process. According to expectancy-value theories of motivation, people's willingness to pursue long-term goals will be shaped by how much they expect to succeed, in addition to how positively they view the goal end state (Atkinson, 1957; Eccles et al., 1983; Feather, 1982; Wigfield & Eccles, 1992). Thus, people's beliefs regarding the relative likelihood that effort and hard work will be rewarded fairly with success are necessary for motivation—simply finding the goal end state desirable is not sufficient. Thus, to the extent that members of disadvantaged groups believe that unfairness exists, they may be concerned that their efforts will not determine their achievement. Thus, their motivation to pursue long-term goals may be more connected with fairness beliefs than that of members of advantaged groups, who may be less likely to deem fairness as relevant for achieving their goals.

Another way of describing this reasoning calls upon the distinction between general fairness beliefs, personal fairness beliefs, and fairness beliefs for others (Lipkus et al., 1996). Because members of disadvantaged groups know that they and their fellow group members are likely targets for discrimination, they know that societal fairness has implications for their own likelihood of fair treatment. Thus, members of disadvantaged groups likely connect their general fairness beliefs to their personal fairness beliefs. As such, the more these individuals believe their society is fair, the more they should expect and perceive fair treatment for themselves. Members of disadvantaged groups who believe in societal fairness should therefore have confidence that their efforts will be fairly rewarded. This confidence should in turn support motivation. Members of disadvantaged groups who see their society as less fair, however, should lack the confidence that their efforts will be fairly rewarded and thus be less motivated to pursue their long-term goals. Members of advantaged groups, on the other hand, may lack the personal and group experiences that would lead them to see societal fairness as relevant to their own treatment and outcomes. Instead, they may view societal fairness as more relevant to others' fair treatment. Thus, their beliefs about societal fairness should have relatively little influence on their own motivation.

Members of disadvantaged versus advantaged groups may also have different overarching or higher order goals with regard to their position in society, and these higher order goals may explain the differential valuing of fairness beliefs. Members of socially disadvantaged groups may pursue their long-term achievement goals primarily to serve an ultimate goal of increasing their posi-

tion in society. Because a change in social status would be possible only if society is fair enough to permit such upward mobility, members of disadvantaged groups may see societal fairness as more relevant to their long-term goal pursuits. In contrast, members of advantaged groups may be concerned primarily with maintaining their positive status, or with small upward change. Because the stakes of this pursuit are lower, in many ways, and because maintaining status is easier than changing status, advantaged group members may not feel that societal fairness is as relevant to these long-term pursuits.

Finally, our hypothesis about the differential links between fairness beliefs and self-regulation for members of socially advantaged and disadvantaged groups is consistent with extensive findings suggesting that status moderates reactions to fairness. Among members of low-status groups, which are typically socially disadvantaged groups, chronically or temporarily heightened fairness beliefs have been shown to increase the perception that their low status is justifiable and legitimate. For example, for low-status group members, activated or endorsed beliefs in a meritocratic society are associated with reduced feelings of personal entitlement (O'Brien & Major, 2009), increased endorsement of stereotypes that justify their group's low status (McCoy & Major, 2007), derogation of fellow group members who make claims of discrimination (Kaiser & Miller, 2001, 2003), and reduced perceptions of discrimination against their own group members (Major et al., 2002). In contrast, among members of high-status groups, which are typically socially advantaged, such fairness beliefs are associated with increased feelings of entitlement, increased derogation of outgroup members who claim discrimination, and increased defense of their group's status in general (e.g., Major et al., 2002). These findings, although they do not directly speak to the hypotheses tested in the current research, provide support for the notion that membership in social groups alters how individuals react to unfairness in important ways.

In summary, then, we suggest that because members of socially advantaged and disadvantaged groups differ in the extent to which they see societal unfairness as holding potential implications for their own outcomes, there should be differences in the extent to which perceptions of societal fairness will facilitate the commitment to goal pursuit for members of advantaged and disadvantaged groups. Specifically, we hypothesize that, relative to members of advantaged groups, members of disadvantaged groups should show a tendency to calibrate their motivation to pursue long-term goals to their beliefs about societal fairness.¹

Overview of Studies

Five studies tested our hypothesis that beliefs in societal fairness facilitate and encourage the commitment to long-term goal pursuit, especially for members of socially disadvantaged groups. Study 1 examined whether the intention to resume goal pursuit after failure (a hallmark of motivation; Atkinson, 1957; Carver & Scheier, 1990; Heckhausen, 1991; Lewin, 1926; Wicklund & Gollwitzer, 1982) is related to (a) people's beliefs in the fairness of society and (b) their SES. Study 2 examined whether participants' motivation to pursue long-term career goals is related to their beliefs in the fairness of society and their SES. Study 3 brought our research question into the lab and examined whether participants' motivation to pursue long-term career goals is affected by (a) an exper-

imental manipulation of societal fairness beliefs and (b) participants' status as members of ethnic majority or minority groups. Study 4 examined whether participants' motivation to pursue long-term career goals is affected by (a) a priming manipulation that manipulates fairness beliefs via a scrambled sentence task and (b) their status as members of ethnic majority or minority groups. This study also examined whether the effect of fairness beliefs on disadvantaged group members' motivation to pursue long-term goals is driven by their beliefs about personal unfair treatment. Finally, Study 5 tested our hypotheses in the context of a large nationally representative sample of respondents from across the globe.

Study 1

In Study 1, we examined the relationship between motivation to pursue long-term goals and the belief that the world operates in a fair and just manner, and we examined how membership in a socially disadvantaged group moderates this relationship. In this study, we measured SES, a straightforward indicator of membership in a socially disadvantaged group. We also measured belief in ultimate justice, or the belief that fairness prevails in the long term. This belief is distinguished from the belief in immanent justice, which is concerned with the immediate fairness of short-term outcomes (see Maes, 1998; Maes & Kals, 2002; Maes & Schmitt, 1999). As noted by Hafer and Bègue (2005), it is a belief in ultimate justice, with its focus on eventual, future outcomes, which is most likely to encourage investment in long-term goals. We predict that SES and fairness beliefs will interact to predict motivation to pursue long-term goals.

We operationalized motivation to pursue long-term goals as undergraduates' commitment to their academic achievement goals after performing poorly on an examination. Specifically, after students received their grades for a course midterm, we asked them to report on both how well they felt they did on the test and how committed they were to performing well on the next test. Persistent motivation in the face of challenges, negative feedback, or poor performance is a hallmark feature of motivation (Atkinson, 1957; Carver & Scheier, 1990; Heckhausen, 1991; Lewin, 1926; Wicklund & Gollwitzer, 1982). Such motivation is also necessary for the pursuit of long-term goals—if the goal pursuer loses steam after encountering difficulty, success (in all but the easiest of tasks) is impossible (Blackwell, Trzesniewski, & Dweck, 2007; Carver & Scheier, 1990; Dweck et al., 1995). Thus, we predicted that for students who felt they performed poorly on the midterm, fairness beliefs would be positively related to commitment to performing well on the next midterm. We expected this relationship to be stronger among participants who report low SES, relative to participants who report high SES. Our predictions are specific to intentions to persist following poor performance, which discriminate those high from those low in motivation (Atkinson, 1957;

¹ Note that we are *not* suggesting that members of disadvantaged groups, who perceive societal unfairness as more personally relevant, are more motivated to see the world as fair than members of advantaged groups, who view societal unfairness as less personally relevant. Both groups of people might be equally motivated to perceive the world as fair, but this motivation might serve different purposes for members of advantaged versus disadvantaged groups.

Carver & Scheier, 1990; Heckhausen, 1991; Lewin, 1926; Wicklund & Gollwitzer, 1982). Persistence following good performance is in fact often reduced among people high in motivation and thus would be hard to distinguish from the already low persistence of people low in motivation (Förster, Liberman, & Higgins, 2005; Liberman & Förster, 2000; Marsh, Hicks, & Bink, 1998; Marsh, Hicks, & Bryan, 1999; Zeigarnik, 1927).

Method

Participants. Forty-five undergraduate students (eight men, 37 women; average age 21.1 years) participated in this study. They were recruited by the teaching assistants for their courses and participated on a purely volunteer basis, receiving no compensation. All participants agreed to complete an initial set of questionnaires and to complete a follow-up questionnaire after a midterm examination in the course.

Procedure. Participants first accessed a website where they could complete the initial questionnaire set, which included two of our independent variables. As a measure of fairness beliefs, participants completed the Belief in Ultimate Justice (BUJ) Scale (Schumann & Ross, 2009; see Anderson, Kay, & Fitzsimons, in press). The scale was validated in a large sample ($N = 800$) as part of mass testing administered at the beginning of the semester. In that sample, the scale showed high internal consistency (Cronbach's $\alpha = .83$) and a .50 correlation with scores on Lipkus's (1991) Global Belief in a Just World (BJW) Scale, a measure of fairness beliefs that has been used extensively in past research.

The BUJ Scale consists of seven items rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*); see the Appendix for specific items. The BUJ Scale showed high internal consistency (Cronbach's $\alpha = .80$). We obtained scores by reverse scoring the two items worded in the direction of weak beliefs in ultimate justice and then averaging scores from all seven items.

Participants subsequently answered questions about their demographic characteristics, including a question about their SES. Because we were interested in the psychological effects of participants' sense of their membership in advantaged (high social status) or disadvantaged (low social status) groups, we opted for a subjective indicator of SES, as opposed to the objective indicators that are sometimes used, such as family income or parental educational achievement. Subjective SES, compared with objective SES, is theorized to be a better indicator of a person's future prospects, opportunities, and resources (e.g., Singh-Manoux, Marmot, & Adler, 2005). Participants rated the following item: "If you had to position yourself on a scale of socioeconomic status (SES), where would you place yourself?" They did so using a 7-point scale ranging from *extremely low SES* to *extremely high SES*. In a separate sample of 72 participants, we found that responses on the subjective SES measure were positively correlated with family income ($r = .70, p < .001$), mother's occupational prestige ($r = .29, p < .02$), and father's occupational prestige ($r = .35, p < .004$).

Approximately one week after participants completed the initial measures, and after they received their grade from a class midterm, they completed a follow-up online questionnaire assessing the third independent variable (perceived performance on the midterm), as well as the dependent variable (commitment to performing well on the next midterm). Participants first rated three items

measuring their perceived performance on the midterm. We chose to measure performance as a subjective perception, rather than use participants' actual grades, because objective measures do not capture the experience of success or failure. To some students, a grade of 70% might represent success beyond their wildest dreams, whereas to others, that same grade represents utter failure. Persistence in the face of failure, as a hallmark feature of motivation, requires not necessarily a low grade in an objective sense but rather the *experience* of receiving a grade that falls short of one's own expectations for oneself.

