

## RESEARCH ARTICLE

# Perceived social mobility and system justification predict greater well-being, but less prosocial behaviour

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## Abstract

In the present research, we propose that perceptions of social mobility (PSM) are beneficial for oneself but costly to others. Supporting this idea, people who were led to think that social mobility in society is probable (vs. improbable) (Study 1a/b,  $N = 754$ ; Study 3a/b,  $N = 938$ ) or held this belief at a dispositional level (Study 2a/b,  $N = 877$ ) showed greater endorsement of system justifying beliefs, which was related to greater happiness and life satisfaction. However, the more people perceived social mobility and justified the system, the less willing they were to help others in need, and this was especially true for those who thought the current economic system was fair and legitimate. Thus, while greater perceived social mobility is related to increased personal well-being through justification of the sociopolitical system, it predicts less desire to help others due to increased support of the economic status quo.

## KEYWORDS

economic inequality, economic system justification, prosocial behaviour, social mobility, system justification, well-being

## 1 | INTRODUCTION

Rooted in the fabric of American society is the idea that social mobility is possible – that almost anyone can move up or down in society regardless of their birth, group membership or current social status. This belief persists despite income inequality having risen steadily since the 1970s (Piketty & Saez, 2014) and reinforces the enduring ideal that educational, career and financial success is earned through hard work and perseverance (Jost & Hunyady, 2005). Indeed, Americans overestimate the likelihood of changes in one's educational and economic status compared to trends indicated by U.S. Census data and multi-country rankings (Davidai & Gilovich, 2015, 2018; Kraus & Tan, 2015, cf. Chambers et al., 2015; Chetty et al., 2014).

Perceptions of social mobility (PSM) are important to examine because perceptions shape public opinion and motivate actions to either support or challenge the status quo. For example, when people are led to believe that social mobility is likely (vs. unlikely), they are more tolerant of income inequality (Shariff et al., 2016) and system-legitimizing beliefs and ideologies (Day & Fiske, 2017). Contributing to

this literature, the present research examines whether PSM predicts people's subjective well-being and willingness to engage in prosocial behaviour towards others. We hypothesize that when people think social mobility is possible, they will support the status quo and view the current system as fair and legitimate. Based on previous work, such views should be related to greater personal well-being (Jost & Hunyady, 2005). However, the more people think the system is fair and just, the less willing they may be to engage in behaviours (e.g., donating time or money; supporting welfare policies) that help others.

### 1.1 | Perceived social mobility

Research examining the consequences of PSM is mixed. Some studies find that Americans believe the poor can escape poverty (Alesina et al., 2004) and overestimate the amount of upward mobility in society (Davidai & Gilovich, 2015, 2018; Kraus & Tan, 2015). Other studies find that, compared to objective levels, Americans underestimate the likelihood of social mobility and think that mobility is declining compared to

previous decades (Chambers et al., 2015). Still others find that social mobility is relatively stable; Chetty and colleagues (2014) examined the tax records of 40 million American adults with the records of their parents 20 years earlier and found that the chances of changing one's socioeconomic status were not much different from one generation to the next.

While objective intergenerational upward mobility is associated with greater happiness and health (Nikolaev & Burns, 2014), little is known about how PSM relate to people's subjective well-being, and no studies to our knowledge have examined how PSM are linked to prosocial behavior. In one line of research, Wiwad (2017) found that people living in the United States are optimistic about moving up the economic ladder, and those who believe that income mobility is possible (vs. less possible) feel more positive affect. But why would greater perceptions of income mobility increase subjective well-being? We suggest a key psychological mechanism: when people perceive that social mobility is probable, they will justify and support the current system more.

## 1.2 | PSM, system justification and well-being

System justification (SJ) provides a useful framework for understanding why PSM may be related to greater well-being. According to this theory, individuals adopt beliefs that support existing social, economic and political arrangements in society because doing so fulfills basic psychological needs for certainty and meaning, safety and security, control over one's environment and motivation to share a common reality with similar others (Jost, 2019; Jost & Banaji, 1994; Kay et al., 2008; Osborne et al., 2019).

While endorsing SJ beliefs can be beneficial, doing so may also reduce support for actions that promote social change (Jost & Hunyady, 2005). For example, when people think that social mobility is possible, they assume that their current societal status is fair and legitimate (Kraus & Tan, 2015) and are less bothered by economic inequality (Shariff et al., 2016). In contrast, when people are led to believe that the possibility of social mobility is low (vs. moderately likely), they are less likely to support SJ ideologies (Day & Fiske, 2017). In short, when individuals think there is a reasonable chance of social mobility in society, they may defend the current system more and feel greater happiness and life satisfaction.

## 1.3 | PSM, SJ and prosocial behaviour

Although PSM may make people feel better, an unintended consequence of this perception is that individuals may be less motivated to help others due to increased support of the status quo. Indeed, Americans often view economic success as a by-product of hard work, skill and determination and attribute poverty to a lack of effort, ability and unwise decision-making (Kay et al., 2005; McCoy & Major, 2007). Along these lines, in more socially mobile societies, people are less likely to support governmental programmes and policies that would

increase taxation on the rich or redistribute wealth (Alesina & La Ferrara, 2005; Jaime-Castillo & Marqués-Perales, 2014). Accordingly, when people perceive that upward mobility is possible, they are more likely to tolerate inequality in wealth and income (Shariff et al., 2016).

Furthermore, when people are exposed to 'rags-to-riches' stories that highlight the successes of certain groups, they tend to blame lower status group members for their disadvantaged status. Thus, while success stories of group members in society can be inspiring, there are hidden costs of reinforcing beliefs about other groups by comparison. For example, learning that Asian Americans have made great strides in society leads perceivers to assume that social mobility exists and that group members who have not excelled are deserving of their inferior status (Ho et al., 2002).

Because SJ is theorized to have palliative effects, endorsing this type of ideology may diminish incentives to address injustice and reduce support for redistribution of resources among groups in society or to advocate for social change (Jost & Hunyady, 2005). Indeed, the more people support the status quo, the less distress and moral outrage they express over injustice and inequality and show less support for programmes that assist the disadvantaged, such as job-training programmes, soup kitchens and tutoring services (Wakslak et al., 2007). Other studies find that when people endorse Economic SJ (ESJ) beliefs, they are more opposed to equality (Jost & Thompson, 2000) and less averse to economic suffering. For example, participants who thought the economic system was fair and legitimate showed less physiological arousal and less sadness, pity and empathy towards individuals experiencing homelessness or poverty (Goudarzi et al., 2020). Overall, these findings suggest that support for the current system decreases support for collective action and social change (Osborne & Sibley, 2013). It remains an open question, however, as to whether PSM relates to SJ or ESJ and to well-being and prosocial behaviour.

Building upon the literature on social mobility and SJ, we propose that people who think that social mobility is possible will be more likely to defend the current system and less likely to adopt behavioural intentions that benefit the disadvantaged. Indeed, one of the key determinants of helping is feeling a sense of responsibility for the welfare of others (Darley & Latané, 1968). If individuals think that social mobility is possible, they may assume that the system is fair and be less inclined to adopt attitudes or behaviours to reduce the existence of economic disparities in society.

## 1.4 | Overview of present research

We conducted six studies to examine how individual's PSM relate to their subjective well-being and willingness to engage in prosocial behavior. In Study 1, we hypothesized that participants who were exposed to information suggesting that social mobility in America is probable (vs. improbable) would (a) perceive greater social mobility, (b) report greater SJ and (c) greater happiness and life satisfaction, but (d) show less willingness to engage in prosocial behavior. We tested these ideas among college students (Study 1a) and adult community (Study 1b) samples.

In Study 2, we examined how individual differences in pre-existing PSM related to well-being and prosocial behaviour among college students (Study 2a) and an adult community sample (Study 2b, pre-registered). Notably, Study 2 explored whether PSM was related to support for the status quo in general (SJ) or for the economic system in particular (ESJ) and their relation to the outcome variables.

Finally, in Study 3 (pre-registered), we hypothesized that participants who were exposed to information suggesting that social mobility in America is probable (vs. improbable) would report (a) greater SJ, (b) greater ESJ and (c) greater happiness and life satisfaction, but (d) show less willingness to engage in prosocial behavior, less support of policies related to social welfare and less intolerance of income inequality. We did not have specific a priori hypotheses about whether SJ and/or ESJ would be differentially related to the outcome variables. We tested these ideas among both college students (Study 3a) and adult community (Study 3b) samples. This research was conducted in accordance with the ethical standards for the treatment of human participants and was reviewed and approved by the Social and Behavioral Sciences Institutional Review Board at the University at Buffalo. Data and findings in this paper have not been published elsewhere.

## 2 | STUDY 1A

### 2.1 | Method

#### 2.1.1 | Participants and procedure

Participants ( $N = 360$ , 48% men, 49% women, 3% unknown) from the introductory psychology subject pool at a large university in the United States completed the study in exchange for course credit. Participants were 18–66 years old ( $M_{\text{age}} = 19.19$ ,  $SD = 3.26$ ) and were 45.8% White, 29.7% Asian, 10.6% Black, 5.3% Hispanic, 4.1% other ethnicities and 4.4% unknown. Their political affiliation was 35% liberal, 26% conservative, 20% moderate and 19% something else/I do not know (coded as missing); median household income was \$50,000–74,999.

Because no previous studies examined a manipulation of PSM on well-being and prosocial behavior, we were not able to estimate effect sizes based on prior research. Instead, for all studies, we collected as many participants as possible given available lab and time constraints. In Studies 1a/b and 3a/b, we used manipulations of social mobility that were highly similar or identical to those of Day and Fiske (2017). In Day and Fiske's work (Study 3; 2017), the manipulation showed a large effect ( $d = 0.93$  in a sample of  $N = 150$ ) on SJ, which was a key variable in the present studies. Thus, we felt confident that our sample sizes in Studies 1a/b and 3a/b were sufficiently powered to at least detect the effect of the manipulation on SJ.

