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Exploring system justification phenomenon among disadvantaged individuals

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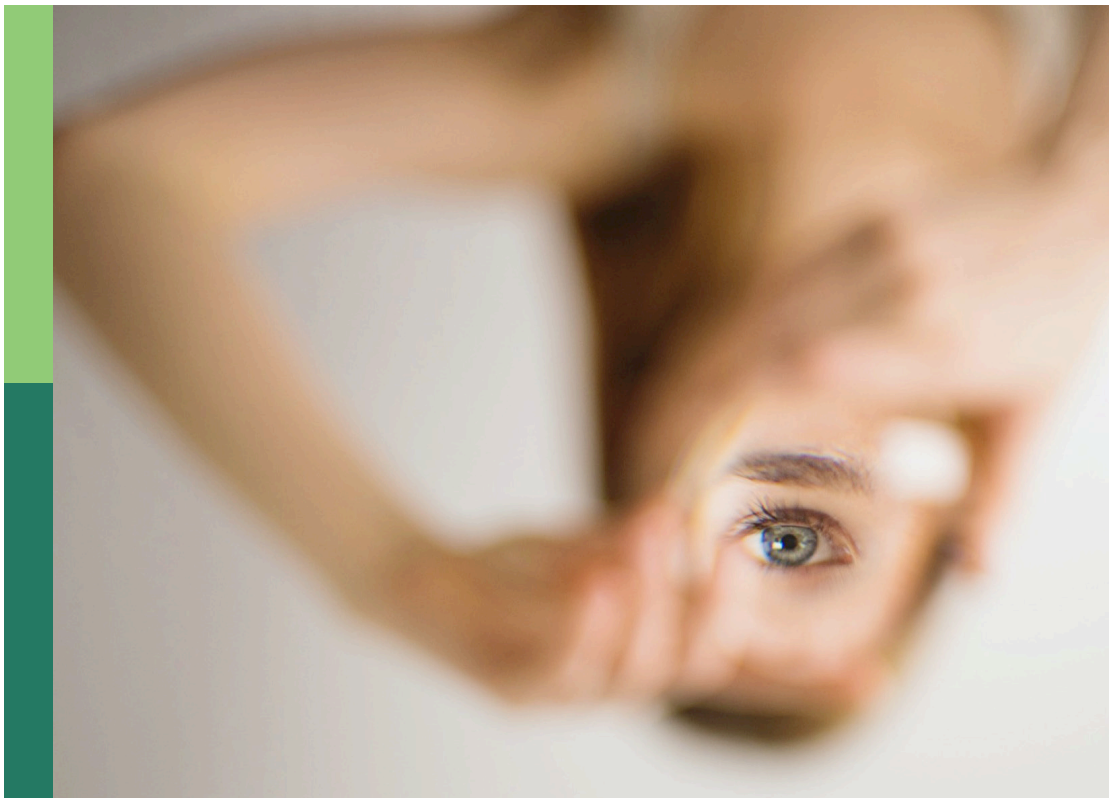

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Exploring system justification phenomenon among disadvantaged individuals

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Editorial: Exploring system justification phenomenon among disadvantaged individuals

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system justification, social disadvantage, oppression, social hierarchy, intergroup conflict, social change

Editorial on the Research Topic
Exploring system justification phenomenon among disadvantaged individuals

The question of *why* (or even when) the disadvantaged might be more or less supportive of existing social arrangements is a matter of debate amongst social and political psychologists (e.g., Passini, 2019; Jost, 2020, see also Rubin et al., 2022). Accordingly, for this Research Topic, we chose a title that was deliberately broad in scope, accommodating several aspects that included: (a) the drivers of system justification; (b) the socio-structural conditions that enhance or dampen system justification, (c) the ideological correlates of system support, and (d) the impact of system justification on wellbeing. Taken together, the contributions comprised in this Research Topic provide a comprehensive analysis of these four issues.

The drivers of system justification

Two articles explicitly examined the motivational basis for system justification. Using a large cross-national sample of participants from 40 different nations, Caricati et al. found that trust in institutions of governance (a manifestation of system justification) increased as a positive function of (a) the degree to which citizens invested in their national identity, and (b) improvements in citizens' outcomes relative to others overtime (see also Caricati, 2018; Caricati and Owuamalam, 2020), and both these effects were visible even after controlling for national wealth and inequality. In a complementary

manner, Owuamalam et al. reported results from two studies showing that support for a Brexit/Leave vote in UK's 2016 EU referendum and a Trump administration in the 2016 presidential election were mostly explained by group interest than by epistemic and existential needs (cf. Jost, 2020).

Socio-structural aspects of system justification

The issue of how socio-structural conditions might influence the probability of system justification was tackled by three contributions. Ferrari et al. and Lönnqvis et al. highlight that difference in status does play an important role. Indeed, using a large cross-national sample of 16 European countries, Ferrari et al. found that while homonegativity was inversely related to trusting the system, gender-based social status crucially moderated this relationship, with this negative association being stronger for men (the higher-status group) than for women. A similar status-based link to system justification was also reported by Lönnqvist et al. who found a positive association between socio-economic status and system support in the Hungarian electoral context, using two representative samples of the Hungarian population surveyed in 2010 and 2018. Finally, focusing this time on the disadvantaged alone, Degner et al. used an open-ended question format to examine the reasons displayed by gay men/lesbians, African Americans, overweight people, and the elderly for explaining social inequality. Results showed that the disadvantaged rarely used system-justifying stereotypes to explain status differences. Instead, Degner et al. found indications that social reality constraints/pressures could be a powerful explanation for status differentials (see also Owuamalam et al., 2019a,b).

Ideological correlates of system justification

Three articles considered the effect of holding ideological beliefs such as ambivalent sexism (Glick and Fiske, 1996) and social dominance orientation (Sidanius and Pratto, 1999) on system justification. Chayinska et al. investigated the relations between system justification, ambivalent sexism, and support for traditional, husband-centered marital surname change in three cross-sectional studies, with two samples of women in Turkey and one in the United States. Results consistently showed that hostile sexism, but not benevolent sexism, predicted support for marital surname change among Women: an association that was partially mediated by gender system justification. Furthermore, in two experimental studies, Carvalho et al. found that social dominance orientation increased the motivation to engage in direct competition with a relevant higher-status outgroup. Finally, Lönnqvist et al. showed that low-SES people who were strongly invested in the political ideology in power, reported stronger system justification. Their results further revealed that although levels of authoritarianism were substantially unchanged, system justification tended to increase from 2010 to 2018 in Hungary: suggesting a highly variable trend in the perceived legitimacy of the existing political system of governance.

Wellbeing and system justification

Finally, a set of articles dealt with the connection between system justification and wellbeing. Panari and Tonelli addressed the question of "what makes the unemployed more likely to accept their disadvantaged position or oppose their situation by searching for a better job?" performing a review of the literature about protean career orientation (i.e., the extent to which individuals feel responsible for their career choices and search for self-realization; Briscoe and Hall, 2006). Results suggested that personal empowerment is key when it comes to helping people to switch from a legitimizing perception of their disadvantaged position (resulting in a lack of search for employment or acceptance of any job), to a more proactive and agentic view of their situation (resulting in a search for a job that is consistent with their life aspirations). Finally, Möller et al. investigated if and how first-generation students (lower status) and students with university-educated parents (higher status) used different defense mechanisms (e.g., university-system justification, academic identification, and social belonging) to cope with the threat of lockdown due to the COVID-19 pandemic. Results from a large sample of German-speaking students ($N = 848$) showed that system justification reduced threat appraisals, but mostly among the higher-status group. Low-status groups, however, relied on personal relations with other students as well as academic identification to cope with the COVID-19 threat.

Concluding remarks

By taking different approaches, we believe the papers in this Research Topic provide valuable new insights into the phenomenon of system justification in general, and among disadvantaged people in particular. Of course, contributions to this volume contain various limitations that the authors themselves also identified, which makes related conclusions somewhat tentative at this time. Nevertheless, we believe these articles highlight novel areas in the literature on system justification that ought to be considered when investigating the processes of support for unequal societal systems. We hope that the present Research Topic would stimulate further discussions and help in our quest to better understand the processes of (and controversies surrounding) system-justifying attitudes amongst the disadvantaged.

Author contributions

LC, CO, and AC drafted the manuscript and which all authors reviewed and approved for publication. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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ORIGINAL RESEARCH
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Social Dominance Orientation Boosts Collective Action Among Low-Status Groups

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We propose that low-status group members' support for group-based hierarchy and inequality (i.e., social dominance orientation; SDO) may represent an ideological strategy to guarantee the legitimacy of future ingroup status-enhancement. Specifically, we argue that, under unstable social structure conditions, SDO serves as an ideological justification for collective action tendencies aimed at competing for a higher status. In such context, SDO should be positively related with actions aimed to favor the ingroup (i.e., collective actions) by increasing group members' motivation to engage in direct competition with a relevant higher-status outgroup. We conducted two studies under highly competitive and unstable social structure contexts using real life groups. In Study 1 ($N = 77$), we induced Low vs. High Ingroup (University) Status and in Study 2 ($N = 220$) we used competing sports groups. Overall, results showed that, among members of low-status groups, SDO consistently increased individuals' motivation to get involved in actions favoring the ingroup, by boosting their motivation to compete with the opposing high-status outgroup. We discuss the results in light of the social dominance and collective action framework.

Keywords: social dominance orientation, social competition, collective action, unstable social hierarchies, social identity theory

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INTRODUCTION

Members of low-status groups often engage in actions aimed to improve their position in the existing hierarchical social system. Although these actions are more frequently motivated by concerns about equality of treatment, opportunities, and rights for all social groups (e.g., civil rights movements), they can also be motivated by a desire to achieve (or based on beliefs that the ingroup deserves and can reach) more power, privilege and resources than relevant outgroups (see Tajfel, 1978; Tajfel and Turner, 1979; Rubin et al., 2014). In this case, members of low-status groups should feel motivated to compete for social status with a relevant high-status outgroup, and to affirm ingroup's superiority, achieve a positive ingroup distinctiveness and ensure intergroup differentiation (social identity theory, SIT; Tajfel, 1978; Tajfel and Turner, 1979). This is the case in competition-based intergroup contexts like sports, University rankings, political elections, countries (e.g., competing for economic or technological dominance, such as the case of USA vs. China), or even regions or sub-states (e.g., pro-independence movements such as the case of India independence movement from 1857 to 1947 or the ongoing Catalonia pro-independence movements). These competition-based intergroup contexts are framed in hierarchically structured

intergroup relations that have to remain in order to be possible for the low-status group to reach and to hold a superior position relative to the relevant outgroup in the future. Actions on behalf of ingroup's interests to achieve the higher status position in the future represent a social competition strategy (e.g., Tajfel, 1978; Tajfel and Turner, 1979). For members of low-status groups to feel motivated to favor the ingroup and engage in social competition, through collective actions, and to attempt to move their group to the top of the status hierarchy, they have to strongly identify with their group and to perceive group boundaries as impermeable, intergroup status positions as illegitimate or unfair and susceptible to change (i.e., unstable intergroup relations; e.g., Tajfel, 1978). For instance, Mummendey et al. (1999) found evidence of a positive relationship between the perception that intergroup relations were unstable, illegitimate, and impermeable, and an increased in social competition in the context of divided Germany. Indeed, under such sociostructural contexts, social competition is the most typical strategy aimed at change status relations between groups (e.g., Blanz et al., 1998; Mummendey et al., 1999). Moreover, these are the contexts that should generate intergroup conflict, in that competition aimed at reversing ingroup and outgroup status relations implies that group members are especially motivated to favor the ingroup (ingroup favoritism) and derogate the outgroup (e.g., Tajfel, 1978).

Therefore, ingroup status-enhancement motivation should, thus, be anchored in hierarchy-enhancing ideologies (i.e., social dominance orientation; SDO; e.g., Sidanius et al., 1994), to guarantee the legitimacy of future ingroup high-status by supporting the existing hierarchically structured social system (see Owuamalam et al., 2016).

Support for Group-Based Hierarchies and Inequality

According to social dominance theory (SDT; e.g., Sidanius et al., 1994), SDO represents the "desire to establish and maintain hierarchically structured intergroup relations regardless of the position of one's own group(s) within this hierarchy" (Sidanius et al., 2017, p. 152) and the "extent to which one desires that one's ingroup dominate and be superior to out-groups" (Pratto et al., 1994, p. 742). SDT also predicts that members of high-status groups tend to support more strongly group-based hierarchy and inequality (i.e., displaying higher SDO) than members of low-status groups (e.g., Sidanius et al., 1994; Levin, 2004). Indeed, group-based equality is inconsistent with privileged groups' interests as equality would decrease their group's status and power, while promoting the status and increasing the power of disadvantaged groups (e.g., Schmitt et al., 2003). Thus, SDO endorsement by members of low-status groups is believed to be associated with negative feelings about group membership, or to fulfill a palliative function helping these members to cope with cognitive dissonance, anxiety, discomfort and uncertainty resulting from their disadvantaged condition, and leading them to engage in intense justifications or rationalizations of the *status quo* (e.g., Levin and Sidanius, 1999; Jost et al., 2004). According to this view SDO is expected to be negatively associated with willingness to engage in collective actions, toward social change, among members of low-status groups (e.g., Jost et al., 2012, 2017; Osborne et al., 2018).

However, recent evidence has shown that members of low-status groups may also support hierarchical social systems to favor the ingroup. For instance, Brandt and Reyna (2017) observed that people may be, simultaneously, in favor of social change (i.e., improve ingroup low-status) and supportive of inequality (i.e., maintaining the hierarchical system and groups differentiation). Caricati and Sollami's work (Caricati and Sollami, 2017, 2018) on the mechanisms of legitimization of hierarchical social systems, suggests that members of low-status groups may justify and legitimate the social hierarchy if they perceive that they can take some advantages from it and protect ingroup interests.

In line with the above idea, Owuamalam et al. [e.g,. 2016; 2018] proposes the social identity model of system attitudes (SIMSA) suggesting that the support for hierarchical social systems among members of low-status groups can be explained by social identity motives. It is argued that support for such social systems, may actually be a way to maintain a positive social identity (i.e., to satisfy their social identity needs) and a strategy on behalf of ingroup's interests and goals. Specifically, and more important to our research, it is proposed that low-status groups may support hierarchical social systems that, at a first glance, seem to disadvantage their group, because they believe they can benefit from such system in the future (Owuamalam et al., 2016, 2017, 2018, 2019). This *hope for the future ingroup high-status* motive to support hierarchical systems (e.g., Owuamalam et al., 2018) may lead members of low-status groups to support hierarchy-enhancing ideologies, such as SDO, as a mean to guarantee the legitimacy of future ingroup status-enhancement. In other words, members of low-status groups may support hierarchical intergroup relations, intergroup inequality, and status differentials (i.e., SDO), because the only possibility for their group to guarantee and legitimate future high-status is through the maintenance of these unequal hierarchical social systems. Of course, this should only occur if the status hierarchy is perceived to be unstable, thus, susceptible to change in the future (e.g., Tajfel, 1978; Owuamalam et al., 2017, 2018).

The Context-Dependent Nature of SDO

In line with the above idea, and in spite of the fact that SDO has been most often conceptualized and operationalized as a relatively stable individual general orientation toward intergroup inequality (e.g., Sidanius et al., 1994), recent evidence has shown that SDO may, in fact, be context-dependent. For instance, SDO levels were found to be shaped by group membership and degree of ingroup identification, sensitive to social competition, to social influence processes, to ingroup status, group dynamics, expected power, and to perceptions of threat (e.g., Reynolds et al., 2001; Guimond et al., 2003; Schmitt et al., 2003; Lehmiller and Schmitt, 2007; Liu et al., 2008; Duckitt and Sibley, 2009; Morrison et al., 2009; Jetten and Iyer, 2010). Specifically, and more relevant to our research, Duckitt and Sibley (2009) highlight that SDO emerges from a competitive worldview developed in contexts of group dominance, inequality and competition, Thus, when social competition increases (e.g., under the shape of struggle

for resources, status and power) levels of SDO are expected to increase across all social groups (Sibley and Wilson, 2007; Duckitt and Sibley, 2009; Perry et al., 2013). As Duckitt and Sibley (2009, p. 106, emphasis added) noted, SDO "expresses the competitively driven motivation to *maintain* or *establish* group dominance and superiority." Thus, in a social structure that favors social competition, high-status groups should feel motivated to protect and *maintain* their superior position and low-status groups should feel motivated to prove and to *establish* their superiority too.

The Two Dimensions of SDO

Additionally, the SDO scale was initially conceptualized and designed in terms of a single dimension (Pratto et al., 1994). However, evidence has shown that this construct should be conceptualized and operationalized as having two distinct dimensions, reflecting each one distinct psychological orientation (Jost and Thompson, 2000; Kugler et al., 2010; Ho et al., 2015). One such dimension reflects support for group-based dominance hierarchies (SDO-D), defined as the support for hierarchical social systems "in which dominant groups actively oppress subordinate groups [and] will be related to phenomena such as support for aggressive intergroup behavior, support of overtly negative intergroup attitudes, support for negative allocations to outgroups, and the perception of group-based competition" (Ho et al., 2012, p. 585). The other dimension reflects opposition to group-based equality (SDO-E), defined as "an aversion to the general principle of equality and to reducing the level of hierarchy between social groups. Opposition to equality translates psychologically into support for exclusivity" (Ho et al., 2012, p. 585). Thus, according to Ho et al. (2012, 2015), examining these two subdimensions separately allows to better understand, and more accurately predict, intergroup attitudes and behaviors. Indeed, and relevant for our research, Jost and Thompson (2000) suggested that using SDO as a unidimensional construct may fail to assess ideological processes among members of low-status groups (see also Kugler et al., 2010).

The Present Research

With the present research, we attempted to combine the above-mentioned contributions of SIT and SDT and the novel *hope for the future ingroup high-status* explanation to support hierarchical systems (SIMSA; e.g., Owuamalam et al., 2018, 2019). We argue that support for group-based hierarchies and inequality (i.e., SDO) stand for an ideological strategy aimed to guarantee the legitimacy of future ingroup status-enhancement among members of low-status groups, namely in unstable social structures (the type of social structure believed to lead low-status group members to engage in social competition, according to SIT). Specifically, SDO endorsement among members of low-status groups may represent a strategy intended to maintain the existing hierarchical social system (i.e., maintenance of hierarchical organized intergroup relations and group status differentials), in order to ensure a legitimate future advancement of the ingroup within the prevailing status hierarchy. In this case, SDO should be positively associated with actions aimed to improve ingroup conditions, status, power and influence, to overcome the high-status outgroup, and to achieve positive ingroup distinctiveness (i.e., collective actions; e.g., Tajfel, 1978). Thus, in competitive social structure conditions, SDO should boost collective action tendencies among members of low-status groups, as a means to favor the ingroup by increasing the motivation to engage in direct competition with relevant high-status outgroups. This would reflect an ideological strategy aimed to guarantee the legitimacy of future ingroup high-status. Among members of high-status groups, although they may also feel motivated to compete for the maintenance of the higher status, we expect different patterns of association.

Moreover, although the literature suggests that SDO is positively associated with ingroup favoritism only in high-status groups (e.g., Levin et al., 2002), we propose that in competition-based intergroup contexts, a positive relationship may exist between SDO and ingroup favoritism (and outgroup derogation), among members of low-status groups.

In order to test the above ideas, we conducted two studies under unstable social structure contexts. In Study 1 we induced Low vs. High Ingroup Status based on information from a University ranking, and, in Study 2, we used football team supporters from two opposing teams with huge rivalry between them, during a football championship.

According to SIT's predictions, given the highly unstable social structure contexts (i.e., the necessary conditions for social competition strategies to emerge), we expect that, in both studies, members of low-status groups (as compared to members of high-status groups) show higher beliefs that status positions between groups are illegitimate and unstable; report stronger motivation to favor the ingroup and derogate the outgroup; and show stronger social competition intentions (H1). We also expect members of both low- and high-status groups to be equally and strongly identified with their group.

Moreover, assuming that SDO represents an ingroup status-enhancement strategy to guarantee the legitimacy of future ingroup high-status, we expect SDO to be positively related to social competition intentions and collective action tendencies among low-status groups (H2). As a result, we should observe positive associations between SDO and ingroup favoritism and/or outgroup derogation, among low-status groups. Among high-status groups, these positive associations are already expected according to previous research (e.g., Levin and Sidanius, 1999).

Finally, we expect to find, among members of the low-status groups, a mediational process in which SDO boosts collective action tendencies to favor the ingroup by increasing individuals' motivation to engage in direct competition with the other relevant high-status outgroup (H3). In other words, we expect social competition intentions to explain the relation between SDO and collective action tendencies, reflecting the proposed function of SDO as a strategy to guarantee the legitimacy of future ingroup high-status.

STUDY 1

Materials and Method

Participants and Design

Participants were 77 students enrolled at the University of Porto (convenience sample; 43 female and 34 male), aged between 18

and 42 ($M = 21.01$, $SD = 3.82$), who were randomly assigned to one of the two Ingroup Status conditions (Ingroup Status: Low vs. High-Status).

Participants' sex and age did not significantly differ across conditions, respectively, $\chi^2(1) = 0.13$, $p = 0.820$, and $t(75) = 0.39$, $p = 0.701$.

Procedure

Participants were contacted in the street and were invited to fill out an opinion survey about the Quality of Education and Employability in the University of Porto.

Participation was voluntary and not monetarily compensated. After giving informed consent, participants provided demographic information (e.g., age, sex). Then, to induce Low vs. High-status beliefs about University of Porto, they read, at the beginning of the questionnaire, one of two newspaper headlines about the results of the annual QS World University Ranking, (1) High-Status condition: "The University of Porto is the best Portuguese University in the QS World University Ranking," stressing that the University of Porto has maintained its top position over the years, with the University of Lisbon in second place (these are the two Portuguese Universities that always compete for the first place); (2) Low-Status condition: "The University of Lisbon surpasses the University of Porto in the QS World University Ranking," stressing that the University of Lisbon had dethroned the leadership of the University of Porto in the ranking. Both headlines were genuine but corresponded to results from different years – the headline used in High-Status condition was from 2018 and the headline used in the Low-Status condition was from 2019. The dates of the newspaper headlines were removed.

Upon completion, participants were thanked and fully debriefed about the deceptions involved in the study.

Measures

Following the Ingroup Status manipulation, participants reported their beliefs about University of Porto's status (manipulation check), identification with their University, beliefs about the stability and legitimacy of status positions between the two Universities, answered to ingroup favoritism and outgroup derogation measures, and finally completed the SDO, social competition intentions and collective action tendencies' scales.

University Status (Manipulation Check)

After reading the headline on the first page, participants indicated their beliefs about the status of the University of Porto in comparison to the University of Lisbon with a single item: "The position held by the University of Porto in the ranking, compared to the University of Lisbon, is ...." (1 = *inferior*; 7 = *superior*).

Identification With University of Porto

As a control measure, in order to measure participants' identification with the University of Porto, we used a 4-item scale (based on Pinto et al. (2016); 1 = *I fully disagree*; 7 = *I fully agree*): (1) "In general, I'm proud to belong to the University of Porto."; (2) "I feel good for being part of the University of Porto."; (3) "In general, I identify with the University of Porto."; (4) "I have a strong connection with the University of Porto.". A principal components factorial analysis conducted on these items extracted one single factor accounting for 69% of the total variance. We averaged the scores of the items to an *identification* index (Cronbach's $\alpha = 0.85$).

Stability of Ranking Positions

We measured participants' beliefs about the stability of status positions between the University of Porto and the University of Lisbon with two items (based on Owuamalam et al. (2016); 1 = *I fully disagree*; 7 = *I fully agree*): (1) "I believe that the positions of these two Universities in the ranking will remain the same in the future."; (2) "I believe that the positions of these two Universities in the ranking can reverse in the future." (reversed-coded). We averaged the scores of the items to a *stability* index (Pearson product-moment correlations between items: $r = 0.38$, $p \leq 0.001$), such that higher scores represented beliefs in stable ranking positions.

Legitimacy of Ranking Positions

We also asked participants about the legitimacy of the positions of the two Universities in the ranking (1 = *I fully disagree*; 7 = *I fully agree*): (1) "I believe that the positions of these two Universities, in the ranking, is legitimate."; (2) "I believe that the positions of these two Universities, in the ranking, is fair.". We averaged the scores of the items to a *legitimacy* index (Pearson product-moment correlations between items: $r = 0.60$, $p \leq 0.001$), such that higher scores represent beliefs in legitimate ranking positions.

Ingroup Favoritism and Outgroup Derogation

We also included ingroup favoritism and outgroup derogation measures. We are especially interested to observe the relationships of these measures with our main variable (SDO) among participants in the low-status condition. We measured participants' favoritism toward their group and outgroup derogation with four items (1 = *I fully disagree*; 7 = *I fully agree*): (1) "Regardless of the rankings, the University of Porto is the best University."; (2) "Regardless of the rankings, the University of Porto is the best place to study."; (3) "I do not sympathize with the University of Lisbon."; (4) "The University of Lisbon has more fame than quality.". A principal components factorial analysis conducted on these items extracted two factors accounting for 83% of the total variance. We averaged the scores of items 1 and 2 to an *ingroup favoritism* index (Pearson product-moment correlations between items: $r = 0.82$, $p \leq 0.001$), and items 3 and 4 to an *outgroup derogation* index (Pearson product-moment correlations between items: $r = 0.49$, $p \leq 0.001$).