Participants first used a 5-point scale to complete the following statement: "Was your grade . . ." The points on the scale ranged from *much lower than expected* to *much higher than expected*. They then rated how happy and satisfied they were with their grade, using 7-point scales ranging from *extremely unhappy/dissatisfied* to *extremely happy/satisfied*. We standardized participants' ratings to make the different scales comparable and combined them into a single index of perceived performance, producing a measure with high internal consistency (Cronbach's $\alpha = .89$).

Participants also rated three items assessing their commitment to perform well on the next midterm. Specifically, participants used a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*) to respond to the following items: "Please rate the extent to which you plan to work hard to do well on the next midterm," "Please rate how important it is to you to do well on the next midterm," and "Please rate your willingness to make sacrifices in order to do well on the next midterm." Items were averaged into a single index of commitment, producing a measure with high internal consistency (Cronbach's $\alpha = .91$).

Results

Means, standard deviations, and intercorrelations of the independent variables are presented in Table 1.² To test our prediction that intentions to persist would be related to fairness beliefs for those low (but not high) in SES, we regressed participants' commitment to perform well on the next midterm on centered scores for subjective SES, BUJ, and perceived performance, as well as all possible interactions. We used the Aiken and West (1991) method to examine all interactions.

Although the three-way interaction was not significant, $\beta = .48, t(37) = 1.98, p = .056$, the pattern of data largely supported our predictions. Among participants who felt they had done poorly on the test, fairness beliefs positively predicted commitment for participants low in reported SES, $B = 1.33, t(37) = 2.21, p < .04$, but not for participants high in reported SES, $B = -0.75, t(37) = 1.52, p = .14$ (see Figure 1). The interaction between these two variables—self-reported SES and BUJ—approached significance, $B = -0.90, t(37) = 1.88, p < .07$.

² Note that in this study, as in all subsequent studies, the standard deviations of all variables are quite similar between social groups and that if anything, there is a slight trend toward more variability among members of advantaged groups. Thus, a weaker relationship between fairness beliefs and motivation among members of advantaged groups, compared with members of disadvantaged groups, cannot be explained by insufficient variability among members of advantaged groups.

Table 1
Means, Standard Deviations, and Intercorrelations of
Independent Variables (Study 1)

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. Socioeconomic status	4.35	1.06	—		
2. Belief in ultimate justice	4.43	0.98	.15	—	
3. Perceived performance	0.00	0.94	-.07	-.14	—

A parallel analysis revealed that when participants felt they had done well on the test—in other words, when commitment could not be taken as an indicator of motivation—neither SES, fairness beliefs, nor their interaction significantly predicted commitment, all *B*s < 0.18, all *t*s(37) < 1.1, all *p*s > .29.

Discussion

This first study provides preliminary evidence that fairness beliefs may increase the motivation to pursue long-term goals among members of socially disadvantaged groups. Among students who felt that they had performed poorly on a test, a positive relationship between fairness beliefs and commitment to performing well in the future was observed, but only among those who perceived themselves as belonging to a low SES group. Attesting to the strength of this phenomenon, these results were found using participants' impressions and intentions regarding real university courses.

Of course, the data from this first study are limited. First, although the most critical predicted effect (influence of fairness beliefs on the motivation of low SES participants) reached conventional levels of significance, the predicted interaction effects only approached significance. Second, as this real-world design was necessarily correlational, we cannot identify with certainty the direction of causality. And finally, although we did predict that the relation between fairness beliefs and goal pursuit would be strongest among participants who reported low SES, we expected it

would still be present, but significantly weaker, among participants who reported high SES. Contrary to this expectation, these latter participants' fairness beliefs did not predict their persistence following poor performance. Given that Study 1 employed just one of many possible measures of fairness beliefs, disadvantaged group membership, and motivation to pursue long-term goals, we hesitate to draw conclusions about this null effect, or, for that matter, the significant effect in the predicted cell. Convergent results using different operationalizations of each of these variables are needed before any firm conclusions can be reached.

Study 2

In Study 1, we found that the belief that the world is fair—that is, a place in which people get what they deserve and deserve what they get—is positively associated with the motivation to pursue long-term goals and that this is particularly true for members of disadvantaged groups. In Study 2 we sought to test the generalizability of this finding by using different measures of fairness beliefs and motivation to pursue long-term goals.

Specifically, rather than examining participants' persistence in the face of poor performance (Carver & Scheier, 1990; Shah, Friedman, & Kruglanski, 2002) as in Study 1, Study 2 investigated participants' willingness to invest resources in pursuit of desirable long-term outcomes. Willingness to commit resources of time and energy to achieve a given end state is a particularly sound measure of motivation to pursue long-term goals. People find many end states to be very desirable, but not everyone is equally willing or able to put in sufficient effort over time to achieve them. For example, many people would love to look attractive in a swimsuit at the beach. However, most of us are not motivated enough to expend the necessary effort—to eat fewer unhealthy foods and spend more time at the gym—to obtain this desired outcome. The same is true of career goals. If everyone could stroll into the nearest hospital and become a highly paid surgeon tomorrow, without the grueling years of medical school, many more people would wield the scalpel. Thus, assessing people's willingness to

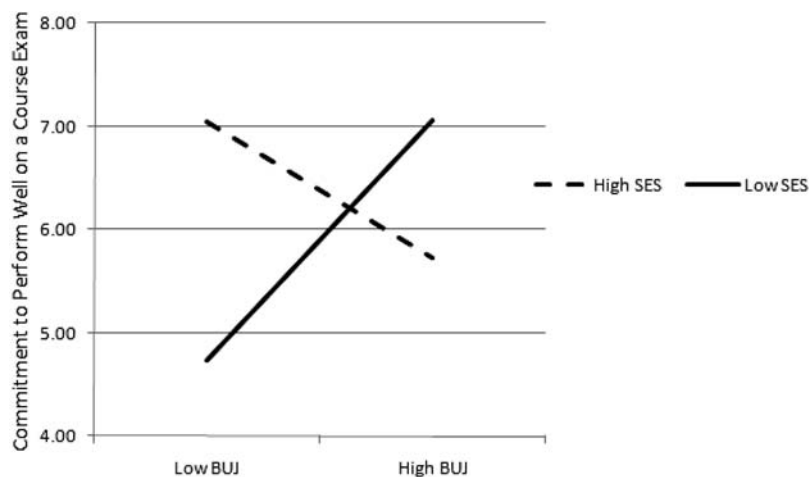


Figure 1. Relationship of participants' commitment to do well on the second test and fairness beliefs, depending on self-reported socioeconomic status (SES), only for participants who felt they had performed poorly on the first test (Study 1). BUJ = belief in ultimate justice.

invest resources in pursuit of a goal offers a better sense of their motivation to achieve that goal than simply asking them to rate the desirability of the goal outcome (Atkinson, 1957). Much as purchase intentions are seen as a closer predictor of actually owning a given product than are product evaluations (Armitage & Conner, 2001; Godin & Kok, 1996; Li & Petrick, 2008), people's willingness to put in the required time, effort, and material resources over time to achieve a goal, as opposed to their evaluation of the goal's end state, provides a closer estimate of their motivation.

Thus, in Study 2, we measured people's willingness to engage in the behaviors necessary to achieve various career goals. We assumed that this strategy would yield a truer indicator of motivation than just a report of interest in these careers. We first asked participants to rate their interest in a number of careers, assuming they had to complete the years of schooling and training required to obtain each career. We expected that participants' answers would reflect two factors: both (a) their willingness to invest resources in long-term goal pursuits and (b) the value they place on the specific rewarding careers themselves. For example, the response of a participant who indicated that she was not very interested in investing effort toward the goal of becoming a lawyer might reflect her general unwillingness to invest resources in pursuit of long-term goals, or it might also reflect her lack of interest in the law profession. Our interest in the current research lies in the first factor only (how much participants are willing to work for the careers). To isolate this first factor, we included another item designed to purely measure the second factor—participants' preferences for the specific careers. This item asked participants to rate their interest in each of the careers, assuming they could begin immediately, with no need to invest the time and energy usually required to attain the positions. By partialing out participants' interest in the specific rewarding careers themselves in our analyses, we were left with only their willingness to invest resources—a pure measure of motivation uncontaminated by idiosyncratic differences in preferences for specific careers.

Participants in Study 2 completed this career interest measure immediately following a measure of chronic fairness beliefs. Participants also completed a demographics questionnaire that contained an SES measure (the same one used in Study 1). We predicted that a strong positive relationship between fairness beliefs and motivation to pursue long-term goals would emerge for low SES participants and that a weaker relationship would emerge for high SES participants. However, given the results from Study 1, we were conscious of the possibility that this relationship would be completely absent among high SES participants.

Method

Participants. One hundred and eleven undergraduates (52 men, 59 women; mean age 19.7 years) participated in this study in exchange for course credit.

Procedure. Participants completed the study online, where they answered a demographics questionnaire and a questionnaire about fairness beliefs and completed our dependent measure of motivation to pursue long-term goals. The same subjective SES item used in Study 1 served as the group membership measure and was embedded in the demographics questionnaire. Lipkus's (1991) seven-item Global Belief in a Just World (BJW) Scale assessed fairness beliefs, which is a more widely known measure than the one used in Study 1. This scale consists of seven items rated on a

6-point scale ranging from 1 (*strong disagreement*) to 6 (*strong agreement*). Sample items are "I feel that people get what they deserve" and "I feel that people who meet with misfortune have brought it on themselves." The BJW scale showed high internal consistency (Cronbach's $\alpha = .90$).

After completing the BJW scale, participants completed the career interest measure, which tapped their willingness to invest resources in long-term goals. Participants saw a list of four professions (lawyer, stockbroker, politician, and company president), which pilot testing³ suggested were desirable and well regarded. Participants rated their interest in completing the years of schooling typically required to practice each profession and also rated their interest in pursuing each profession assuming they could start the next day, with no training required. The order of these two sets of questions was counterbalanced: Half of the participants first rated their interest in the professions assuming they could start the next day, while the other half first rated them taking into account the necessary schooling. Question order had no effect on results in this or subsequent studies and is therefore not discussed further. To form the dependent measure, we partialled out participants' ratings of their interest in each career from their ratings of their interest in investing efforts in order to achieve that particular career. Specifically, we used multiple regression to compute the unstandardized residuals and then averaged these residuals across careers.⁴ This measure showed acceptable internal consistency (Cronbach's $\alpha = .72$), suggesting that our strategy had indeed yielded a reliable measure of participants' generalized willingness to invest resources in pursuit of long-term goals.