Participants came to the lab for the 'Study of Cognition and Beliefs' and were randomly assigned to read one of two news articles that discussed the possibility of social mobility in America. After briefly

describing what they read, participants reported their PSM in society and then completed the dependent measures and demographics. Participants were then debriefed, given course credit and dismissed. All study materials, datasets and syntax files for all studies are available in the Open Science Framework (OSF): [https://osf.io/jeb45/?view\\_only=e87877](https://osf.io/jeb45/?view_only=e87877).

#### 2.1.2 | Measures

**Manipulation of social mobility.** Participants read an article that was intended to activate perceptions of high versus low social mobility, modelled after the manipulation used by Day and Fiske (2017). Because we were initially interested in perceptions of upward mobility, the manipulation was adapted to highlight upward mobility in particular (see Supporting Information or Methodology File for articles). Participants in the *high mobility condition* read an article called 'Moving on Up!' that described research suggesting that Americans are able to move up the societal ladder with relative ease with statements such as, 'Fortunately, this study found that the chances that a person who starts in the bottom 20% will move up are actually reasonably good'. In the *low mobility condition*, participants read an article with comparable statements, but was titled 'Moving on Up?' and included information suggesting that upward mobility is unlikely with statements such as, 'Unfortunately, this study found that the chances that a person who starts in the bottom 20% will make it to the top 20% are very slim—a mere 5%'. Afterwards, participants described the main idea of the article and then completed the following measures.

**PSM.** Participants completed Day and Fiske's (2017) measure assessing PSM with items such as, 'It is common for people who are motivated enough to go 'from rags to riches' and 'It is not too difficult for people to change their place in society'. Six items used a 1 = *strongly disagree* to 7 = *strongly agree* scale and two items assessed the perceived ease of changing one's social class from 1 = *extremely difficult* to 7 = *extremely easy*. Items were standardized and averaged (eight items,  $\alpha = .81$ ).

**SJ.** The general SJ Scale (Kay & Jost, 2003) measures the defence of the broader American sociopolitical system. Participants reported how fair, just and legitimate they perceived society to be with items such as, 'In general, you find society to be fair' and 'Most policies serve the greater good' from 1 = *strongly disagree* to 7 = *strongly agree* (eight items,  $\alpha = .87$ ).

**Well-being.** Participants were instructed to report how much they felt satisfied with life and happy in the current moment. Items were taken from the Satisfaction with Life Scale (Diener et al., 1985) (e.g., 'I am satisfied with life') from 1 = *strongly disagree* to 7 = *strongly agree* (three items,  $\alpha = .85$ ) and the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999) (e.g., 'In general, I consider myself...') 1 = *not a very happy person* to 7 = *a very happy person*; two items,  $r = .84$ ,  $p < .001$ ). Life satisfaction and happiness were correlated ( $r = .58$ ,  $p < .001$ ) so items were standardized and averaged to create a composite (five items;  $\alpha = .87$ ).

**TABLE 1** Zero-order correlations among measures in Studies 1a/1b.

Variable	1	2	3	4	5	6	7
1. Perceived social mobility (PSM)	-						
2. System justifying beliefs	.32***	-					
	.52***						
3. Well-being	.19***	.32***	-				
	.22***	.29***					
4. Prosocial behaviour intentions	.10	-.14**	.21***	-			
	-.01	-.18**	.09				
5. Age	.05	.02	.00	.09	-		
	.18***	.22***	.23***	.04			
6. Household income	-.06	.08	.22***	.04	-.05	-	
	.01	.10*	.31***	.06	.01		
7. Political affiliation	.26***	.46***	.12*	-.21***	-.09	.12*	-
	.42***	.55***	.06	-.21***	.16*	.04	

Note: Study 1a correlation on top, Study 1b correlation on bottom. Political affiliation was on a scale from 1 = *very liberal* to 7 = *very conservative*. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Prosocial behaviour intentions.** Participants responded to three items from the Prosocial Orientation Questionnaire (P. C. Cheung et al., 1998) and two items from a measure assessing charitable behaviour intentions (Winterich & Zhang, 2014). Sample items were 'I will use time and money to help those in need' from 1 = *strongly disagree* to 7 = *strongly agree* and 'How likely is it that you would donate to a local charity?' from 1 = *extremely unlikely* to 7 = *extremely likely*. Items were standardized and averaged together (five items,  $\alpha = .86$ ).

**Demographics.** Following Day and Fiske (2017), we controlled for gender, age, household income (1 = *less than \$5,000* to 10 = *\$150,000 and greater*) and political affiliation (1 = *very liberal* to 7 = *very conservative*),<sup>1</sup> as these variables have been shown to be associated with PSM and/or SJ (e.g., Davidai & Gilovich, 2015; Diener et al., 1995; Kraus & Tan, 2015; Shariff et al., 2016; Wakslak et al., 2007).

## 2.2 | Results

Table 1 presents zero-order correlations. We first conducted a series of independent sample *t*-tests (1 = *high mobility*, -1 = *low mobility*). As expected, participants in the high mobility condition perceived greater social mobility ( $M = 4.05$ ,  $SD = 0.82$ ) than those in the low mobility condition ( $M = 3.32$ ,  $SD = 0.94$ ),  $d = 0.83$ ,  $t(358) = 7.84$ ,  $p < .001$ , 95% CI [0.55, 0.91]. However, the experimental condition did not directly affect SJ,  $t(358) = 0.54$ ,  $p = .59$ , 95% CI [-0.15, 0.26], well-being,  $t(358) = 0.42$ ,  $p = .68$ , 95% CI [-0.19, 0.29] or prosocial intentions,

$t(358) = 0.44$ ,  $p = .66$ , 95% CI [-0.16, 0.25]. Thus, for the remaining analyses, we focus on associations among the variables. Given that indirect effects can emerge even in the absence of significant total or direct effects, and we had theoretical reasons to predict indirect effects, we proceeded with mediational analyses to test the relationships in the proposed model (Rucker et al., 2011; Shrout & Bolger, 2002) controlling for gender, age, income and political affiliation.

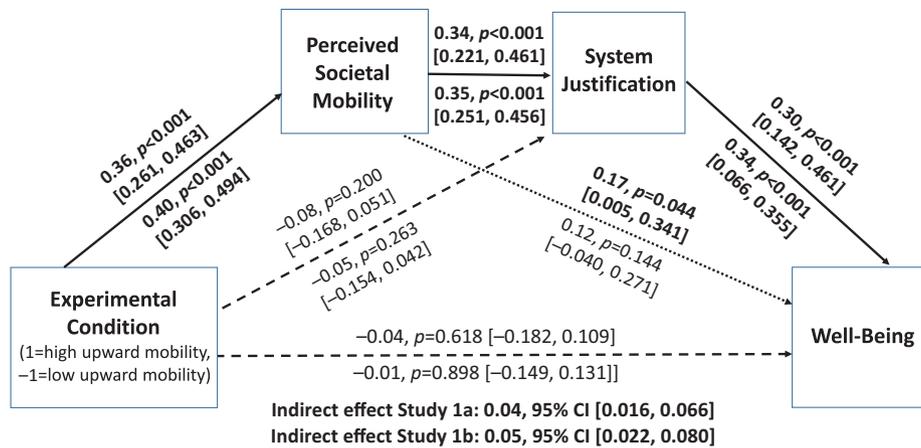
### 2.2.1 | Well-being

To test whether PSM was related to the outcomes via SJ, we tested a sequential mediation model using Hayes' (2018) PROCESS macro for SPSS (model 6) where experimental condition predicted PSM, PSM predicted SJ and SJ predicted well-being. Results showed that the experimental condition affected PSM, which were related to greater SJ and greater well-being. Bootstrapping analyses based on 5000 resamples tested the indirect effect of PSM and SJ on well-being. The 95% bias-corrected confidence interval for the size of the indirect effect excluded zero, indicating a significant indirect effect (Figure 1).

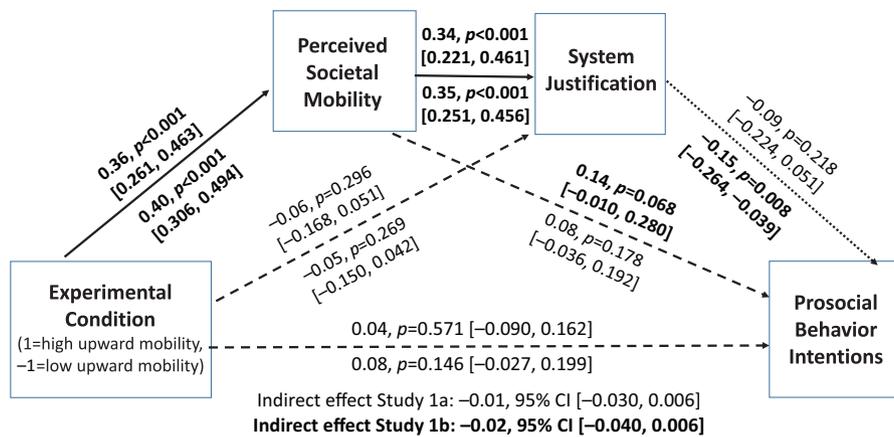
### 2.2.2 | Prosocial behaviour intentions

Next, we conducted sequential mediation analyses examining willingness to engage in prosocial behaviour. The experimental condition affected PSM, which was related to greater SJ, which was unrelated to prosocial intentions. The 95% bias-corrected confidence interval for

<sup>1</sup> For political affiliation, percentages are based on responses of liberal = very liberal, liberal or slightly liberal and conservative = very conservative, conservative or slightly conservative.