SDO

Participants responded to the full 16-item SDO_7 scale (Ho et al., 2015)[1], on 7-point scales (1 = *I fully disagree*; 7 = *I fully agree*). A confirmatory factor analysis showed that the two-dimensional solution had an acceptable model fit. We averaged

[1]The scale was translated from English to Portuguese by one of the researchers and by an experienced translator. The two translations were compared and discussed, and some adjustments were made together with a third experienced researcher.

the scores of the items and composed the SDO-D and SDO-E subdimensions according to Ho et al.'s (2015) theoretical framework and guidelines.

Both SDO-D (e.g., "An ideal society requires some groups to be on top and others to be on the bottom."; Cronbach's $\alpha = 0.75$) and SDO-E dimensions (e.g., "It is unjust to try to make groups equal."; Cronbach's $\alpha = 0.88$) were reliable.

Social Competition

To measure participants' motivation to compete with the outgroup (University of Lisbon), we use a 4-item scale adapted to our context (based on Blanz et al. (1998); 1 = *I fully disagree*; 7 = *I fully agree*): (1) "We are going to make it clear to everyone that the students of the University of Porto are more efficient than the students of the University of Lisbon."; (2) "We will show very soon that the students of the University of Porto have more initiative and commitment than the students of the University of Lisbon."; (3) "We, the students of the University of Porto, have to work harder to have a higher academic reputation than the students of the University of Lisbon."; (4) "We, the students of the University of Porto, should strive to achieve greater success than the students of the University of Lisbon.". A principal components factorial analysis conducted on these items extracted one single factor accounting for 79% of the total variance. We averaged the scores of the items to a *social competition* index (Cronbach's $\alpha = 0.91$).

Collective Action

Finally, we asked participants to indicate their motivation to participate in 6 collective initiatives in favor of the University of Porto (1 = *not motivated al all*, 7 = *very motivated*): (1) "Participate in a meeting/discussion to define strategies to increase the University's potential."; (2) "Participate in a meeting/discussion to define strategies so that the University of Porto achieves more success."; (3) "Act together with other students to defend University's interests."; (4) "Act together with other students to defend University's image."; (5) "Act together with other students to increase University's prestige.", (6) "Act together with other students to increase University's status.". A principal components factorial analysis conducted on these items extracted one single factor accounting for 73% of the total variance. Thus, we averaged the scores to a *collective action* index (Cronbach's $\alpha = 0.93$)[2].

Results

Table 1 summarizes the descriptive statistics and correlations between measures, by ingroup status condition.

Results show significant differences in participants' beliefs about University status, those being higher in the High-Status than in the Low-Status condition, $t(75) = 2.68$, $p = 0.009$, Cohen's $d = 0.62$. This result shows that ingroup status manipulation was effective to induce lower vs. higher beliefs about university status (see **Table 1**).

As expected, there are no significant differences between conditions regarding participants' ingroup identification, $t(75) = 0.84$, $p = 0.401$, and participants in both conditions are strongly identified with their group (>5.50, on a 7-point rating-scale). As predicted, participants in the Low-Status condition show lower beliefs about stability, $t(75) = 4.23$, $p \leq 0.001$, Cohen's $d = 0.98$, and legitimacy, $t(75) = 3.49$, $p \leq 0.001$, Cohen's $d = 0.81$, than participants in the High-Status condition (i.e., higher beliefs in illegitimate and unstable status positions between groups, the necessary conditions for social competition to emerge among members of low-status groups).

Results also show that participants in the Low-Status condition show stronger outgroup derogation, $t(75) = 3.91$, $p \leq 0.001$, Cohen's $d = 0.90$, than participants in the High-Status condition (see **Table 1**). There are no significant differences between conditions in the remaining measures.

We also expected SDO to be positively related to social competition intentions and collective action tendencies. Thus, by observing the Pearson product-moment correlations between all measures (see **Table 1**) we observe that, among participants in the Low-Status condition, both SDO-D and SDO-E are positively related with social competition ($r = 0.64$, $p \leq 0.001$, and $r = 0.54$, $p \leq 0.001$, respectively) and collective action ($r = 0.40$, $p = 011$, and $r = 0.44$, $p = 0.005$, respectively). We also observe a positive association only between SDO-E and outgroup derogation, although not reaching statistical significance ($r = 0.31$, $p = 0.054$).

Among participants in the High-Status condition, we observe that only SDO-D is positively related with social competition ($r = 0.51$, $p \leq 0.001$), but not SDO-E ($r = 0.21$, $p = 0.207$); neither SDO-D or SDO-E are related to collective action ($r = 0.24$, $p = 0.145$; $r = 0.00$, $p = 0.986$, respectively).

SDO as an Ideological Strategy to Legitimate Future Ingroup Status-Enhancement

We expected that SDO should be positively associated with collective action tendencies by increasing social competition intentions (i.e., motivation to engage in direct competition with the opposing outgroup), among members of the low-status groups.

To test the effect of SDO on collective action tendencies through social competition intentions, we conducted a mediation analysis (using PROCESS 3.5 version, Model 4 with 1,000 bootstrap samples; Hayes, 2018), considering SDO as the predictor, social competition as the mediator, and collective action as the dependent measure[3]. Specifically, we tested four

[2]The full scale included another 4 items of collective initiatives against/to contest the current University's position in the Ranking. An initial principal components factorial analysis conducted on the full scale confirmed the existence of two distinct factors accounting for 80% of the total variance. Thus, initially, we averaged the scores of the items 1–6 to a *collective action* index (Cronbach's $\alpha = 0.93$), and the items 7–10 to a *contestation* index (Cronbach's $\alpha = 0.95$). However, since contestation presented similar patterns of results to those found with collective action, henceforth, we only discuss the results with the collective action measure. Means, standard deviations, and correlations between measures by status condition, including contestation measure, are available as online supplementary materials (OSM) 1 at https://osf.io/b9xf8/

[3]Mediation analysis with contestation presents the same pattern. Results and figures of the mediation models with contestation are available at the OSM 2. We only found a different pattern with the SDO-D dimension in the High-status

TABLE 1 | Summary of means, standard deviations, and correlations between measures by ingroup status condition.

		Low-status condition		High-status condition											
	Variable	***M***	***SD***	***M***	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	University status	4.79	1.52	5.68	1.40		0.38*	−0.06	0.31†	0.55***	−0.02	0.25	−0.15	0.09	0.10
2	Identification	5.74	0.97	5.93	0.97	0.31†		0.04	0.41**	0.26	−0.31†	0.20	−0.15	0.19	0.08
3	Stability	3.00	1.19	4.16	1.21	−0.25	−0.17		0.27	0.04	0.06	0.05	0.27	−0.06	−0.11
4	Legitimacy	4.55	1.24	5.52	1.18	0.11	−0.19	0.30†		0.40*	0.17	0.55***	0.19	0.47**	0.33*
5	Ingroup favoritism	5.50	1.47	4.91	1.66	0.42**	0.70***	−0.24	−0.25		0.29†	0.35*	−0.16	0.37*	0.16
6	Outgroup derogation	3.87	1.37	2.70	1.24	0.14	0.04	−0.08	−0.30†	0.12		0.21	31†	0.35*	0.02
7	SDO-D	2.93	1.29	3.07	0.85	0.38*	0.18	0.06	−0.13	0.19	0.24		0.51***	0.51***	0.24
8	SDO-E	2.39	1.27	2.61	1.09	0.44**	0.14	−0.12	−0.17	0.17	0.31†	0.74***		0.21	0.00
9	Social competition	4.04	1.83	3.24	1.86	0.49***	0.36*	0.00	−0.39*	0.49***	0.30†	0.64***	0.54***		0.32*
10	Collective action	4.32	1.78	4.21	1.63	0.30†	0.50***	−0.20	−0.32†	0.55***	0.15	0.40*	0.44**	0.59***	

†$p \leq 0.10$; *$p \leq 0.05$; ** $p \leq 0.01$; ***$p \leq 0.001$.
Correlations for the Low-status condition (n = 39) are below the diagonal; and correlations for High-status condition (n = 38) are above the diagonal.

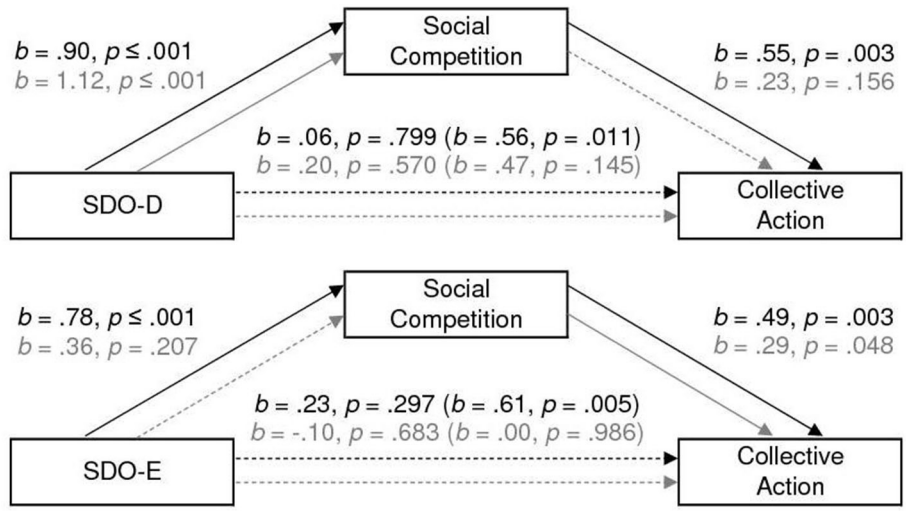

FIGURE 1 | The effect of SDO on collective action mediated by social competition. Coefficients for the high-status condition are in gray. All reported coefficients are unstandardized.

independent mediation models: two independent models for each SDO subdimensions, for each status condition (two for the low-status condition and two for the high-status condition). All reported coefficients are unstandardized.

As we can see in **Figure 1**, SDO-D is a significant predictor of social competition in both Low- and High-status conditions, however, social competition predicts collective action only in the Low-status condition. The model explains 35% of the variability observed in collective action, $F_{(2,36)} = 9.80$, $p \leq 0.001$, in the Low-status condition; and 11% of the variability observed in collective action, $F_{(2,35)} = 2.20$, $p = 0.126$, in the High-status condition. The indirect effect of SDO-D on collective Action through social competition is positive and significant in the Low-status condition, $b = 0.50$, $SE = 0.18$, 95% CI [0.167, 0.842], a *post-hoc* power analysis showed a power $(1 - \beta)$[4] of 0.88, and non-significant in the High-status condition, $b = 0.26$, $SE = 0.22$, 95% CI [−0.201, 0.719], power $(1 - \beta)$ of 0.28.

condition: the indirect effect of SDO-D on contestation through social competition is positive and significant, $b = 0.38$ $SE = 0.18$, 95% CI [0.065, 0.799], contrasting with the indirect effect of SDO-D on collective action that was non-significant. This may reflect a desire to increase the differences between the two Universities, or simply a desire of enhancing ingroup position in the global ranking (i.e., they are already in 1st place in the national ranking and want to rise their position in the world ranking).

[4]We calculated statistical power using Monte Carlo simulations with Schoemann et al.'s (2017) online calculator: https://schoemanna.shinyapps.io/mc_power_med/, following authors' recommendations.

We observe (see **Figure 1**) that SDO-E is also a significant predictor of social competition only in the Low-status conditions; social competition predicts collective action at both Low- and High-status conditions. The model explains 37% of the variability observed in collective action, $F_{(2,36)} = 10.61$, $p \leq 0.001$, in the Low-status condition; and 11% of the variability observed in collective action, $F_{(2,35)} = 2.11$, $p = 0.137$, in the High-status condition. The indirect effect of SDO-E on collective action through social competition is positive and significant in the Low-status condition, $b = 0.38$, $SE = 0.16$, 95% CI [0.102, 0.732], a *post-hoc* power analysis showed a power ($1 - \beta$) 0.84, and non-significant in the High-status condition, $b = 0.11$, $SE = 0.10$, 95% CI [−0.065, 0.339], power ($1 - \beta$) of 0.12.

Results support the mediational hypothesis (full mediation) for both the SDO-D and SDO-E dimension only among participants in the Low-Status condition.

Discussion

Overall, results showed that, among participants in the Low-status condition, social competition fully mediates the relationship between SDO (both SDO-D and SDO-E) and collective action, suggesting that SDO (shaped by the specific competition-based context, highly unstable) boosted individuals' motivation to compete with the other relevant high-status outgroup, and in turn, increased their motivation to get involved in actions to favor the ingroup and to contest ingroup position in the ranking (based on results with contestation measure; see OSM 1 and 2).

On the contrary, among participants in the High-Status condition, we found different patterns of associations, and SDO did not increase collective action tendencies, possibly because they believe to have a secure high-status.

STUDY 2

In Study 1 we induced (Low vs. High) ingroup status in a highly unstable social structure context. As expected, we found that, in the Low-status condition, participants' SDO boosted collective action tendencies by increasing their motivation to engage in direct competition with the opposing high-status group.

In Study 2, we intended to test our predictions with another type of group whose existence is based on, and is inherent to, highly competitive and unstable social structure context. Thus, in Study 2 we used football team supporters of two opposing teams whose relations are marked by huge rivalry, during a football championship.

Since the football context is often associated to violent events among teams' supporters, in Study 2 we test our model predicting both normative (i.e., actions supporting the ingroup, consistent with ingroup favoritism) and non-normative collective action (i.e., actions harming the outgroup, consistent with outgroup derogation). Moreover, since SDO has been found to be positively related to aggressive intergroup attitudes and behaviors against outgroups (e.g., Ho et al., 2012), we may expect stronger associations with outgroup derogation (than with ingroup favoritism) and non-normative collective action (than with normative collective actions).

Materials and Method

Participants

Participants were 220 supporters (convenience sample; 107 female and 113 male) of two of the major Portuguese football teams (119 from the *Futebol Clube do Porto* and 101 from *Sport Lisboa e Benfica*), aged between 18 and 61 ($M = 25.92$, $SD = 7.94$).

Participants' sex and age did not significantly differ across team samples, respectively, $\chi^2(1) = 2.75$, $p = 0.106$, and $t(218) = 0.24$, $p = 0.810$.

Procedure

Participants were contacted through Facebook groups from both football teams to fill out a survey about the regular occurrence of some extreme interactions between football fans, leading from time to time to violent events. The study was conducted during the championship of 2019/2020, in the months of February and March. During that period, the team leading the ranking scores (the team which occupied the first place in the ranking at that time; i.e., high-status group) was *Sport Lisboa e Benfica* (SLB) followed by the *Futebol Clube do Porto* (FCP) (the team occupying the second position in the ranking; i.e., low-status group). SLB was also the team that had won the previous championship of 2018/2019, and in 2017/2018 the winner had been the FCP. Thus, the championship is a very unstable context, and either team could win the 2019/2020 championship. To highlight this unstable context, at the beginning of the questionnaire it was stressed the fact that in the last 18 years, the title of national football champion (Portuguese Cup) had been awarded only to these two football teams (real information).

Participation was completely voluntary and not monetarily compensated. After giving informed consent, participants provided demographic information (e.g., age, sex). Upon completion, participants were thanked, and the aim of the study was clarified.

Measures

Firstly, after selecting their favorite team from a list of all national football teams (those who selected other teams, were redirected to the end of the questionnaire), as a control measure, participants indicated identification with their football team. Then, participants reported their beliefs about teams' status, about the stability and legitimacy of ranking positions between the two teams (that ultimately reflects teams' status), answered to ingroup favoritism and outgroup derogation measures, and finally, completed the SDO, social competition intentions and collective action tendencies scales. As mentioned above, in this study we included normative collective actions supporting their own team (i.e., actions to favor the ingroup) and non-normative violent collective actions against the opposing team (i.e., actions to harm and derogate the outgroup), since that last type of actions is very common to occur in the context of football and moreover, it was, supposedly, the aim of the study (cover story).

Identification With the Team

As a control measure, we assessed participants' identification with their team using four items from Leach et al. (2008)' scale (1 = *I fully disagree*; 7 = *I fully agree*): (1) "I am glad to be a supporter of

the FCP/SLB."; (2) "I think that the FCP/SLB' supporters have a lot to be proud of."; (3) "It is pleasant to be a supporter of the FCP/SLB."; (4) "Being a supporter of the FCP/SLB gives me a good feeling.". A principal components factorial analysis conducted on these items extracted one single factor accounting for 77% of the total variance. We averaged the scores of the items to an *identification* index (Cronbach's $\alpha = 0.90$).

Team Status

Participants indicated their beliefs about their team's status in comparison to the opposing team: "The status of FCP/SLB, compared to the SLB/FCP, is …." (1 = *inferior*; 7 = *superior*).

Stability of Ranking Positions

We measured participants' beliefs about the stability of ranking positions between the two teams with two items (based on Owuamalam et al. (2016); 1 = *I fully disagree*; 7 = *I fully agree*): (1) "The positions of these two teams in the ranking, can easily reverse in the future." (reversed-coded); (2) "The team that currently leads the ranking, can easily lower its position in the future." (reversed-coded). We averaged the scores of the items to a *stability* index (Pearson product-moment correlations between items: $r = 0.50$, $p \leq 0.001$), such that higher scores represent perceived stable ranking positions.

Legitimacy of Ranking Positions

We also asked participants about the legitimacy of the positions of these two teams (1 = *I fully disagree*; 7 = *I fully agree*): "The positions of these two teams in the ranking … (1) is legitimate."; (2) "is unfair." (reversed-coded). We averaged the scores of the items to a *legitimacy* index (Pearson product-moment correlations between items: $r = 0.63$, $p \leq 0.001$), such that higher scores represented beliefs in legitimate ranking positions.

Ingroup Favoritism and Outgroup Derogation

We measured participants' motivation to favor their team and motivation to derogate the opposing team in a 4-items scale (1 = *I fully disagree*; 7 = *I fully agree*): (1) "Whether they win or lose, my team is the best team."; (2) "Whether they win or lose, my team is the best I could belong to."; (3) "The SLB [vs. FCP outgroup] has more fame than value."; (4) "The SLB [vs. FCP outgroup] plays very poorly.". A principal components factorial analysis conducted on these items extracted two factors accounting for 79% of the total variance. We averaged the scores of the items 1 and 2 to an *ingroup favoritism* index (Pearson product-moment correlations between items: $r = 0.64$, $p \leq 0.001$), and the items 3 and 4 to an *outgroup derogation* index (Pearson product-moment correlations between items: $r = 0.53$, $p \leq 0.001$).

SDO

Participants answered to the full 16-item SDO_7 scale (Ho et al., 2015), on 7-point scales (1 = *I fully disagree*; 7 = *I fully agree*). A confirmatory factor analysis showed that the two-dimensional solution had an acceptable model fit. We averaged the scores of the items and composed the SDO-D and SDO-E subdimensions according to Ho et al.'s (2015) theoretical framework and guidelines. Both SDO-D (Cronbach's $\alpha = 0.78$) and SDO-E dimensions (Cronbach's $\alpha = 0.86$) were reliable.

Social Competition

To measure participants' motivation to compete with the outgroup, we used a 4-item scale adapted to our context (based on Blanz et al. (1998); 1 = *I fully disagree*; 7 = *I fully agree*): (1) "The FCP (vs. SLB) is going to make it clear to everyone that it is more efficient than the SLB (vs. FCP)."; (2) "The FCP (vs. SLB) has to work more to have a higher international reputation than the SLB (vs. FCP)."; (3) "The FCP (vs. SLB) is going to show everyone that it is more offensive and attacking team than the SLB (vs. FCP)."; (4) "The FCP (vs. SLB) is going to teach the SLB (vs. FCP) how to play football.". A principal components factorial analysis conducted on these items extracted one single factor accounting for 80% of the total variance[5]. We averaged the scores of the items to a *social competition* index (Cronbach's $\alpha = 0.87$).

Collective Action

Finally, we asked participants to indicate their motivation to participate, in the future, in (normative and non-normative) collective initiatives, either supporting their team or harming the rival team (1 = *not motivated al all*, 7 = *very motivated*): "Join other supporters of my team … (1) and wait for the team bus to congratulate the team when they win."; (2) wait for the team bus to show my support for the team, even when they lose."; (3) to block the rival team bus."; (4) to invade and damage the headquarters of opposing team."; (5) to shoot petards at supporters of rival team."; (6) to paint walls on the street with symbols or slogans alluding to my team."; (7) set objects or accessories of the rival teams on fire (e.g., scarves, flags, buses)."; (8) to confront supporters from rival team.". A principal components factorial analysis conducted on these items extracted two factors accounting for 82% of the total variance. We averaged the scores of the items to a *normative CA* index (Pearson product-moment correlations between items: $r = 0.88$, $p \leq 0.001$) corresponding to items 1 and 2, and a *non-normative CA* index (Cronbach's $\alpha = 0.91$) corresponding to items 3–8.

Results

Table 2 summarizes the descriptive statistics and correlations between all measures, by football team.

As expected, results showed that supporters from both teams are equally, $t(218) = 0.38$, $p = 0.708$, and strongly identified (>6.20 on a 7-point rating-scale) with their team (see **Table 2**). There are no significant differences between teams' supporters regarding beliefs about teams' status, $t(218) = 1.37$, $p = 0.174$. This result may be due to the fact that the championship was still ongoing, and the championship winner was not yet established, being possible that either team could win. We may also speculate that this may have occurred as a strategy to elevate the ingroup, in the case of the FCP supporters (low-status group), or based on beliefs that they could still win despite the (real) current lower position in the ranking (i.e., 2nd place).

Consistent with Study 1 and with our predictions, FCP supporters (low-status group) showed lower beliefs about

[5]We discarded item 2 because it presented low communality (<0.20) in a preliminary analysis.

TABLE 2 | Summary of means, standard deviations, and correlations between measures by football team.

		FCP (Low-status group)		SLB (High-status group)												
	Variable	***M***	***SD***	***M***	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1	Identification	6.21	0.98	6.26	0.96		0.51***	−0.09	0.29**	0.53***	0.38***	−0.08	−0.11	0.49***	0.49***	0.27**
2	Team status	5.72	1.38	5.98	1.41	0.44***		−0.08	0.25*	0.60***	0.46***	0.06	0.03	0.56***	0.35***	0.23*
3	Stability	3.19	1.64	3.64	1.76	−0.14	−0.28**		−0.12	−0.19†	0.08	0.13	0.11	0.01	0.15	0.12
4	Legitimacy	4.09	1.78	6.17	1.24	−0.24**	−0.33***	−0.01		0.24*	−0.01	0.02	−0.11	0.34***	0.17†	0.10
5	Ingroup favoritism	6.27	1.10	6.13	1.26	0.60***	0.45***	−0.27**	−0.27**		0.36***	0.04	−0.00	0.56***	0.39***	0.17†
6	Outgroup derogation	3.81	1.50	3.75	1.81	0.22*	0.42***	−0.13	−0.34***	0.27**		0.24*	0.23*	0.61***	0.37***	0.40***
7	SDO-D	3.08	1.14	3.14	1.23	0.10	0.28**	0.03	−0.28**	0.12	0.22*		0.64***	0.19†	0.12	0.27**
8	SDO-E	2.44	1.15	2.63	1.23	−0.03	0.10	0.03	−0.23*	0.08	0.31***	0.57***		0.15	0.06	0.27**
9	Social competition	4.63	1.42	4.93	1.57	0.41***	0.52***	−0.27**	−0.35***	0.41***	0.43***	0.30***	0.12		0.51***	0.30**
10	Normative CA	3.38	2.09	4.04	2.37	0.26**	0.41***	−0.15	−0.33***	0.37***	0.28**	0.29***	0.19*	0.41***		0.41***
11	Non-normative CA	1.44	1.07	1.67	1.39	0.00	0.18*	0.15	−0.20*	0.04	0.37***	0.21*	0.33***	0.24*	0.32***	

†$p \leq 0.10$; *$p \leq 0.05$; ** $p \leq 0.01$; ***$p \leq 0.001$.
Correlations for FCP supporters (n = 119) are below the diagonal; and correlations for SLB supporters (n = 101) are above the diagonal.

stability (despite not reaching statistical significance), $t(218) = 1.96$, $p = 0.051$, Cohen's $d = 0.27$, and legitimacy, $t(218) = 9.88$, $p \leq 0.001$, Cohen's $d = 1.34$. Contrary to our predictions there were no differences between teams' supporters regarding ingroup favoritism, $t(218) = 0.88$, $p = 0.383$, outgroup derogation, $t(218) = 0.262$, $p = 0.793$, or social competition intentions, $t(218) = 1.52$, $p = 0.130$. Again, the lack of differences may be because the championship was still ongoing, the winner was not yet established, and both teams' supporters were highly motivated to see their team in the first place.