Results

Means, standard deviations, and intercorrelations between the independent variables are presented in Table 2. We predicted that participants' motivation to invest resources toward long-term goals

³ A separate sample of 45 participants was given a list of 50 professions, selected at random from those listed at O*NET Online (<http://online.onetcenter.org/>), a popular job search website. Professions with which we thought our undergraduate participants would be completely unfamiliar (e.g., extruding and forming machine setter, control and valve installer and repairer, slot key person, etc.) were excluded before the random selection process took place, leaving a list of 50 professions with which we thought most students would be at least somewhat familiar. Participants selected the professions they thought were desirable and highly regarded by people in general. The average profession was selected by 30% of participants. The four professions used in the dependent measure of Study 2 were selected from the top 20th percentile, and at least 60% of participants indicated that they saw these jobs as desirable and highly regarded.

⁴ We also conducted analyses using other statistical procedures aiming to remove the influence of participants' interest in the particular careers we chose from their interest in investing resources in order to attain them. For instance, in one analysis we used participants' interest in investing resources averaged across careers as the dependent measure and conducted our analyses with their interest in the careers themselves, also averaged across careers, entered as a covariate. In another analysis we computed a difference score (interest in investing resources minus interest in the careers themselves, averaged across careers) to serve as the dependent measure. In all cases, results were very similar. We chose to report the analyses using residualized scores, because it is the only method that allows us to report both adjusted means, as opposed to means on a scale that is difficult to interpret, and an appropriate index of reliability.

Table 2
Means, Standard Deviations, and Intercorrelations of
Independent Variables (Study 2)

Variable	<i>M</i>	<i>SD</i>	1	2
1. Socioeconomic status	4.24	0.78	—	
2. Belief in a just world	3.48	0.92	.02	—

would be greater to the extent that they believed in fairness and that this relationship would be especially strong among participants who reported lower SES. To test this prediction, we again used multiple regression, with centered scores for subjective SES and BJW, as well as the two-way interaction, predicting willingness to invest resources in long-term goals. We predicted that a significant interaction would emerge.⁵

Consistent with this prediction, the interaction between BJW and SES was significant, $\beta = -.23$, $t(107) = 2.27$, $p < .03$ (see Figure 2). We probed this interaction by comparing the simple slopes relating fairness beliefs to willingness to invest resources in long-term goals among higher and lower SES participants, where higher and lower SES were defined as being one standard deviation above and below the mean, respectively. As expected, among participants low in SES, BJW scores strongly predicted willingness to invest resources in long-term goals, $\beta = .44$, $t(107) = 2.70$, $p < .01$. Among participants high in SES, however, this relationship was not significant, $\beta = -.01$, $t(107) < 1$, *ns*. In other words, lower SES students' motivation was stronger to the extent that they believed in the general fairness of society. In contrast, as in Study 1, this relationship was absent among higher SES students.

Discussion

This study provides a conceptual replication of Study 1. People who viewed themselves as low in SES reported more willingness to invest resources in their long-term goals to the extent that they believed that the world is fair. This relationship was absent among people who viewed themselves as high in SES. Study 2 also involved a different measure of motivation to pursue long-term goals (willingness to invest resources), which speaks to the generalizability of the effect.

It is surprising, given the strong theoretical precedent for thinking that fairness beliefs motivate long-term goal pursuit, that we have twice found socially advantaged groups to be entirely unconcerned with societal fairness when considering how much to invest in their long-term goals. We predicted advantaged groups to show a weaker relationship between fairness beliefs and goal pursuit, but not necessarily no relationship. However, it may be the relatively abstract notion of *societal unfairness*, which is not attached to any particular domain or individual, that members of advantaged groups fail to consider in the context of goal pursuit, because societal unfairness may not appear to them to be personally relevant. There may be other ways to describe unfairness that might be seen by these individuals as more personally relevant, which might then influence their motivation. In any case, we note that motivating goal pursuit is but one of a number of functions filled by fairness beliefs (e.g., see Dalbert, 2002; Lind & Tyler, 1988; van den Bos & Lind, 2002; van Prooijen, 2009), so in no way should

our results be interpreted as indicating that members of advantaged groups have no reason to care about societal unfairness.

Study 3

In two studies, we found consistent evidence that for members of disadvantaged groups, beliefs in societal fairness were positively associated with the motivation to pursue long-term goals. In Studies 3 and 4, we sought to explore the causal nature of this relationship by manipulating fairness beliefs and assessing the effects on the motivation to pursue long-term goals.

Studies 3 and 4 also examined a different type of disadvantaged group. We suggest that members of any socially disadvantaged should more readily draw personal implications from their beliefs about societal fairness and, therefore, should be especially attuned to fairness beliefs when planning goal-directed behavior. Most social groups possess a variety of features that can distinguish them from the rest of the population (Betancourt & Lopez, 1993; Snibbe & Markus, 2005). Our use of preexisting SES as a marker of disadvantage is thus both a strength and a weakness. The resulting applicability of our findings to the real world constitutes a strength of this strategy. However, low SES individuals possess a number of unique characteristics beyond social disadvantage, and any one of those features could have been the crucial moderator of the fairness belief–motivation link. We believe that low SES participants calibrated their motivation to their fairness beliefs because their group is chronically disadvantaged. But we cannot rule out the possibility that the crucial moderator is some other trait characteristic of individuals with low SES: their political orientation, their religious beliefs, cultural values, and so forth.

To address these alternative explanations, we sought to test the generalization of this effect beyond socioeconomic measures of group membership. To this end, Studies 3 and 4 examined the moderating role of ethnic minority status. Members of ethnic minority groups differ from individuals with low SES in a number of important ways. Nonetheless, one feature common to both types of individuals is membership in a group that is socially disadvantaged. Thus, if ethnic minority group members show the same tendency as individuals with low SES to calibrate their long-term goal motivation to their fairness beliefs, we can be increasingly confident that the conceptually important variable is indeed membership in a disadvantaged group.

Participants in Study 3 first read either a fairness passage (describing that fairness in Canada is improving) or a control passage (describing that living conditions for a rare animal species were improving). They then completed a brief demographics form, which included a question about ethnicity, which we used to identify participants' ethnic majority or ethnic minority status, and, last, the same career interest measure employed in Study 2. We

⁵ For this study and all subsequent studies, for ease of presentation, we converted the within-cell means, which reflected an average of residualized scores, back into adjusted means. We did this by adding to each cell mean the interest in investing resources predicted by the mean level of interest in the careers themselves, as indicated by the regression equations obtained during the calculation of the dependent measure. The number obtained thus reflects, for each cell, the average rating of interest participants reported in investing resources in the desirable careers, adjusted for their interest in the careers themselves.

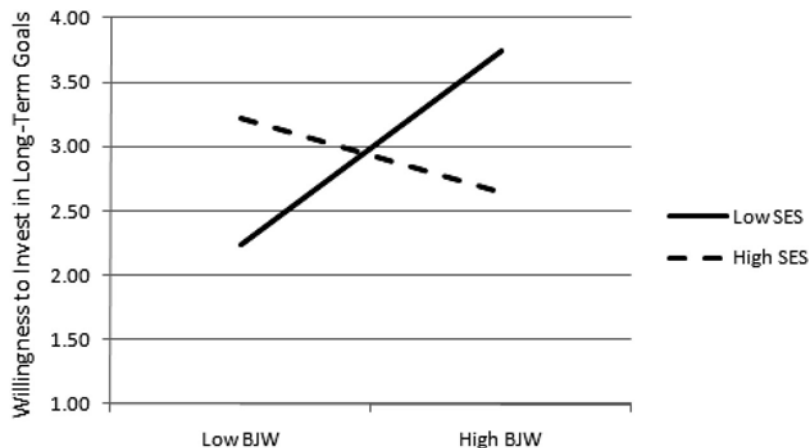


Figure 2. Relationship of participants' willingness to invest effort in long-term goals and fairness beliefs, depending on self-reported socioeconomic status (SES; Study 2). BJW = belief in a just world.

predicted that ethnic minority participants who read the fairness passage would be more willing to invest resources in the goal of achieving a desirable, well-regarded profession. For ethnic majority participants, although our initial hypothesis predicted a significant but weaker effect of fairness beliefs on willingness to invest effort in long-term goals, in light of results from Studies 1 and 2, we deemed it likely that this effect would be completely absent for ethnic majority participants.

Method

Participants. Seventy-four undergraduates (29 men, 44 women, one unspecified; average age 21.0 years) participated in this study. They volunteered to participate in exchange for course credit.

Procedure. Participants completed the study online, where they first read an article, ostensibly taken from a major daily newspaper, which constituted our manipulation of fairness beliefs. Half of the participants—those in the fairness condition—read an article that described increasing conditions of fairness in their country. Specifically, participants read the following article:

Since very early on, there have always been people who were concerned with justice, fairness, and the equal treatment of all human beings. Recent sociological advances have permitted researchers to establish a single unbiased index of fairness using objective indicators such as education levels, individual wealth, and health outcomes within a given country. For instance, this index takes into account how well people's financial outcomes and professional success are determined by their hard work and the education they complete, as opposed to being attributable to demographic variables and biased perceptions.

This research has recently focused on Canada, and has found that in the past decade, Canada has become a much more fair place. In other words, it is becoming more and more likely that the hard work of Canadian citizens will translate into occupational success, and less likely that factors such as gender or family connections will have an influence. Furthermore, the inequalities between demographic groups in terms of physical health and emotional wellbeing are becoming smaller and smaller.

Overall then, it seems that Canadian society is becoming more and more fair, and all indicators point to this trend continuing over the next several years.

Participants in the control condition read an article that also had a positive and optimistic message, but that was irrelevant to fairness. Specifically, they read about improving conditions for a rare species of tree frog. All participants then answered some reading comprehension questions, to support the alleged purpose of the study (namely, to examine the attention paid by students to current events).