**FIGURE 1** Results of serial mediation models predicting well-being in Studies 1a/b controlling for gender, age, income and political affiliation. Study 1a statistics appear above, and Study 1b statistics appear below the paths. Coefficients are unstandardized; numbers in brackets reflect 95% confidence intervals. Significant paths are in bold; dashed lines reflect non-significant paths; dotted lines reflect mixed paths (i.e., significant in one study only).



**FIGURE 2** Results of serial mediation models predicting prosocial behaviour intentions in Studies 1a/b controlling for gender, age, income and political affiliation. Study 1a statistics appear above, and Study 1b statistics appear below the paths. Coefficients are unstandardized; numbers in brackets reflect 95% confidence intervals. Significant paths are in bold; dashed lines reflect non-significant paths; dotted lines reflect mixed paths (i.e., significant in one study only).

the size of the indirect effect included zero, indicating a non-significant indirect effect through SJ (Figure 2).

**2.3 | Discussion**

Participants who were led to believe that social mobility is probable (vs. improbable) were more likely to believe that people can move up the socioeconomic ladder. In turn, greater PSM was related to greater system defence – that is, viewing the current system as fair and just. Consistent with the palliative function of SJ, greater system defence was related to greater well-being, even after controlling for gender, age, income and political affiliation. However, SJ was unrelated to prosocial behaviour intentions. Overall, this study provides initial evidence that PSM is related to a greater tendency to justify the system,

which is related to greater personal well-being. Whereas Study 1a focused on a college student sample, Study 1b sought to replicate and extend these findings by examining a broader sample of adults from the community.

**3 | STUDY 1B**

**3.1 | Method**

**3.1.1 | Participants and procedure**

Participants in Study 1b were recruited through Research Match, a crowd-sourcing service that enables researchers to request adults from the United States to volunteer for research studies. There were

388 participants (22% men, 75% women, 1% non-binary, 2% unknown gender) ranging from 19 to 90 years old ( $M_{\text{age}} = 51.98$ ,  $SD = 15.70$ ). The sample was 88.7% White, 3.1% Black, 1.5% Hispanic, 1.3% Asian, 3.1% other ethnicities and 2.3% ethnicity not specified, and their political affiliation was 59% liberal, 21% conservative, 11% moderate and 10% something else/I do not know (coded as missing); median household income was \$50,000–74,999. Using the same manipulation as in Study 1a, participants read one of two articles that were meant to activate PSM. Participants then completed the same measures as before assessing PSM (eight items,  $\alpha = .85$ ), SJ (five items,  $\alpha = .79$ ), well-being (five items,  $\alpha = .91$ ), prosocial behaviour intentions (five items,  $\alpha = .83$ ) and demographics (three items,  $\alpha = .90$ ).<sup>2</sup>

## 3.2 | Results

Table 1 presents zero-order correlations. As before, we first conducted independent sample *t*-tests with experimental conditions predicting PSM, SJ, well-being and prosocial intentions. As in Study 1a, participants in the high mobility condition perceived greater social mobility ( $M = 3.50$ ,  $SD = 1.08$ ) than those in the low mobility condition ( $M = 2.74$ ,  $SD = 0.95$ ),  $d = 0.74$ ,  $t(386) = 7.28$ ,  $p < .001$ , 95% CI [0.55, 0.96], but condition did not affect SJ,  $t(383) = 0.63$ ,  $p = .53$ , 95% CI [−0.15, 0.29] or well-being,  $t(386) = 0.97$ ,  $p = .33$ , 95% CI [−0.14, 0.40]. There was a significant effect of condition on prosocial intentions, such that those in the high mobility condition reported greater prosocial intentions ( $M = 5.90$ ,  $SD = 0.84$ ) than those in the low mobility condition ( $M = 5.66$ ,  $SD = 0.97$ ),  $d = 0.26$ ,  $t(382) = 2.54$ ,  $p = .011$ , 95% CI [0.05, 0.42]. For the remaining analyses, we focus on associations among the variables given that indirect effects can emerge even in the absence of significant total or direct effects (Rucker et al., 2011; Shrout & Bolger, 2002).

### 3.2.1 | Well-being

We conducted serial mediation analysis using Hayes' (2018) PROCESS macro for SPSS (model 6) with condition as the independent variable, well-being as the dependent variable and PSM and SJ, respectively, as sequential mediators. Replicating Study 1a, condition affected PSM, PSM were related to greater SJ, which was related to greater well-being. The 95% bias-corrected confidence interval for the size of the indirect effect excluded zero, indicating a significant indirect effect (Figure 1).

### 3.2.2 | Prosocial behaviour intentions

Sequential mediation analyses showed that condition affected PSM, PSM were related to greater SJ, which was related to less prosocial

behaviour intentions. The 95% bias-corrected confidence interval for the size of the indirect effect excluded zero, indicating a significant indirect effect (Figure 2).

## 3.3 | Discussion

The findings of Study 1b were generally consistent with Study 1a. Participants who were led to believe that social mobility is probable (vs. improbable) were more likely to think that people can move up the socioeconomic ladder, which was related to greater defence of the current system. Believing the current system was fair and legitimate was associated with greater happiness and life satisfaction but with less interest in donating time or money to help others. Findings emerged even after accounting for gender, age, income and political affiliation, suggesting that PSM is uniquely related to greater personal well-being and less prosocial intentions through increased support of the status quo.

## 4 | STUDY 2A

Given that Studies 1a and 1b showed inconsistent or no effects of the experimental condition on the dependent variables, we measured (rather than manipulated) people's PSM in Study 2a. As before, we expected that individuals who perceived greater social mobility would endorse SJ, which would be related to greater personal well-being but to less prosocial intentions. SJ refers to a general tendency to support the status quo in society and serves a palliative function (Jost & Hunyady, 2005); for example, SJ is related to greater life satisfaction among individuals experiencing relative deprivation (Osborne & Sibley, 2013).

Extending beyond previous studies, we also included a measure of ESJ to examine the possibility that PSM might be related to greater justification of the economic system, given that PSM reflects perceptions of moving up or down the economic ladder. That is, ESJ is a more specific construct than SJ that legitimizes the fairness of the current economic system and rationalizes the belief that equal opportunity exists in a capitalistic system and that personal merit leads to deserved outcomes (Jost & Thompson, 2000).

When people perceive wealth and poverty in society to be fair and legitimate, they are less emotionally perturbed by economic inequality (Goudarzi et al., 2020). Indeed, ESJ has been shown to decrease moral outrage, guilt and support for wealth redistribution policies (Wakslak et al., 2007). Based on such findings, we expected that when both SJ and ESJ are considered within the same mediation model, ESJ would be related to less prosocial behaviour intentions while SJ would be related to greater well-being. We did not have strong a priori predictions about the relationship between ESJ and well-being or SJ and prosocial behaviour. In addition to assessing prosocial behaviour intentions as in Studies 1a/b, we expanded our measures to examine altruistic motives to donate money and prosocial behaviour during a resource allocation task. We expected that ESJ would be related to

<sup>2</sup> Due to a technical error, three items were omitted from the SJ scale in Study 1b: "The United States is the best country in the world to live in," "Most policies serve the greater good," and "Society is set up so that people usually get what they deserve." For the remaining studies, all original 8 items of the SJ were retained.

less prosocial intentions and less willingness to donate or help others financially.

## 4.1 | Method

### 4.1.1 | Participants

A total of 387 participants (41% men, 58% women, <1% non-binary, <1% unknown gender) from the introductory psychology subject pool at a large public university in the United States completed the study online in exchange for course credit. We assessed post hoc power in Studies 2a/b using Schoemann et al.'s (2017) Monte Carlo power analysis for indirect effects application. These analyses determined that a sample of  $N = 300$  would be sufficient to achieve at least 80% power to detect the indirect effects of SJ and ESJ on well-being and the indirect effect of ESJ on prosocial intentions. The sample ranged from 18 to 30 years old ( $M_{\text{age}} = 18.83$ ,  $SD = 1.20$ ), was 53.2% White, 27.9% Asian, 10.3% Black, 4.9% Hispanic, 3.4% other ethnicities and <1% unknown. Their political affiliation was 42% liberal, 17% conservative, 18% moderate and 23% unknown/I do not know (coded as missing); median household income was \$50,000–74,999.

### 4.1.2 | Measures

**PSM.** Using the same measure as before, participants reported their PSM (eight items,  $\alpha = .79$ ).

**SJ.** As in Study 1b, participants reported the degree to which they felt the broader American geopolitical system was fair and just (eight items,  $\alpha = .85$ ).

**ESJ.** Participants completed the ESJ scale (Jost & Thompson, 2000) by reporting their agreement with items such as 'Laws of nature are responsible for differences in wealth in society' and 'Economic positions are legitimate reflections of people's achievements' from 1 = *strongly disagree* to 7 = *strongly agree* (17 items,  $\alpha = .78$ ).

**Well-being.** Using the same measures as before, participants reported their happiness and life satisfaction (five items,  $\alpha = .86$ ).

### 4.1.3 | Prosocial behaviour

**Altruistic Behaviour (resource allocation task).** Participants completed a social values orientation task (Van Lange et al., 1997) that involved allocating resources between themselves and another person ('Other'). Participants were presented with nine scenarios. For each scenario, they were given three options (A, B or C) to allocate points to themselves versus the other person with more points equating to better outcomes. For example, a scenario could include choice A (participant earns 500 points; 'Other' gets 100 points); choice B (participant earns 500 points; 'Other' gets 500 points); or choice C (participant earns 550 points; 'Other' gets 300 points). In this example, choosing option B is

the prosocial response because it maximizes the combined payoff for oneself and the 'Other' and minimizes inequality between oneself and others.