Finally, we found a higher motivation to get involved in actions supporting their team (Normative CA), $t(218) = 2.22$, $p = 0.028$, Cohen's $d = 0.33$, among the SLB supporters (high-status group), compared to FCP supporters (low-status group; see **Table 2**). This result may suggest an attempt to reaffirm their current (but not definitive) position.

There are no significant differences between teams' supporters in the remaining measures.

We also expected SDO to be positively related to social competitions intentions and collective action tendencies. Thus, by observing the Pearson product-moment correlations between all measures (see **Table 2**), we observe that, among FCP supporters (low-status group), only SDO-D ($r = 0.30$, $p \leq 0.001$) is positively related with social competition, but not SDO-E ($r = 0.12$, $p = 0.195$); both SDO-D ($r = 0.29$, $p \leq 0.001$; $r = 0.21$, $p = 0.025$), and SDO-E ($r = 0.19$, $p = 0.043$; $r = 0.33$, $p \leq 0.001$) are positively related with both normative CA and non-normative CA, respectively. We also observe that both SDO-D ($r = 0.22$, $p = 0.015$) and SDO-E ($r = 0.31$, $p \leq 0.001$) are positively related only with outgroup derogation.

Among the SLB supporters (high-status group), both SDO-D ($r = 0.27$, $p = 0.007$) and SDO-E ($r = 0.27$, $p = 0.007$) are related with only non-normative CA. We also observe that both SDO-D ($r = 0.24$, $p = 0.016$) and SDO-E ($r = 0.23$, $p = 0.022$) are positively related only with outgroup derogation.

SDO as an Ideological Strategy to Legitimate Future Ingroup Status-Enhancement

We expected that SDO would predict collective action tendencies by increasing social competition intentions (i.e., motivation to engage in direct competition with the opposing outgroup).

To test the effect of SDO on collective action tendencies through social competition, we conducted a mediation analysis (using PROCESS 3.5 version, Model 4 with 1,000 bootstrap samples; Hayes, 2018), considering SDO as the predictor, social competition as the mediator, and collective action as the dependent measure. Specifically, we tested eight independent mediation models: four for the low-status group and four for the high-status group, since we have two SDO subdimensions and two types of collective action (normative and non-normative). All reported coefficients are unstandardized.

SDO-D on Normative CA Through Social Competition

As we can see in **Figure 2**, SDO-D is a significant predictor of social competition, and, in turn, social competition predicts normative CA, among both FCP supporters (low-status group) and SLB supporters (high-status group). We also observed that, SDO-D maintains a positive and significant direct effect on normative CA even after the mediator is included, among FCP supporters, $b = 0.34$, $p = 0.035$. The model explains 20% of the variability observed in normative CA, $F_{(2,116)} = 14.68$, $p \leq 0.001$, among FCP supporters; and 26%, $F_{(2,98)} = 17.02$, $p \leq 0.001$, among SLB supporters. The indirect effect of SDO-D on normative CA through social competition is positive and significant among FCP supporters, $b = 0.20$ $SE = 0.07$, 95% CI [0.065, 0.344], and a *post-hoc* power analysis showed a power $(1 - \beta)$ of 0.89; and non-significant among SLB supporters, $b = 0.19$ $SE = 0.11$, 95% CI [−0.006, 0.415], power $(1 - \beta)$ of 0.50.

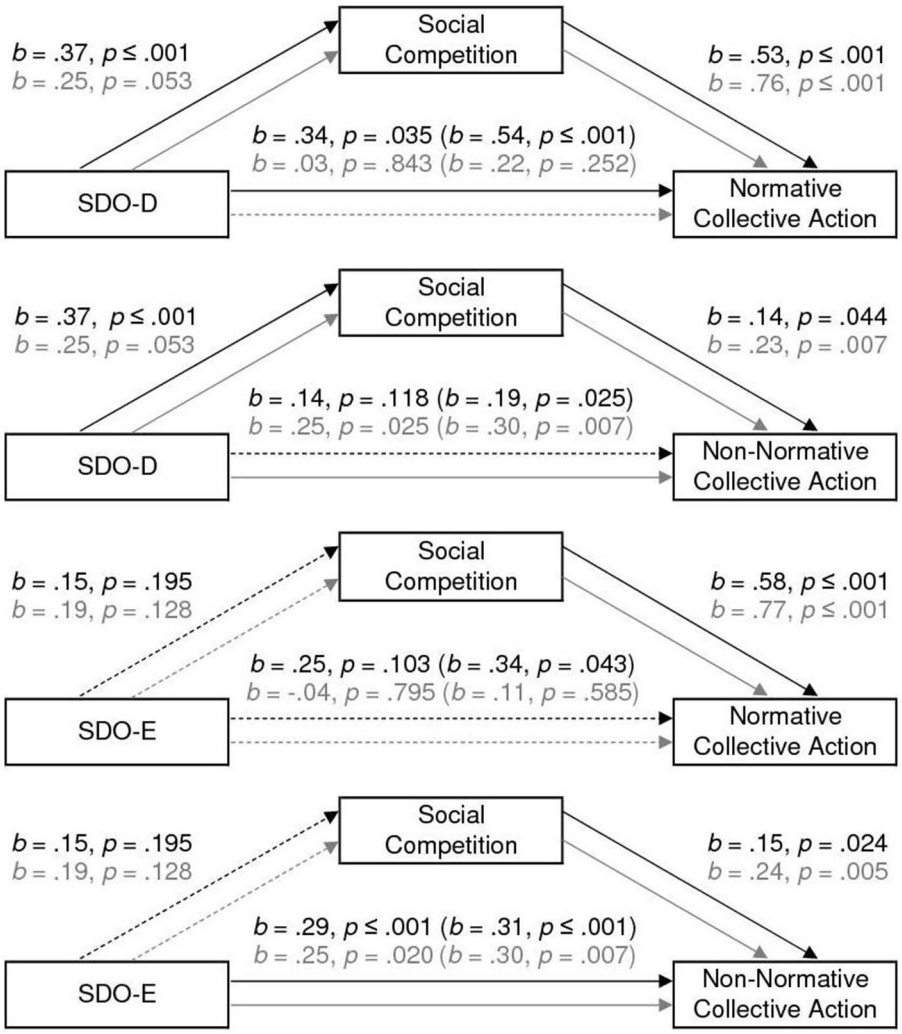

FIGURE 2 | The effect of SDO on normative CA and non-normative CA, mediated by social competition. Coefficients for the SLB supporters (high-status group) are in gray. All reported coefficients are unstandardized.

SDO-D on Non-normative CA Through Social Competition

We also observe a positive direct effect of SDO-D on non-normative CA, among FCP supporters, however, this effect disappear after the mediator is included, $b = 0.14$, $p = 0.118$. We also observed that, SDO-D maintain a positive and significant direct effect on non-normative CA even after the mediator is included, among SLB supporters, $b = 0.25$, $p = 0.025$. Social competition is also a significant predictor of non-normative CA, although weaker, among both FCP supporters and SLB supporters. The model explains 8% of the variability observed in non-normative CA, $F_{(2,116)} = 4.70$, $p = 0.011$, among FCP supporters; and 14%, $F_{(2,98)} = 7.85$, $p \leq 0.001$, among SLB supporters. Although we also found the expected path from SDO-D to non-normative CA through social competition intentions, no significant indirect effect is observed among FCP supporters, $b = 0.05$ $SE = 0.04$, 95% CI [−0.018, 0.153], a *post-hoc* power analysis showed a power $(1 - \beta)$ of 0.47; or among SLB supporters, $b = 0.06$ $SE = 0.04$, 95% CI [−0.005, 0.149], power $(1 - \beta)$ of 0.36.

SDO-E on Normative CA Through Social Competition

We also observe that SDO-E is not a significant predictor of social competition neither among FCP supporters nor among SLB supporters (see **Figure 2**). Nevertheless, social competition predicts normative CA, among both FCP supporters and SLB supporters. The model explains 19% of the variability observed in normative CA, $F_{(2,116)} = 13.56$, $p \leq 0.001$, among FCP supporters; and 26%, $F_{(2,98)} = 17.04$, $p \leq 0.001$, among SLB supporters. No significant indirect effect is observed among FCP supporters, $b = 0.09$ $SE = 0.07$, 95% CI [−0.053, 0.214], a *post-hoc* power analysis showed a power $(1 - \beta)$ of 0.26; or among SLB supporters, $b = 0.15$ $SE = 0.12$, 95% CI [−0.058, 0.419], power $(1 - \beta)$ of 0.33.

SDO-E on Non-normative CA Through Social Competition

We also observed that SDO-E maintains a positive and significant direct effect on non-Normative CA even after the mediator was included in the equation (see **Figure 2**), among both FCP supporters, $b = 0.29$, $p \leq 0.001$ and SLB supporters, $b = 0.25$, $p = 0.020$. Social competition also significantly predicted non-normative CA, among both FCP supporters and SLB supporters. The model explains 15% of the variability observed in non-normative CA, $F_{(2,116)} = 10.23$, $p \leq 0.001$, among FCP supporters; and 14%, $F_{(2,98)} = 8.10$, $p \leq 0.001$, among SLB supporters. No indirect effect of SDO-E on non-normative CA through social competition emerged among FCP supporters, $b = 0.02$ $SE = 0.02$, 95% CI [−0.012, 0.081], a *post-hoc* power analysis showed a power $(1 - \beta)$ of 0.15; or among SLB supporters, $b = 0.05$ $SE = 0.04$, 95% CI [−0.021, 0.127], power $(1 - \beta)$ of 0.24.

Discussion

Results of Study 2 support our mediational hypothesis only with the SDO-D subdimension on normative CA. Specifically, among FCP supporters (low-status group pursuing the champion title), we observed a partial mediation of SDO-D on normative CA, since SDO-D has both a direct and indirect effect (through social competition intentions) on normative CA. Regarding non-normative CA, although we observed the expected path and the direct effect of SDO-D on non-normative CA disappeared after the mediator (social competition) was included, we observed no significant indirect effect.

Regarding the SDO-E dimension, we observed that, SDO-E was not a reliable predictor of social competition, among both FCP and SLB supporters. Moreover, among FCP supporters (low-status group), SDO-E had a positive direct effect on normative CA, but this effect disappeared after including the mediator in the regression equation. We also observed a positive direct effect of SDO-E on non-normative CA, which was virtually unchanged after the mediator (social competition) was accounted for. This suggests that SDO-E is a strong predictor of non-normative CA, among FCP supporters, and this relation is not explained through social competition intentions.

Among SLB supporters (high-status group), we observed that neither SDO-D nor SDO-E have direct or indirect effects on Normative CA. We also observed that both SDO-D and SDO-E had a positive direct effect on non-normative CA, which was slightly reduced after taking into account the mediator (social competition). This suggests that both SDO-D and SDO-E are strong predictors of non-normative CA among SLB supporters (the high-status group), and this relation is not explained through social competition intentions.

GENERAL DISCUSSION

Previous research has determined that SDO endorsement among members of low-status groups is associated with negative feelings about ingroup membership (e.g., Levin and Sidanius, 1999; Jost et al., 2004) or as a way to deal and cope with cognitive dissonance, anxiety, discomfort and uncertainty, resulting from their disadvantaged condition (e.g., Jost et al., 2004). By this view, SDO is expected to be negatively associated with willingness to engage in collective action, to favor the ingroup, among members of low-status groups (e.g., Jost et al., 2012, 2017; Osborne et al., 2018).

However, recent evidence (e.g., Caricati and Sollami, 2017; Owuamalam et al., 2017) suggests that support for hierarchical organized intergroup relations and group status differentials (i.e., SDO), among members of low-status groups, may represent a strategy to guarantee a possible future ingroup high-status. Specifically, we proposed that under competitive social structure conditions, SDO should boost collective action tendencies, among members of low-status groups, as a means to favor the ingroup by increasing members' motivation to engage in direct competition with the relevant high-status outgroup, reflecting an ideological strategy to guarantee the legitimacy of future ingroup status-enhancement within the prevailing hierarchical system.

We tested this idea with two studies under highly unstable social structure contexts (i.e., the necessary conditions for social competition strategies to emerge among members of low-status groups). In Study 1 we induced Low vs. High ingroup status with information from a University ranking and in Study 2 we used football team supporters from two rival teams, during a football championship.

We predicted that, in both studies, members of the lower-status groups to show stronger beliefs that the status groups' relative positions were unstable and illegitimate, higher motivation to favor the ingroup and/or to derogate the outgroup, as well as stronger motivation to engage in social competition, than would members of the higher-status groups. As expected, in both studies, participants who belong to groups in a lower status position reported higher beliefs in unstable and illegitimate intergroup status relations than participants from groups in a higher status position. In Study 1, as expected, participants in the Low-status condition showed higher motivation to derogate the outgroup and stronger social competition intentions, than participants in the high-status condition. However, in Study 2 there were no differences in these measures between members of higher and lower status groups. We may think that this may have occurred because the final ranking positions of the football teams and the championship winner (i.e., the group's statuses) were not yet established, as the championship was still ongoing, and hence both groups were equally motivated to compete for the title.

Also, as expected, we found SDO to be positively related to social competition intentions and collective action tendencies, among members of the low-status group. Moreover, consistent in both studies, SDO was associated with outgroup derogation but not with ingroup favoritism, among members of the low-status groups. A similar pattern emerged among members of the high-status groups, in line with data from previous research.

Finally, we expected a mediational process, among members of the low-status groups, such that SDO should boost collective action tendencies to favor the ingroup by increasing participants' motivation to engage in direct competition with the other relevant high-status outgroup. In Study 1, we found that, indeed, SDO increased participants' motivation to get involved in collective action, by boosting their motivation to engage in direct competition with the higher-status outgroup. In

other words, participants' support for group-based hierarchies and inequality, and beliefs that social groups differ and should differ in value, seems to justify and to legitimate the engagement in direct competition (and subsequently in collective efforts), to reverse status positions and overcome the high-status outgroup, within the prevailing hierarchical system. In Study 2, we found a similar mediation pattern, but only with the SDO-D dimension and regarding normative collective actions. Although the mediation pattern for non-normative collective action was similar to this one, the indirect effect was not significant.

Thus, although, previous research has determined that SDO should be negatively related with collective action among members of low-status groups, our research shows that support for group-based hierarchy and inequality may represent an ideological strategy to guarantee the legitimacy of future ingroup status-enhancement, when changing intergroup status positions is a possibility (see Owuamalam et al., 2018, 2019). Indeed, overall, we found consistent positive associations (direct and/or indirect effects) between SDO and collective action, among members of the low-status group, suggesting that, indeed, this relationship is not always negative as previously research has determined.

Theoretical Implications

We believe that our work has relevant implications for both SDT and collective action research. Our work stresses the importance of considering features of the social structure in SDO research, such as beliefs in the stability of status relations between groups. Indeed, in highly unstable contexts where social competition is highly encouraged, it seems that SDO may in fact boost collective action, among members of low-status groups, and not necessarily be opposed to ingroup's interests and undermine individuals' motivation to get involved in collective action, as previously suggested. Moreover, our work adds more evidence to SDO's conceptualization as a function of situational and contextual factors, acting to justify and legitimate individuals' attitudes and/or action (cf. Guimond et al., 2003). Thus, investigating the situational and contextual factors underlying individuals' adherence to hierarchy-enhancing ideologies, such as SDO, may contribute to understand the maintenance, normalization and perpetuation of social stratification and inequalities between social groups, such as, institutional or systemic racism.

Finally, our work also highlights the importance of including ideological processes on collective action research (see Jost et al., 2017; Choma et al., 2019; Mikołajczak and Becker, 2019). Specifically, SDO, as a cognitive and ideological justification for the maintenance of intergroup inequality, hierarchical intergroup relations, and status and power differentiation between groups, is particularly relevant to collective action research, since these actions are predominantly expected to be directed to decrease group differentiations and promote intergroup equality. Thus, including system-justifying or hierarchy-enhancing ideologies, such as SDO, in collective action research may contribute to better understand individuals' motivation to engage in, and the meanings of, social movements.

Limitations and Future Directions

In spite of the potential contribution of our results, there are also potential limitations that should be addressed in future research.

We start by addressing the limitations regarding the sample size in Study 1. Indeed, sample sizes were $n = 39$ in the Low-status condition and $n = 38$ in the High-status condition, which can be considered very small for mediation analyses (e.g., Fritz and MacKinnon, 2007). Even though we detected the expected mediated effect, results should be interpreted with caution. Therefore, future research may seek to replicate this study with a larger sample, using results from an annual World University Ranking (e.g., Quacquarelli Symonds QS World University Rankings; Center for World University Rankings – CWUR), which can easily be analyzed by country, allowing to be applied with students from any University, and even use a cross-group design.

Regarding Study 2, some limitations should also be addressed. We found consistent full mediations in Study 1, and partial mediations and direct effects in Study 2, among members of low-status groups. It is possible that the results in Study 2 may have been influenced by the unique characteristics of football context, such as, the strong emotional commitment that football invokes (see Shakina et al., 2020); the impact of participating in ritual gatherings (e.g., matches), of the symbols representative of the group (e.g., flags), and emotional entrainment, on identification and commitment with the group (Von Scheve et al., 2014). It may also have been influenced by other variables not included or controlled in the study, such as, the degree/intensity of rivalry between groups (being extremely intense between football teams, more than between Universities) that shape identities, attitudes and behaviors (e.g., Benkwitz and Molnar, 2012); degree of fan loyalty which reflects a persistent attitude resistant to change, and creates biases in cognitive processing and provides a guide to behavior (Funk and James, 2001); fanographics (i.e., variables that measure fans' relationship with the sport or club; e.g., time dedicated to the team; de Carvalho et al., 2015).

Moreover, in Study 1, status positions were already stablished for the current year, and no individual or collective action could change that result at least in the short-term. In Study 2, although teams' positions were based on the teams' scores at the time our study was conducted and, obviously, results from the previous championship (that were consistent with current scores at the time) were prominent in the minds of the participants, ranking (or status) positions were not yet defined or established and therefore, could reverse. In other words, "everything was at stake" for both teams. Indeed, at the end of the championship (2019/2020), teams' positions reversed and the FCP overcame the former champion (SLB). This shows the degree of instability and uncertainty teams' supporters may have experienced. It would have been interesting to have replicated the study and observe the patterns of association between our measures after the championship ended. Future research may consider this longitudinal procedure.

Moreover, interestingly, as discussed above, although SDO-D is expected to be more related, than SDO-E, to support for hostile and aggressive attitudes and behaviors especially under

intergroup competition or conflict (Ho et al., 2012, 2015), the direct effect of SDO-D on non-normative collective action (Study 2) was weaker, compared to normative collective action, and disappeared after including the mediator. Surprisingly, SDO-E, that typically is not related with violent or overt confrontation and believed to be more subtle in nature (Ho et al., 2015), showed a stronger direct effect that remained unchanged after including the mediator. Moreover, in this context, and contrasting with Study 1, SDO-E was not related with social competition. As stressed by Ho et al. (2012), although previous research suggests that SDO-D and SDO-E are related to distinct intergroup phenomena, results are still inconclusive. For instance, Ho et al. (2015) found inconsistent results among Black participants in the relationship between SDO-D and SDO-E with criterion variables, suggesting that there may be moderators that may help to better understand how SDO-D and SDO-E relates with some intergroup phenomena. Moreover, research considering these two dimensions (i.e., the SDO_7 scale; Ho et al., 2015), and, in particular, under contexts of social competition, it is still scarce. Thus, more research is needed to better understand the meaning of, and motivations underlying, each SDO subdimension, taking into account social status and the existing (or perceived) social structure, and in particular, under competition-based and conflict-based settings.

We also found, consistently in both studies, that SDO was positively related with only outgroup derogation, but not with ingroup favoritism, among members of low-status groups. Indeed, under such competition-based and conflict-based contexts, the need for intergroup distinctiveness provides a fertile ground for conflict and hate, leading to great hostility toward the outgroup (e.g., Tajfel, 1978; Brewer, 1999). Moreover, individual's motivation to get involved in social competition and intergroup conflict "can be a result of a cooperative desire to help the ingroup ("ingroup love"), an aggressive/competitive motivation to hurt the outgroup or increase the gap between the groups ("outgroup hate"), or a combination of both" (Weisel and Böhm, 2015, p. 110). Thus, future research should address these aspects to better understand the relations between SDO and outgroup derogation (and ingroup favoritism), among low-status groups under competition-based and conflict-based contexts.

DATA AVAILABILITY STATEMENT

The data supporting the conclusions of this article is available at https://osf.io/b9xf8/.

AUTHOR CONTRIBUTIONS

CC and IP contributed to conception and design of the studies. CC conducted data collection, organized database, performed the statistical analysis, and wrote the first draft of the manuscript with support from IP. All authors contributed to results interpretation, to preparation and presentation of the final manuscript with critical review, commentary, and revision in different stages of the manuscript. All authors read and approved the submitted version.

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Heteronormativity and the Justification of Gender Hierarchy: Investigating the Archival Data From 16 European Countries

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Within the framework of the System Justification Theory, this study tested on the archival data from 16 European countries the general hypothesis that homonegativity (HN), as an expression of gender binarism and heteronormativity, works as a legitimizing myth of gender hierarchy. Specifically, we hypothesized that (1) system justification (SJ) would positively relate to HN and (2) this relation would depend on the country level of gender hierarchy, (3) on the gender of respondents, and (4) on the interaction between gender hierarchy and gender. We selected the Gender Equality Index (GEI) as an indicator of the gender hierarchy of the country system and the items from the European Social Survey-Round 9 (ESS-9) as the indicators of the gender of respondents and the levels of SJ and HN. The Hierarchical Linear Modeling (HLM) partially confirmed the hypotheses, suggesting HN to work as a blatant prejudice and being more viable as a legitimizing myth in females from countries with higher gender hierarchy and in males from more gender-equal countries. In both cases, HN serves as a myth to justify the ontological premise of participants that the world is fair and to counteract the cognitive dissonance generated by the perception of a gender-unequal system (in the case of a woman) or by the perception of a gender-equal system that can threaten gender privileges (in the case of a man).

Keywords: heteronormativity, homonegativity, system justification, gender hierarchy, legitimizing myth

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INTRODUCTION

Within the Western value system, the principles of universalism and human rights have placed gender equality among the standards of a fair society, and the respect for sexual minorities has become one of the shared goals of the EU Institutions. Nonetheless, the complete achievement of such a goal appears to be still far from being realized, and in some European countries even more so. From the point of view of the rights of individuals and public policies, however, women equality and the social conditions of LGBT+ individuals (i.e., of Lesbian, Gay, Bisexual, Transgender, and other sexual minorities) are often the objects of separate actions, and the very definition of gender equality has often been cisgender-centric, that is to say strictly adherent to a definition of gender based on biological sex (Hines, 2007; Matthyse, 2020).

In recent times, this strategy appears to contradict the fact that Gender Theory has pointed out how the hierarchical and discriminatory gender system is based on heteronormativity as a common epistemology that belittles women as it marginalizes sexual minorities

(Schilt and Westbrook, 2009; Ward and Schneider, 2009). Heteronormativity is defined as the belief that heterosexuality is the human default sexual orientation (Butler, 1990; Warner, 1991; Kitzinger, 2005; Habarth, 2015; Kowalsky and Scheitle, 2020). Heteronormativity implies a view of sexuality as strictly procreative and responding to a gender binary that aligns biological sex, gender identity, gender expression, gender roles, and sexual orientation, within a rigid, dichotomic, complementary, male–female gender schema (Bem, 1974, 1981). In other words, heteronormativity and gender binarism expect every individual to fall into either the masculine or the feminine category, which is clearly defined by the procreative physiology corresponding to his/her chromosomal sex. Such strict definition of sex would stem a natural sexual attraction to the opposite sex, as well as complementary attitudes and psychological traits; such gender roles would consider male individuals naturally dominant and aggressive and female individuals inherently submissive and nurturing (Eccles et al., 1990; Schilt and Westbrook, 2009). The psychosocial literature agrees that the above-described gender complementarity generates a power asymmetry, which favors men over women (Glick et al., 2000; Glick and Fiske, 2001). As an ideology that values certain social groups (i.e., either-male-or-female biologies, cisgender identities, heterosexual sexual orientation, and being a man) and stigmatizes others (i.e., intersex biologies, transgender identities, homosexual and bisexual sexual orientations, and being a woman), heteronormativity builds gender hierarchy and produces what has been called a "pyramid of sexual oppression" (Rubin, 1984; Halberstam, 1998).

Heteronormativity has been strictly related to sexism and sexual stigma and in particular to homonegativity (HN), which is defined as negative attitudes toward sexual minorities based on monitoring divergence from traditional masculine and feminine roles (Habarth, 2015; Scandurra et al., 2020). López-Sáez et al. (2020) found sexism and HN to be stronger, and resistance to heteronormativity to be lower, among groups higher in the gender hierarchy. As such, we can expect that gender binarism would not be enforced by those lower in the pyramid of sexual oppression and especially not by sexual minority populations. Nonetheless, some studies contradict this expectation by demonstrating that sexual minorities represent gender as a heteronormative male–female binary (Rocha Baptista and de Loureiro Himmel, 2016; Ferrari and Mancini, 2020; Kowalsky and Scheitle, 2020) and can also show high sexism and internalized HN (Tatum and Ross, 2020), especially when they adhere to conservative ideologies (López-Sáez et al., 2020). Thus, sexual minorities seem to express a sort of out-group favoritism that contradicts the Social Identity Theory (SIT; Tajfel and Turner, 1979) assumption that individuals would adhere to cognitions favorable to their own group.