Following the manipulation,⁶ participants completed a demographics questionnaire, which included a question about their ethnicity. We used responses to categorize participants into two categories: socially advantaged (i.e., ethnic majority, or European Canadian; $n = 47$) and socially disadvantaged (ethnic minority;⁷ $n = 27$). Participants then completed the career interest measure, which assessed their willingness to invest resources in long-term goals, with scores computed in the same way as in Study 2 (Cronbach's $\alpha = .74$).

⁶ A separate sample of 33 participants read one of the two articles and completed two measures relating to their beliefs in societal fairness. These measures included (a) Kay and Jost's (2003) eight-item system satisfaction measure (sample item: "Society is set up so that people usually get what they deserve") and (b) a one-item measure of societal fairness beliefs ("How optimistic are you about the future of fairness in Canada?"). On both of these measures, participants who read the fairness article reported stronger fairness beliefs than did participants who read the control article: system satisfaction: $M_{\text{fairness article}} = 5.64$, $SD_{\text{fairness article}} = 1.40$; $M_{\text{control article}} = 4.54$, $SD_{\text{control article}} = 1.14$; $t(31) = 2.44$, $p = .02$; one-item measure: $M_{\text{fairness article}} = 4.78$, $SD_{\text{fairness article}} = 1.22$; $M_{\text{control article}} = 3.73$, $SD_{\text{control article}} = 1.53$; $t(31) = 2.18$, $p = .04$.

⁷ Reflecting the typical composition of our university's undergraduate population, the ethnic minority category in this study and in Study 5 was highly diverse, including students from a number of different backgrounds, but predominately South and East Asian.

Results

We predicted that ethnic minority participants would report higher willingness to invest resources in long-term goals when they were exposed to the fairness passage compared with the control passage but that this relationship would not appear among ethnic majority participants. To test this prediction, we subjected participants' scores on the computed measure of willingness to invest resources to a two-way analysis of variance (ANOVA), with condition (fairness vs. control) and ethnicity (ethnic majority vs. ethnic minority) as between-subjects factors.

As predicted, a condition by ethnicity interaction emerged, $F(1, 70) = 6.25, p < .02, \eta_p^2 = .08$, illustrated in Figure 3. Ethnic majority participants were virtually unaffected by the manipulation, $F(1, 70) < 1, ns$, with those in the fairness condition being just as willing to invest in long-term goals (adjusted $M = 2.45, SD = 0.91$) as those in the control condition (adjusted $M = 2.45, SD = 0.70$). In contrast, ethnic minority participants showed increased willingness to invest in long-term goals following exposure to the fairness passage (adjusted $M_{\text{fairness}} = 3.36, SD_{\text{fairness}} = 1.07$; adjusted $M_{\text{control}} = 2.25, SD_{\text{control}} = 0.74$), $F(1, 70) = 9.79, p < .003, d = 1.21$.

Discussion

We have hypothesized that fairness beliefs function to enhance motivation to pursue long-term goals, especially among those who are part of socially disadvantaged groups. Study 3's experimental design built on the findings of Studies 1 and 2 by providing evidence that fairness beliefs do play a causal role in shaping motivation for members of disadvantaged groups. After reading that Canadian society was becoming increasingly fair, ethnic minority participants' motivation to pursue long-term goals was increased (relative to reading an irrelevant control article). As in Studies 1 and 2, advantaged (in this case, ethnic majority) participants' motivation was unrelated to fairness beliefs. Study 3 also involved a different set of social groups, which is important given that we hypothesized that our predictions should extend to members of any disadvantaged group.

It is also worth noting that in the control condition, ethnic majority and minority participants showed a similar degree of willingness to invest in long-term goals, $F(1, 70) < 1, ns$, whereas in the fairness condition, ethnic minority participants reported greater willingness than ethnic majority participants did, $F(1, 70) = 9.82, p < .003, d = 0.92$. Thus, a boost to fairness beliefs actually increased ethnic minority participants' motivation to a level higher than that of ethnic majority participants, whereas under normal circumstances (i.e., in the control condition), the groups did not differ in terms of motivation (this pattern of data is also observed in Study 4). Although this finding rules out the possibility that our results can be explained by a ceiling effect, whereby the fairness manipulation failed to increase the motivation of advantaged group members because they were already motivated to a maximal degree, one might expect that, at baseline conditions, the motivation of ethnic minority group members would be lower than that of ethnic majority group members. Our hypotheses, however, focused on the extent to which members of socially advantaged and disadvantaged groups would be differentially attuned to fairness beliefs, not on absolute differences between these groups. As Biernat and her colleagues (Biernat & Manis, 1994; Biernat, Manis, & Nelson, 1991) have noted, it is problematic to compare scores between members of different groups using the type of scales we used here, because of shifting standards: The same point on a scale might have one meaning for a member of one group and another for a member of another group.

Alternatively, the main effect difference in willingness to sacrifice may be due to cultural differences between individuals of different social groups. It may be the case that, for cultural reasons, the members of socially disadvantaged groups in our sample were predisposed to invest effort in order to achieve long-term goals. Importantly, this cultural explanation would not account for our main finding, which is that members of socially disadvantaged groups were more sensitive to fairness information when making investments in their long-term goals. Thus, what is meaningful, despite shifting standards and cultural differences, is to consider

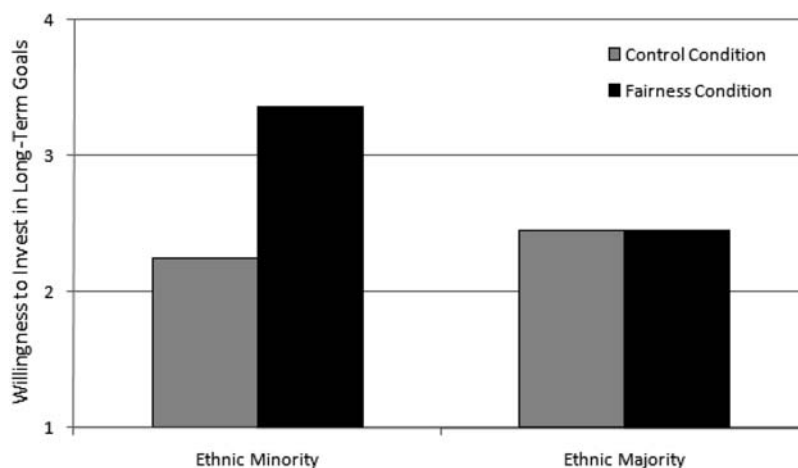


Figure 3. Participants' willingness to invest effort in long-term goals, depending on ethnic minority status and fairness condition (Study 3).

how the motivation of members within the different groups varies as a function of fairness beliefs, as we have done here.

Study 4

In Study 4, we aimed to more directly test our hypothesized mechanism. To do so, we altered the design of Study 3 in two important ways. First, we used a more subtle priming methodology (McCoy & Major, 2007) to activate the notion of fairness, instead of the direct, explicit beliefs manipulation used in Study 3. The use of such a procedure eliminates demand characteristics, ensuring that Study 3's results did not emerge from participants' beliefs about how they thought they should respond to fairness information. This priming procedure also avoids the explicit mention of between-groups inequality present in the manipulation from Study 3, which may have made the manipulation especially powerful for members of socially disadvantaged groups, providing an alternative explanation for our results.

Second, we included a potential mediating variable in Study 4. We hypothesized that members of socially disadvantaged groups are more attuned to fairness information when setting goals because they are more concerned that they might personally be affected by societal unfairness, compared with members of advantaged groups. In Lipkus et al.'s (1996) terms, we hypothesized that the general fairness beliefs of members of socially disadvantaged groups would influence their long-term goal motivation indirectly through their personal fairness beliefs. To add substance to this speculation, Study 4 tested whether beliefs about personal (un)fair treatment mediate the link between fairness beliefs and motivation. After the fairness manipulation, participants rated three items designed to measure their beliefs about their own likelihood of unfair treatment. We expected that priming the abstract concept of fairness would decrease the extent to which ethnic minority participants believe that they are or could be treated unfairly and that this decrease would produce greater motivation, as reflected by greater willingness to invest resources in long-term goals. We expected this effect to be absent for ethnic majority participants.

Method

Participants. Ninety-one undergraduates (24 men, 67 women; mean age 18.8 years) participated in this study in exchange for course credit.

Procedure. Participants completed the study online, where they first encountered a demographics questionnaire, which included a question about their ethnicity. We used responses to categorize participants into two categories: ethnic majority ($n = 38$) and ethnic minority ($n = 53$). Participants then completed a scrambled sentence task, which acted as the priming manipulation. We used materials developed by McCoy and Major (2007) to prime what they termed a *meritocratic ideology*, or the belief that outcomes are distributed fairly, on the basis of merit. All participants read 20 sets of five words and had to use four of the five words from each set to form a grammatically correct English sentence. The instructions required them to spend approximately 5 min on the task. In the fairness condition, 15 of the 20 sets could be unscrambled into meritocracy-themed sentences. For instance, "effort positive prosperity leads to," "people are merit judge on," and "deserve people rich house it" could respectively be unscram-

bled into "Effort leads to prosperity," "Judge people on merit," and "Rich people deserve it." In the control condition, no sentences had fairness-related content. For example, control sentences included "A computer saves time," "College goes by quickly," and "She likes fluffy cats."

After completing the scrambled sentence task,⁸ participants completed a measure of personal (un)fairness beliefs—that is, a measure of the extent to which they believed that they were currently, or might be in the future, treated unfairly. Because members of disadvantaged groups can be reluctant to acknowledge discrimination and unfair treatment, and because people should be demotivated by the prospect of not only unfair disadvantage but also unfair advantage, we included items referring not only to unfair treatment with negative consequences but also to unfair treatment with positive consequences and simply to "different" treatment than would be expected in a perfectly fair world. Specifically, participants used a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*) to answer the three following questions: "How likely do you think it is that you will suffer negative consequences due to unfairness at some point in your life?"; "How likely do you think it is that you will gain an unfair advantage relative to others at some point in your life?"; and "To what extent do you feel that people like you are treated differently than they would be in a perfectly fair world?" Participants' responses to these questions were averaged together to form a single index of their beliefs about personal unfair treatment, a measure that showed acceptable internal consistency (Cronbach's $\alpha = .67$). Finally, participants completed the same career interest measure, and we computed an index of general willingness to invest resources in long-term goals in the same way, as in Studies 2 and 3 (Cronbach's $\alpha = .70$).