**Altruistic motives to donate.** Participants responded to the altruistic motives for donating money items from the Motives to Donate Scale (Konrath & Handy, 2018), which assesses reasons why people want to donate money to charitable organizations. Sample items were 'I donate because I feel compassion toward people in need' and 'I give because I am concerned about those less fortunate than myself' (three items,  $\alpha = .78$ ).

**Prosocial behaviour intentions.** Participants completed the same prosocial intention items as in the previous studies (five items,  $\alpha = .83$ ).

## 4.2 | Results

Table 2 reports zero-order correlations. We conducted mediation analyses using Hayes' (2018) PROCESS macro for SPSS (model 4) in which we entered PSM as the X variable, each dependent variable as the Y variable, respectively, and SJ and ESJ as parallel mediators. For all analyses, we controlled for the same covariates as before (i.e., gender, age, income, political affiliation).

### 4.2.1 | Well-being

Consistent with Studies 1a and 1b, PSM were related to greater SJ, which was related to greater well-being. Although PSM were also related to greater ESJ, ESJ was unrelated to well-being. Bootstrapping analyses based on 5000 resamples tested the indirect effect of PSM and SJ on well-being. The 95% bias-corrected confidence interval for the size of the indirect effect of SJ did not include zero, whereas it included zero for the indirect effect of ESJ, indicating only a significant indirect effect through SJ (Figure 3).

### 4.2.2 | Altruistic behaviour (resource allocation task)

Mediation analyses showed that PSM were related to both greater SJ and ESJ, but only ESJ was related to less altruistic behaviour. The 95% bias-corrected confidence interval for the size of the indirect effect through ESJ did not include zero and was significant (Figure 4 in the Supporting Information).

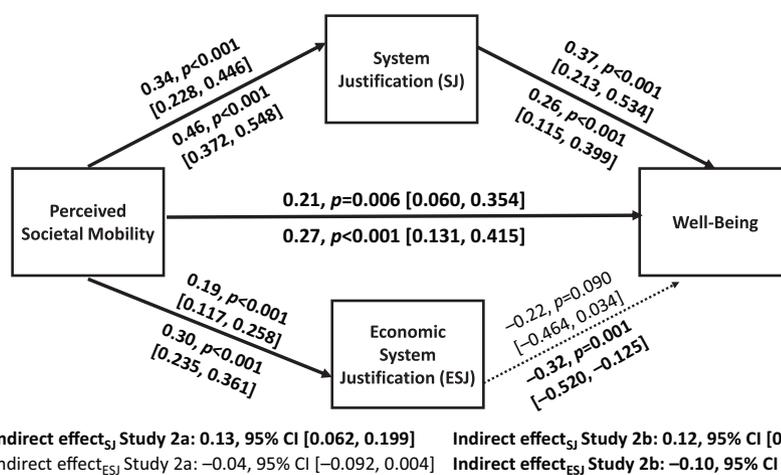
### 4.2.3 | Altruistic motives to donate

Mediation analyses showed that PSM were related to greater SJ and ESJ, but only ESJ predicted less altruistic motives to donate, and only the 95% bias-corrected confidence interval for the size of the indirect effect through ESJ did not include zero and was significant (Figure 5 in

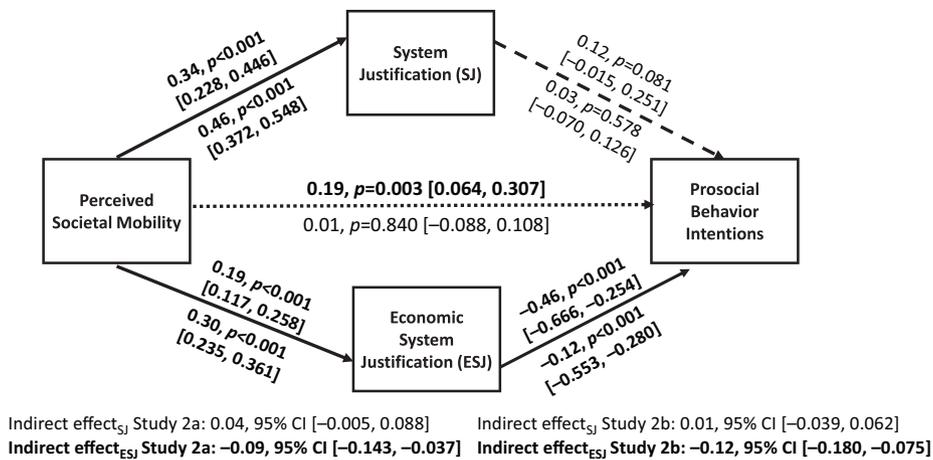
**TABLE 2** Zero-order correlations among measures in Studies 2a/b.

Variable	1	2	3	4	5	6	7	8	9	10
1. Perceived social mobility	-									
2. System justifying beliefs	.41***	-								
	.61***									
3. Economic system justifying beliefs	.41***	.60***	-							
	.65***	.71***								
4. Well-being	.18***	.30***	.06	-						
	.29***	.27***	.17***							
5. Prosocial behaviour intentions	.01	-.11*	-.29***	.21***	-					
	-.25***	-.25***	-.42***	.09						
6. Prosocial behaviour	-.11*	-.19***	-.29***	.14***	.18***	-				
	-.24***	-.23***	-.33***	-.07	.30***					
7. Altruistic motives to donate	-.03	-.11*	-.28***	-.13***	.75***	.17***	-			
	-.14**	-.15**	-.28***	.11*	.70***	.23***				
8. Age	-.01	-.01	-.09	-.02	-.01	-.08	-.02	-		
	.34***	.32***	.36***	.18***	-.07	-.13**	-.03			
9. Household income	-.10*	.06	-.09	.26***	.04	-.02	.09	-.08	-	
	.11*	.13**	.14**	.31***	.01	-.06	-.01	.11*		
10. Political affiliation	.37***	.50***	.60***	.07	-.28***	-.24***	-.26***	-.02	-.01	-
	.54***	.58***	.73***	.19***	-.31***	-.26***	-.17***	.27***	.09*	

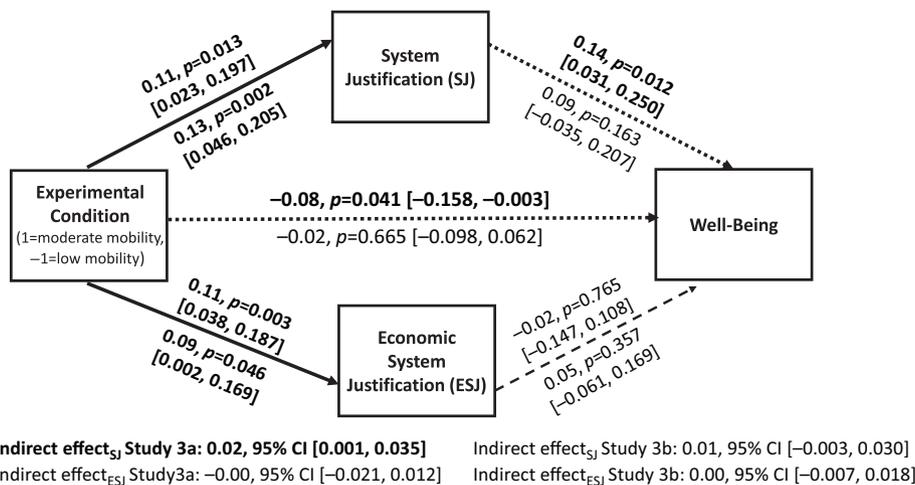
Note: Study 2a correlation on top, Study 2b correlation on bottom. Political affiliation was on a scale from 1 = very liberal to 7 = very conservative. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



**FIGURE 3** Results of mediation model predicting well-being in Study 2a/b controlling for covariates. Study 2a statistics are above line; Study 2b statistics are below line. All coefficients are unstandardized; numbers in brackets reflect 95% confidence intervals. Significant paths are in bold; dashed lines reflect non-significant paths; dotted lines reflect mixed paths (i.e., significant in one study only).



**FIGURE 4** Results of mediation model predicting prosocial behaviour intentions in Study 2a/b controlling for covariates. Study 2a statistics are above line; Study 2b statistics are below line. All coefficients are unstandardized; numbers in brackets reflect 95% confidence intervals. Significant paths are in bold; dashed lines reflect non-significant paths; dotted lines reflect mixed paths (i.e., significant in one study only).



**FIGURE 5** Results of mediation model predicting well-being in Study 3a/b controlling for covariates. Study 3a statistics are above line; Study 3b statistics are below line. All coefficients are unstandardized; numbers in brackets reflect 95% confidence intervals. Significant paths are in bold; dashed lines reflect non-significant paths; dotted lines reflect mixed paths (i.e., significant in one study only).

the Supporting Information).

#### 4.2.4 | Prosocial behaviour intentions

Mediation analyses showed that PSM were related to greater SJ and ESJ, but only ESJ was related to less prosocial behaviour intentions. The 95% bias-corrected confidence interval for the size of the indirect effect through ESJ did not include zero and was significant (Figure 4).

### 4.3 | Discussion

Replicating Studies 1a/1b, participants who perceived greater social mobility were more likely to support the status quo, which was related

to greater happiness and life satisfaction. Although PSM was also related to justification of the economic system, only general SJ was related to greater well-being. These results are consistent with our previous findings and with the literature showing that SJ serves a palliative function by allowing individuals to make sense of the world by believing that the current sociopolitical system is fair and just.

Although general SJ played a key role in well-being, the link between PSM and prosocial outcomes was largely driven by ESJ. Specifically, the more participants thought that social mobility was possible, the more they supported the current economic system, which was related to less prosocial outcomes. Specifically, the more people justified the economic system, the less altruistically they behaved in a resource allocation task, the altruistic motives they reported for donating money and showed lower behavioural intentions to donate money to others. Thus, while supporting the status quo, in general, was associated with greater

personal well-being, supporting the economic status quo, in particular, was related to less prosocial motives, intentions and behaviour.