While these findings can be explained as a case of consensual discrimination occurring when the intergroup status is perceived as stable and legitimate (Rubin and Hewstone, 2004), they may also be explicated by other psychosocial theories. For example, the Social Dominance Theory (SDT; Pratto et al., 2006) explains the out-group favoritism with the assumption that all social systems converge toward the formation of group-based stable social hierarchies, one of which is the male-dominated gender system based on gendered reproductive strategies. Moreover, gender would also influence individual differences in relation to his/her desire for hierarchically structured intergroup relations [i.e., social dominance orientation (SDO)], with men being inherently more oriented to it. However, the psychosocial theory that best sought to answer the question of the legitimation of group-based inequality at the expense of personal and group interest is the System Justification Theory (SJT; Jost and Banaji, 1994; Jost and Hunyady, 2002). SJT is the theory on which this study is focused.

System Justification Theory suggests that most people find ways of tolerating and justifying the group-based inequality as legitimate and necessary. To do so, they endorse minority-stigmatizing stereotypes, myths and ideologies legitimizing hierarchies, and out-group favoritism. SJT assumes that the out-group favoritism cannot be explained by theories stressing either *ego-justifying motives* to serve individual self-esteem or *group-justifying motives* to maintain or enhance collective self-esteem and/or positive group distinctiveness (for the contradictory view, see Owuamalam et al., 2019; Caricati and Owuamalam, 2020). SJT suggests the need for a *system-justifying motive* "to maintain or enhance the legitimacy and stability of existing forms of social arrangements" (Jost and Hunyady, 2002, p. 113). One of the predictions of SJT is that members of oppressed groups experience a stronger cognitive dissonance between system-justifying motive and ego- and group-justifying motives. To restore consonance, the disadvantaged would embrace stronger attitudes of justification of the status quo. However, this is not always or even ordinarily expected, especially when the system justification (SJ) conflicts with motives for self-enhancement, self-interest, and in-group favoritism (Jost et al., 2003).

The SJT has been widely applied to research on women and sexual minorities. For example, Bonnot and Krauth-Gruber (2017) found that women with a higher feeling of dependence on the social system remembered their own competencies as more similar to the gender stereotype. Moreover, SJ was widely used to explain why women held sexist behaviors and beliefs influencing their adhesion to political conservatism (Sibley et al., 2007; Russo et al., 2014; Hodson and MacInnis, 2017; Corrington and Hebl, 2018; Prusaczyk and Hodson, 2018; Cassese and Barnes, 2019), why they turned to more benign attributions for stranger harassment experiences (Saunders et al., 2017), rape myth acceptance, and rape victim blaming (Ståhl et al., 2010; Joseph et al., 2013; Chapleau and Oswald, 2014). SJT explained these effects with the "palliative function" of SJ that protects discriminated individuals from cognitive dissonance. Bahamondes et al. (2020) found SJ to have such a protective effect also on sexual minorities, among which the endorsement of system-justifying beliefs had a negative association with psychological distress, through a reduced perception of sexual discrimination. Research on SJ also widely tapped into ambivalent sexism findings (Napier et al., 2010) and, in particular, into the evidence that women were less likely than men to endorse a more hostile justification of gender inequality, but they still did justify it by leaning on the benevolent forms of sexism (Glick et al., 2000; Russo et al., 2014). In

fact, despite important negative effects on the self-representation of women (Calogero and Jost, 2011), benevolent sexism is associated with greater life satisfaction, confirming the palliative effect hypothesized by the SJT (Connelly and Heesacker, 2012). Napier et al. (2010) found that whereas the ideology of benevolent sexism legitimized gender discrimination regardless of the level of national gender inequality, hostile sexism is related to life satisfaction only in gender-unequal nations. In other words, benevolent sexism as a myth legitimizing gender hierarchy did not depend on objective gender inequalities, while hostile sexism did.

All these results are consistent with the idea that heteronormativity, and its corollary benevolent justification of gender inequalities as "complementarity," works as a legitimizing myth supporting the existing gender hierarchy. Therefore, heteronormativity can be regarded both as a myth legitimizing gender hierarchy and as one of the effects of the more general process of defending and justifying the status quo through stereotyping and ideological devices, according to SJT. Starting with the general hypothesis that HN, as an expression of heteronormativity, works as a legitimizing myth of gender hierarchy, this study aims at analyzing the relation between System Justification (SJ) and Homonegativity (HN) taking into account both the gender of respondents (as a personal factor) and the gender hierarchy/equality of the country as a societal factor as it was measured by the Gender Equality Index (GEI). Based on SJT, our first hypothesis was SJ to have a positive correlation with HN (Hypothesis 1). Second, in line with the results of the study by Napier et al. (2010), we expected this effect to depend on whether the system in the different countries would be more gender-hierarchical or more gender-equal. That is to say, we expected that the level of national gender hierarchy would moderate the relationship between SJ and HN, i.e., the positive correlation between SJ and HN would be higher in more gender-hierarchical countries than in more equal ones (Hypothesis 2). It would occur because members of gender-hierarchical countries need to endorse HN in order to align the awareness of living in a gender-hierarchical country and the belief in a justifiable system. Moreover, based on the prediction of SJT that members of oppressed groups embrace stronger attitudes of justification of the status quo to restore the experience of a stronger cognitive dissonance between system-justifying motive and ego- and group-justifying motives, we expected that the positive correlation between SJ and HN would be stronger among the female participants (Hypothesis 3). Finally, we also expected a national gender hierarchy × gender interaction predicting that the positive correlation between SJ and HN would be higher in females from more gender-hierarchical countries (Hypothesis 4).

METHODS

Study Design and Procedure

This study is based on the archival data from 16 European countries. It aimed at comparing across the European countries at a micro-country or individual level (level 1) and at a macro-social or group level (level 2) the associations between the following factors:

- System justification, as the system-justifying stands of people (level 1),
- Heteronormativity, defined as the adhesion of people to gender binary ideology (level 1),
- Gender (level 1), and
- Gender hierarchy, indicated by the gender inequality of different countries (level 2).

To do so, it was decided at level 1 to draw from the microdata of European Social Survey-Round 9 (ESS-9; ESS Round 9, 2018) and at level 2 to draw from the archival data of the GEI (2019). Also, at level 2, we considered the data from Eurobarometer-493 (2019) and Eurobarometer 437 (2015) on acceptance of sexual diversity, World Bank Indicators (i.e., Ground Domestic Production and Gini Index), and personal sociodemographic information and personal values, using them as control variables.

The data were stored in an Excel matrix containing ESS-9 survey respondents in rows and selected items in columns. The level 2 indicators were placed in the same matrix, replicating them for each row referring to the country to which they belonged. The data matrix was then transferred to a secured OneDrive folder to which only the authors of this study had access.

Measures

To test the hypotheses, we identified both design and covariate variables, and both individual-level societal-level indicators.

Individual-Level Indicators

For individual-level indicators, we considered the microdata from the ESS. The ESS is a biennial survey, collecting the cross-national data on attitudes and behaviors, in the cross-sectional probability samples, which are representative of all persons, aged 15 and above, resident in private households in each of the European participant countries. For this study, the data were used from ESS-9 (European Social Survey Round 9 Data, 2018) released in November 2019 and referring to 19 of the 27 countries surveyed in 2018 ($N = 36{,}015$; ESS-9 2018, edition 1.1. published on November 11, 2019). For each ESS-9 respondent, a few items were selected as indicators of the individual-level design variables.

System Justification

The research on SJT operationalized SJ in different ways as follows: (1) perceptions of fairness and legitimacy of the prevailing social system (Jost et al., 2003; Kay and Jost, 2003); (2) detection of a number of specific belief systems, such as Protestant Work Ethic, Belief in a Just World, Belief in Individual Mobility (O'Brien and Major, 2005), and political conservatism (Butz et al., 2017); and (3) trust and confidence in government, and empowerment of, and deference to authority (van der Toorn et al., 2011). This complicated the selection of specific indicators when working with the preexisting data of ESS-9, which did not include *ad hoc* measures, such as the System Justification Scale (Kay and Jost, 2003). Based on the various definitions of SJ, it

TABLE 1 | ESS-9 items used for system justification and homonegativity.

ESS-9 items for system justification	
SJ_T: Trust in the system	how much you personally trust each of the institutions I read out… …[country]'s parliament? ...the legal system? …politicians? …political parties?
SJ_S: Satisfaction for the system	On the whole how satisfied are you with the present state of the economy in [country]? Now thinking about the [country] government, how satisfied are you with the way it is doing its job? And on the whole, how satisfied are you with the way democracy works in [country]? Now, ...please say what you think overall about the state of education in [country] nowadays? ...please say what you think overall about the state of health services in [country] nowadays?
SJ_J: Just world belief	I think that, by and large, people get what they deserve I am confident that justice always prevails over injustice I am convinced that in the long run people will be compensated for injustices
ESS-9 items for homonegativity	
Gay men and lesbians should be free to live their own life as they wish	
If a close family member was a gay man or a lesbian, I would feel ashamed	
Gay male and lesbian couples should have the same rights to adopt children as straight couples	

was decided to select items from ESS-9 pertaining to three related dimensions (**Table 1**): the personal trust in and satisfaction with their country institutional system of the participants, and their belief in a just world. Through an interjudge agreement validation between the three authors, we selected four items from ESS-9 related to *trust in the system* (SJ_T; $\alpha = 0.90$), five items related to *satisfaction for the system* (SJ_S; $\alpha = 0.82$), and three items related to *belief in a just world* (SJ_J; $\alpha = 0.75$).

Homonegativity

As far as HN was concerned, we selected three items from ESS-9 (**Table 1**) referring to *attitudes toward Gay men and Lesbians* (i.e., the answer option was 1–5, 1 = agree strongly and 5 = disagree strongly) through an interjudge agreement validation. We calculated a synthetic indicator of HN ($\alpha = 0.80$).

Gender

Information about gender was gained from ESS-9 item F2 asking about the sex of the respondent (i.e., the answer option was 1 = M, 2 = F, 9 = No answer). Answers were recoded into a dummy variable (Gender 1 = F).

Individual-Level Covariates

For each respondent of the ESS-9 database, we used the following *personal information* as control indicators: age, the highest level of education (recoded as a dichotomic response: Higher Education, i.e., 4–6 of the original questionnaire = 1), household income (1–9 decile), and bio-parental status (1 = had a child). Moreover, we drew items related to *basic human values* from the dedicated section of ESS-9. ESS-9 included 21 questions about the adhesion of respondents to Schwartz's values. The Schwartz Theory of Basic Human Values (Schwartz, 1992) maintains 10 transcultural human values grouped in 4 higher-order kinds of motivations. All questions were formulated asking the respondent to indicate how much he/she would feel to be like someone for whom some specific aspects of life are important. Answers were on a 7-point Likert scale, with 1 = "Very much like me" and 7 = "Not like me at all." We formed four indexes, one for each Type of Motivation, calculating the average scores of all the items referring to each as follows: Openness to Change ($\alpha = 0.66$), Self-enhancement ($\alpha = 0.72$), Conservation ($\alpha = 0.70$), and Self-transcendence ($\alpha = 0.74$).

Group-Level Indicators

As the societal-level variables were concerned, indicators were chosen from different databases.

Gender Hierarchy, Equality

We considered the overall score of the 2019 GEI calculated from the indicators collected in 2017 about the actual situation of men and women in EU countries in six core domains as follows: work, money, knowledge, time, power, and health.

Group-Level Covariates

On a societal level, we decided to consider country indicators of acceptance of sexual diversity (as an index of the system cultural heteronormativity); economic inequality (Gini Index); and living standards and purchasing power parity (GDPppp). The level of *acceptance of sexual diversity* was measured using the data from Special Eurobarometer-493 (2019) and Special Eurobarometer 437 (2015) on discrimination, which included specific items on sexual discrimination. We decided to draw a synthetic index from the average scores of a few items that were identical in both 2015 and 2019 versions. In particular, both reports included the same six questions on attitudes toward gay, lesbian, bisexual, and transgender persons (e.g., *"From 1 to 10 how comfortable would you feel about having a gay, lesbian or bisexual person in the highest elected political position;" "From 1 to 10 how comfortable would you feel if a colleague at work with you were a transgender person;" "From 1 to 10 how comfortable would you feel if one of your children was in a love relationship with a person of the same sex"*) allowing to pair 2015 and 2019 data for each country, in order to identify a mean score referring to the climate of *Acceptance of Sexual Diversity* over the time period (ASD; $\alpha = 0.99$). As a control indicator of the *economic status* of the examined countries, we retrieved the 2018 Gross Domestic Product (GDP) *per capita* from the World Bank database and converted it by using the Purchasing Power Parity (PPP) exchange rate in constant 2011 international dollar. This value reflects the average income in a country in relation to the cost of living. We also used the last available Gini Index (from 2017 in all cases, except for Germany, Great Britain, and Ireland, which were from 2016) from the World Bank database as a control indicator of the economic disparities within each country.

Participants

Participants from countries not included in the GEI were excluded from the microdata ESS-9 2018 database. The analyzed sample was thus composed of 31,024 respondents from 16 countries as follows: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Italy, the Netherlands, Poland, and Slovenia.

The sample of respondents to ESS-9 was composed of 53.4% women, aged 15–90 years old ($M = 50.86$; $SD = 18.73$), 41.5% ($N = 12.816$) with a lower-tier education or less, and 58.5% ($N = 18.039$) with a higher education. As far as the marital status was concerned, 69.5% ($N = 21.385$) was or had been married or in a registered partnership and 69.9% ($N = 21.613$) had biological offspring. The household income was evenly distributed with 53.2% ($N = 13.115$) of respondents declaring to be on the 5th decile or less.

RESULTS

Descriptive Statistics

Table 2 shows the descriptive statistics of the level 1 design variables for each of the 16 countries. Differences were found based on the country considered for SJ_T, $F_{(15)} = 335.218$, $p < 0.001$, $\eta^2 = 0.142$; SJ_S, $F_{(15)} = 501.366$, $p < 0.001$, $\eta^2 = 0.198$; and for SJ_J, $F_{(15)} = 109.397$, $p < 0.001$, $\eta^2 = 0.051$ [$\lambda = 0.71$, $F_{(45,90,424)} = 245.861$, $p < 0.001$, $\eta^2 = 0.108$]. Specifically, Bulgaria and Cyprus were at the lowest levels on all SJ dimensions, while Netherlands and Finland were at the highest levels of the same variables ($p < 0.001$). Differences were also found on HN, $F_{(15)} = 794.181$, $p < 0.001$, $\eta^2 = 0.282$, showing that the countries at the lower levels on SJ dimensions reported the highest levels of heteronormativity.

Table 3 shows the descriptive statistics of the level 2 design variable for each of the 16 countries included.

The bivariate analysis found most correlations to be significant with $p < 0.01$, which is likely due to sample high numerosity. For this reason, to avoid the risk of overestimating relationships between the variables, we considered only correlations with $r > 0.09$ (Cohen, 1988). As far as the level 1 variables were concerned (**Table 4**), the bivariate correlation analysis found HN to have an intermediate correlation with older age ($r = 0.226$, $p < 0.01$), and a small one with having values motivated by conservation ($r = 0.184$, $p < 0.01$) and being a biological parent ($r = 0.145$, $p < 0.01$). HN also had a moderate negative correlation with values motivated by Openness to Change ($r = -0.218$, $p < 0.01$) and by Self-transcendence ($r = -0.257$, $p < 0.01$), and a small one with being part of a wealthier household ($r = -0.168$, $p < 0.01$), with having a higher education ($r = -0.123$, $p < 0.01$), and with two of the three dimensions of System Justification, i.e., SJ_T ($r = -0.167$, $p < 0.01$) and SJ_S ($r = -0.118$, $p < 0.01$). SJ dimensions showed no other significant correlations.

Regarding the level 2 variables (**Table 5**), GEI had a very large correlation with ASD ($rho = 0.878$, $p < 0.01$) and with GDPppp ($rho = 0.663$, $p < 0.01$) and a small correlation with Gini Index ($rho = 0.012$, $p < 0.05$).

Testing the Hypotheses

To test our hypothesis, we decided to run three nested two-level hierarchical models with random intercept and slopes, testing the main, the two-way, and the three-way interaction effects of the three dimensions of SJ (i.e., SJ_T, SJ_S, and SJ_J), GEI, and Gender on HN as a dependent variable. It was decided to run a hierarchical model targeting the design variables with their main interactions and all main effects of level 1 and level 2 covariates (**Table 6**; see also **Supplementary Materials** for slopes of significant interactions).

As far as Hypothesis 1 was concerned, i.e., the positive relationship between SJ dimensions and HN, the results showed a significant negative correlation between SJ_T and HN, while no relationships were found regarding SJ_S and SJ_J, thus partially contradicting our H1.

Regarding Hypothesis 2, i.e., the role of GEI in the SJ–HN relation, the results showed no significant interaction with either SJ_T or SJ_S. Nevertheless, SJ_J showed a significant interaction with GEI indicating that individuals from more gender-equal countries (i.e., with high GEI levels) showed higher HN when they believed in a just world ($t = 2.929$, $p < 0.01$); instead, the slope was not significant for a low level of GEI, thus not confirming H2.

Furthermore, with respect to Hypothesis 3, SJ_T showed a significant interaction with Gender indicating that HN decreased with the increase of the trust in the system in both genders ($t = -2.159$, $p < 0.05$), but primarily in males ($t = -8.651$, $p < 0.001$), thus contradicting our H3 for SJ_T dimension. No interactions were found regarding SJ_S. However, SJ_J showed a significant interaction with Gender, indicating that females showed significantly higher levels of HN when they had high SJ_J values ($t = 6.642$, $p < 0.001$), thus confirming H3 for the SJ_J dimension.

Finally, considering Hypothesis 4, no significant interactions of GEI or of Gender were found on SJ_T and SJ_S dimensions. Nevertheless, SJ_J showed a significant interaction with both GEI and Gender, indicating that among individuals from more gender-hierarchical countries (with low GEI), females showed higher levels of HN when they believed in a just world ($t = 8.621$, $p < 0.001$), as we hypothesized (H4). Interestingly, among individuals from more gender-equal countries (with high GEI), males showed higher levels of HN when they believed in a just world ($t = 2.929$, $p < 0.01$).

General results showed HN decreased in women and individuals of countries with higher gender equality in all the three hierarchical models. Furthermore, in all the three models, all level 1 covariates (e.g., age, household income, high education, openness to change, self-enhancement, conservation, self-transcendence, and bio-parental status) had significant effects on HN. Specifically, age, self-enhancement, conservation, and bio-parental status positively correlated with HN, while household income, high education, openness to change, and self-transcendence had negative correlations with HN. Regarding level 2 covariates (e.g., Gini, GDP, and ASD), they did not relate to HN.

TABLE 2 | Descriptive statistics of level 1 design variables ($N = 31.024$).

Country	SJ_T *M* (*SD*)	SJ_S *M* (*SD*)	SJ_J *M* (*SD*)	Gender (% of Women)	HN *M* (*SD*)	Open. *M* (*SD*)	Self-en. *M* (*SD*)	Cons. *M* (*SD*)	Self-tr. *M* (*SD*)	Age *M* (*SD*)	Hi. Ed. *M* (*SD*)	H. Inc. *M* (*SD*)	Bio-P. *M* (*SD*)	*N*
Austria	5.12 (1.95)	6.44 (1.58)	3.21 (0.96)	53.86	2.22 (1.01)	5.07 (0.92)	5.01 (0.82)	5.46 (0.79)	6.01 (0.71)	51.56 (18.04)	0.31 (0.46)	4.96 (2.57)	0.69 (0.46)	2,499
Belgium	4.67 (1.91)	5.95 (1.45)	2.99 (0.80)	50.87	1.87 (0.89)	5.22 (0.78)	4.90 (0.69)	5.33 (0.68)	5.98 (0.55)	47.91 (19.18)	0.66 (0.47)	5.70 (2.46)	0.68 (0.47)	1,767
Bulgaria	2.48 (2.09)	3.43 (1.83)	2.81 (0.93)	55.59	3.35 (0.88)	4.49 (1.10)	4.60 (0.95)	5.42 (0.86)	5.46 (0.84)	54.55 (18.12)	0.70 (0.46)	4.24 (2.51)	0.81 (0.40)	2,198
Cyprus	3.45 (1.96)	4.32 (1.81)	2.79 (0.81)	53.13	3.14 (0.97)	5.09 (0.91)	4.65 (0.83)	5.79 (0.69)	6.18 (0.65)	54.44 (18.65)	0.67 (0.47)	4.60 (2.67)	0.78 (0.41)	781
Czech Republic	4.12 (2.15)	5.85 (1.58)	2.43 (0.87)	56.25	2.79 (0.91)	5.06 (0.88)	4.84 (0.90)	5.39 (0.77)	5.50 (0.75)	49.04 (17.56)	0.63 (0.48)	5.31 (2.78)	0.70 (0.46)	2,398
Estonia	4.61 (2.00)	5.49 (1.61)	3.02 (0.74)	56.03	3.01 (1.03)	4.86 (0.86)	4.35 (0.81)	5.16 (0.70)	5.96 (0.60)	50.73 (19.31)	0.81 (0.39)	5.60 (2.63)	0.76 (0.43)	1,904
Finland	5.75 (1.85)	6.64 (1.41)	2.96 (0.77)	51.68	2.03 (0.89)	5.11 (0.86)	4.39 (0.82)	5.19 (0.81)	6.11 (0.60)	50.90 (19.13)	0.81 (0.39)	6.07 (2.76)	0.69 (0.46)	1,755
France	4.01 (1.90)	4.57 (1.64)	2.74 (0.80)	54.58	1.82 (0.93)	4.92 (0.94)	4.36 (0.83)	5.09 (0.87)	5.95 (0.73)	52.37 (18.97)	0.53 (0.50)	4.99 (3.05)	0.74 (0.44)	2,010
Germany	4.80 (1.98)	5.57 (1.59)	3.04 (0.77)	48.60	1.93 (0.88)	5.08 (0.82)	4.60 (0.79)	5.14 (0.80)	6.08 (0.55)	49.65 (19.06)	0.50 (0.50)	6.07 (2.81)	0.65 (0.48)	2,358
Great Britain	4.22 (2.05)	4.93 (1.73)	2.85 (0.78)	54.42	1.87 (0.83)	5.11 (0.91)	4.45 (0.87)	5.23 (0.82)	5.97 (0.64)	52.40 (18.38)	0.64 (0.48)	5.21 (2.98)	0.71 (0.45)	2,204
Hungary	4.48 (2.23)	4.43 (2.21)	2.99 (0.96)	57.65	3.34 (1.01)	4.93 (0.90)	4.92 (0.90)	5.25 (0.75)	5.50 (0.79)	50.89 (18.47)	0.51 (0.50)	5.17 (2.74)	0.67 (0.47)	1,698
Ireland	4.42 (2.12)	5.32 (1.76)	2.91 (0.90)	52.39	1.91 (0.79)	5.11 (0.92)	4.54 (0.92)	5.41 (0.84)	5.96 (0.73)	52.23 (17.69)	0.66 (0.47)	4.60 (2.73)	0.69 (0.46)	2,216
Italy	3.93 (2.07)	5.01 (1.56)	3.11 (0.85)	52.71	2.61 (0.96)	4.85 (0.90)	4.80 (0.86)	5.61 (0.73)	5.69 (0.73)	51.28 (19.43)	0.46 (0.50)	4.78 (2.45)	0.61 (0.49)	2,745
Netherlands	5.84 (1.63)	6.39 (1.25)	3.04 (0.75)	50.20	1.59 (0.69)	5.23 (0.83)	4.77 (0.72)	5.08 (0.74)	5.92 (0.53)	48.66 (18.82)	0.48 (0.50)	6.56 (2.77)	0.65 (0.48)	1,673
Poland	3.61 (2.04)	5.23 (1.83)	3.11 (0.84)	52.66	3.18 (0.97)	4.76 (0.90)	4.52 (0.85)	5.48 (0.79)	5.67 (0.75)	47.62 (18.88)	0.51 (0.50)	5.38 (2.63)	0.69 (0.46)	1,500
Slovenia	3.23 (1.98)	4.82 (1.79)	2.79 (0.81)	53.71	2.69 (0.95)	5.40 (0.82)	5.13 (0.73)	5.78 (0.67)	6.11 (0.51)	49.35 (18.82)	0.61 (0.49)	5.33 (2.58)	0.47 (0.44)	1,318
Total *M* (*SD*)	4.33 (2.18)	5.31 (1.87)	2.93 (0.86)	53.00	2.41 (1.08)	5.01 (0.92)	4.67 (0.87)	5.35 (0.80)	5.84 (0.71)	50.86 (18.73)	0.58 (0.49)	5.30 (2.77)	0.70 (0.46)	

SJ_T, system justification trust in the system; SJ_S, system justification satisfaction for the system; SJ_J, system justification belief in a just world; HN, homonegativity; Open., openness to change; Self-en., self-enhancement; Cons., Conservation; Self-tr., self-transcendence; Hi. Ed., Highest Education; H. Inc., Household Income; Bio-P., being a biological parent.