Results

Primary analyses. We predicted that ethnic minority participants would report more willingness to invest effort in long-term goals after the fairness prime than after the control prime, but, on the basis of the balance of results from Studies 1 through 3, that this relationship would not appear among ethnic majority participants. To test this prediction, we subjected participants' computed scores of general willingness to invest resources in long-term goals to a two-way ANOVA, with priming condition (fairness prime vs. no prime) and ethnicity (ethnic majority vs. ethnic minority) as between-subjects factors.

As predicted, a significant interaction between priming condition and ethnicity emerged, $F(1, 87) = 7.68, p < .01, \eta_p^2 = .08$. Ethnic majority participants did not show a reliable effect of the manipulation; indeed, their responses revealed a pattern that approached significance in the opposite direction, such that they showed less willingness to invest when primed with fairness (adjusted $M = 2.76, SD = 0.68$) than when not primed at all ($M = 3.08, SD = 0.87$), $F(1, 87) = 3.49, p < .07, d = 0.41$. In contrast,

⁸ A separate sample of 49 participants completed one of the two scrambled sentence tasks and then completed a one-item measure of societal fairness beliefs ("How optimistic are you about the future of fairness in Canada?"). Participants who completed the fairness version of the task reported stronger fairness beliefs than participants who completed the control version of the task ($M_{\text{fairness article}} = 5.35, SD_{\text{fairness article}} = 0.79$; $M_{\text{control article}} = 4.75, SD_{\text{control article}} = 0.95$), $t(47) = 2.24, p = .03$.

as predicted, ethnic minority participants showed more willingness to invest when primed with fairness ($M = 3.54$, $SD = 0.72$) than when not primed at all ($M = 3.04$, $SD = 0.75$), $F(1, 87) = 4.33$, $p = .04$, $d = 0.68$.

Mediational analysis. We also predicted that the extent to which ethnic minority participants thought they were or could be in the future treated unfairly would drive the effects of the fairness prime on their willingness to invest effort in long-term goals. To test this prediction, we conducted a series of multiple regressions. First, four separate regressions tested the effect of priming condition (with fairness prime coded as 1 and no prime as 0) on ethnic majority and ethnic minority participants' willingness to invest in long-term goals and beliefs about personal unfair treatment. As reported above, priming condition had a negative effect that approached significance on ethnic majority participants' motivation to pursue long-term goals, $\beta_{\text{motivation}} = -.30$, $t(36) = 1.90$, $p < .07$. However, priming condition had virtually no effect on these participants' beliefs about personal unfair treatment, $\beta = .00$, $t(36) < 1$, *ns*, suggesting that they did not see societal unfairness as personally relevant. In contrast, among ethnic minority participants, priming condition significantly positively predicted willingness to invest in long-term goals, $\beta = .28$, $t(51) = 2.06$, $p < .05$, and significantly negatively predicted beliefs about personal unfair treatment, $\beta = -.35$, $t(51) = 2.66$, $p = .01$. In other words, ethnic minority participants primed with fairness were more motivated to pursue long-term goals and less likely to believe that their own treatment would become or continue to be unfair.

When ethnic minorities' willingness to invest in long-term goals was predicted by both condition and beliefs about personal unfair treatment (centered) simultaneously, the direct association between priming condition and willingness to invest was no longer significant, $\beta = .17$, $t(50) = 1.21$, $p > .23$, but the direct association between beliefs about personal unfair treatment and willingness to invest remained statistically significant, $\beta = -.32$, $t(50) = 2.29$, $p < .03$.

To test the significance of the indirect path we used the bootstrapping procedures described by Preacher and Hayes (2004). This procedure is recommended over other available methods for testing indirect paths with small samples (Preacher & Hayes, 2004). The 95% confidence intervals for this indirect effect were 0.01 and 0.49, indicating that the null hypothesis should be rejected and that the indirect effect was significantly different from zero ($p < .05$). The results of this mediational analysis for ethnic minority participants are displayed in Figure 4. Thus, beliefs about

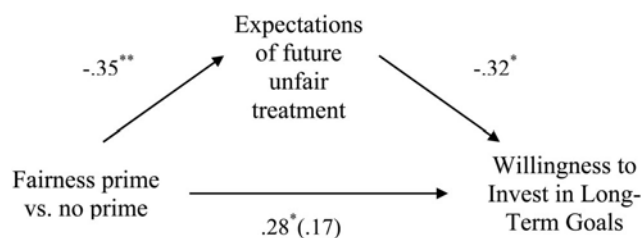


Figure 4. Mediation model showing the direct effect of a fairness prime on willingness to invest effort in long-term goals and its indirect effect through beliefs about personal unfair treatment (ethnic minority participants only; Study 4). * $p < .05$. ** $p < .01$.

personal unfair treatment mediated the effect of priming condition on ethnic minorities' motivation to achieve rewarding careers.

Discussion

Study 4 replicated the effect found across the first three studies using a subtle manipulation of fairness beliefs: Priming the abstract concept of fairness using a scrambled sentence methodology led ethnic minority (but not ethnic majority) participants to express an increased willingness to invest resources in their long-term goals. In addition, a mediational strategy tested the mechanism of this effect and found that the fairness prime decreased ethnic minority participants' beliefs that they were and would continue to be treated unfairly, which in turn led to greater willingness to invest efforts in long-term goals. In contrast, ethnic majority participants' beliefs about their own personal unfair treatment were unaffected by the fairness prime. Importantly, a manipulation check conducted by McCoy and Major (2007) demonstrated that the priming manipulation we used was effective in influencing ethnic majority participants' beliefs about societal unfairness. Thus, our results are unlikely to have emerged because these ethnic majority participants were simply insensitive to the priming manipulation: Like ethnic minority participants, they felt that society was more fair following the prime (McCoy & Major, 2007). Unlike ethnic minority participants, however, ethnic majority participants' beliefs about their own personal fair treatment were unaffected by the prime. Taken together, these results suggest there is a disconnect between advantaged group members' beliefs about societal unfairness and their beliefs about their own personal outcomes.

We predicted and found that the more members of disadvantaged groups believe in societal fairness, the more they believe in their own personal fair treatment, and thus the more motivated they are to pursue long-term goals. In contrast, the beliefs about societal fairness held by members of advantaged groups had no bearing on their motivation. But what of their beliefs about their own personal fair treatment? A regression analysis revealed no evidence that ethnic majority members' beliefs about personal unfair treatment predicted their motivation, $\beta = -.06$, $t(35) < 1$, *ns*. As mentioned in the discussion of Study 2, this may be due to the general nature of our fair treatment items. These items concerned fair and unfair treatment in the abstract, with no reference to a specific context. It may be that members of advantaged groups view fairness information as relevant to their goal pursuit only if the fairness information is specifically tied to the specific goal in question. In other words, if we had measured beliefs about personal fair treatment in career domains, we might have found that this measure predicted career motivation even among members of the ethnic majority. It is not the intent of the present article to examine the notion that members of socially advantaged groups might be differentially sensitive to abstract versus specific fairness beliefs; however, this may be an interesting topic for future research.

Unexpectedly, the fairness prime marginally impacted the motivation of members of ethnic majority participants in the reverse direction. It is possible that members of advantaged groups see desired outcomes as more attainable in an unfair world, because they know that unfairness might prevent some qualified others from competing with them for these outcomes. However, given the inconsistency of this effect—it only approached significance, and

in only one out of four studies thus far—we are not confident that this is a meaningful result.

Study 5

In Study 5, we used data from the World Values Survey (WVS) to see if this phenomenon would replicate in a sample that spans the globe. Using data from the WVS allowed us to test our hypotheses using the general population, a complement to our prior samples of university students. Because, on average, university students might be expected to be more advantaged than the average citizen, and because ethnic minority or low SES university students may differ in a number of ways from members of other disadvantaged groups, we wanted to test our hypotheses with a broader sample. Thus, in Study 5, we aimed to conceptually replicate earlier studies in a broad sample with different operationalizations of fairness beliefs and investment in goals. In addition, because of the plethora of variables available in the WVS, using this data set allows us to control for various factors that could potentially be confounded with membership in a disadvantaged group or with the motivation to pursue long-term goals. For example, these data allow us to test the possibility that the moderating function of group membership is driven by variables confounded with group membership, such as political views or religious beliefs, rather than by disadvantage.

The WVS data contain a wealth of items that could potentially be relevant to either fairness beliefs, membership in a disadvantaged group, or the motivation to pursue long-term goals. In the analyses we report, we focus on the available items that most closely match the conceptualizations of the three variables used in the present research. To measure fairness beliefs, we used items that tapped individuals' belief in meritocratic fairness, or the notion that hard work is rewarded with success. To measure membership in disadvantaged groups, we used two different items. First, we used a subjective item asking participants to identify their social class. Second, we used respondents' ethnicity. Because certain ethnicities might be advantaged in some parts of the world, but disadvantaged in others, we restricted this latter analysis to citizens of nations with a dominant Caucasian population. In such nations, the Caucasian group is typically relatively advantaged, whereas the non-Caucasian groups are typically relatively disadvantaged. To measure motivation to pursue long-term goals, we used items that tapped individuals' prioritization of hard work, particularly over spare time and leisure (willingness to sacrifice relaxation and enjoyment is another necessary component of long-term goal pursuit and a hallmark feature of self-regulation; Atkinson, 1957; Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trotschel, 2001; Fishbach, Friedman, & Kruglanski, 2003). We chose to assess work motivation because it seems most clearly linked with meritocratic fairness, compared with other common domains of motivation (like health and relationships), which may be less obviously related to societal fairness.

We predicted that the positive relation between fairness beliefs and motivation would strengthen as function of self-reported social class, such that those lower in social class would most strongly calibrate their effort investment to their beliefs in societal fairness. We also predicted that the relation between fairness beliefs and motivation would be stronger among non-Caucasians, at least in countries with a dominant Caucasian population. Finally, we pre-

dicted that these patterns would hold when controlling for other individual difference variables that could covary with our variables of interest.

Method

Data for this study came from the second wave of the World Values Survey (WVS). These surveys were conducted in face-to-face interviews between 1994 and 1999, and the samples are designed to be approximately representative of the relevant country's population (see Inglehart, Basañez, Diez-Medrano, Halman, & Luijckx, 2004, for a more detailed description of data sets typical of this survey). We present results from this particular wave because it was the only wave that contained all the items relevant to our hypothesis.

Participants. The variables that were relevant to the present study (described below) were available for 53,394 individuals from 49 countries.⁹ See Table 3 for demographics of the sample.