## 5 | STUDY 2B

We next tested the robustness of the findings with a large, pre-registered study of an adult community sample. The hypotheses, methods, materials and data analysis plan were the same as in Study 2a and were pre-registered.<sup>3</sup> Based on the results of Study 2a, we predicted that the more participants endorsed PSM, the more they would justify the sociopolitical system, which would be related to greater personal well-being. However, it is possible that participants who perceived greater social mobility may also endorse the current economic system more, which might be related to less prosocial motives, intentions and behaviours.

### 5.1 | Method

#### 5.1.1 | Participants and procedure

A total of 490 participants (25% men, 72% women, 2% non-binary, <1% unknown gender;  $M_{\text{age}} = 55.28$ ,  $SD = 16.97$ ) were recruited through Research Match. The sample was 88.2% White, 3.1% Black, 2.9% Hispanic, 2.4% Asian, 2.4% other ethnicities and 1% ethnicity not specified. Their political affiliation was 61% liberal, 23% conservative, 13% moderate and 3% I do not know (coded as missing); median household income was \$75,000–99,999.

Using the same measures as in Study 2a, participants reported their PSM (eight items,  $\alpha = .85$ ), SJ (eight items,  $\alpha = .89$ ), ESJ (17 items,  $\alpha = .89$ ) and happiness and life satisfaction (five items,  $\alpha = .90$ ). They also completed the same prosocial behaviour measures from Study 2a – the altruistic behaviour resource allocation task, Altruistic Motives to Donate scale (three items,  $\alpha = .78$ ) and prosocial behaviour intentions (five items,  $\alpha = .83$ ).

### 5.2 | Results

Table 4 reports zero-order correlations. As in Study 2a, we conducted mediation analyses using Hayes' (2018) PROCESS macro for SPSS (model 4) in which we entered PSM as the X variable, each dependent variable as the Y variable, respectively, and SJ and ESJ as parallel mediators. For all analyses, we controlled for the same covariates as before (i.e., gender, age, income, political affiliation).

<sup>3</sup> For Studies 2b, 3a, and 3b, we pre-registered the studies prior to data collection and analyses. Our original, pre-registered hypotheses were that when people think that societal mobility is possible, they will support the status quo and view the current system as fair and legitimate, which would be related to greater well-being but to less prosocial outcomes. In our original pre-registrations, we did not propose specific, a priori hypotheses regarding potential differences between SJ and ESJ.

#### 5.2.1 | Well-being

Consistent with our previous findings, PSM was related to greater SJ, which was related to greater well-being. PSM was also related to greater ESJ, which was related to lower well-being. The 95% bias-corrected confidence interval for the size of the indirect effect of PSM on well-being did not include zero and was significant through both SJ and ESJ (Figure 3).

#### 5.2.2 | Altruistic behaviour (resource allocation task)

Replicating Study 2a, PSM was related to greater SJ and ESJ, but only ESJ was related to less prosocial behaviour in the resource allocation task. The 95% bias-corrected confidence interval for the size of the indirect effect of PSM on altruistic behaviour did not include zero and was significant through ESJ (Figure S4).

#### 5.2.3 | Altruistic motives to donate

Replicating Study 2a, PSM was related to greater SJ and ESJ, but only ESJ predicted less altruistic motives to donate. The 95% bias-corrected confidence interval for the size of the indirect effect of PSM on altruistic motives to donate did not include zero and was significant through ESJ (Figure S5).

#### 5.2.4 | Prosocial behaviour intentions

As in Study 2a, PSM was related to greater SJ and ESJ. However, only the indirect effect through ESJ was related to less prosocial intentions. The 95% bias-corrected confidence interval for the size of the indirect effect of PSM on prosocial behaviour intentions did not include zero and was significant through ESJ, whereas the indirect effect through SJ was not found to be different from zero and was not significant (Figure 4).

### 5.3 | Discussion

Results of Study 2b were generally consistent with Study 2a. Participants who perceived greater social mobility endorsed both general SJ and ESJ, which were related to greater personal well-being. However, whereas general SJ predicted greater well-being and ESJ predicted lower well-being in the present study, only SJ predicted greater well-being in Study 2a. One interpretation of the current findings is that ESJ may reflect a belief in economic inequality, and past work has shown that living in areas with higher income inequality is related to lower well-being (Buttrick et al., 2017). Thus, while general support of the status quo may be beneficial for personal well-being, acceptance of existing economic differences may be associated with lower

well-being. In terms of prosocial outcomes, the findings replicated Study 2a: participants who perceived greater social mobility were more likely to endorse both general SJ and ESJ, but only ESJ was related to less prosocial motives, intentions and altruistic behaviour on a resource allocation task.

## 6 | STUDY 3A

Study 3a sought to manipulate PSM and examine its effects on both general SJ and ESJ, well-being and prosocial outcomes. Based on the findings thus far, we hypothesized that participants who were led to believe that social mobility in America is probable (vs. improbable) would report (a) greater SJ, (b) ESJ and (c) greater happiness and life satisfaction, but (d) shows less willingness to engage in prosocial behaviour, less support for policies related to welfare and wealth redistribution and less intolerance of income inequality in society. We did not have specific a priori hypotheses about whether SJ and/or ESJ would be differentially related to the outcome variables. The modified version of Day and Fiske's (2017) manipulation used in Studies 1a/b – which only focused on upward mobility – was ineffective and did not produce consistent effects or replicate the original studies' findings. We, therefore, used the original procedure outlined in Day and Fiske's (2017) studies to manipulate PSM in the present study. The hypotheses, materials and data analysis plan were pre-registered.

### 6.1 | Method

#### 6.1.1 | Participants and procedure

A total of 530 participants (58% men, 40% women, 2% non-binary) from the introductory psychology subject pool at a large university in the United States completed the study online for course credit. The sample was 18–30 years old ( $M_{\text{age}} = 19.17$ ,  $SD = 1.48$ ); 47.2% White, 23.3% Asian, 15% Black, 6.4% Hispanic, 3.4% multiracial and 4.7% other ethnicities; their political affiliation was 33% liberal, 24% conservative, 42% moderate and 1% I do not know (coded as missing); and median household income was \$100,000–149,999.

Similar to Studies 1a and 1b, participants were randomly assigned to read one of two news articles that discussed the possibility of social mobility in America. In contrast to these previous studies, the current study used the same manipulation as in Day and Fiske's (2017) research that alluded to both upward and downward mobility, rather than just upward mobility. Participants then reported their PSM followed by the dependent measures.

#### 6.1.2 | Measures

**Manipulation of social mobility.** Participants read an article that was intended to activate perceptions of high versus low social mobility (Day & Fiske, 2017); see Supporting Information. Participants in the high

mobility condition read an article called 'Moving on Up!' that described research suggesting that Americans are able to move up and down the societal ladder with statements such as 'Fortunately, this study found that the chances that a person who starts in the bottom 20% will move up are actually reasonably good' and 'But mobility doesn't only occur at the bottom. For instance, those in the top 20% don't necessarily stay there... These up-and-down changes are indicators of a healthy level of social mobility'.

In the low mobility condition, participants read an article called 'Moving on Up?' that described research suggesting that social mobility is unlikely with statements such as, 'Unfortunately, this study found that the chances that a person who starts in the bottom 20% will make it to the top 20% are very slim – a mere 5%' and 'But the lack of mobility is not just a problem at the bottom. For instance, those in the top 20% also seem to stay there'. Afterwards, participants described the main idea of the article and completed the following measures.

**PSM.** Using the same measure as before, participants reported their PSM (eight items,  $\alpha = .82$ ).

**SJ.** Using the same measure as before, participants reported the degree to which they felt the broader American sociopolitical system was fair and just (eight items,  $\alpha = .83$ ).

**ESJ.** Participants completed a subset of items from Jost and Thompson's (2000) ESJ scale (seven items,  $\alpha = .76$ ).<sup>4</sup>

**Well-being.** Using the same measures as before, we assessed life satisfaction and happiness, which were standardized and averaged to create a composite (seven items;  $\alpha = .89$ ).

**Prosocial behaviour intentions.** Using the same measure as before, participants reported their prosocial behaviour intentions (five items,  $\alpha = .86$ ).

**Support for redistribution of wealth.** Participants reported their support for policies consistent with wealth redistribution with items such as, 'In general, the wealthy should be taxed to provide benefits to the poor' from 1 = *strongly disagree* to 6 = *strongly agree* and 'How do you feel about raising federal income taxes for people who make MORE THAN \$200,000 per year?' from 1 = *greatly oppose this policy* to 6 = *greatly favor this policy* (8 items,  $\alpha = .83$ ; Brown-Ianuzzi et al., 2015).

**Opposition to welfare policies.** To assess opposition to welfare policies, participants reported how much they agreed with items such as, 'People who stay on welfare have no desire to work' and 'Too many tax dollars are spent to take care of those unwilling to take care of themselves' from 1 = *strongly disagree* to 6 = *strongly agree* (6 items,  $\alpha = .75$ ; Brown-Ianuzzi et al., 2015).

**Intolerance of income inequality.** Participants reported their intolerance of income inequality by reporting their agreement with items such as, 'I think the state of income inequality in the US is unfair' from 1 = *strongly disagree* to 7 = *strongly agree* (3 items,  $\alpha = .87$ ; Shariff et al., 2016).

<sup>4</sup> Because we included three additional dependent measure questionnaires in Studies 3a and 3b, we did not administer the full 17-item ESJ scale due to time and space constraints. Instead, using the data from Studies 2a and b, we conducted a confirmatory factor analysis on the ESJ scale and selected the 7 highest loading items for inclusion in the shortened version (see OSF methodology file for list of items).