TABLE 3 | Descriptive statistics of level 2 design and covariate variables ($N = 16$).

Country	GEI	ASD	Gini Ind.	GDPppp
Austria	65.3	6.11	29.7	46.26
Belgium	71.1	7.29	27.4	43.582
Bulgaria	58.8	3.33	40.4	19.321
Cyprus	56.3	4.74	31.4	33.048
Czech Republic	55.7	5.05	24.9	33.436
Estonia	59.8	4.88	30.4	31.035
Finland	73.4	6.91	27.4	42.061
France	74.6	7.51	31.6	39.556
Germany	66.9	6.81	31.9	45.936
Great Britain	72.2	8.39	34.8	40.522
Hungary	51.9	4.88	30.6	28.465
Ireland	71.3	8.21	32.8	70.855
Italy	63	6.02	35.9	35.828
Netherlands	72.1	8.60	28.5	49.787
Poland	55.2	5.89	29.7	28.786
Slovenia	68.3	6.03	24.2	32.728
Total *M* (*SD*)	64.74 (7.54)	6.29 (1.49)	30.72 (4.08)	38.82 (11.67)

GEI, Gender Equality Index; ASD, acceptance of sexual diversity; Gini Ind., Gini Index for economic inequality; GDPppp, living standards and purchasing power parity.

TABLE 4 | Zero-order correlations at level 1 variables ($N = 31.024$).

	SJ_T	SJ_S	SJ_J	HN	Gender	Open.	Self-en.	Cons.	Self-tr.	Age	Hi. Ed.	H. Inc.	Bio-P.
SJ_T	1												
SJ_S	0.667**	1											
SJ_J	0.225**	0.244**	1										
HN	−0.167**	−0.118**	0.041**	1									
Gender	−0.021**	−0.044**	−0.027**	−0.075**	1								
Open.	0.044**	0.053**	0.067**	−0.218**	−0.074**	1							
Self-en.	0.048**	0.073**	0.141**	−0.036**	−0.103**	0.560**	1						
Cons.	−0.036**	0.025**	0.127**	0.184**	0.077**	0.033**	0.210**	1					
Self-tr.	0.062**	0.050**	0.031**	−0.257**	0.096**	0.348**	0.200**	0.434**	1				
Age	−0.062**	−0.073**	−0.044**	0.226**	0.033**	−0.283**	−0.296**	0.181**	−0.012*	1			
Hi. Ed.	0.126**	0.051**	−0.083**	−0.123**	0.012*	0.147**	0.060**	−0.093**	0.074**	−0.145**	1		
H. Inc.	0.168**	0.153**	0.019**	−0.168**	−0.111**	0.147**	0.150**	−0.125**	0.047**	−0.238**	0.287**	1	
Bio-P.	−0.071**	−0.066**	−0.034**	0.145**	0.100**	−0.186**	−0.181**	0.131**	0.010	0.505**	−0.037**	0.017**	1

$^{*}p < 0.05$; $^{**}p < 0.01$.

SJ_T, System Justification Trust; SJ_S, System Justification Satisfaction; SJ_J, System Justification Just World Belief; HN, homonegativity; Open., Openness to Change; Self-en., self-enhancement; Cons., Conservation; Self-tr., self-transcendence; Hi. Ed., Highest Education; H. Inc., Household Income; Bio-P., being a biological parent.

DISCUSSION

This study aimed at applying SJT in justifying gender hierarchy in 16 European countries, analyzing the microdata from ESS-9 and the levels of gender equality in these countries. As for system justification, we considered three correlated dimensions as follows: personal trust in and satisfaction with the institutional system of the country, and belief in a just world. We hypothesized HN, as an expression of gender binarism and heteronormativity, to work as a legitimizing myth of gender hierarchy especially among participants from more gender-hierarchical countries and among women. Contradictorily, the results show no positive correlation between any of the indicators of system justification considered and HN. Nonetheless, the data confirmed women not trusting the system to have higher HN, in particular, in more gender-hierarchical countries.

The negative relationship between trust in the system and HN as well as the absence of a significant relationship between both satisfaction with the system and belief in a just world and HN were the unexpected results. Nonetheless, they could be ascribed to the possibility that gender inequality is not perceived as a core element of the institutional systems of the European countries. In fact, European countries declare to pursue gender equality as a shared value, as evidenced by institutional statements

TABLE 5 | Spearman's correlations at level 2 variables ($N = 16$).

	GEI	ASD	Gini	GDP
GEI	1			
ASD	0.878**	1		
Gini	0.012*	−0.048**	1	
GDP	0.663**	0.818**	−0.089**	1

$^{**}p < 0.01$; $^{*}p < 0.05$.

GEI, Gender Equality Index; ASD, acceptance of sexual diversity; Gini Ind., Gini Index for economic inequality; GDP, living standards and purchasing power parity.

and international agreements on the subject. However, gender inequality is endemic in the countries considered, as evidenced by GEI scores ranging from 51.9 to 72.2 out of 100 with no country in the sample even close to reaching complete gender equality. The low score of HN among respondents with high levels of trust in an albeit gender-unequal system could therefore suggest the denial of injustice not to occur in reason of the status quo of the system, but in reason of hope for change, consistently with the Social Identity Model of System Attitudes (SIMSA) (Caricati and Owuamalam, 2020). Alternatively, similarly to the study of Bahamondes et al. (2020), we could ascribe it to a phenomenon of reduced perception of discrimination that allows those who trust the system to legitimize it. This would somehow resort to an "evasiveness" toward sexual diversity (López-Sáez et al., 2021): outward neutrality or acceptance of LGBT+ individuals without acknowledging their experience of disparities (Brownfield et al., 2018). Such deliberate choice to "not know" denying the violence suffered by sexual minorities (Cowan et al., 2005) would suggest a more subtle form of discrimination toward LGBT+, which does not lean on the homonegative ideology to legitimize gender hierarchy.

Coherently to these interpretations, and contrary to our Hypothesis 1, the results suggest that HN, i.e., negative attitudes toward LGBT people, is not among the aspects that individuals justify when they declare trust and satisfaction for the institutional and economic status quo of the system in which they live. Similarly, according to the HLM results, gender significantly moderates trust in the system—heteronormativity relation: contrary to what we expected, slopes indicated a lower HN with higher levels of trust in the system both in males and in females, but with a much steeper slope among men. We can argue that this result is coherent with the idea of men aligning their personal level of HN with the standards of the institutions they trust, so to defend the status quo through the justificatory idea that actual discrimination is low, possibly leaning on evasiveness toward LGBT+ discrimination (Brownfield et al., 2018). The same possibility is less viable for women: on one hand, unlike men, women do not use HN to justify gender privilege, and, on the other hand, they are the ones directly faced with discrimination.

However, we found a different and more nuanced pattern in relation to belief in a just world, which we identified as the core indicator of justification of the system. The bivariate correlations found only a small negative association between belief in a just world and HN, and HLM indicated belief in a just world to have no main effect on HN. Nevertheless, the HLM results showed women to embrace more homonegative attitudes when they believed in a just world, although being a group directly concerned by gender discrimination. Coherently with the study of Napier et al. (2010), this effect was stronger in more gender-hierarchical countries where oppression on women is heavier, and women seemed to lean more on homonegative beliefs to justify their condition. The same occurred for men from more gender-equal countries, who were also more homonegative when they believed in a just world. We can therefore speculate that, on the one hand, women as a still discriminated group find themselves in cognitive dissonance believing in a just world, especially when they live in countries where gender discrimination is stronger. On the other hand, men, coherently with the idea of using HN as a legitimizing myth of their privilege, hold stronger homonegative attitudes when they live in gender-hierarchical countries but when they live in more gender equal countries they hold stronger homonegative attitudes if they believe in a just world.

Moreover, trust in and satisfaction with the system are also intuitively associated with the general well-being of the country, and more gender-equal countries are also the wealthier ones and those with a lower wealth disparity, as it is suggested by the positive correlation between GEI and GDPppp. The inverse correlation between Gini Index and GEI suggests that it is possible to ascribe the lack of interaction of SJ_T and SJ_S with GEI to some coherence in their relationship with GDPppp, which would align also their effects on HN. This would mean that the relationships between GEI and HN and between GDPppp and SJ across the countries would have the same direction, resulting in the lack of significance of the interaction between GEI and SJ on HN. Therefore, any significance (or lack of) of the interaction between GEI and SJ_T as well as between GEI and SJ_S should be taken cautiously, although not supporting the hypotheses H1 and H2 of HN working as a legitimizing myth of gender hierarchy.

Finally, the results confirmed HN as an attitude coherent with traditional views, as positive correlations of the design variables with age, cultural and economic status, and conservative values showed. The fact that gender hierarchy strongly associates with discrimination against LGBT+ individuals at the country level suggests HN as a good indicator of heteronormativity intended as an ideology underpinning both gender inequality and discrimination against LGBT+ individuals (Kowalsky and Scheitle, 2020). Moreover, coherently to the concept of heteronormativity and sexism being a whole belief system that regulates both the male–female relationships and the attitudes toward gender minorities, the results of this study showed that living in countries with more equal relationships between men and women, as well as belonging to a gender-oppressed group not directly affected by anti-LGBT attitudes, is associated with lower HN. In this sense, the tendency of women to be less homonegative than men could be considered coherent with the refusal of an ideology that indirectly penalizes all the social groups that are lower in the pyramid of sexual oppression, as it would be expected from the SIT (Tajfel and Turner, 1979).

TABLE 6 | Hierarchical linear model, estimates of fixed effects.

	Parameter	Estimate	*SE*	Sign.	95% CI	
					Lower bound	Upper bound
Trust						
	Intercept	2.572	0.050	<0.001	2.463	2.682
Design variables	SJ_T	−0.034	0.004	<0.001	−0.041	−0.026
	GEI	−0.030	0.012	0.028	−0.057	−0.004
	Gender (1 = female)	−0.215	0.011	<0.001	−0.237	−0.193
	SJ_T * GEI	−0.000	0.001	0.482	−0.001	0.001
	SJ_T * Gender	0.025	0.005	<0.001	0.016	0.035
	GEI * Gender	−0.003	0.002	0.100	−0.006	0.001
	SJ_T * GEI * Gender	0.001	0.001	0.383	−0.001	0.002
Covariates	Age	0.008	0.000	<0.001	0.007	0.009
	Household Income	−0.022	0.002	<0.001	−0.026	−0.017
	High Education	−0.149	0.012	<0.001	−0.173	−0.126
	Openness to change	−0.062	0.008	<0.001	−0.077	−0.047
	Self-enhancement	0.053	0.008	<0.001	0.037	0.070
	Conservation	0.255	0.008	<0.001	0.239	0.271
	Self-transcendence	−0.334	0.010	<0.001	−0.354	−0.315
	Biological parent	0.084	0.014	<0.001	0.057	0.112
	Gini	−0.005	0.013	0.691	−0.033	0.023
	GDP	−0.008	0.007	0.274	−0.023	0.007
	ASD	−0.138	0.075	0.093	−0.302	0.027
Satisfaction						
	Intercept	2.573	0.052	<0.001	2.461	2.685
Design variables	SJ_S	−0.008	0.005	0.075	−0.0172	0.001
	GEI	−0.031	0.012	0.029	−0.058	−0.004
	Gender (1 = female)	−0.214	0.011	<0.001	−0.236	−0.192
	SJ_S * GEI	−0.001	0.001	0.145	−0.002	0.000
	SJ_S * Gender	0.011	0.006	0.074	−0.001	0.022
	GEI * Gender	−0.002	0.002	0.338	−0.005	0.002
	SJ_S * GEI * Gender	0.002	0.001	0.057	−0.000	0.003
Covariates	Age	0.008	0.000	<0.001	0.007	0.009
	Household Income	−0.023	0.002	<0.001	−0.027	−0.019
	High Education	−0.156	0.012	<0.001	−0.180	−0.132
	Openness to change	−0.060	0.008	<0.001	−0.075	−0.044
	Self-enhancement	0.052	0.008	<0.001	0.035	0.068
	Conservation	0.254	0.008	<0.001	0.238	0.271
	Self-transcendence	−0.334	0.010	<0.001	−0.353	−0.315
	Biological parent	0.089	0.014	<0.001	0.062	0.116
	Gini	−0.004	0.013	0.741	−0.033	0.024
	GDP	−0.008	0.007	0.260	−0.024	0.007
	ASD	−0.142	0.077	0.091	−0.311	0.027
Belief in just world						
	Intercept	2.566	0.051	<0.001	2.456	2.676
Design variables	SJ_J	0.015	0.009	0.116	−0.034	0.003
	GEI	−0.030	0.012	0.028	−0.057	−0.004
	Gender (1 = female)	−0.208	0.011	<0.001	−0.230	−0.187
	SJ_J * GEI	0.003	0.001	0.011	0.001	0.006
	SJ_J * Gender	0.043	0.013	0.001	0.019	0.068

(Continued)

TABLE 6 | Continued

	Parameter	Estimate	*SE*	Sign.	95% CI	
					Lower bound	Upper bound
	GEI * Gender	−0.002	0.002	0.226	−0.005	0.001
	SJ_J * GEI * Gender	−0.009	0.002	<0.001	−0.013	−0.006
Covariates	Age	0.008	0.000	<0.001	0.007	0.009
	Household Income	−0.024	0.002	<0.001	−0.028	−0.019
	High Education	−0.152	0.012	<0.001	−0.176	−0.128
	Openness to change	−0.059	0.008	<0.001	−0.074	−0.043
	Self-enhancement	0.047	0.008	<0.001	0.031	0.063
	Conservation	0.247	0.008	<0.001	0.231	0.264
	Self-transcendence	−0.331	0.010	<0.001	−0.350	−0.311
	Biological parent	0.090	0.014	<0.001	0.063	0.117
	Gini	−0.005	0.013	0.721	−0.033	0.023
	GDP	−0.008	0.007	0.252	−0.024	0.007
	ASD	−0.145	0.076	0.082	−0.311	0.022

GEI, Gender Equality Index; SJ_T, System Justification Trust; SJ_S, System Justification Satisfaction; SJ_J, System Justification Just World Belief; HN, Homonegativity; Gini, Gini Index for economic inequality; GDP, living standards and purchasing power parity; ASD, acceptance of sexual diversity. Dependent variable: HN. Principal effects and interactions for design variables and principal effects for Level-1 and Level-2 variables (N = 23871).

CONCLUSION

This study showed the indicators of system justification considered (i.e., personal trust in and satisfaction with the legal system of the country, and belief in a just world) to behave differently. The results suggested that belief in a just world is the more convincing justifying motive for endorsing HN, first of all in females coming from more hierarchical countries. Thus, the results suggest the opportunity to consider a more complex frame, in which different indicators of system justification behave differently for men and women, in justifying gender hierarchy in more gender-equal countries vs. more gender-hierarchical ones. Synthesizing, the relationships between different system justification measures and HN suggest taking into consideration two elements as follows: the social positioning of different gender subjectivities; and the contradiction of EU between the institutional engagement for gender equality and the still gender-hierarchical status quo.

Our results suggest that within the articulated ideology of gender binarism and heteronormativity, HN—along with hostile sexism—should be considered as a blatant prejudice, and this may condition the way HN can work as a legitimizing myth of gender hierarchy, being less viable for oppressed gender groups and in contexts where the political goal is gender equality. Nonetheless, HN works according to the prediction of SJT of a palliative function to restore cognitive consonance among oppressed groups, i.e., in the case of women from more gender-hierarchical countries. To believe in the fairness of a system that considers gender equality fundamental but fails to concretize it, women may lean upon the idea that heteronormativity is acceptable, and HN may express this legitimization. In this case, heteronormativity rather than justifying a system intended as a "State," or a specific "organization of rights and laws," seems to be useful for justifying one's own ontological premises in the world: the need to see the world as equitable means also to accept heteronormativity. This was true not only for the oppressed groups (in the case of women), especially in those more gender-hierarchical countries where there seems to be less alternative to the status quo, but also for the dominant group of men, at least in those more gender-equal countries where the societal norms force them to give up their privilege.

Limitations

Most of the limitations of the study are related to the use of the archival data and the necessity to lean on the predefined items that were not conceived for our hypothesis. For instance, gender was a dichotomous variable, and it was not possible to distinguish sexual minorities among the respondents. Moreover, the indicators of system justification related to trust in and satisfaction with the political and institutional system might fail to detect the justification of respondents of the specific gender system. This might occur according to the hypothesis by Sengupta et al. (2015) that SJ works differently for specific aspects of social systems: in this case, asking about the generic belief of respondents about the institutions of their country (i.e., government, health, and education) might fail in detecting their attitudes toward the gender system.

Considering the limitations of this study, and some weaknesses in measures and statistical indexes (e.g., Cronbach's alpha or the Gini Index not being equal for each country), other dedicated studies could be conducted to further test the results we obtained. Moreover, future guidelines would use transnegativity as an indicator of heteronormativity to investigate the legitimization of gender hierarchy, since transgender subjectivities represent a more

direct and socially pathologized break of heteronormativity than homosexuality does; hence, transnegativity may be more tolerated by the societal norms, working as a less blatant prejudice.

DATA AVAILABILITY STATEMENT

Publicly available datasets were analyzed in this study. This data can be found here: https://www.europeansocialsurvey.org/data/download.html?r=9 https://data.europa.eu/euodp/en/data/dataset/S2251_91_4_493_ENG https://data.europa.eu/euodp/it/data/dataset/S2077_83_4_437_ENG.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

FF and TM contributed to conception and design of the study. FF organized the database and wrote the first draft of the manuscript. FF and CI performed the statistical analysis. CI wrote sections of the manuscript. All authors contributed to manuscript revision, read, and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.686974/full#supplementary-material

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"The New State That We Are Building": Authoritarianism and System-Justification in an Illiberal Democracy

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The authoritarian personality is characterized by unquestionining obedience and respect to authority. System justification theory (SJT) argues that people are motivated to defend, bolster, and justify aspects of existing social, economic, and political systems. Commitment to the *status quo* is also a key characteristic of the authoritarian personality. It can be argued that the social context matters for how an underlying latent authoritarian character is expressed. This means that authoritarian regimes could be expected to lead to increased authoritarianism and stronger system-justification. We investigated this hypothesis in two representative samples of Hungarians, collected before (2010) and after (2018) 8 years of Fidesz' rule (N = 1,000 in both samples). Moreover, the strong version of SJT argues that members of disadvantaged groups are likely to experience the most cognitive dissonance and that the need to reduce this dissonance makes them the most supportive of the *status quo*. This argument dovetails nicely with claims made by the political opposition to Fidesz, according to which Fidesz is especially popular among low-status members of society. We found that measures assessing authoritarian tendencies did not change between 2010 and 2018. However, more specific beliefs and attitudes did change, and these effects were especially pronounced among Fidesz supporters. Their belief in a just world and a just system has grown stronger, while their attitudes toward migrants had hardened. Low status was associated with lower levels of system-justifying ideologies. However, low status Fidesz voters justified the system more than high status opposition voters in 2018, lending some support for the strong version of SJT. Our results suggest that beliefs and attitudes of Hungarians have changed between 2010 and 2018, and that political leadership played a crucial role in this.

Keywords: authoritarianism, system justification, system threat, immigration attitudes, partisanship

INTRODUCTION

". . . The defining aspect of today's world can be articulated as a race to figure out a way of organizing communities, a state that is most capable of making a nation competitive. This is why, honorable ladies and gentlemen, a trending topic in thinking is understanding systems that are not Western, not liberal, not liberal democracies, maybe not even democracies, and yet making nations successful" (Viktor Orbán, Hungary's Prime Minister, speech at the XXV. Bálványos Free Summer University and Youth Camp, 26th July, 2014).

One of the most influential social science books of the 20th century was the Authoritarian Personality by Adorno et al. (1950). They attempted to explain fascism, the Second World War and the Holocaust with psychological factors as active forces in the social process. Their conceptualization of the authoritarian personality built on Fromm's definition of the authoritarian character as a type of personality that loves authority – a personality type that simultaneously wishes to be in authority and to be subject to the will of the authority. They argued that this type of personality, which itself was partly a result of hierarchical and authoritarian parent-child relationships, made a person easily susceptible to anti-democratic propaganda and a potential fascist.

The current global rise of autocratization and retreat of democracy (Lührmann and Lindberg, 2019) has spurred research interest and led to new approaches and new measures of the authoritarian personality. The authors of the *Authoritarian Personality* argued that the social context matters for how an underlying latent authoritarian character is expressed in authoritarian attitudes and authoritarian behavior. More recent theoretical work has suggested an explanatory role for social learning (Altemeyer, 1981, 1988, 1996). However, very little is known about the role of institutions in the psychology of the individual. More specifically, very few empirical studies have investigated changes in authoritarianism in response to antidemocratic shifts in the political system. In the present study, we address this gap in the literature by investigating authoritarian characteristics, including right-wing authoritarianism (RWA; Duckitt and Sibley, 2007) and system-justifying beliefs (Kay and Jost, 2003), in two representative samples of Hungarians, collected before and after 8 years of an "illiberal democracy."

An important rationale underlying the generation of the new illiberal state was the establishment of a national economic elite and protection of the middle class. However, the opposition to Fidesz has argued that Fidesz is especially popular among those low in social status (Csekő, 2020). This makes it a particular interesting context in which to investigate whether those low in social status will engage in system justification, apparently against their own interests, but as suggested by the strong version of system justification theory, according, to which "people who are the most disadvantaged by a given social system should paradoxically be the most likely to provide ideological support for it, insofar as they have the greatest need to justify their suffering" (Jost et al., 2004, p. 267).

In the following introduction, we first sketch the major developments in the Hungarian political system over the past decade, then we introduce the two theoretical frameworks upon which we rely, namely, the authoritarian personality and system justification theory. Finally, we present our research questions.

The Rise of the Illiberal Democracy: The Hungarian Context

Following the collapse of the Soviet Union in 1989, Hungary was a leader in the region's liberal transition and among the first post-communist nations to join the European Union in 2004 (Lendvai, 2012). However, the transition to a marker-based economy was a far more protracted and difficult process than many observers initially expected. Hungary suffered badly in the 2008 financial crisis and was on the verge of defaulting until the International Monetary Fund, demanding stringent austerity measures, provided a bailout package. In 2006, a social democrat party speech was leaked, in which the then prime minister, Ferenc Gyurcány, admitted having lied repeatedly about the condition of Hungary's public finances, and said that the economy could no longer sustain his party (MSZP)'s promises. This led to several weeks of mass demonstrations, calls for resignation, and violent clashes with the police (Lendvai, 2012).

The public spending crisis and a growing constituency of socioeconomically harassed voters allowed Fidesz, the largest opposition party, to run a notably blank electoral campaign in 2010 in terms of economic issues. Instead, they ran on a culturally conservative and nationalist platform. In their election program, the charismatic party leader Viktor Orbán pledged to increase police presence, raise prison sentences, assist families to have more children, protect marriage as the union between a man and a woman, protect life from the moment of conception, and honor the elderly (Batory, 2010).

In the 2010 elections, Fidesz won 53% of the popular vote. Due to the strong majoritarian element of the electoral system, this was enough to give it a 68% majority in parliament. The two-thirds majority of parliament allowed Fidesz to make major institutional changes. They employed this legislative dominance by changing the constitution and by replacing key officials in every politically relevant institution. Fidesz's illiberalism was reflected in both the nature of the institutional reforms and the practices through which the party governed (Pogány, 2013). Public broadcasting and the national news agency were subsumed under the authority of a new government-dominated body. Fidesz also used its dominant legislative position to pave the way for gerrymandering and for making the electoral system even more majoritarian. Consequently, Fidesz secured a two-thirds parliamentary majority in both the 2014 and the 2018 national elections.

In terms of economic policy, Fidesz has advocated a "bourgeoisification" of the country with the aim of creating a middle- and upper-class who would regard Fidesz as their natural political party (Wilkin, 2018). A raft of policies sometimes referred to as "Orbanomics" included redistributive strategies to shield middle-class Hungarian voters from the pressures of unrestrained capitalism. It also contained numerous illiberal elements, such as increasing state ownership of enterprises in the banking, advertising, and transportation industries. This was not "state capture" carried out by a small group of oligarchs in

order to establish regulations and pass measures in their own interests. Rather, the process ran in the other direction: Orbán decided who should become an oligarch and how powerful he should be (Kornai, 2015). András Lánczi, president of the Fidesz-leaning think-tank Századvég, famously said that "What (the critics of Orbán regime) call corruption in practical terms is the most important policy goal of Fidesz. What do I mean? The government puts forth such goals as the creation of a domestic entrepreneurial class, or the building of the pillars of a strong Hungary in agriculture and industry" (Antal, 2019). As a result of these economic measures (including the introduction of a flat tax and curbs to social benefits) and external factors (e.g., funding from the European Union, global economic revival; Kingsley and Novak, 2018), Hungary has, since 2012, enjoyed one of the highest rates of economic growth in the EU, accompanied by the highest increase in the risk of in-work poverty (Albert, 2019).