Variables of interest. We used items from the WVS to create measures of societal fairness beliefs, membership in a socially disadvantaged group, and prioritization of work over leisure. We used three items to compute scores for societal fairness beliefs, or the extent to which respondents believed that outcomes are distributed as a function of merit. One item asked respondents to use a 1–10 scale to rate their beliefs about the efficacy of hard work (1 = *in the long run, hard work usually brings a better life* and 10 = *hard work doesn't generally bring success—it's more a matter of luck and connections*). Two additional items asked respondents to indicate which of two opinions about the poor were closest to their view. Respondents chose one of the following two options to explain why some people are poor: "because of laziness and lack of willpower" (score of 1) "because of an unfair society" (score of 2). They then chose one of the following two options regarding the chances that the poor have of escaping poverty: "they have a chance" (score of 1) and "they have very little chance" (score of 2). We reverse scored all three items such that higher scores indicated stronger beliefs in societal fairness. We then standardized the items to make them comparable and averaged them together to form a composite index of societal fairness beliefs.

⁹ Specifically, the sample consisted of participants from the following countries (asterisks denote countries where Caucasians represented the largest ethnic group in the sample): Albania ($N = 820$), Argentina* ($N = 840$), Armenia ($N = 1,629$), Australia* ($N = 1,635$), Azerbaijan ($N = 1,522$), Bangladesh ($N = 1,299$), Belarus ($N = 1,662$), Bosnia and Herzegovina ($N = 983$), Brazil* ($N = 1,090$), Bulgaria* ($N = 702$), Chile* ($N = 897$), China ($N = 1,176$), Croatia ($N = 895$), Czech Republic ($N = 915$), Dominican Republic ($N = 377$), Estonia ($N = 871$), Finland* ($N = 724$), Georgia* ($N = 1,734$), Germany* ($N = 1,321$), Hungary ($N = 538$), India ($N = 1,462$), Japan ($N = 611$), Latvia ($N = 964$), Lithuania ($N = 821$), Macedonia ($N = 733$), Mexico ($N = 1,925$), Moldova ($N = 898$), New Zealand ($N = 714$), Nigeria ($N = 1,546$), Norway ($N = 916$), Pakistan ($N = 434$), Peru ($N = 1,005$), Philippines ($N = 1,150$), Poland* ($N = 760$), Puerto Rico ($N = 1,050$), Romania* ($N = 978$), Russian Federation ($N = 1,607$), Serbia and Montenegro ($N = 1,266$), Slovakia ($N = 943$), Slovenia* ($N = 791$), South Africa* ($N = 2,279$), Spain* ($N = 921$), Sweden* ($N = 661$), Taiwan ($N = 644$), Turkey ($N = 1,668$), Ukraine* ($N = 2,081$), United States* ($N = 1,120$), Uruguay* ($N = 838$), and Venezuela ($N = 978$).

Table 3
Demographics for the World Values Survey Sample (Study 5)

Variable	N	%
Gender		
Female	27,253	51.0
Male	26,086	48.9
(Unspecified)	(55)	(0.1)
Age, in years		
M	40.9	
SD	15.8	
Range	15–95	
Ethnicity		
Arabic	4,017	7.5
Black	4,384	8.2
Caucasian	19,060	35.7
East Asian	1,249	2.3
Mixed ethnicity	1,231	2.3
South Asian	1,868	3.5
Southeast Asian	1,141	2.1
Other	1,819	3.4
(Not specified)	(18,625)	(34.9)
Social class (self-identified)		
Lower class	6,213	11.6
Working class	16,284	30.5
Lower middle class	20,967	39.3
Upper middle class	8,999	16.9
Upper class	931	1.7
Highest level of education		
Incomplete elementary school	4,432	8.3
Complete elementary school	7,342	13.8
Incomplete secondary school	9,350	17.5
Complete secondary school	18,988	35.6
Some university without degree	3,568	6.7
University with degree	7,918	14.8
(Not specified)	(1,796)	(3.4)
Current employment status		
Full time	19,637	36.8
Part time	3,888	7.3
Self-employed	4,509	8.4
Retired	7,479	14.0
Homemaker	5,838	10.9
Student	3,366	6.3
Unemployed	4,639	8.7
Other	1,053	2.0
(Not specified)	(2,985)	(5.6)

In the interests of thoroughness, we also examined the WVS data set for items that might measure other conceptions of fairness beliefs. Respondents indicated their confidence in institutions designed to ensure a fair society, such as the justice system, courts, and government. They also indicated their happiness with the political system now compared with 10 years ago (a good parallel to our manipulation of fairness in Study 3). Because we believe that meritocracy beliefs most closely match our conceptualization of societal fairness beliefs, we report analyses using respondents' endorsement of meritocracy as our measure of societal fairness beliefs. However, it may be useful to note that all analyses reported here also hold (and indeed, are stronger) when using these other measures of fairness beliefs.

As a measure of membership in a disadvantaged group, we first used respondents' reports of their social class. Specifically, interviewers told respondents "People sometimes describe themselves as belonging to the working class, the middle class, or the upper or lower class." Respondents then reported their own social class

using a 5-point scale (1 = *upper class*, 2 = *upper middle class*, 3 = *lower middle class*, 4 = *working class*, 5 = *lower class*). We reverse scored this item such that higher scores indicated higher class.¹⁰

We also considered ethnic minority status as a measure of membership in a disadvantaged group. Given that the WVS used samples designed to be at least approximately representative of each country's population, we searched for countries where Caucasians represented the largest ethnic group contained in the sample. Of the countries where the WVS measured respondents' ethnicity, we identified 17 where this was the case (see footnote 9). We restricted our analysis to these countries, and we coded Caucasian participants as advantaged and non-Caucasian participants as disadvantaged. This procedure left us with a total of 14,689 participants, of whom 72.3% were Caucasian and 27.7% were non-Caucasian.

To compute scores for motivation to pursue long-term goals, two relevant items were available in this data set. Respondents rated how much they prioritize work versus leisure or recreation using a 5-point scale (1 = *it's leisure that makes life worth living, not work* and 5 = *work is what makes life worth living, not leisure*). Respondents also rated the importance of work in their lives using a 4-point scale (1 = *very important* and 4 = *not at all important*). We reverse scored the second item such that higher scores indicated more prioritization of work. We then standardized the items to make them comparable and averaged them together to form a composite index of prioritization of work.

Finally, we included a number of variables that could potentially be confounded with either group membership or motivation to work hard. For group membership, we considered a measure of political views (1 = *left*, 9 = *right*) and religiosity (1 = *a convinced atheist*, 2 = *not a religious person*, 3 = *a religious person*; identical results were obtained using a measure of religious participation as the covariate). For motivation to work hard, we included respondents' selection of "good pay" and "respected job" from a list of potential factors that they might find important when looking for a job (coded as 0 = *not selected*, 1 = *selected*). All analyses reported below were first conducted without the inclusion of any control variables. Those analyses were then repeated, including all the (centered) above-mentioned variables as covariates.

Results

Means, standard deviations, and intercorrelations of the independent variables are presented in Table 4. We predicted that respondents who reported lower social class would show an especially strong relationship between their beliefs in societal fairness and their willingness to make sacrifices to achieve long-term goals. We also predicted that non-Caucasian respondents living in countries where Caucasians formed the largest ethnic group would show an especially strong relationship between their beliefs in

¹⁰ Respondents also indicated their household income on a scale with points tailored to each country's typical household income, which represents economic status. All analyses reported here hold when using the household income scale as the measure of membership in a disadvantaged group.

Table 4
Means, Standard Deviations, and Intercorrelations of Independent Variables (Study 5)

Variable	N	M	SD	1	2	3	4	5	6
Sample with social class as moderator									
1. Social class	53,394	2.67	0.95	—					
2. Fairness beliefs	53,394	0.00	0.69	.13**	—				
3. Political views	42,509	5.60	2.31	.09**	.15**	—			
4. Religiosity	50,173	2.67	0.54	.00	.06**	.13**	—		
5. Value: Good pay	50,681	0.84	0.36	-.02**	-.06**	.01*	.00	—	
6. Value: Respected job	50,681	0.51	0.50	.03**	.05**	.09**	.05**	.13**	—
Sample with ethnicity as moderator									
1. Ethnicity (0 = non-Caucasian, 1 = Caucasian)	14,697	0.72	0.45	—					
2. Fairness beliefs	14,697	0.00	0.69	-.06**	—				
3. Political views	12,483	5.43	2.25	-.03**	.13**	—			
4. Religiosity	50,173	2.68	0.55	-.07**	.10**	.15**	—		
5. Value: Good pay	50,681	0.79	0.41	-.09**	-.01	.01	.01	—	
6. Value: Respected job	50,681	0.46	0.50	-.03**	.02*	.04**	.08**	.12**	—

* $p < .05$. ** $p < .001$.

societal fairness and their willingness to make sacrifices to achieve long-term goals.

To test the first prediction, we used the Aiken and West (1991) method for multiple regression, using centered scores for fairness beliefs and social class, as well as their interaction, predicting prioritization of work, with no covariates. As predicted, the interaction between fairness beliefs and social class attained significance, $\beta = -.012$, $t(53390) = 2.68$, $p < .01$. We probed this interaction by examining the relationship between fairness beliefs and prioritization of work at one standard deviation above and below the mean of social class. These analyses revealed that fairness beliefs positively predicted willingness to sacrifice to achieve long-term goals at both low, $\beta = .12$, $t(53390) = 19.55$, $p < .0001$, and high, $\beta = .10$, $t(53390) = 16.28$, $p < .0001$, social class. However, this relationship was strongest at low social class. More strikingly, we conducted analyses separately at each level of social class. Figure 5 illustrates how the relationship between fairness beliefs and the prioritization ranged from robust at the lowest social class, $\beta = .15$, $t(6211) = 11.53$, $p < .0001$, to completely absent at the highest social class, $\beta = -.006$, $t(929) < 1$, ns , with the intermediate social classes showing an intermediate-sized relationship, $\beta = .10$, $t(46248) = 22.49$, $p < .0001$.