**TABLE 3** Zero-order correlations among measures in Studies 3a/b.

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Perceived social mobility	-										
2. System justifying beliefs	.41***	-									
	.54***										
3. Economic system justifying beliefs	.50***	.69***	-								
	.64***	.75***									
4. Well-being	.10*	.17***	.12**	-							
	.19***	.23***	.19***								
5. Prosocial behaviour intentions	-.02	-.22*	-.30***	.11*	-						
	-.27***	-.28***	-.45***	-.09							
6. Support for wealth redistribution	-.36***	-.46***	-.64***	-.07	.36***	-					
	-.51***	-.54***	-.77***	-.15**	.45***						
7. Opposition to welfare policies	.34***	.53***	.59***	.08*	-.32***	-.55***	-				
	.57**	.53**	.72***	.14**	-.46***	-.70***					
8. Intolerance of income inequality	-.33***	-.58***	-.66***	-.02	.35***	.60***	-.42***	-			
	-.51***	-.63***	-.84***	-.14**	.36***	.81***	-.65***				
9. Age	-.09*	.03	-.03	.00	.08	-.00	.02	.02	-		
	.15**	.31***	.26**	.16***	-.05	-.10*	.17***	-.16***			
10. Household income	.00	.05	.07	.23***	-.02	-.12*	.06	-.05	.08	-	
	.10*	.10	.06	.26***	-.01	-.04	.07	-.09	.01		
11. Political affiliation	.32***	.47***	.55***	.11*	-.28***	-.54***	.49***	-.44***	-.01	.14**	-
	.51***	.62***	.76***	.15*	-.33***	-.75***	.71***	-.74***	.11*	.06	

Note: Study 3a correlation on top, Study 3b correlation on bottom. Political affiliation was on a scale from 1 = *very liberal* to 7 = *very conservative*. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

## 6.2 | Results

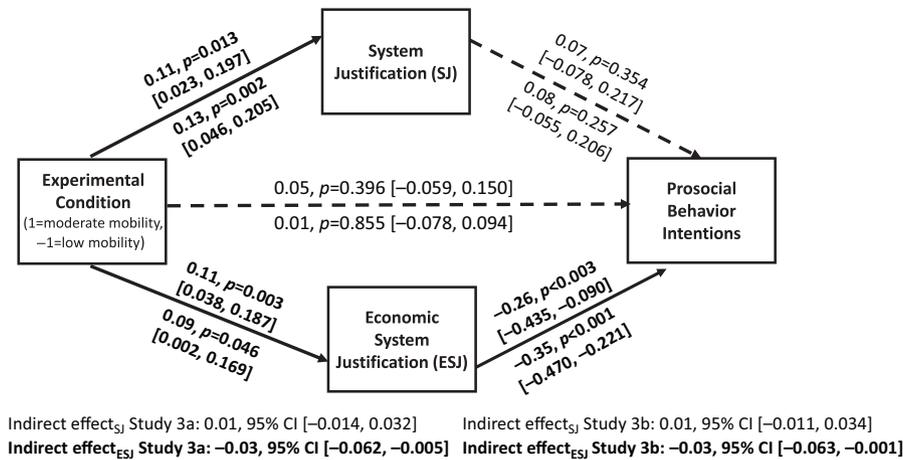
Table 3 presents zero-order correlations. We first conducted t-tests to examine whether participants assigned to the high (vs. low) mobility condition: (a) perceived greater social mobility; (b) reported greater SJ and ESJ; (c) greater well-being; and (d) lower intentions to engage in prosocial behaviour and support policies related to welfare, wealth redistribution and intolerance of income inequality.

Results showed that participants in the high mobility condition perceived greater social mobility ( $M = 4.18, SD = .82$ ) than those in the low mobility condition ( $M = 3.40, SD = 1.00$ ),  $d = 0.91$ ,  $t(513.53) = -9.85$ ,  $p < .001$ , 95% CI [-0.93, -0.62]. They also reported greater SJ ( $M = 3.51, SD = 0.71$ ) than those in the low mobility condition ( $M = 3.27, SD = 0.94$ ),  $d = 0.96$ ,  $t(530) = -2.85$ ,  $p = .004$ , 95% CI [-0.40, -0.07] and greater ESJ ( $M = 3.65, SD = 0.85$ ) than those in the low mobility condition ( $M = 3.42, SD = 0.91$ ),  $d = 0.88$ ,  $t(530) = -2.97$ ,  $p = .003$ , 95% CI [-0.38, -0.08]. Further, participants in the high mobility condition reported greater opposition to welfare policies ( $M = 3.28, SD = 0.80$ )

than those in the low mobility condition ( $M = 3.12, SD = 0.82$ ),  $d = 0.81$ ,  $t(530) = -2.38$ ,  $p = .02$ , 95% CI [-0.30, -0.03].

The experimental condition did not directly affect well-being,  $t(530) = 0.81$ ,  $p = .42$ , 95% CI [-0.08, 0.19]; prosocial behaviour intentions,  $t(521.31) = -0.06$ ,  $p = .95$ , 95% CI [-0.19, 0.17]; support for redistribution of wealth,  $t(530) = 1.55$ ,  $p = .12$ , 95% CI [-0.03, 0.26]; or intolerance of income inequality,  $t(530) = 1.46$ ,  $p = .15$ , 95% CI [-0.06, 0.38]. Given that indirect effects can emerge even in the absence of significant total or direct effects (Rucker et al., 2011; Shrout & Bolger, 2002), we proceeded to test whether there was an indirect effect of the experimental condition on the outcome variables. Specifically, we entered condition as the X variable, SJ and ESJ as parallel mediators, and each dependent variable as the Y variable, respectively, using Hayes' (2018) PROCESS macro for SPSS (model 4).<sup>5</sup> As before, we controlled for gender, age, income and political affiliation.

<sup>5</sup> This analysis plan, which we used in Studies 3a and 3b, deviated slightly from our original pre-registrations which included PSM in the mediational model. Given that the experimental condition in Studies 3a and 3b were found to directly influence SJ and ESJ, we included the



**FIGURE 6** Results of mediation model predicting prosocial behaviour intentions in Study 3a/b controlling for covariates. Study 3a statistics are above line; Study 3b statistics are below line. All coefficients are unstandardized; numbers in brackets reflect 95% confidence intervals. Significant paths are in bold; dashed lines reflect non-significant paths; dotted lines reflect mixed paths (i.e., significant in one study only).

### 6.2.1 | Well-being

Mediation analyses showed that participants in the high social mobility condition were more likely to endorse SJ and ESJ; this was the case across all the analyses reported below. Consistent with Studies 1a/1b and 2a, SJ was related to greater well-being; however, ESJ was unrelated to well-being. The 95% bias-corrected confidence interval for the size of the indirect effect through SJ did not include zero and was significant (Figure 5).

### 6.2.2 | Prosocial behaviour intentions

As in Study 2b, whereas SJ was unrelated to prosocial intentions, ESJ was related to less prosocial intentions. The 95% bias-corrected confidence interval for the size of the indirect effect did not include zero and was only significant through ESJ (Figure 6).

### 6.2.3 | Support for redistribution of wealth

Mediation analyses showed that whereas SJ was unrelated to support for redistribution of wealth, ESJ was related to less support for redistribution of wealth. The 95% bias-corrected confidence interval for the size of the indirect effect did not include zero and was only significant through ESJ (Figure 9 in the Supporting Information).

### 6.2.4 | Opposition to welfare policies

Mediation analyses showed that both SJ and ESJ were related to greater opposition to welfare policies. The 95% bias-corrected confi-

dence interval for the size of the indirect effects did not include zero and was significant through both SJ and ESJ (Figure S10).

### 6.2.5 | Intolerance of income inequality

Mediation analyses showed that higher SJ and ESJ were related to less intolerance of income inequality. The 95% bias-corrected confidence intervals for the size of the indirect effects did not include zero and were significant through both SJ and ESJ (Figure S11).

## 6.3 | Discussion

Study 3a builds upon the previous studies by providing causal evidence that PSM increases tendencies to justify both the general sociopolitical system and the economic system. Greater defence of the general system was related to greater happiness and life satisfaction. In contrast, defence of the *economic* system was unrelated to well-being, but was related to less willingness to donate time and money to help others, less support of policies related to redistribution of wealth and welfare and less intolerance of income inequality in society. Additionally, general SJ was related to greater opposition to welfare policies and less intolerance of income inequality. These findings were significant even after controlling for gender, age, income and political affiliation.

Study 3a extends beyond Studies 2a/b by providing causal evidence that PSM leads people to justify both the general sociopolitical system and the economic system. Notably, SJ was related to greater personal well-being, while ESJ was related to lower prosocial behaviour intentions and less support of policies addressing social welfare and inequalities. Thus, while PSM boosts personal well-being via general SJ, they simultaneously undermine people's prosocial intentions via ESJ. In the final study, we sought to test the generalizability of these findings by going beyond a college student sample to examine adults from the community.

experimental manipulation of PSM (i.e., Condition variable) in the model, rather than the PSM measure (see Figures 5 and 6).

## 7 | STUDY 3B

### 7.1 | Method

#### 7.1.1 | Participants and procedure

A total of 408 participants (26% men, 70% women, 4% non-binary;  $M_{\text{age}} = 55.91, SD = 18.00$ ) were recruited through Research Match. We sought to recruit as many participants as possible to reach a similar sample size as in our previous studies and as noted in our preregistration. The sample was 89.5% White, 2.2% Hispanic, 1.7% Black, 1.7% Asian, 2.7% multiracial and 1.5% other ethnicities. Their political affiliation was 66.5% liberal, 16.1% conservative and 16.2% moderate; median household income was \$100,000–149,999.