Despite the economic crisis in the run-up to the 2010 elections, the deeper causes of Fidesz success may have been more due to social than economic issues (Mudde, 2014). The ethnically exclusive and intolerant form of Hungarian national identity on which Fidesz has campaigned since 2010 (Marsovszky, 2010) has manifested itself in Orbán's pronouncements on Hungary as part of a Central European migrant-free zone, which has successfully thwarted both cultural globalization and an influx of foreigners (Wilkin, 2018). The fight against "illegal immigration" has become a key element of Fidesz's program since 2015. In a 2017 speech, Orbán said that "The truth is that now (. . .) everything that we think about Hungary and the order of life in Hungary is once again under threat. The truth is that after we regained our freedom in 1990, we have once again arrived at a crossroads in our history. (. . .) And now here we are, astonished to see that the forces of globalism are trying to force our doors open (. . .) We alone resist them now. We have reached the point at which Central Europe is the last migrant-free region in Europe." His message could not be clearer: the traditional Hungarian way of life is in danger and must be defended.

The political changes of the last decade have resulted in a political system in which the degree of power concentration is exceptional. According to rating agencies, such as Freedom House, the Bertelsmann Foundation, the World Bank, and the Economist Intelligence Unit, Orbán has successfully hollowed out Hungary's democracy. Since Fidesz won the elections in 2010, Hungary has become the clearest example of a relatively stable democracy turning into an authoritarian regime (Levitsky and Way, 2020; for similar observations, see Bogaards, 2018; Kelemen, 2019), and to have decayed from democracy into competitive authoritarianism, defined as "a type of regime in which the coexistence of meaningful democratic institutions and serious incumbent abuse yields electoral competition that is real but unfair" (Levitsky and Way, 2020, p. 51). Orbán openly stated his preference for an illiberal state in a July 2014 speech, in which he encouraged his Hungarian audience to understand systems that are "not Western, not liberal, not liberal democracies, maybe not even democracies, and yet making nations successful" (Rupnik, 2016).

In summary, since 2010, the Hungarian political and economic context has been characterized by: (1) strong economic growth; (2) economic measures that favor the middle- and the upper-class at the cost of the lower or working classes; (3) an authoritarian turn; i.e., a move from democracy into competitive authoritarianism; and (4) system threat induced by "illegal immigration."

The Authoritarian Personality

Some of the many attempts to explain the rise of fascism drew on the psychology of the individual. Most notable was Adorno et al.'s (1950) *The Authoritarian Personality*. Seeking to discover the psychological roots of social intolerance, the authors argued that the fascistic individual was psychologically susceptible to the ideology of anti-Semitism and to the emotional appeal of anti-democratic politics. They identified a personality syndrome that supported conventional values and authoritarian submission, as well as authoritarian aggression toward "inferior" minority groups, who were thought of judgmentally, harshly, and rigidly.

Although the psychoanalytic basis on which Adorno et al. (1950) constructed their theory has been highly criticized and tends to be ignored, the general tenet that right-wing political orientation can be correlated with certain underlying psychological dispositions has held up well and continues to attract attention. Subsequent research has confirmed that the social psychological and behavioral processes thought to constitute the authoritarian personality syndrome, conventionalism, conformity, cynicism, moral absolutism, intolerance and prejudice, tend to bundle together (e.g., Jost et al., 2003). One of the most prominent contemporary theories of authoritarianism was developed by Altemeyer (1981; 1988; 1996), who coined the term right-wing authoritarianism, to refer to aggression, submission, and conventionalism. The conceptual and methodological narrowing down of the original aspects of authoritarianism allowed Altemeyer to develop the RWA scale, which measured a strong unitary social attitude dimension, making it psychometrically superior to the original F-scale developed by Adorno et al. (1950). However, as Feldman (2003) argued the concept still lacked secure theoretical grounding and he went on to suggest a new conceptualization in which authoritarian predispositions originated in the conflict between the values of social conformity and personal autonomy. An overarching theme across conceptualizations is that authoritarianism underlies prejudice (e.g., Duckitt and Sibley, 2007).

Although authoritarianism is a complex attribute, most definitions of the concept seem to agree that it comprises simultaneous dominance of inferiors and submissiveness to superiors. It is remarkable how well such a core definition dovetails with the political program of Fidesz. On one hand, Fidesz stirs up hatred toward disadvantaged minorities, such as refugees (Krekó and Enyedi, 2018), Muslims (Kende et al., 2019), and sexual minorities (Bene and Boda, 2021). On the other hand, Fidesz propagates submission to those in power, emphasizing, e.g., traditional gender roles, which place women in inferior positions to men (Vida, 2019). Most importantly, they require total political submission to the "homeland" and its "people," crushing subnational capacity for institutional resilience, destroying the independent judiciary, and taking

full control of the media landscape (Jakli and Stenberg, 2021; Seongcheol, 2021).

The Role of Institutions in Authoritarianism

The rise of the European populist radical right and the 2016 United States election of Donald Trump has resulted in a resurgence of research into authoritarianism (Nilsson and Jost, 2020). Much of this research has, however, been confined to predicting political orientation and voting behavior from authoritarian personality characteristics, with far less attention given to the causes of authoritarianism (e.g., Dunn, 2015). One approach to "explaining" authoritarianism has been to show that individual differences in authoritarianism are genetically or biologically based (e.g., McCourt et al., 1999). Few would probably dispute this altogether, as the development of most characteristics is likely to involve genes and the interaction between genes and environment. Yet, asserting that authoritarianism is simply inborn does little to explain large cross-national and across time differences in authoritarianism. Another prominent approach has been to explain authoritarianism as the product of social learning, or more specifically, the result of one's individual experiences with authority (e.g., Altemeyer, 1981, 1988, 1996). These perspectives are of course not mutually exclusive. As already argued by Frenkel-Brunswik et al. (1947), authoritarian characteristics portray a latent capacity or "degree of readiness to behave antidemocratically should social conditions change in such a way as to remove or reduce the restraint upon this kind of behavior" (Frenkel-Brunswik et al., 1947, p. 40).

Consistent with the notion that changing social conditions may unleash antidemocratic behaviors, some recent electoral outcomes have been claimed to have loosened moral and ethical restraints and normalized violent lawlessness. It has been argued that the election of Trump returned "the scourge of authoritarianism (. . .) not only in the toxic language of hate, humiliation and bigotry, but also in the emergence of a culture of war and violence that looms over society like a plague" (Giroux, 2017, p. 887). There is, indeed, some empirical evidence suggesting that Trump's popularity on the campaign trail and subsequent election win increased people's willingness to publicly express xenophobic views (Bursztyn et al., 2017), and the acceptability of prejudice toward groups Trump targeted (e.g., Crandall et al., 2018; Hobbs and Lajevardi, 2019). Anti-Muslim crimes have doubled since Trump's presidential campaign, with some analysis suggesting that Trump's tweets about Islam-related topics (Müller and Schwarz, 2020) were directly responsible for certain crimes. One of the main aims of our study was to investigate whether, in a similar vein, Hungary's authoritarian descent has been accompanied by an authoritarian slide in the populace.

Besides studies investigating how the outcomes of specific elections may unleash authoritarian behaviors, there have been some cross-cultural studies that have sought to determine the influences that different types of regimes may have on the individual's psychology. Some of these studies have suggested that commitment to democratic principles and rejection of authoritarian alternatives is higher in democratic than in authoritarian political regimes (Chu et al., 2008; Mujani and Liddle, 2013), although such studies (and others) also expose substantial variations within both democratic and authoritarian regimes (e.g., Inglehart et al., 2003; Chang et al., 2013; Shin, 2015; Park, 2017), thereby leaving open the question of whether there is a consistent impact of regime on particular citizens' political value orientations.

One reasons for these inconsistent results regarding political preferences in different political systems could be that this research has to large extent relied on country level-comparisons. Unfortunately, these comparisons tend to be tainted by measurement problems. For instance, language systematically affects the meaning and interpretation of survey items, and different responses will be given depending on the language of the item (Pérez, 2011). There are also other country-biases than language (e.g., popular conceptions of the meaning of the word "democracy" vary between countries; Chu and Huang, 2010), meaning that comparisons between countries will generally be grossly misleading.

Some studies that have looked at socialization within a given culture suggested that citizens socialized under authoritarian rule are less supportive of democracy than those socialized under democratic rule (Pop-Eleches and Tucker, 2014; Voicu and Bartolome Peral, 2014). One study, focusing on the individual, found that preferences for democracy increase as individuals experience more time living under democratic rule (Fuchs-Schündeln and Schündeln, 2015), although single culture studies have given mixed results (e.g., Haerpfer and Kizilova, 2014). Besides being scant, an important limitation of the present literature connecting changes in political regimes with the political preferences of the individual is that it very much focuses on the shift from authoritarian forms of government toward democracy. There is very little research on what happens when the direction of change is the opposite; that is, from democracy toward authoritarianism.

System Justification in an Authoritarian State

The central tenet of system justification theory is that people have a basic motivation to legitimize the social system (Jost and Hunyady, 2005). System justification meets epistemic, existential, and relational needs, providing individuals with a sense of security and enables them to maintain a shared reality with others while alleviating their sense of external threat.

Authoritarianism and system justification are closely associated constructs (Wilson and Sibley, 2013; Osborne and Sibley, 2014) – they share an attachment to "things as they are," a resistance to social change, and an ideological commitment to the *status quo*, religion, and tradition (see also Jost and Kende, 2020). Jost and Hunyady (2005) used the umbrella term system-justifying ideologies to describe a set of worldviews (e.g., just world beliefs, Protestant work ethic, meritocratic ideology, fair market ideology) of which one specific type is right-wing authoritarianism. The authors argued that these ideologies serve

to legitimize the prevailing social order. Importantly, however, previous empirical studies have found only zero or very low correlations between individual difference measures of RWA and of system justification. For example, Osborne and Sibley (2014) observed a low positive correlation in an American sample, while Kelemen et al. (2014) obtained a low negative correlation in a Hungarian sample surveyed during a period of left-wing government in Hungary (for a similar result in France, see Langer et al., 2020). In a cross-cultural study, Vargas-Salfate et al. (2018) found a low within-country individual level positive association between RWA and system justification (r = 0.169), but nothing at the country level (r = 0.106).

Besides direct measures of authoritarianism and system justification, we also measured belief in a just world (BJW; Lerner and Miller, 1978) and immigration attitudes. We now explain our reasons for doing so. BJW refers to the belief that everyone gets what they deserve (Lerner and Miller, 1978), and can be considered a system justifying ideology. Those who believe the world to be just will perceive the *status quo* as legitimate and believe that there is no need for social action or for social change (Hafer and Choma, 2009).

Regarding immigrant attitudes, immigrants have, by Fidesz and the Fidesz dominated state media, been consistently portrayed as a danger to Europe and the greatest threat to the Hungarian nation (Bocskor, 2018). A sense of perceived threat is at the very core of both the authoritarian personality and of system justifying ideology. Indeed, increased authoritarianism and system-justification go hand in hand with increasing levels of perceived symbolic or material threats to the *status quo* (Kay and Zanna, 2009; Kay and Friesen, 2011). In the Hungarian context, in which migrants have been portrayed as the greatest threat, increases in authoritarianism and system justification would be expected to tally with hardened attitudes toward migrants. Moreover, the perceived threat imposed by migrants could, as explained below, help explain why low social status Fidesz voters may support a system that has made them worse off.

The Strong Version of System Justification

One key strength of system justification theory is that it plausibly explains why people show support for social systems that oppose their personal or group-based interests. The strong or dissonancy-based version of system justification theory (also referred to as the status-legitimacy hypothesis; see Brandt, 2013, p. 2) can also explain why members of disadvantaged groups legitimize the *status quo*, and why they do not engage in system-challenging collective action (e.g., Osborne et al., 2019; De Cristofaro et al., 2021). Owuamalam et al. (2019), although acknowledging that system justification theory is more than the system justification motive, argue that providing empirical evidence for the dissonance-based strong version serves as the "litmus test" of system justification theory. Such evidence is needed to support an independent motive for system justification and distinguished the theory from interest-based theories such as social identity theory (SIT) or self-categorization theory (SCT). Indeed, as Owuamalam et al. (2019) noted, several studies to test the strong version have been run, including studies striving to explain such paradoxical phenomena as working-class conservatism, low-income groups' relatively strong preference for meritocratic ideologies, and their idealization of capitalism (Jost et al., 2003). The findings obtained in these studies are mixed in terms of the support they afford the strong version of the theory. Jost et al. (2003) showed that several low-status groups engage in system justification against their own personal and group-based interests, as reflected in their endorsement of income inequalities and meritocratic ideologies. Henry and Saul (2006) found evidence for the strong version of the theory in Bolivia, which is one of the poorest countries in the world. They found that children from low-SES Bolivian families strongly believed in the effectiveness of the government in meeting the people's needs. These results are consistent with Jost et al. (2004) notion that the people who are the most disadvantaged by a given social system have the greatest need to decrease dissonance by justifying their suffering, and should, paradoxically, thus be the most likely to ideologically support the system (Henry and Saul, 2006, p. 267). Although there are many findings that do not support the strong version (e.g., Caricati and Lorenzi-Cioldi, 2012; Brandt, 2013; Kelemen et al., 2014; Caricati, 2017; Vargas-Salfate et al., 2018), Jost (2019) points out that also null results beg the question of why the lower classes are as likely or almost as likely to opt for the *status quo* as are the higher classes?

The Present Research

In the 2010 parliamentary elections, Hungary witnessed political upheaval. MSZP, the ruling socialist party plummeted from 48% of the vote in 2006 to 15%, handing over victory to the two opposition parties, Fidesz and Jobbik. In the 2 months leading up to the elections, we assessed authoritarianism and system-justification in a nationally representative sample of 1,000 Hungarian adults (Lönnqvist et al., 2019b).

In 2018, we sought to rerun the same survey with new participants after 8 years of Fidesz rule. More specifically, using the same methodology as in 2010, we again surveyed a representative sample of 1,000 Hungarians. This was done 2 months after the 2018 elections. The state apparatus and the governing party had campaigned in tandem to give Fidesz 49% of the vote with an impressive 70% turn-out, thereby setting up its third straight two-thirds majority. Jobbik held onto its base with 19% of the vote. The divided leftist and liberal parties were unable to increase their share of votes. The central question of the current study was whether the authoritarian turn had been accompanied by changes in attitudes and beliefs as measured at the individual level. Authoritarianism of the populace could be expected to increase under 8 years of an illiberal democracy. This could be expected to be especially true among those who support the illiberal democracy. Our first hypothesis is therefore that this political turn would have strengthened authoritarianism (H1a), and especially among the voters of the ruling party (H1b).

As right-wing authoritarianism shares common features with system justification and just world beliefs, we also expected that system justification and personal and global just world beliefs

would have also increased in the past 8 years (H2a), and especially among the voters of the ruling party (H2b).

The masses tends to adjust their attitudes to leadership cues (Zaller, 1992; Gabel and Scheve, 2007), and especially those who identify with a party tend to modify their issue stances to conform to their party (Carsey and Layman, 2006; Dancey and Goren, 2010; see also Lönnqvist et al., 2019a). This means that that Fidesz's ever-increasing hostility toward immigrants, in part fueled by the so called "refugee crisis" in 2015, could have moved the populace's attitudes in a more anti-immigrant direction. Our third hypothesis is that Fidesz's hostility toward immigrants would have hardened attitudes toward migrants (H3a), and especially among the voters of the ruling party (H3b).

This context, in which intense economic progress is associated with aggravated inequalities and an increased risk of marginalization. provided a unique context in which to test the strong version of system justification theory. Would disadvantaged group members justify a new social system that perpetuated their disadvantages? Did even low SES Fidesz supporters believe in the system? (RQ1).

MATERIALS AND METHODS

Participants and Procedure

The 2018 study was designed as an exact replication of the 2010 study. Both were run with nationally representative sample of 1,000 Hungarian adults. The quotas (i.e., age, sex, education, and place of residence), were based on the most recent Hungarian Statistical Office data and the data was collected applying the random walking method. Overall, 3,980 Hungarian adults were approached by trained market researchers in 2010 and 4,095 in 2018. One thousand face-to-face interviews were successfully conducted both in 2010 (25%) and 2018 (24%). 1,229 people refused to participate in 2010 (31%) and 1,427 in 2018 (35%). 1,751 people did not conform to the quotas employed in 2010 (44%) and 1,668 in 2018 (41%). The participants, who did not receive any material compensation, were informed that the data collection was voluntary and anonymous. The 2010 and 2018 final samples both consisted of 1,000 Hungarian adults (527 females in 2010 and 526 females in 2018) with a mean age of 45.4 (SD = 16.5) in 2010 and 45.7 (SD = 16.9) in 2018. Regarding highest attained education, 47 participants had not finished elementary school in the 2010 sample and 23 in the 2018 sample, 436 had finished elementary school in the 2010 sample and 435 in the 2018 sample, 380 had finished high school in the 2010 sample and 435 in the 2018 sample, and 137 had finished higher education (BA or MA) in the 2010 sample and 134 in the 2018 sample. Two participants in 2018 did not answer this question. Data were collected in early 2010, some months before the April elections in which Fidesz came to power, and late in 2018, around half a year after Fidesz had won its third consecutive super-majority in parliament. In general, the two samples look essentially identical in terms of response rate, sex, age, and education. We conducted the research with the IRB approval of Eötvös Loránd University.

Measures

All scales in the studies were abridged Hungarian adaptations (see Kelemen et al., 2014), and all items were responded to on a scale ranging from 1 (absolutely disagree) to 4 (absolutely agree).

Authoritarian Personality

Characteristics reflecting authoritarian personality were measured with scales assessing Authoritarianism [two items from the original F-scale (Adorno et al., 1950)] and two items added by Kelemen et al. (2014). The two Authoritarianism items from the original F-scale by Adorno et al. (1950) were (1) People can be divided into two distinct classes: the weak and the strong, (2) Human nature being what it is, there will always be war and conflict. The two items added by Kelemen et al. (2014) were (3) Everybody has to know his or her place in life in terms of both superiority and inferiority, and (4) It is both important to know how to obey and how to command. Cronbach's alpha internal consistency reliabilities were 0.57 and 0.62 in 2010 and 2018, respectively.

Just World Beliefs

The abridged version of Lerner and Miller (1978) scale was used to measure global just world beliefs (GBJW) and personal just world beliefs (PBJW). The three GBJW items were: (1) I think basically the world is a just place, (2) I believe that, by and large, people get what they deserve, and (3) I am confident that justice always prevails over injustice. Alphas were 0.67 and 0.74 in 2010 and in 2018, respectively.

The four PBJW items were: (1) I think that important decisions that are made concerning me are usually just, (2) I believe that I usually get what I deserve, (3) In my life injustice is the exception rather than the rule, and (4) I believe that most of the things that happen in my life are fair. Alphas were 0.80 and 0.85 in 2010 and in 2018, respectively.

System Justification Beliefs

System justification was measured with Kay and Jost (2003) system justifying belief (SJB) measure. The five SJB items were (1) In general, I find society to be fair, (2) Hungarian society needs to be radically restructured (R), (3) Most policies serve the greater good, (4) Everyone has a fair shot at wealth and happiness, and (5) Our society is getting worse every year (R). Alphas were 0.67 and 0.78 in 2010 and in 2018, respectively.

Anti-immigration Attitudes

The six items assessing anti-immigration attitudes were: (1) We should defend our way of life from outside (foreign) influence, (2) Life is enriched by lots of different people living next to each other (R), (3) We should be stricter regarding the rights of people who want to live here, (4) It is good that the countries of the world are increasingly more connected (R), (5) The presence of foreigners increases the crime rate, and (6) Greater freedom in movement and settlement is beneficial for everyone (R). Alphas were 0.80 and 0.78 in 2010 and in 2018, respectively.

Party Affiliation

Regarding party affiliation, participants were asked which party they would vote for in case there were elections "next Sunday."

We formed five groups according to voting intentions (see **Table 1**). In 2010, the group socialists consisted of the MSZP (Hungarian Socialist Party), whereas it in 2018 consisted of 46 MSZP and 43 Democratic Coalition (DK) voters. The latter was formed in 2010 as a fraction of the MSZP by the then leader of the MSZP, current leader of the DK, under whose leadership it split away in 2011 to form a separate party, taking many of the MSZP voters with him. Voters of small political parties ($N < 50$) were not considered.

Subjective Socioeconomic Status

Subjective socioeconomic status was measured with one question: "Which of the following statement characterizes your financial status the best?" The four options were: "I do not have any financial problems," "I do not have financial problems, but I have to live within my means," "I can't buy everything I want, and usually run out of money before the end of the month," and "I have serious financial troubles." SES was collapsed to form two categories by combining the "I have serious financial problems" (N = 103 in 2010 and 31 in 2018) and the "I can't buy everything I want, and usually run out of money before the end of month" (N = 421 in 2010 and 262 in 2018) categories to equal "low SES" with the other two options ("I do not have any financial problems," N = 19 in 2010 and 52 in 2018; "I do not have financial problems, but I have to live within my means," N = 457 in 2010 and 652 in 2018) classified as "high SES."

Data Analysis

To address our hypotheses (H1–H3), two-way ANOVAs were conducted that examined the effect of measurement time (2010 vs. 2018) and voting intentions (Fidesz vs. Jobbik vs. Social democrats vs. Undecided vs. No response) on the outcome variables (authoritarianism, global just world beliefs, personal just world beliefs, and anti-immigrant attitudes). To test our research question (RQ1), a three-way ANOVA was conducted that examined the effect of measurement time, voting intentions, and socioeconomic status on system justification beliefs. For pairwise comparisons, we used Bonferroni correction *post hoc* tests. Cohen's d was calculated using the pooled standard deviation across groups.

RESULTS

A two-way ANOVA with authoritarianism as dependent variable, revealed a statistically significant interaction between the effects of measurement time and voting intentions on authoritarianism,

TABLE 1 | Descriptive statistics and effect sizes for comparison between 2010 and 2018 means according to voting intention.

	Authoritarianism	Global just world beliefs	Personal just world beliefs	Anti-immigrant attitudes
Fidesz supporters				
2010 M (SD) *n* = 334	3.08 (0.48)	2.33 (0.61)	2.57 (0.60)	2.69 (0.58)
2018 M (SD) *n* = 327	3.08 (0.49)	2.69 (0.65)	2.83 (0.57)	3.13 (0.51)
SE	0.04	0.05	0.05	0.04
d (*p*)	0 (0.86)	−0.571 (<0.001)	−0.444 (<0.001)	−0.805 (<0.001)
95% CI	−0.84, 0.70	−0.46, −0.26	−0.35, −0.17	−0.53, −0.36
Jobbik supporters				
2010 M (SD) *n* = 124	3.19 (0.51)	2.13 (0.68)	2.56 (0.63)	2.92 (0.58)
2018 M (SD) *n* = 80	2.93 (0.49)	2.68 (0.78)	2.76 (0.63)	3.05 (0.62)
SE	0.07	0.10	0.09	0.08
d (*p*)	0.519 (<0.001)	−0.752 (<0.001)	−0.317 (0.021)	−0.217 (0.086)
95% CI	0.12, 0.40	−0.74, −0.36	−0.37, −0.03	−0.30, 0.02
Social democrat supporters				
2010 M (SD) *n* = 95	3.11 (0.52)	2.35 (0.69)	2.53 (0.57)	2.63 (0.63)
2018 M (SD) *n* = 89	3.12 (0.42)	2.55 (0.71)	2.64 (0.63)	2.82 (0.56)
SE	0.07	0.10	0.09	0.08
d (*p*)	−0.021 (0.89)	−0.286 (0.05)	−0.183 (0.207)	−0.319 (0.022)
95% CI	−0.16, 0.14	−0.39, 0.00	−0.29, 0.06	−0.35, −0.03
Undecided				
2010 M (SD) *n* = 177	3.11 (0.49)	2.31 (0.70)	2.55 (0.59)	2.64 (0.61)
2018 M (SD) *n* = 218	3.02 (0.55)	2.49 (0.69)	2.61 (0.62)	2.76 (0.55)
SE	0.05	0.07	0.06	0.06
d (*p*)	0.172 (0.08)	−0.259 (0.007)	−0.099 (0.343)	−0.189 (0.039)
95% CI	−0.01, −0.19	−0.32, −0.05	−0.18, 0.06	−0.23, −0.01
No response				
2010 M (SD) *n* = 206	3.06 (0.51)	2.34 (0.64)	2.50 (0.56)	2.70 (0.58)
2018 M (SD) *n* = 209	3.03 (0.52)	2.50 (0.74)	2.68 (0.63)	2.80 (0.50)
SE	0.05	0.07	0.06	0.06
d (*p*)	0.058 (0.513)	−0.231 (0.015)	−0.302 (0.002)	−0.185 (0.053)
95% CI	−0.06, −0.13	−0.29, −0.03	−0.29, −0.06	−0.22, 0.00

Dependent variables: Authoritarianism, global just world beliefs, personal just world beliefs, anti-immigrant attitudes.