To test the second prediction, we again used the Aiken and West (1991) method for multiple regression, using centered scores for fairness beliefs, dummy coded ethnicity (0 = non-Caucasian, 1 = Caucasian), and their interaction, predicting prioritization of work, with no covariates. This analysis was restricted to countries where Caucasians formed the largest ethnic group. As predicted, the interaction between fairness beliefs and ethnicity attained significance, $\beta = -.09$, $t(14685) = 5.71$, $p < .001$. We probed this interaction by examining the relationship between fairness beliefs and prioritization of work among Caucasians and non-Caucasians. These analyses revealed that fairness beliefs positively predicted willingness to sacrifice to achieve long-term goals among non-Caucasians, $\beta = .11$, $t(14685) = 6.57$, $p < .001$, but not among Caucasians, $\beta = .005$, $t(14685) < 1$, ns . This relationship is depicted in Figure 6.

Finally, we conducted these same analyses with the control variables listed in the section above entered as covariates and found identical results. We conducted this control analysis separately for each covariate and then including all the covariates. Table 5 presents a summary of the results for the Fairness Beliefs \times Social Class interaction; Table 6 presents the same summary for the Fairness Beliefs \times Ethnicity interaction.

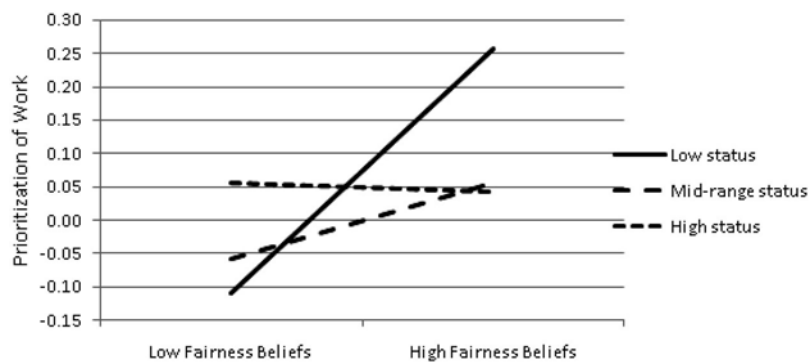


Figure 5. Relationship between respondents' willingness to make sacrifices to achieve long-term goals and their endorsement of meritocratic beliefs, for self-identified lower and upper class respondents (Study 5).

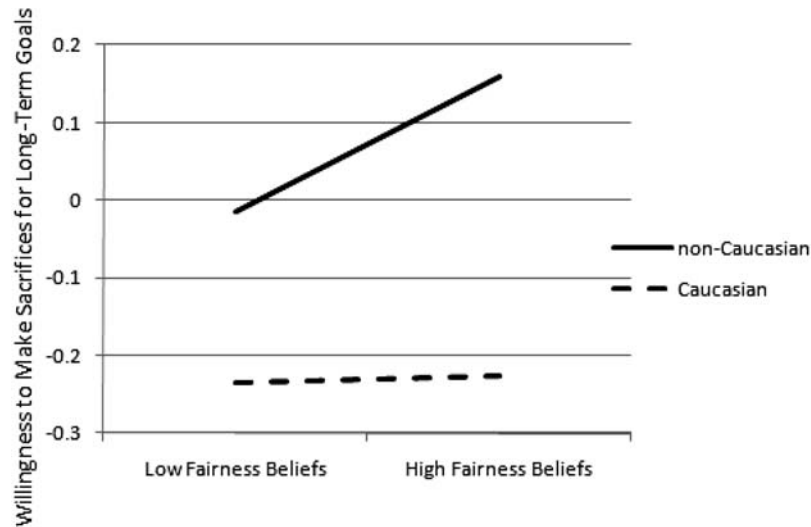


Figure 6. Relationship between respondents' willingness to make sacrifices to achieve long-term goals and their endorsement of meritocratic beliefs, for Caucasian and non-Caucasian respondents living in countries where Caucasians form the largest ethnic group (Study 5).

Discussion

We have hypothesized that fairness beliefs function to enhance motivation to pursue long-term goals, especially among those who are part of socially disadvantaged groups. In Studies 1 and 2, we found evidence that fairness beliefs predict motivation to pursue long-term goals and that this relationship was strong among participants low in SES but nonexistent among participants high in SES. In Studies 3 and 4, we found that this same relationship was strong among members of ethnic minority groups but nonexistent among members of ethnic majority groups. In Study 5, we replicated both of these findings using data from a cross-national sample containing a much wider range of relatively advantaged and disadvantaged groups. In this sample, fairness beliefs continued to predict motivation to pursue long-term goals

even among survey respondents who reported high social class, but the relationship was much stronger among respondents who reported low social class. Moreover, as in Studies 3 and 4, the relationship was strong among members of ethnic minority groups but nonexistent among members of ethnic majority groups. These results complement the findings from Studies 1–4 in an important way, by reflecting responses of the broader population and providing convergent validity using a set of measures different from those used in the preceding studies.

General Discussion

The present research suggests that fairness beliefs do indeed confer a special benefit on members of socially disadvantaged

Table 5
Results of Study 5: Social Class as Moderator

Covariate	Interaction β (Fairness beliefs \times Social class)	t	p	Class	Fairness beliefs β	t	p
None	.012	2.68	.008	Low	.15	11.53	<.001
				Middle	.10	22.49	<.001
				High	-.01	1.70	.87
Political views	-.014	2.82	.005	Low	.13	8.70	<.001
				Middle	.09	16.61	<.001
				High	-.05	1.26	.21
Religiosity	-.013	2.97	.003	Low	.15	2.97	<.001
				Middle	.09	15.11	<.001
				High	-.003	0.10	.92
Value: Good pay	-.009	2.02	.04	Low	.14	10.42	<.001
				Middle	.10	21.58	<.001
				High	.02	0.43	.67
Value: Respected job	-.008	1.85	.06	Low	.13	9.75	<.001
				Middle	.10	20.59	<.001
				High	.01	0.35	.72
All	-.011	2.18	.03	Low	.11	6.87	<.001
				Middle	.09	15.11	<.001
				High	-.06	1.53	.10

Table 6
Results of Study 5: Ethnicity as Moderator

Covariate	Interaction β (Fairness beliefs \times Ethnicity)		<i>t</i>	<i>p</i>	Ethnicity	Fairness beliefs β		<i>t</i>	<i>p</i>
None	-.09		5.71	<.001	Caucasian	.005	<1	<i>ns</i>	
					Non-Caucasian	.11	6.57	<.001	
Political views	-.08		4.33	<.001	Caucasian	-.001	<1	<i>ns</i>	
					Non-Caucasian	.09	5.00	<.001	
Religiosity	-.09		5.82	<.001	Caucasian	-.003	<1	<i>ns</i>	
					Non-Caucasian	.11	6.55	<.001	
Value: Good pay	-.07		3.41	<.001	Caucasian	-.005	<1	<i>ns</i>	
					Non-Caucasian	.08	4.30	<.001	
Value: Respected job	-.07		3.57	<.001	Caucasian	-.006	<1	<i>ns</i>	
					Non-Caucasian	.08	4.41	<.001	
All	-.08		4.45	<.001	Caucasian	-.008	<1	<i>ns</i>	
					Non-Caucasian	.08	4.69	<.001	

groups. Across five studies, we consistently found evidence that beliefs in societal fairness enhanced the motivation to pursue long-term goals and that this effect was more consistent and stronger among members of socially disadvantaged groups. Members of advantaged groups showed somewhat inconsistent effects, ranging from no effect to weak effects in either direction. Although these latter observations were unexpected (we had predicted a weakened, but still significant, effect for members of advantaged groups), our predicted general pattern of data—a stronger association between fairness beliefs and motivation to pursue long-term goals for members of disadvantaged, rather than advantaged, groups—was highly consistent, emerging regardless of whether fairness beliefs were measured as chronic individual differences or manipulated through direct or indirect methods; whether group membership was operationalized in terms of SES or ethnicity; and whether motivation was assessed in terms of persistence in the face of failure or willingness to invest resources in, and make sacrifices for, long-term goals. Thus, believing in societal fairness appears to enhance the motivation of members of socially disadvantaged groups to pursue long-term goals. This benefit appears to be unique to disadvantaged groups and provides one potential answer to the question we raised in the introduction about the functionality of believing in a just world for those who are disadvantaged.

Implications for the Study of Justice

The present studies elaborate on and expand one of the foundations of just-world theory (Lerner, 1980): that the motive to perceive one's surroundings as fair and just may stem from the need to pursue long-term goals. Implicit in this view of the origin of the justice motive is the idea that fair environments are supportive of long-term goal pursuit and that believing in fairness serves to encourage people to engage their motivational systems and exert efforts directed toward the achievement of long-term gains. The studies described in the present article substantiate this idea, by showing that both chronic and experimentally induced beliefs about fairness can lead to an increased motivation to pursue such important long-term goals as academic success and career achievement.

In addition to providing novel empirical support for Lerner's theorizing about the origin of the justice motive, this research also contributes new insights to our understanding of the effects of

group membership. Our findings suggest that the motivational function of fairness beliefs is qualified by individuals' group membership, applying especially to members of socially disadvantaged groups. We found evidence that this group membership effect arises in part because only members of socially disadvantaged groups translate their general fairness beliefs into beliefs about their own personal fair treatment. Societal unfairness has different consequences for members of socially disadvantaged and advantaged groups. Discrimination and prejudice, and other forms of systemic societal unfairness, may prevent the disadvantaged from achieving their goals; thus, unfairness may be differentially personally relevant for members of disadvantaged groups.

Group differences in this fairness-motivation link may also stem from differences in the higher order or overarching motivations that underlie individuals' motivations to pursue academic and career goals. Members of disadvantaged groups may see these goals as means serving the ultimate purpose of dramatically improving their place in society—of changing position from a low-status to a high-status group. Members of advantaged groups, in contrast, do not need to improve their social standing and may instead see academic and career goals as means to maintain (or slightly improve) their place in society. Achieving drastic improvements in one's social position may be both more important and more difficult than simply maintaining or minimally improving it. Thus, relative to members of advantaged groups, members of disadvantaged groups may have more riding on long-term goals that are also more difficult to achieve. Because members of disadvantaged groups have larger stakes associated with their long-term goals, they might be especially interested in calibrating their motivation to factors that will impact their success, such as societal fairness.

Although our results suggest that members of disadvantaged groups care more about fairness when pursuing goals, they do not necessarily suggest that members of socially advantaged groups are indifferent to fairness. First, there might be factors not considered here that lead members of socially advantaged groups to calibrate their motivation to their fairness beliefs. Second, there are a multitude of other reasons why members of socially advantaged groups might be concerned with fairness (Dzuka & Dalbert, 2002, 2007; Jost, Glaser, & Sulloway, 2003; Jost et al., 2007; Kay, Gaucher, Napier, Callan, & Laurin, 2008; Lind &

Tyler, 1988; Lipkus et al., 1996; Montada et al., 1986; Sidanius & Pratto, 1999; Tyler, 1989; van den Bos, 2001; van den Bos & Lind, 2002; van Prooijen, 2009).