Using the same materials as in Study 3a, participants read one of two articles intended to activate perceptions of the probability (vs. improbability) of social mobility. Participants then completed the same measures assessing PSM (eight items,  $\alpha = .88$ ), SJ (eight items,  $\alpha = .82$ ), ESJ (seven items,  $\alpha = .90$ ), well-being (seven items,  $\alpha = .90$ ), prosocial behaviour intentions (five items,  $\alpha = .78$ ), support for redistribution of wealth (eight items,  $\alpha = .93$ ), opposition to welfare policies (six items,  $\alpha = .71$ ), intolerance of income inequality (three items,  $\alpha = .92$ ) and demographics.

### 7.2 | Results

As in Study 3a, we first conducted a series of independent sample *t*-tests with condition (1 = *high mobility*, -1 = *low mobility*) predicting PSM, SJ, ESJ, well-being, prosocial behaviour intentions, support for redistribution of wealth, opposition to welfare policies and intolerance of income inequality. As expected, participants in the high mobility condition perceived greater social mobility ( $M = 3.66, SD = 1.10$ ) than those in the low mobility condition ( $M = 2.51, SD = 0.98$ ),  $d = 1.04$ ,  $t(398.48) = -11.11, p < .001$ , 95% CI [-1.35, -0.95]. Participants in the high mobility condition also reported greater SJ ( $M = 3.07, SD = 1.03$ ) than those in the low mobility condition ( $M = 2.86, SD = 0.99$ ),  $d = 1.01$ ,  $t(406) = -2.10, p = .04$ , 95% CI [-0.41, -0.01] and greater ESJ ( $M = 2.91, SD = 1.30$ ) than those in the low mobility condition ( $M = 2.71, SD = 1.20$ ),  $d = 1.25$ ,  $t(406) = -1.61, p = .05$ ,<sup>6</sup> 95% CI [-0.44, 0.04].

Similar to Study 3a, condition did not directly affect well-being,  $t(406) = -0.09, p = .93$ , 95% CI [-0.16, 0.15]; prosocial behaviour intentions,  $t(406) = 0.23, p = .82$ , 95% CI [-0.15, 0.19]; support for redistribution of wealth,  $t(406) = 0.35, p = .73$ , 95% CI [-0.18, 0.26]; opposition to welfare policies,  $t(406) = -1.18, p = .24$ , 95% CI [-0.25, 0.06]; or intolerance of income inequality,  $t(406) = 1.21, p = .23$ , 95% CI [-0.12, 0.51]. Given that indirect effects can emerge even in the absence of significant total or direct effects (Rucker et al., 2011; Shrout & Bolger, 2002), we proceeded to test whether there was an indirect effect of the experimental condition on the outcome variables. Specif-

ically, we entered condition as the X variable, SJ and ESJ as parallel mediators and each dependent variable as the Y variable, respectively, using Hayes' (2018) PROCESS macro for SPSS (model 4). As before, we controlled for gender, age, income and political affiliation.

#### 7.2.1 | Well-being

Mediation analyses showed that participants in the high social mobility condition were more likely to endorse SJ and ESJ; this was the case across all the analyses reported below. However, neither SJ nor ESJ were related to well-being (Figure 5).

#### 7.2.2 | Prosocial behaviour intentions

Mediation analyses showed that whereas SJ was unrelated to prosocial intentions, ESJ was related to less prosocial behaviour intentions. The 95% bias-corrected confidence intervals for the size of the indirect effect did not include zero and were significant through ESJ (Figure 6).

#### 7.2.3 | Support for redistribution of wealth

Mediation analyses showed that whereas SJ was related to greater support for wealth redistribution, ESJ was related to less support for redistribution of wealth. The 95% bias-corrected confidence intervals for the size of the indirect effects did not include zero and were significant through both SJ and ESJ (Figure S9).

#### 7.2.4 | Opposition to welfare policies

Mediation analyses showed that whereas SJ was unrelated to opposition to welfare policies, ESJ was significantly related to greater opposition to welfare policies. The 95% bias-corrected confidence interval for the size of the indirect effect did not include zero and was significant only through ESJ (Figure 10 in the Supporting Information).

#### 7.2.5 | Intolerance of income inequality

Mediation analyses showed that whereas SJ was unrelated to intolerance of income inequality, ESJ was related to less intolerance of income inequality. The 95% bias-corrected confidence interval for the size of the indirect effect did not include zero and was significant only through ESJ (Figure 11 in the Supporting Information).

### 7.3 | Discussion

The results of Study 3b were generally consistent with Study 3a. Participants who were led to believe that social mobility is probable (vs. improbable) were more likely to defend *both* the general sociopolitical

<sup>6</sup> A directional hypothesis was pre-registered, so significance level was based on a one-tailed (vs. two-tailed) test.

system and the economic system. Consistent with previous findings, general SJ was related to greater happiness and life satisfaction, while ESJ was unrelated to well-being, but related to lower intentions and support for prosocial behaviour. In the present study, defence of the broader sociopolitical system (SJ) was also related to greater support of wealth redistribution. Together, these findings suggest that support for specific components of the social system can have differing personal and societal implications.

To clarify the non-significant effects in Studies 3a and 3b, we used Schoemann and colleagues' (2017) Monte Carlo power analysis for indirect effects application, which allows researchers to determine the sample size needed to achieve a target power of 0.80 given observed correlations between variables. These analyses revealed that Study 3a was underpowered to detect the indirect effect of ESJ on the relationship between condition and well-being. However, Study 3a was sufficiently powered to detect the indirect effect of SJ on the relationship between condition and prosocial behaviour. Study 3b was underpowered to detect the indirect effect of SJ on the relationship between condition and well-being and prosocial behaviour, respectively. Based on such findings, future studies would benefit from recruiting larger samples to increase power (e.g., 720–730 participants based on Schoemann et al.'s, 2017, application) to help clarify the robustness of the indirect effects of SJ and ESJ on well-being and prosocial behaviour.

## 8 | INTERNAL META-ANALYSIS

To provide a more precise estimate of the relationships among the study variables, we conducted an internal meta-analysis across Studies 2a, 2b, 3a and 3b ( $k = 4$ ), which assessed PSM, SJ and ESJ as parallel mediators, and well-being and prosocial intentions, respectively, as outcomes.<sup>7</sup> For each study, we extracted effect sizes (unstandardized regression coefficients) and their standard errors, which allowed us to calculate pooled effect sizes across studies.

We used random-effects modelling using the 'metafor' package in R. This approach considers both within- and between-study variance, making it suitable for heterogeneous datasets. Heterogeneity among studies was assessed using  $I^2$  and  $\tau^2$  statistics. We examined the following mediation models: (a) Model 1: PSM to SJ and ESJ as parallel mediators to well-being; (b) Model 2: PSM to SJ and ESJ as parallel mediators to prosocial intentions. Indirect effects were estimated using the product of coefficients method (M. W. Cheung, 2022). Full results of these analyses are available in the [Supporting Information](#).

### 8.1 | Model 1: PSM to SJ and ESJ as parallel mediators to well-being

The aggregated effect size was significant for the path between PSM and SJ,  $b = .50$ ,  $SE = 0.06$ ,  $z = 7.79$ ,  $p < .001$ , 95% CI [0.37, 0.62],

PSM and ESJ,  $b = .50$ ,  $SE = 0.08$ ,  $z = 5.98$ ,  $p < .001$ , 95% CI [0.34, 0.67], SJ and well-being,  $b = .24$ ,  $SE = 0.07$ ,  $z = 3.35$ ,  $p < .001$ , 95% CI [0.10, 0.38], but not ESJ and well-being,  $b = -.13$ ,  $SE = 0.08$ ,  $z = -1.61$ ,  $p = .108$ , 95% CI [-0.29, 0.03]. The estimated indirect effect of PSM on well-being was significant through SJ,  $b = .12$ ,  $SE = 0.04$ , 95% CI [0.04, 0.19], but not through ESJ,  $b = -.07$ ,  $SE = 0.04$ , 95% CI [-0.15, 0.02].

### 8.2 | Model 2: PSM to SJ and ESJ as parallel mediators to prosocial intentions

The aggregated effect size was significant for the link between PSM and SJ,  $b = .49$ ,  $SE = 0.06$ ,  $z = 7.89$ ,  $p < .001$ , 95% CI [0.37, 0.62], PSM and ESJ,  $b = .50$ ,  $SE = 0.08$ ,  $z = 5.98$ ,  $p < .001$ , 95% CI [0.34, 0.67], ESJ and prosocial intentions,  $b = -.41$ ,  $SE = 0.04$ ,  $z = -10.26$ ,  $p < .001$ , 95% CI [-0.49, -0.33], but not for SJ and prosocial intentions,  $b = .05$ ,  $SE = .03$ ,  $z = 1.78$ ,  $p = .075$ , 95% CI [-0.01, 0.10]. The estimated indirect effect of PSM on prosocial intentions was significant through ESJ,  $b = -.21$ ,  $SE = 0.04$ , 95% CI [-0.28, -0.13], but not through SJ,  $b = .02$ ,  $SE = 0.03$ , 95% CI [-0.04, 0.09].

In sum, the meta-analysis shows that PSM is related to increased well-being through SJ (but not through ESJ) and PSM is related to decreased prosocial behaviour intentions through ESJ (but not through SJ). Together, these findings suggest that support for the status quo, in general, is a key mechanism underlying increased well-being associated with PSM, whereas support for the economic status quo in particular accounts for the relationship between PSM and decreased prosocial intentions.