$F(4,1849) = 3.01$, $p = 0.017$, $\eta_p^2 = 0.006$. Simple main effects analysis showed that Jobbik voters were significantly more authoritarian in 2010 than in 2018, but the authoritarianism of other voters did not change between 2010 and 2018 (ps > 0.05). In fact, Jobbik supporters had plummeted from being highest in authoritarianism in 2010 to being lowest in 2018. **Table 1** reports the standard error associated with the estimated marginal means, the relative ps, the confidence intervals, and Cohen's d.

A similar two-way ANOVA with global just world beliefs as dependent variable, revealed a statistically significant interaction between the effects of measurement time and voting intentions on global just world beliefs, $F(4,1849) = 1.813$, $p = 0.003$, $\eta_p^2 = 0.009$. Simple main effects analysis showed that all groups in 2018 thought the world generally was more just than in 2010, and this effect was the strongest among Fidesz and Jobbik voters. **Table 1** reports the standard error associated with the estimated marginal means, the relative ps, the confidence intervals, and Cohen's d.

A two-way ANOVA with personal just world beliefs as dependent variable revealed a statistically non-significant interaction between the effects of measurement time and voting intentions on personal just world beliefs, $p = 0.102$. The main effects of measurement time, $F(1,1849) = 26.624$, $p < 0.001$, $\eta_p^2 = 0.014$, and voting intentions, $F(4,1849) = 3.628$, $p = 0.006$, $\eta_p^2 = 0.008$, were significant. Personal just world beliefs were lower in 2010 compared to 2018, and Fidesz voters had higher scores than the no response group and the undecided group. **Table 1** reports the standard error associated with the estimated marginal means, the relative ps, the confidence intervals, and Cohen's d.

A two-way ANOVA with anti-immigrant attitudes as dependent variable revealed a statistically significant interaction between the effects of measurement time and voting intentions on anti-immigrant attitudes, $F(4,1849) = 15.623$, $p < 0.001$, $\eta_p^2 = 0.018$. Simple main effects analysis showed that all groups became more anti-immigrant, except Jobbik voters, who in 2010 were already very anti-immigrant, much more so than any other group. However, now Fidesz voters, showing a large increase in anti-immigrant attitudes, were as anti-immigrant as Jobbik voters. Other groups showed only small increases in anti-immigrant attitudes. **Table 1** reports the standard error associated with the estimated marginal means, the relative ps, the confidence intervals, and Cohen's d.

A three-way ANOVA with system-justification beliefs as dependent variable revealed a statistically significant three-way interaction between measurement time, voting intentions and socioeconomic status, $F(4,1836) = 2.770$, $p = 0.26$, $\eta_p^2 = 0.006$. Simple main effects analysis showed that both low SES and high SES Fidesz voters judge the system as more just in 2018 than in 2010. A similar pattern emerged for the No response (both low and high SES), the Undecided groups (both low and high SES), and the low SES Social democrat voters. High SES Jobbik voters also judged the system as more just in 2018 than in 2010. This was not the case for low SES Jobbik voters and high SES Social democrat voters. Largest differences were found among Fidesz voters. The main effect of SES was significant, $F(1,1836) = 48.987$, $p < 0.001$, $\eta_p^2 = 0.026$. Higher SES was generally associated with higher system justification scores both in 2010 and 2018. However, low SES Fidesz voters had higher SJB scores in 2018 than high SES other voters in 2018. **Table 2** reports the standard error associated with the estimated marginal means, the relative ps, the confidence intervals, and Cohen's d.

DISCUSSION

We investigated the extent to which the Hungarian public had changed in terms of characteristics associated with authoritarianism and system justification after 8 years of Fidesz's rule. Mean scores on our measures of authoritarianism were generally stable over time. These results do not support H1a and H1b.

The results were different for system-justifying belief and belief in a just world. Fidesz supporters, in particular, believed the world to be more just in 2018 compared with 2010, but also others believed the world to be more just. Fidesz supporters also stood out in terms of starkly increased belief in the system. However, everyone else, except supporters of the social democrats and low SES Jobbik voters, also thought the system was more just in 2018 than in 2010. These results support both H2a and H2b.

Regarding anti-immigrant attitudes in 2018, Fidesz supporters were much more anti-immigrant than in 2010, with other groups showing much smaller increases in anti-immigrant sentiment, supporting H3a and H3b.

Our results do not generally support the strong version of system justification theory: system justification was positively associated with socioeconomic status both in 2010 and 2018. However, in 2018, low status Fidesz voters were more prone to

TABLE 2 | Descriptive statistics and effect sizes for comparison between 2010 and 2018 means according to voting intention and SES.

	SES	2010 M (SD)	2018 M (SD)	SE	p	95% CI	Cohen's *d*
Fidesz	Low	1.75 (0.46)	2.44 (0.56)	0.07	< 0.001	−0.82, −0.56	1.346
	High	1.91 (0.46)	2.71 (0.53)	0.06	< 0.001	−0.90, −0.69	1.612
Jobbik	Low	1.62 (0.44)	1.71 (0.43)	0.14	0.528	−0.38, 0.19	0.207
	High	1.71 (0.50)	2.19 (0.49)	0.10	< 0.001	−0.68, −0.29	0.970
Social democrats	Low	1.82 (0.55)	2.06 (0.54)	0.14	0.089	−0.51, 0.04	0.440
	High	2.12 (0.55)	2.05 (0.55)	0.10	0.481	−0.13, 0.27	0.127
No response	Low	1.79 (0.55)	2.12 (0.59)	0.09	< 0.001	−0.50, −0.15	0.579
	High	2.03 (0.48)	2.22 (0.63)	0.07	0.005	−0.33, −0.06	0.339
Undecided	Low	1.76 (0.44)	1.96 (0.64)	0.09	0.022	−0.36, −0.03	0.364
	High	1.97 (0.52)	2.23 (0.61)	0.07	< 0.001	−0.41, −0.12	0.459

Dependent variable: System justifying beliefs. SES, Subjective socioeconomic status.

justify the system than were voters of other parties, including even high status voters of other parties. This lends some support for the strong version of SJT (RQ1).

Stable Values and Changing Attitudes

In terms of contemporary personality research, our measures of authoritarianism could be argued to resemble personal values. Personal values are general conceptions of what is desirable; they are more abstract than attitudes since they transcend specific actions and situations (e.g., Schwartz, 1992). Our measures of authoritarianism could be argued to tap into valuing hierarchy over egalitarianism and submission over criticism, respectively. Although values are often thought to be malleable to culture and life events, they have, in fact, been shown to be remarkably stable in adulthood. For instance, vocational training or education in a certain discipline does little to influence such fundamental values (Bardi et al., 2014). Two longitudinal studies to have investigated value change in migration have suggested that values do change in response to such major life transitions (Lönnqvist et al., 2011; Bardi et al., 2014). However, it seems that these changes may be temporary; one of the studies included a 2-year follow-up, at which stage values had reverted back to their initial pre-migration levels (Lönnqvist et al., 2013).

Regarding the more direct question of whether the political system in a country influences personal value priorities, the empirical evidence is mixed. For more than four decades, the populace of Eastern Europe was subject to communist regime. However, these regimes and their symbols remained alien to the populace and were not generally accepted (Rupnik, 1988). For the period preceding communist rule, data on value priorities is scant. One study conducted in the early 1990s, after the fall of the communist regimes suggested that Eastern Europeans did not differ as a group from their Western counterparts in most values related to politics, religion, and primary relations (van den Broek and de Moor, 1994). By contrast, another study based on data from the same time period suggests that the communist system did move personal values toward higher hierarchy and conservatism and lower autonomy (Schwartz et al., 2000). Such cross-cultural comparisons are, however, hampered by lack of scalar invariance across countries (Davidov, 2010). This means that comparisons of mean importance across countries are likely to be highly misleading. Our results are generally consistent with the above literature; values, at least in the short run, do not seem to change in response to the political system.

Our results revealed increased anti-immigrant attitudes and system-justifying beliefs. This is consistent with a large body of research suggesting that the populace tends to adjust its attitudes to leadership cues (Zaller, 1992; Gabel and Scheve, 2007). Also consistent with previous research is that both beliefs and attitudes changed the most among Fidesz supporters. Since the 1960s, an impressive amount of literature on "the role of enduring partisan commitments in shaping attitudes toward political objects" (Campbell et al., 1960, p. 135; for a review, see Bartels, 2002) has accumulated. Those who identify with a party tend to modify their issue stances to conform to their party (Carsey and Layman, 2006; Dancey and Goren, 2010; see also Lönnqvist et al., 2019a). Other groups of voters showed only small increases in anti-immigrant sentiment. Nevertheless, although attitudes have in the last decades generally become more liberal, our results suggest that there is nothing inevitable about this (cf., Strimling et al., 2019). The process can be reversed, and political leadership may play a crucial role in such a reversal.

Worldviews Changed, but Why?

There was, overall, a moderate increase in both global and personal belief in a just world, and a large increase in belief a just system. Belief in a just world and belief in a just system have been argued to be caused by factors such as insecurity (Jost et al., 2008), threats to the system and consequent instability (Jost and Hunyady, 2005), perceptions of a dangerous world (Jost and Hunyady, 2005), and needs for order, structure, closure, and control (Jost et al., 2003, 2017; Jost and Hunyady, 2005). It is conceivable that the fear mongering Fidesz's leadership and of the state dominated media led people to experience heightened insecurity and threat, and that that heightened belief in the system and in a just world served a palliative function. Indeed, there is ample evidence that system justifying beliefs are associated with lower levels of anxiety, discomfort, and uncertainty (see Jost and Hunyady, 2003). Recently, Vargas-Salfate et al. (2018) showed, in a longitudinal 18-country study, that endorsing system-justifying beliefs is positively related to general psychological well-being.

On the other hand, other explanations than those referring to the palliative function of system justifying beliefs are possible. There was real moral outrage at the societal *status quo* in the run-up to the 2010 elections. After all, the then prime minister had been caught on tape admitting to having lied for years about the economy and Hungary's economy had collapsed (Lendvai, 2012). Moral outrage at the *status quo* has been negatively associated with belief in just system (e.g., Wakslak et al., 2007; Becker and Wright, 2011; Jost et al., 2012), and moral conviction can overpower system-justifying beliefs (De Cristofaro et al., 2021). It is feasible that moral outrage targeted at the previous government served to strengthen system justification after Fidesz was voted into power. People's belief in a just world and a just system may have hit a low-point in 2010, and the mere return to a more-or-less stable and normal way of life, allowed by strongly increasing levels of income, may have been enough to raise belief in a just world and a just system. Future research could try to disentangle the possible effects of state fear mongering from the effects of increased wealth as underlying increased just world and just system beliefs.

Belief in a just world, and even more so system-justifying belief, showed strong party-bias. It was primarily Fidesz supporters whose belief in a just world and a just system grew stronger. This result is consistent with a large body of research showing that partisan bias shapes not only more value-laden judgments (Bartels, 2002; Carsey and Layman, 2006; Dancey and Goren, 2010), but also more factual beliefs about the world; e.g., economic conditions (both current and future) are described as being better when the supported political party is in office (e.g., Gerber and Huber, 2010; Benhabib and Spiegel, 2019) or has just won an election (Gillitzer and Prasad, 2018). Given that even such, in some sense "objective" and factual beliefs are biased by

partisanship, our results according to which more abstract beliefs regarding the world and the system are similarly biased cannot be considered surprising.

Conflicting Evidence for the Strong Version of System Justification Theory

Our results do not generally support the strong version of system justification theory: system justification was positively associated with socioeconomic status. However, some findings deserve particular attention in terms of the strong version of system justification theory. Voters for the ruling party Fidesz included individuals who reported low SES (i.e., serious financial difficulties), and these low SES Fidesz voters showed a higher mean level of system justification than did opposition voters with high SES. That individuals struggling with serious or mild financial difficulties in a period of intense economic progress still support the system would seem to support the notion that "some of the ideas we hold are quite simply not good for us, and in that sense, they do not serve our interests or the interests of our ingroups"' (Jost et al., 2019, p. 384). In this sense, our results do support the notion that disadvantaged-group members legitimize the *status quo* under certain conditions.

One explanation for even low SES Fidesz voters belief in the system could be the perception of immigrants as threatening. Our results show that anti-immigrant attitudes were positively correlated with system justification. Kay and Zanna (2009) argued that increasing terror alert in the United States after 09/11 could be viewed as a natural manipulation of system threat, and something similar could have happened in Europe with the so called "refugee crisis" of 2015. Supporting the idea that it was this external threat that could have contributed to low SES Fidesz' voters endorsement of the system, both low and high SES Fidesz voters were harsher in their attitudes toward migrants than were other voters. The threat that immigrants imposed could be perceived as a controllable threat (by contrast to for instance the 2008 financial crisis, after which system derogation was commonplace in Hungary; see Kelemen et al., 2014; Szabó and Lönnqvist, 2021), and this perception may have been further supported by the continuous decrease in the number of those illegally entering Hungary over recent years, a pattern that Fidesz claimed credit for Bíró-Nagy (2021). Problematically, increased system justification among the disadvantaged can undermine system-changing collective action intentions (Osborne et al., 2019; De Cristofaro et al., 2021).

Limitations and Conclusion

An obvious limitation of the present research is that the design was cross-sectional. A longitudinal design would have allowed us to assess to what extent between-party changes in attitudes were due to people changing their beliefs and attitudes or people changing party. For instance, we cannot tell whether 2010 Fidesz supporters became more anti-immigrant during the following years, or whether more anti-immigrant people became Fidesz supporters. However, Hungary has, after the volatility in the years leading up to the 2010 election, been characterized by stability of party politics (Enyedi, 2016). We thus believe that the changes that we observed, particularly in Fidesz supporters, were due to those supporters changing, and not due to old supporters being replaced by new supporters.

We acknowledge that our paper is descriptive and has many limitations. An obvious limitation is the unreliable measure of authoritarianism. Additionally, we measured voting intention and not actual voting; these can sometimes differ, especially given the face-to-face nature of our data collection as compared to the secrecy of actual voting. We acknowledge that we cannot really be certain of what the most powerful underlying causal factors driving increasing anti-immigrant sentiment are. An alternative explanation for increased anti-immigrant sentiment could be the increasing spread of political misinformation and propaganda in online settings; partisan communities of like-minded individuals could be exciting themselves into adopting more and more extreme positions (Pariser, 2011). However, recent results challenge this narrative; at least in Western contexts, exposure to political disagreement on social media is high (Bakshy et al., 2015; Pew Research Center, 2016) and social media does not polarize people's views (Boxell et al., 2017). Furthermore, if social media echo chambers and political disinformation had, by themselves, increased anti-immigrant sentiment in Hungary, then something similar could have been expected to happen in Western Europe. However, European Social Survey data suggest that overall public attitudes toward refugees (Hatton, 2016) and immigrants (Heath and Richards, 2016) have remained relatively stable in wake of the so-called refugee crisis in 2015. The effects of online propaganda on attitudes, are, naturally, difficult to completely disentangle from the effects of political leadership. This is especially true if the political leadership is responsible for much of the propaganda. Nevertheless, we believe that it is, as in the West (Arceneaux and Johnson, 2015), the behavior of the political elite that changes people's attitudes, not media communication *per se*.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Faculty of Education and Psychology, Eötvös Loránd University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

J-EL contributed to all aspects of work for this article. ZS contributed to conception, data analysis, and the preparation of the manuscript. LK contributed to the data collection and interpretation, and revising the article critically. All authors contributed to the article and approved the submitted version.

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Obstacles to Birth Surname Retention Upon Marriage: How Do Hostile Sexism and System Justification Predict Support for Marital Surname Change Among Women?

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Despite the ongoing shift in societal norms and gender-discriminatory practices toward more equality, many heterosexual women worldwide, including in many Western societies, choose to replace their birth surname with the family name of their spouse upon marriage. Previous research has demonstrated that the adherence to sexist ideologies (i.e., a system of discriminatory gender-based beliefs) among women is associated with their greater endorsement of practices and policies that maintain gender inequality. By integrating the ideas from the system justification theory and the ambivalent sexism theory, we proposed that the more women adhere to hostile and benevolent sexist beliefs, the more likely they would be to justify existing gender relations in society, which in turn, would positively predict their support for traditional, husband-centered marital surname change. We further argued that hostile (as compared to benevolent) sexism could act as a particularly strong direct predictor of the support for marital surname change among women. We tested these possibilities across three cross-sectional studies conducted among women in Turkey (Study 1, $N = 118$, self-identified feminist women; Study 2, $N = 131$, female students) and the United States (Study 3, $N = 140$, female students). Results of Studies 1 and 3 revealed that higher adherence to hostile (but not benevolent) sexism was associated with higher support for marital surname change indirectly through higher gender-based system justification. In Study 2, the hypothesized full mediation was not observed. Consistent with our predictions, in all three studies, hostile (but not benevolent) sexism was found to be a direct positive predictor of the support for marital surname change among women. We discuss the role of dominant ideologies surrounding marriage and inegalitarian naming conventions in different cultures as obstacles to women's birth surname retention upon marriage.

Keywords: marital surname change, system justification, hostile sexism, benevolent sexism, gender inequality

INTRODUCTION

> "It is a very odd and radical idea indeed that.
> a woman would nominally disappear.
> just because she got married."
> Ellen Goodman, a Pulitzer Prize-winning U.S. columnist,
> The Name of the Game, Boston Globe 30 (September 24, 1974).

Social scientists have documented substantial progress toward gender egalitarianism in the last half-century, sometimes referred to as a "gender revolution" (e.g., England et al., 2020). It can be noticed in a radical shift in the public support for practices and legal standards aimed to promote and secure greater equality of rights and opportunities between men and women (e.g., Scarborough et al., 2019; England et al., 2020). Despite the ongoing progress toward gender egalitarianism, one form of a gendered practice – women's adoption of their husband's surname upon marriage – remains resistant to change in many cultures and countries.[1] In fact, according to the nationally representative opinion poll conducted in the United States a few years ago (e.g., Bame, 2017), 57% of United States adults thought that it is ideal for a woman to take their husband's surname. Although, cultural surname practices vary worldwide, this kind of marriage-related gendered naming practice may arguably seem somewhat obsolete in the 21st century. Noteworthy, the legal doctrine law of coverture, which implied that a wife's legal identity was subsumed under that of her husband upon marriage, was abolished almost 2 centuries ago (e.g., Kopelman et al., 2009; MacEacheron, 2016).

Prevailing support for marital surname change among heterosexual couples presents an important social issue as it manifests that there remains a social facet of status inequality in marriage, wherein (traditionally) women are expected to change their legal identity in a way men are not. Surprisingly, research that has provided insight into the social-psychological processes that underlie inegalitarian naming conventions is rare (for an exception, see, e.g., Pilcher, 2017; Stoiko and Strough, 2017). Previous research on marital surname change has approached this phenomenon from an individual perspective, which focused mainly on the role of women's personal motives in their marital surname choice (e.g., Scheuble et al., 2012; MacEacheron, 2016; Stoiko and Strough, 2017; Taniguchi and Kaufman, 2020). While, we acknowledge the importance of understanding individual-level motives regarding naming choices, in the current paper, we argue that decisions made by individuals in relation to their surnames upon marriage can be embedded in and become a consequence of a broader social system as well.

Central to our idea is the view that male-oriented naming practices are part of a broader constellation of dominant ideologies about gender and marriage, and these ideologies are often taken for granted (Emens, 2007; Scheuble et al., 2012). Therefore, prevailing support for marital surname change can be considered a group- and system-based phenomenon, in which marital naming convictions are produced and reinforced congruent with advantaged group's interests (i.e., men). In the present article, we raised the important question of whether the adherence to *sexist ideologies* (i.e., a system of discriminatory gender-based beliefs) among women would be associated with their endorsement of marital surname change and whether this link would be mediated by gender-based system justification. We tackled this question by drawing on the Ambivalent Sexism Theory (Glick and Fiske, 1996) and the System Justification Theory (Jost and Kay, 2005). These theories provide explanations about how sexist ideology is used to rationalize current social and political arrangements as fair and legitimate, especially among historically disadvantaged social groups. In particular, we aim to investigate the extent to which women's adherence to *hostile sexism*, the ideology that resentfully preserves male-dominated gender relations, compared to *benevolent sexism* (i.e., a set of favorable group ascriptions that justify the current gender status quo), predicts women's support for marital surname change directly and indirectly through gender-based system justification. We test these possibilities among self-identified women in *WEIRD* (i.e., Western, Educated, Industrialized, Rich, and Democratic; see Henrich et al., 2010) and non-WEIRD[2] contexts: Turkey and the United States A scholarly understanding of the processes underlying women's support for traditional (husband-centered) naming practices can help make significant progress toward understanding the obstacles of achieving gender equality.

Ambivalent Sexism and Support for Marital Surname Change

The proponents of the Ambivalent Sexism Theory (Glick and Fiske, 1996, 2001) have argued that sexism is reflecting a profound ambivalence rather than a constant antipathy toward women (or men). The essence of sexism generally lies in an uncritical acceptance of male supremacy and female subordination. According to this theory, sexist beliefs may be organized along two different yet complementary dimensions. The first dimension reflects hostile sexism, which involves strong feelings of antipathy or animosity toward the opposite gender (Glick et al., 2004; Sibley et al., 2007; Laurin et al., 2011). Individuals adhering to such aggressive sexist beliefs tend to perceive individuals from the other gender as competing over power and dominance. The second dimension, benevolent sexism, comprises subjectively positive yet patronizing beliefs about women in their respective restricted roles. Individuals adhering to benevolent sexist beliefs typically depict women as fragile and vulnerable creatures deserving men's protection and guidance (Glick et al., 2001). Benevolent sexism, thus, entails an affective expression of male dominance.

Both forms of ambivalent sexism have been considered as a *system-justifying ideology*, that is, the ideology that justifies,

[1]Notable exceptions include Greece, Italy, and Iceland where the legal procedure requires women to retain their birth names when they marry.

[2]Even though we use the well-established terms, WEIRD and non-WEIRD to provide some general characteristics of the two cultural contexts, we note that our samples are highly educated, and thus, tend not to differ on the *E* (educated) dimension. Please see the participants' characteristics in the three studies below.

naturalizes, and perpetuates gender inequality in society (Jost and Kay, 2005; see also Sibley et al., 2007). Previous research has suggested that widely and persistently held sexist beliefs propel women to justify the dominant patriarchal ideology surrounding the marriage (e.g., Chen et al., 2009; Day et al., 2011), endorse social norms that are likely to reinforce and perpetuate male privilege in society (e.g., Glick et al., 2004; Sibley et al., 2007; Laurin et al., 2011), and support the policies aimed to restrict women's autonomy (e.g., Petterson and Sutton, 2018; Salmen and Dhont, 2020).

While the association between ambivalent sexism and support for male-centerd marital surname change has not been systematically examined quantitatively, a few studies conducted with female college students in the context of the United States have shown that their plans to adopt their husbands' surname upon marriage were associated with their higher conformity to patriarchal norms (e.g., Scheuble et al., 2012; Stoiko and Strough, 2017). A qualitative study conducted with professional feminist middle-class heterosexual women in the United Kingdom has suggested that they viewed the practice of marital surnaming as built into the dominant ideologies of institutionalized sexism (e.g., Mills, 2003). Research on marital surname change has also examined women's rationales for their decision not to retain their maiden name upon marriage (e.g., Scheuble et al., 2012; MacEacheron, 2016), drawing comparisons between the choices of feminist and non-feminist women (e.g., Stoiko and Strough, 2017) as well as approaching the complex surname choices made by same-sex couples (e.g., Underwood and Robnett, 2019).

However, the claim, we wish to make here is that women's personal choices in relation to marital surname change rarely happen in a vacuum. When a disproportionate number of women worldwide manifest the willingness to undergo a major and visible change in their legal identity by adopting their husbands' surname upon marriage, it can reasonably be considered a group phenomenon worth scrutiny from a social-psychological perspective. Some studies have documented that sexist ideology exerts a great influence on the endorsement of patriarchal norms in a marriage that promote and protect male dominance in a heterosexual family (e.g., Chen et al., 2009; Stoiko and Strough, 2017). A handful of experimental research has shown that both benevolent sexism and hostile sexism predict individuals' support for traditional gender roles, thus often showing their complementary role in promoting gender inequalities (e.g., Barreto and Ellemers, 2005; Barreto et al., 2010; Brownhalls et al., 2021). Nevertheless, there are reasonable grounds to suggest that higher hostile sexism may exert a particularly strong influence on women's support for inegalitarian naming practices compared to higher benevolent sexism. This is because women's resistance to or the lack of endorsement of this convention at the societal level may be perceived by others as a counter-stereotypical, agentic, and even system-challenging behavior that threatens the entrenched traditional gender roles (e.g., Kahn et al., 2021). As previous research has revealed, hostile (as compared to benevolent) sexism is the ideology that motivates individuals to engage in a number of different strategies aimed to preserve the stability and reaffirm the legitimacy of the gender status quo in different life domains (e.g., Connor and Fiske, 2019). So while benevolent sexism robustly predicts positive attitudes toward women who sustain traditional gender roles in the institution of marriage (e.g., Chen et al., 2009; Szastok et al., 2019), hostile sexism as the ideology reinforces idealized notions of traditional (male-dominated) gendered division and penalizes those who challenge it through agentic behavior (e.g., Connor and Fiske, 2019). Based on the previous research, we, therefore, argue that hostile sexism can *directly* predict women's support for the traditional (husband-centered) naming practice to a greater extent than benevolent sexism.