That being said, some research has suggested that members of socially advantaged groups may not have the same need to believe in societal fairness as members of socially disadvantaged groups (Jost, Pelham, et al., 2003). Drawing on system justification theory, Jost and his colleagues (Jost & Hunyady, 2003; Jost, Pelham, et al., 2003) have argued that members of low-status groups experience cognitive dissonance arising from the conflict between their belief that the system is putting them at an unfair disadvantage and their belief that they themselves are, by their acquiescence, contributing to the stability of this system. According to this model, low-status group members thus have a strong need to reduce this ideological dissonance through system justification, which explains the observation that at least some of the time, these individuals appear more motivated to maintain their belief in the justice of their system than do members of high-status groups (Jost & Hunyady, 2003; Jost & Thompson, 2000). The research we present here offers a complementary explanation for this phenomenon: Perhaps another reason why members of socially disadvantaged groups may be more motivated to maintain their societal fairness beliefs is that for them, especially, these beliefs serve to enable long-term goal pursuit.

Throughout this article, we have reasoned that it is functional for members of disadvantaged groups to calibrate their motivation on long-term goals to their beliefs about societal fairness. However, there is also reason to believe that this tendency may have negative consequences for members of disadvantaged groups. In a completely unfair world where members of disadvantaged groups are routinely and without exception barred from breaking into certain careers, for instance, it makes little sense for members of these groups to work toward achieving these careers. In such a case, tying motivation to societal fairness would save disadvantaged group members from working fruitlessly. However, modern societal unfairness is rarely so blatant as to completely exclude members of certain social groups from certain outcomes. In some cases, in all but the most discriminatory societies, unambiguously outstanding candidates can sometimes overcome biases against their social groups (see Dovidio & Gaertner, 2000). In other words, even in an unfair job market, some members of disadvantaged groups might be able to attain virtually any career goal. If instead they work less hard toward their career goals when they perceive a discriminatory tendency in the job market, then they will be less likely to achieve the goals that they might, albeit with great difficulty and against steep odds, have attained.

Moreover, the social world is dynamic, and societal fairness is subject to change over time. This fact introduces an additional benefit to disadvantaged group members who increase their motivation in the face of unfairness: the possibility of changing, instead of reinforcing, the status quo. If members of disadvantaged groups are demotivated by unfairness in society, this may serve to legitimize the status quo even further.

Thus, our research suggests that believing in societal fairness might benefit members of disadvantaged groups in the narrow, goal-specific sense, in that it allows them to direct their energy toward obtaining desired outcomes. Taking a step back and considering the larger social picture, however, makes it less clear whether the tendency of members of disadvantaged groups to

calibrate their motivation to their fairness beliefs is, on balance, functional or dysfunctional.

Implications for the Study of Self-Regulation

Research on the effectiveness of self-regulation has typically focused on individually based psychological processes and mechanisms that predict successful goal pursuit over time. For instance, self-efficacy (Bandura, 1986), implicit theories (Blackwell et al., 2007; Dweck et al., 1995), self-regulatory strength (Muraven, Tice, & Baumeister, 1998), the ability to delay gratification (Mischel, 2008; Mischel, Shoda, & Rodriguez, 1989), and chronic individual differences in self-control (Tangney, Baumeister, & Boone, 2004) have received major attention in terms of their implications for successful self-regulation. It is clear that internal, intrapersonal, processes impact self-regulatory success. However, because goal pursuers are often immersed in social and interpersonal environments, and because their efforts are often impacted by other individuals and social structures, it is also important for self-regulation researchers to learn about how external, interpersonal processes may impact self-regulatory success. The present research contributes to growing efforts to understand social influences on self-regulation (Drigotas et al., 1999; Finkel et al., 2006; Fitzsimons & Finkel, 2010) by examining how one particular feature of the social environment—the extent to which it is seen as operating fairly—can influence people's motivation to pursue long-term goals.

Thus far, efforts to examine social effects on self-regulation have focused primarily on investigations of close interpersonal and commonly dyadic processes, such as the influence of instrumental friends and family members on people's achievement (Fitzsimons & Shah, 2008) and the influence of smooth dyadic interaction on subsequent self-control resources (Finkel et al., 2006). In contrast, the current research contributes a broader perspective, examining how general social structures may impact individual-level motivation toward personal goals via internalized beliefs about fairness. In this fashion, the current work extends the important research on the performance effects of being a target of a stereotype, or being conscious of being a member of a stigmatized group (Pinel, 1999; Steele, 1997). Understanding the group dynamics and structural features that shape basic processes in self-regulation is an important area for future research.

In all studies reported here, we deliberately chose to measure self-regulation in achievement-related domains. Achievement goals such as performing well at school are objectively dependent on fairness: Grades can be readily attributed to causes that are either fair (e.g., knowledge of course material) or unfair (e.g., a student's ethnic background or physical appearance). Calibrating achievement goals to societal fairness beliefs is a rationally sensible thing to do, to the extent that societal fairness can affect one's own outcomes. Thus, we thought that motivation for achievement-related goals was likely to be linked to people's beliefs about societal fairness, if they believed that societal unfairness could influence their own achievement-related outcomes. We do not wish to suggest, however, that achievement-related goals are the only ones for which motivation can be calibrated to fairness beliefs. So long as a goal is deemed relevant to fairness, that is, so long as it makes sense to say that the goal was achieved either fairly or unfairly, or that the failure to achieve it was either fair or

unfair, then the same principles should apply. The current studies examine motivation in achievement-related domains as a matter of convenience, simply because although people may vary in the extent to which they see many goals as relevant to fairness, we suspected that virtually all people would see the relevance of fairness to achievement goals.

Implications for Personal Well-Being and Social Equality

Perhaps the most interesting implications of the present research are practical. Successful goal pursuit is one of the foundations of psychological health and well-being. Our research suggests that the motivation of members of socially disadvantaged groups to achieve important goals is dependent on their beliefs about societal fairness. It follows then, that for members of socially disadvantaged groups, psychological health and well-being are at least to some degree dependent on fairness beliefs. Such individuals need to believe in societal fairness to engage in the kinds of long-term goal-pursuit activities that are theorized to enhance well-being. Although we are not the first to note the connection between fairness beliefs and well-being (e.g., Dzuka & Dalbert, 2002, 2007), the current perspective and our emphasis on group differences presents some important novel implications.

The well-being of members of socially disadvantaged groups may be more constrained by conditions of societal fairness than that of members of socially advantaged groups. Although societal unfairness obviously limits the accomplishments of disadvantaged group members via discrimination and other unfair practices that objectively impact how they are perceived and treated, our research suggests that even the mere perception of societal unfairness may constrain the goals and self-regulatory resources needed to achieve well-being. In doing so, the current research also highlights the relevance of distinguishing between the consequences of *actual* fairness and *beliefs* about fairness. Actual, objective fairness has obvious implications for well-being: Members of socially disadvantaged groups are the ones who suffer under conditions of unfairness. But empirical attention to the impact of subjective fairness on well-being should not be neglected. Although the benefits of fairness beliefs in the absence of actual fairness are likely limited, the same is likely true of the reverse. Although it is obviously important to change the *objective* social landscape if one hopes to make strides toward social equality, doing so may not reap all the expected benefits if that change is not reflected in *perceived* social landscape. Changing a company's policies, for example, to more ardently employ methodologies that ensure equal treatment of all employees regardless of class, race, or gender will be helpful; but, if we are to believe the findings reported here, doing so without also advertising these changes will necessarily limit its effectiveness.

This does not imply, however, that people need to always be kept abreast of the state of social justice if one hopes to encourage more social equality. Although attempts to end injustice and discrimination often involve awareness raising, the present research suggests a potentially ironic consequence of such strategies. According to the present research, this strategy may ultimately compound, rather than alleviate, inequality. That is, attempts to raise the public's awareness of societal unfairness may increase the discrepancy between the achievements—or at least the motiva-

tion—of members of advantaged and disadvantaged groups. Perhaps focusing on the relative differences in societal unfairness (“We have come a long way, but more progress needs to be made”) would be an effective means of circumventing this potential unintended consequence of awareness campaigns.

Concluding Remarks

Although considerable strides have been made over the past two decades in understanding when and for whom justice concerns will be activated, experimental research examining the functionality of justice beliefs remains notably absent (Hafer & Bègue, 2005). As long as this trend continues, our understanding of the psychological roots and antecedents of justice beliefs will remain incomplete. We believe the studies reported here represent a significant step toward addressing this gap in the literature and, at the same time, connect the psychology of justice to both processes of self-regulation and individual differences in social group membership.

Our findings may also help to explain the allure of the American dream, especially among members of disadvantaged groups. There is a pervasive belief among U.S. citizens that America is the land of opportunity, where success is class blind and anyone can become anything with enough hard work. However, social mobility, or the ease with which citizens can climb the ladders of the social and economic hierarchies, is no greater in the United States than it is in most European nations (Björklund & Jäntti, 1997; Erikson & Goldthorpe, 2002; Fischer & Hout, 2006; Kerckhoff, Campbell, & Winfield-Laird, 1985), and some authors have even questioned or flat-out rejected the existence of upward mobility in America (Carrier, 2010; The New York Times, 2005). The current results suggest that the American dream, with its implication that success is distributed fairly as a function of individual merit, may be an important source of motivation for those who endorse it, especially those who are members of disadvantaged groups. It may allow these individuals to focus on their goals for the future. This motivating function of the American dream may explain why it is such a persistent belief in spite of its questionable truth.

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Appendix**Belief in Ultimate Justice Scale Items**

- | | |
|---|---|
| (R) 1. I believe that many good deeds go unrewarded in the end. | 6. I believe that, in the long run, people get what they deserve. |
| (R) 2. I believe that many bad deeds go unpunished in the end. | 7. I believe that people's efforts are eventually noticed and rewarded in life. |
| 3. I believe that, in the long run, the bad things that happen to people are offset by good things. | 8. I believe that over the course of one's life, justice is always served in the end. |
| 4. I believe that good people are rewarded in life, although not always immediately. | Items marked with (R) are reverse scored. |
| 5. I believe that bad people are punished in life, although not always immediately. | |

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