## 9 | GENERAL DISCUSSION

Despite economic inequality in the United States increasing over the past several decades, people still believe in social mobility – the idea that individuals can move up or down in society (Ballard, 2020). In present studies, we examined how PSM relates to subjective well-being and willingness to engage in prosocial behaviour. In Studies 1a/b and 3a/b, college students and adult community members were exposed to information suggesting social mobility in the United States is more (vs. less) probable. Those who read an article touting higher likelihood of mobility perceived that social mobility is possible, which was related to greater SJ in some studies (Studies 1a/b) and to both SJ and ESJ in other studies (Studies 3a/b). Although people who supported the general system tended to report greater well-being (Studies 1a/b, Study 3a), justification of the *economic* system was related to less willingness to help others and less support for social welfare policies (Studies 3a/b).

Along similar lines, Studies 2a/b found that greater PSM was related to *both* greater general SJ and ESJ. While SJ was related to greater well-being, ESJ was related to lower motivation and intentions to act prosocially and less prosocial behaviour on a resource allocation task. Findings emerged even after controlling for gender, age, income and

<sup>7</sup> We did not include Studies 1a/1b in the meta-analysis because ESJ was not assessed in these initial studies.

**TABLE 4** Comparison of indirect effects across studies.

	Well-being		Prosocial behavioural intentions		Altruistic behaviour (resource allocation task)		Altruistic motives to donate		Support for wealth redistribution		Opposition to welfare policies		Intolerance of income inequality	
	SJ	ESJ	SJ	ESJ	SJ	ESJ	SJ	ESJ	SJ	ESJ	SJ	ESJ	SJ	ESJ
Study 1a	+		n.s.											
Study 1b	+		-											
Study 2a	+	n.s.	n.s.	-	n.s.	-	n.s.	-						
Study 2b	+	-	n.s.	-	n.s.	-	n.s.	-						
Study 3a	+	n.s.	n.s.	-					n.s.	-	+	+	-	-
Study 3b	n.s.	n.s.	n.s.	-					+	-	n.s.	+	n.s.	-

Note: For Studies 1a/b, the sign represents the direction of the sequential indirect effect of PSM and SJ between the experimental condition and the outcome variable; for the remaining studies, the sign represents the direction of the indirect effect through SJ or ESJ between PSM (measured in Study 2a/b or manipulated in Study 3a/b) and the outcome variable. Abbreviations: ESJ, economic system justification; n.s., non-significant; SJ, system justification.

political affiliation, suggesting that SJ and ESJ uniquely account for the relationship between PSM and well-being and willingness to engage in prosocial behaviour.

The current findings build upon past work examining the consequences of PSM. For example, Wiwad (2017) found a link between perceptions of income mobility and positive affect, and Day and Fiske (2017) showed that exposure to messages of social mobility predicted greater SJ. Extending these findings, the present research is the first to demonstrate that PSM is linked to well-being and prosocial behaviour through increased support of the status quo. Furthermore, PSM is linked to these outcomes through support for different components of the status quo. That is, while SJ reflects support for the sociopolitical system in general, few studies have examined the possibility that different outcomes may result from support of specific systems. In particular, while PSM was associated with greater happiness and life satisfaction via justification of the general sociopolitical system, PSM was associated with less willingness to help others via increased support of the economic system. Thus, the present work sheds light on potential mechanisms underlying previous findings showing, for example, that PSM increases tolerance for inequality in society (Goudarzi et al., 2020; Shariff et al., 2016) or people's tendency to blame group members who hold disadvantaged status (Cozzarelli et al., 2001; Ho et al., 2002).

Table 4 summarizes the pattern of indirect effects that emerged for well-being and prosocial outcomes across studies. Despite some inconsistencies in the findings across studies, the predominant pattern across Studies 2a/b and 3a/b was that PSM was related to greater personal well-being via general SJ and to less prosocial outcomes via ESJ. Indeed, results of an internal meta-analysis across these studies showed that PSM was related to greater well-being through SJ (but not ESJ), whereas PSM was related to less prosocial outcomes through ESJ (but not SJ). Separating out the differing influences of SJ and ESJ in Studies 2a/b and 3a/b may also account for the inconsistent effects of SJ alone on prosocial behavioural intentions in Studies 1a/b.

## 9.1 | Limitations and future directions

In Studies 1a/1b, we sought to experimentally manipulate SJ using an adapted version of an established procedure (Day & Fiske, 2017). However, this manipulation did not work as intended; rather, we indirectly affected SJ by shifting PSM. Given this, we used the same procedures as in Day and Fiske (Study 3; 2017) in Studies 3a/b, where the manipulation directly affected support of both the general sociopolitical system and the economic system. The adaptations made to the original manipulation are one possible reason why we did not replicate the findings of Day and Fiske (2017) in the current Studies 1a/b. Specifically, whereas Studies 1a/1b only alluded to upward mobility, Day and Fiske's (2017) studies and the current Studies 3a/3b mentioned both upward and downward mobility. Shifting of socioeconomic circumstances – between when Studies 1a/b and Studies 3a/b were conducted – may also have played a role. Studies 1a/b were conducted in Spring 2019, while Studies 3a/b were conducted in Spring 2023. Socioeconomic changes resulting from the COVID-19 pandemic may have heightened the impact of the manipulation. For example, the sharp increase in unemployment in early 2020 and relatively rapid recovery may have made societal mobility seem more plausible compared to the Spring of 2019.

Although PSM was manipulated in Studies 1a/b and Studies 3a/b, the mediators (SJ and ESJ) and outcomes (well-being and prosocial behaviour) were assessed at the same time point. To address these limitations, researchers could conduct longitudinal studies to assess these variables at different time points. The order of questionnaires may also have contributed to why the manipulation did not directly affect well-being and prosocial outcomes. For example, in Day and Fiske's (2017) studies, PSM was assessed at the end of the study; in the current studies, PSM was assessed immediately after the manipulation, which could have inadvertently diluted the effects of the manipulation on subsequent dependent measures.

Past research has shown that PSM, SJ and ESJ are established scales, and the distinctions between these constructs have been discussed

in previous work (Day & Fiske, 2017; Goudarzi et al., 2020; Jost & Banaji, 1994; Jost & Thompson, 2000). However, in the present studies, the relationships that emerged between PSM, SJ and ESJ may be due, in part, to overlap between these constructs, as suggested by the high correlations among these variables in Studies 2a/2b and 3a/3b. Thus, potential multicollinearity issues between these measures may limit the conclusions that can be drawn in the current studies. That is, because these constructs are highly related to each other, we cannot definitively conclude that one construct (e.g., SJ) leads to an outcome (e.g., well-being) as there is likely to be shared variance among the measures and thus, more than one construct may contribute to the prediction of the dependent variables.

The present research focused on PSM, rather than individual social mobility, based on past work showing that personal social mobility did not significantly mediate the relationship between social mobility framing and system defence (Day & Fiske, 2017). However, given that we assessed different outcomes than Day and Fiske (2017) (i.e., well-being, prosocial behaviour), future studies would benefit from measuring individual social mobility as well to provide further insights into whether PSM in general or one's personal social mobility, differ in terms of how strongly they predict SJ, ESJ, well-being and prosocial behaviour. If people think that social mobility is possible for them personally, they might defend the system even more than if they perceive that social mobility is possible in general in society.

Future research could also explore the link between perceptions of economic inequality – as they relate to social mobility – and outcomes such as well-being and prosocial behaviour. Past work has shown that economic inequality is related to lower well-being due to decreased trust and perceptions that other people are fair (Oishi et al., 2011). When economic inequality is high, people are less likely to believe in economic mobility because they assume that economic success and failure are due to external factors beyond one's control, rather than to internal, controllable factors (Davidai, 2018). Based on such findings, we might expect that when economic inequality is high, people would perceive less social mobility, justify the current system less and experience lower well-being as a result. However, if economic inequality leads people to attribute economic outcomes to external factors beyond one's control, then they may be less likely to justify the current economic system and adopt more prosocial behaviour intentions to help those in need. Future research could manipulate PSM that either highlights economic inequality (or not) to see if this produces different effects on well-being and prosocial behaviour.

Finally, a limitation of the present research is that we only focused on U.S. residents. Future research could examine whether PSM is associated with well-being and prosocial behaviour in countries beyond WEIRD (i.e., Western, Educated, Industrialized, Rich, Democratic; Henrich et al., 2010) samples. Indeed, countries differ in how much their citizens justify the current system (Osborne et al., 2019). For example, people living in China – who often depend on the government for social services such as education and health care – show greater SJ than in countries like Italy and Brazil (Vargas-Salfate et al., 2018). The more people in China support the status quo, the more satisfied they feel about their lives due to greater belief in individual upward

mobility (Li et al., 2020). Other studies have shown that although SJ is lower in post-communist than in capitalist societies, SJ processes (e.g., defensive responses to system criticism, the palliative benefits of SJ) in post-communist contexts are similar to those observed in Western societies (Cichocka & Jost, 2014).

## 10 | CONCLUSION

The current research shows that when people in the United States are exposed to information suggesting that the likelihood of social mobility is high (vs. low), or when they endorse such perceptions at a dispositional level, they are more likely to support and defend the current sociopolitical and economic system in society. The more people think the general sociopolitical system is fair and just, the happier and more satisfied they feel about their own lives, consistent with the palliative function of SJ. However, while PSM is beneficial for personal well-being, rationalizing the economic status quo, in particular, poses a barrier to social change by reducing people's prosocial motives, intentions and behaviour. Future work could investigate ways to keep people's hopes about social mobility alive but not at the expense of helping others in need.

## CONFLICT OF INTEREST STATEMENT

The author and co-authors of this paper have no conflicts of interest to declare.

## ETHICS STATEMENT

This research was conducted in accordance with the ethical standards for the treatment of human participants and was reviewed and approved by the Social and Behavioral Sciences Institutional Review Board at the University at Buffalo.

## TRANSPARENCY STATEMENT

Transparency Statement

## DATA AVAILABILITY STATEMENT

The author has provided the required Data Availability Statement and, if applicable, included functional and accurate links to said data therein.

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## SUPPORTING INFORMATION

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