Ambivalent Sexism, System Justification, and Support for Marital Surname Change

Endorsement of patriarchal practices such as husband-centered marital surname change can also be affected by the extent to which women justify the existing arrangements. The current study sought to address the link between ambivalent sexism and support for marital surname change through the mediating role of gender-based system justification. System justification theory (Jost and Kay, 2005; see also Jost, 2020) offers a cognitive-motivational analysis of why and how individuals justify a social, political, and economic status quo. According to system justification theory, not only advantaged groups but also disadvantaged groups perpetuate the existing social arrangements (Jost et al., 2003; but see Owuamalam et al., 2018 for a critique of this idea). This happens because the status quo serves the disadvantage to satisfy their epistemic (e.g., to reduce uncertainty), existential (e.g., to reduce distress and threat), and relational (e.g., to connect with mainstream society) needs. In doing so, people can satisfy their inner psychological needs for stability, predictability, and control, thus avoiding the rocky path of challenging the existing societal arrangements (e.g., Hennes et al., 2012; Jost, 2020).

Both forms of ambivalent sexism – hostile and benevolent sexism – have been associated with higher levels of system justification (e.g., Glick and Fiske, 2001; Jost and Kay, 2005; Sibley et al., 2007; Brandt, 2011). In particular, studies have found that hostile sexism, a rawer form of gender-related ideology, was transversally and causally related to gender-based system justification among members of the disadvantaged group (e.g., women; see Sibley et al., 2007; Laurin et al., 2011) and predicted individuals' support for policies aimed to restrict women's autonomy and legitimize men's dominance in decision-making processes (e.g., Petterson and Sutton, 2018; Salmen and Dhont, 2020). Likewise, benevolent sexism plays a complementary role in predicting individuals' support for restrictive policies and traditional gender roles (e.g., Chen et al., 2009; Barreto et al., 2010; Kahn et al., 2021; see also Glick and Fiske, 2001). However, while hostile sexism penalizes women for gender role deviance, benevolent sexism is more likely to have a pacifying effect on women decreasing their motivation to demand social change (e.g., Becker and Wright, 2011).

In gender settings, previous research conducted with women as members of the historically-disadvantaged group has revealed

that women are more likely than men to rationalize the persistent gender gap in high-status jobs and earnings (e.g., O'Brien et al., 2012). The observed pattern of behaviors is arguably consistent with the idea that women's adherence to sexist ideologies is also reflected in their tendency to justify the current gender division, which, in turn, produces their support for policies and practices aimed to preserve the entrenched male-dominated status quo. Extending this line of research, we argue that both hostile and benevolent sexism can be associated with greater gender-based system justification and thus act as the indirect predictors of women's support for the marital surname change.

THE CURRENT RESEARCH

Marital surname change represents a particularly fertile issue in which to explore whether the adherence to sexist ideologies among women predicts their support for the gendered practice that implies the replacement of women's previous surname with the family name of their spouse upon marriage. Consistent with our theoretical backdrop, we hypothesize that women's adherence to both forms of sexist beliefs will predict their higher tendency to justify existing gender relations in society, which in turn, will positively predict their support for marital surname change. We further argue that hostile (as compared to benevolent) sexism can act as a particularly strong direct predictor of the support for the traditional (husband-centered) naming practice among heterosexual women thus manifesting its predictive power *above and beyond* benevolent sexism. We examined these direct and indirect associations across three correlational studies, controlling for women's political orientation because previous research has linked right-leaning political ideology to the endorsement of hostile sexism (e.g., Sibley et al., 2007). The hypothesized theoretical model is depicted in **Figure 1**.

We test the applicability of our theoretical model among women in Turkey and the United States The two countries represent so-called Western (the United States) and non-Western (Turkey) societies that differ substantially in the objective scores of gender inequalities and sexism such that these scores are higher in developing countries as compared to more established democracies (Gender Equality Index, 2020). Despite these objective differences, we argue that marital surname change – as an entrenched and prevailing feature of heterosexual marriage in many cultures worldwide – holds promise as one avenue into capturing the impact of social-psychological mechanisms pertaining to the support for male dominance and the patriarchal family system among women as members of a historically disadvantaged group. This is because the predictions along with the system justification theory and the ambivalent sexism theory were shown to be sustained in a number of cross-national studies, thus revealing their potential applicability in both individualist and collectivist cultures (e.g., Glick et al., 2001, 2004; Brandt, 2011). Therefore, we expect to find similar findings across the two contexts: Turkey and the United States

Finally, in the present research, we test the applicability of our model among two subpopulations of women: self-identified feminist women in Turkey (Study 1) and female university students in Turkey and the United States (Studies 2 and 3, respectively). In Study 1, we chose to focus on self-identified feminist women because previous research has found that even women who generally endorse egalitarian values tend to endorse surname change upon marriage (e.g., Mills, 2003; Stoiko and Strough, 2017). In Studies 2 and 3, we chose to focus on the female student subpopulations because young women in emerging adulthood (18–25 years of age) are likely to be particularly impressionable to the processes of gender socialization by which they are taught how to behave in accordance with their assigned gender (Nielson et al., 2020). Besides, some earlier research, conducted a decade ago, has reported that support for marital surname change was also observed among highly-educated heterosexual women and female college students in Western cultures such as the United States (e.g., Scheuble et al., 2012). So, if there is a general trend for women to support marital surname change upon marriage, it has to be tested within

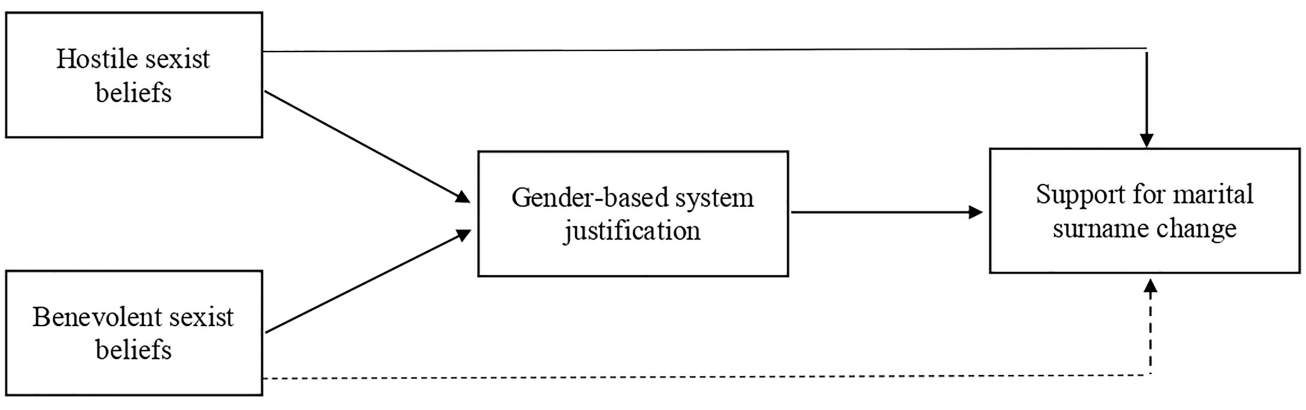

FIGURE 1 | A theoretical model depicting the indirect and direct relationship between hostile and benevolent sexism on support for marital surname change through gender-based system justification.

diverse female subpopulations. Therefore, we investigate whether there are significant associations between women's adherence to hostile sexist beliefs and higher support for marital surname change through gender-based system justification, with a particular focus on the subpopulations of feminists and female students, who might be seen as the frontrunners of social change in society.

STUDY 1: FEMINIST WOMEN IN TURKEY

In Turkey, the gendered practice of changing a woman's surname upon marriage has been one of the most debated legal issues with respect to achieving more gender egalitarianism (e.g., Inal, 2020; Kartal, 2020). According to Article 187 of the Turkish Civil Code of 1926, a married woman is required to adopt her husband's last name upon marriage. The article was amended in 1997 to allow women to keep their maiden surname before the surname of their husbands. This rule has not only been in conflict with the Turkish Constitution but also with the international agreements on gender equality (i.e., Convention on the Elimination of All Forms of Discrimination Against Women) to which Turkey became a party (e.g., Inal, 2020; Kartal, 2020). The only legal possibility for women in Turkey to retain their family surname upon marriage without adding that of their husband is to file a lawsuit to use this right (Inal, 2020; Kartal, 2020). The last years have indeed witnessed numerous high-profile cases of such lawsuits to the national and international courts (e.g., Uluğ, 2015).

In the recent decade, there have been both progress and significant backlash in the centuries-old struggle of feminist women in Turkey for gender equality. Many women's hard-won rights have become a target of conservative religious groups and right-wing populist parties in this country (Kabasakal-Arat, 2020). Simultaneously, patriarchal attitudes have gained increased influence in Turkey as a result of the Islamic resurgence over the last generation (Engin and Pals, 2018; Kavas and Thornton, 2019). As of 2020, the Global Gender Gap Index has ranked Turkey as having the 130th largest gender gap of 153 countries (World Economic Forum, 2020). It is within this context Study 1 was conducted.

Method

Participants and Procedure

Data were collected between May 24 and June 27, 2017. We distributed the link to the survey on various Facebook groups of female associations in Turkey concerned with women's rights and gender equality in this Middle-Eastern country. The common requirements for participants in this study included identifying as a female, being 18 years or older, and categorizing themselves as feminists. We reached the participants through snowball convenience sampling. The study was advertised as a research project seeking to understand attitudes toward various social issues among feminist women in Turkey. Written informed consent to participate in this online study was provided by all participants. Respondents were informed that there was no monetary compensation for their participation. Two hundred seventy-six volunteers entered the survey, 157 withdrew from participation without completing the survey. One hundred eighteen participants self-identified as women whereas one was a man. A male participant was excluded from the study as this person did not match the advertised inclusion criteria (i.e., being a female). The final sample consisted of 118 self-identified feminist women from Turkey. Participants' age ranged from 21 to 65 ($M = 33.02$; $SD = 9.53$). Participants were highly educated (47.9% indicated they completed a Bachelor's degree, and 32.5 earned an MSc degree). When asked regarding their marital status, 41.5% indicated they were single without a prior experience of marriage, 50% reported they were single and divorced, and 8.5% were married. We received IRB approval for this research from the University of Massachusetts Amherst.

Sensitivity analysis conducted using G*Power (Faul et al., 2009) indicated that the final sample size ($N = 118$) was sufficient for detecting a small effect in a regression analysis (multiple regression: R^2 deviant from zero; power = 0.80; $\alpha = 0.05$; Cohen's $f^2 = 0.10$).

Measures

Except for the socio-demographic variables mentioned above, all items were presented on seven-point response scales (1 = *completely disagree*, 7 = *completely agree*). The scales were presented in random order.[3]

Hostile and Benevolent Sexism

To measure both forms of sexism, we used the shortened scales adapted from the Ambivalent Sexism Inventory[4] (ASI; Glick and Fiske, 1996; see Sakallı-Uğurlu, 2002 for the adaptation of ASI to Turkish). We assessed hostile sexism with six items with the following items: "*Once a woman gets a man to commit to her, she usually tries to put him on a tight leash*," "*Women seek to gain power by getting control over men*," "*When women lose to men in a fair competition, they typically complain about being discriminated against*," "*Women exaggerate problems they have at work*," "*Many women are actually seeking special favours, such as hiring policies that favor them over men, under the*

[3]The survey also included a few measures of collective action intentions and open–ended questions regarding marital surname change for exploratory purposes.
[4]The original scale consisted of 22 items measuring hostile (HS) and benevolent sexism (BS), 11 items for each sub-scale (Glick and Fiske, 1996). While previous studies generally supported the one-dimensional psychometric structure of HS, the items pertaining to BS's three theoretical sub-factors (i.e., complementary gender differentiation, protective paternalism, and heterosexual intimacy) were shown to vary across cultures (e.g., García-Sánchez et al., 2019). Some recent studies have proposed the shortened scales of HS and BS, showing that the two factors were positively intercorrelated and exhibited the same factor structure as the original, longer scales without sacrificing reliability (e.g., Rollero et al., 2014; Hammond et al., 2018). In light of these previous discussions in the literature, we conducted EFAs to verify if the items adapted from the original scale produced a coherent bi-factorial structure. The two items adopted from the original scale to measure BS comprised its Complementary Gender Differentiation sub-factor.

guise of asking for 'equality'" and "*Men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives*"[5] (Cronbach's $\alpha = 0.85$). Benevolent sexism was assessed with two items adapted from the ASI. These items were: "*Women, compared to men, tend to have a superior moral sensibility*" and "*Women, as compared to men, tend to have a more refined sense of culture and good taste*" ($r = 0.64$, $p < 0.001$). To evaluate the viability of the two-factor structure of the Ambivalent Sexism scale, we conducted Exploratory Factor Analysis (EFA) with Varimax rotation. Results revealed that the six items measuring hostile sexism loaded on one component (46.67%) and the two items measuring benevolent sexism loaded on another factor (18.22%), which together explained 64.89% of the total variance (KMO = 0.815; $p < 0.001$).

Gender-Based System Justification

We assessed gender-specific system justification with three items[6] adapted from Jost and Kay (2005) and adjusted to the marriage context. These items were: "*In general, relations between men and women are fair*," "*Generally speaking, women and men have equal rights in recruitment and promotion*," and "*Generally speaking, the relationships between men and women in marriage are just and equal*" (Cronbach's $\alpha = 0.84$).

Support for Marital Surname Change

We created five items to measure support for marital surname change. These items were: "*For a healthy marriage, a woman should not use her maiden name, but use only her husband's last name*," "*When women get married, one of the most important indicators of being a real family is women not using their maiden name but using only their husbands' last names,*" "*A woman who loves and respects her partner should not use her own surname after marriage, but only her husbands' surname after marriage,*" "*When women get married, a woman not using her maiden name indicates that she loves her husband*" and "*I think a woman who is not using her maiden name, but using only her husband's last name is pure and honest*." Results of PCA revealed that these items loaded on one factor, which explained 67% of the variance (KMO = 0.855, $p < 0.001$). The scale showed adequate internal consistency (Cronbach's $\alpha = 0.87$).

Political Orientation

As ambivalent sexism was systematically shown to be correlated with right-wing ideology (Sibley et al., 2007; Petterson and Sutton, 2018) as well as support for power-related ideology in marriage (e.g., Chen et al., 2009), we used political orientation as a control variable. We asked participants to indicate their political orientation on a scale ranging from 1 (*extreme left*) to 9 (*extreme right*).

Results and Discussion

Preliminary Analysis

Means, SDs, and correlations between the variables are presented in **Table 1**. The mean scores of hostile sexism, gender-based system justification, and the support for marital surname change were rather low among feminist participants. The analysis of descriptive statistics revealed that participants scored relatively high on benevolent sexism. Pearson correlation analyses were computed to analyze bivariate associations between the study constructs. Participants' adherence to hostile sexist beliefs was found to be positively correlated with greater gender-based system justification, right-leaning political orientation, greater support for marital surname change. Benevolent sexism beliefs were found to be significantly associated only with hostile sexism beliefs, while their association with all the other study variables was found to be non-significant. Last, greater endorsement of gender-based system justification was significantly associated with greater support for marital surname change.

Mediation Analyses

We conducted a mediation analysis using PROCESS v.3.0, Model 4 with 5,000 bootstrapped samples (Hayes, 2013) to test whether (1) there is a direct positive significant association between hostile (as compared to benevolent) sexism and support for marital surname change and (2) this association is mediated by gender-based system justification. The percentile bootstrap CI was recommended as least susceptible to the influence of outliers in small samples compared to other popularly used tests (e.g., Creedon and Hayes, 2015). We identified hostile and benevolent sexist beliefs as independent variables, gender-based system justification as the mediator, and support for marital surname change as the dependent variable. In this mediation model, hostile sexism was used as an independent variable, while benevolent sexism was used as a covariate variable. We also controlled for the effects of participants' political orientation. Results indicated that adherence to hostile sexist beliefs, but not to benevolent sexist beliefs, was a significant predictor of gender-based system justification (see **Figure 2**). System justification was, in turn, found to positively significantly predict support for marital surname change. Participants' adherence to hostile sexist beliefs predicted higher support for marital surname change after including gender-based system justification in the model. Results indicated a significant indirect association between adherence to hostile sexism beliefs and support for marital surname change, as mediated by system justification, $b = 0.387$, $SE = 0.166$, 95% CI [0.06, 0.70]. The total direct effect was significant and large in size (Cumming, 2014), $b = 0.546$, $SE = 0.078$, 95% CI [0.39, 0.70]. The direct effect of hostile sexism beliefs on support for marital surname change was significant, $b = 0.208$, $SE = 0.077$, $p = 0.008$, 95% CI [0.05, 0.36], when controlled by BS and political orientation. We also conducted a *post hoc* power analysis for indirect effect using the power analysis calculator (see Schoemann et al., 2017).

[5]This item was originally proposed to measure BS, and in particular, protective paternalism (Glick and Fiske, 1996). However, the results of EFAs revealed that in the context of Study 1, it was clearly loaded on the HS factor (0.58). We thus treated this item as a part of HS based on the results obtained in our analysis (see Online Supplementary Materials). We return to this methodological issue in the General Discussion.

[6]These items were selected from the original eight-item scale as they loaded on the same component with the highest factor loadings in our pre-test.

TABLE 1 | Means, SDs, and correlations among key variables (Study 1).

Variables	*M (SD)*	1	2	3	4	5
1. Benevolent sexism	3.52 (1.84)	–				
2. Hostile sexism	1.85 (1.07)	0.31***	–			
3. Gender-based system justification	1.48 (0.88)	0.12	0.64***	–		
4. Political orientation	2.27 (1.20)	−0.05	0.30***	0.29***	–	
5. Support for marital surname change	1.44 (0.81)	0.13	0.58***	0.76***	0.24***	–

***$p < 0.001$.

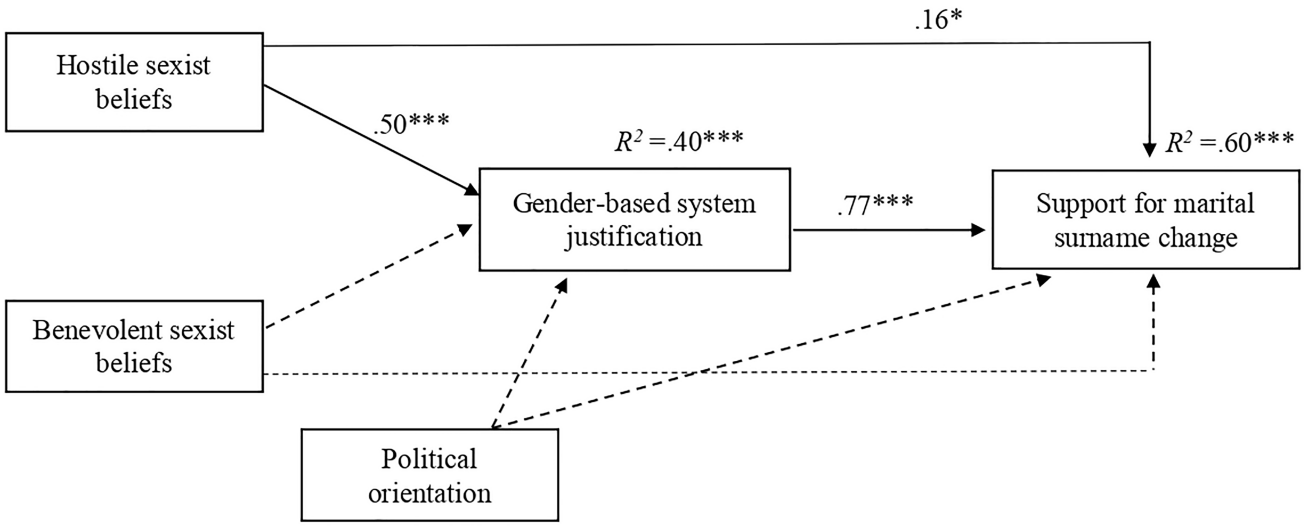

FIGURE 2 | The results of mediation analysis in Study 1. Standardized regression coefficients for the relationship between hostile and benevolent sexism (IVs) and support for marital surname change (DV) as mediated by gender-based system justification and controlled for political orientation, ***$p < 0.001$, *$p < 0.05$. Non-significant paths are shown as broken arrows.

Results yielded sufficient power for the indirect effect of hostile sexism (1.00). The observed indirect effect was large in size (Cumming, 2014). Both direct and indirect effects remained significant after including political orientation in the model as a covariate. Political ideology was not significantly associated with system-justification ($b = 0.074$, $SE = 0.056$, $p = 0.193$) and support for marital surname change ($b = -0.007$, $SE = 0.051$, $p = 0.894$).

Our first study provided support for the idea that there is a positive association between hostile sexist beliefs and higher support for marital surname among self-identified feminist women in Turkey, mediated by their gender-based system justification. It further suggested that: (i) benevolent sexism did not predict support for marital surname either directly or indirectly through gender-based system justification; (ii) the positive relationship between hostile sexism and support for marital surname change remained significant even when controlling for political orientation. The fact that we observed the aforementioned association among feminist women in Turkey seemingly supports the idea that when existing masculine naming marital conventions are systematically taken by society for granted, they are likely to become endorsed even by feminists, that is, individuals who supposedly stand for more gender equality (Mills, 2003; Stoiko and Strough, 2017). Previous studies (e.g., Stoiko and Strough, 2017) have demonstrated that feminist women had more egalitarian attitudes toward marital naming choice compared to the subsamples of non-feminist women and men. Thus, our study might be the first study to show that there is a link between adherence to hostile sexist beliefs and endorsement of marital surname change mediated by gender-based system justification among women who consider themselves feminist. A better understanding of how different subpopulations of women, including both feminist and non-feminist women, interpret marital naming conventions and their social consequences for gender equality is imperative. In sum, the results of Study 1 were consistent with our prediction that hostile (but not benevolent) sexist beliefs would be particularly related to supporting marital surname change as a gendered practice that reinforces women's subordination and perpetuates hierarchy in marriage.

STUDY 2: FEMALE UNIVERSITY STUDENTS IN TURKEY

Study 2 was designed to test our theoretical proposition with a sample of female university students in Turkey. The female student subpopulation has been chosen because, as outlined above, young women in emerging adulthood are likely to be particularly susceptible to established norms and thus tend to endorse societal notions of gender role beliefs that they have construed through the processes of gender socialization (e.g., Nielson et al., 2020).

Method

Participants and Procedure

Data were collected between November 21, 2018 and January 9, 2019. We distributed the link to the survey among university students in a private university in Ankara, Turkey. A sample of 144 undergraduate female students was recruited. Participants were offered course credit for their participation in a research study. They were also provided with non-research alternatives involving a comparable time and effort to obtain the extra credit to minimize the possibility of undue influence (e.g., Beckford and Broome, 2007). Twelve participants withdrew from the participation and thus were excluded from our analysis. A male participant was excluded from the study as this respondent did not match the advertised inclusion criteria (i.e., being a female). The final sample consisted of 131 female university students. Participants' age ranged from 19 to 41 ($M = 21.05$; $SD = 2.06$), four participants did not indicate their age. Sensitivity analysis was conducted using G*Power (Faul et al., 2009) showed that this sample size was sufficient for detecting a small effect in a regression analysis (multiple regression: R^2 deviant from zero; power = 0.80; $\alpha = 0.05$; Cohen's $f^2 = 0.09$).

Measures

We used the same scales as those used in Study 1 (a six-item scale for hostile sexism, Cronbach's $\alpha = 0.82$; a two-item scale for benevolent sexism, $r = 0.61$, $p = 0.001$; a three-item scale for gender-based system justification, Cronbach's $\alpha = 0.72$; a five-item scale for support for marital surname change, Cronbach's $\alpha = 0.82$). Factor analysis showed the same dimensionality of the constructs as in Study 1, with one exception: the item "*Men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives*" was found to cross-load on both hostile sexism and benevolent sexism. As we were interested in replicating Study 1, we treated it as a Hostile Sexism item. The scales and demographic questions, thus, were identical to those used in Study 1.

Results and Discussion

Preliminary Analyses

Means, SDs, and correlations between the variables are presented in **Table 2**. The mean scores of hostile sexism, gender-based system justification, and the support for marital surname change were rather low. The analysis of descriptive statistics revealed that similar to Study 1, participants scored relatively high on benevolent sexism. Pearson correlation analyses were computed to analyze bivariate associations between the study constructs. Similar to Study 1, greater adherence to benevolent sexism beliefs was associated with greater adherence to hostile sexist beliefs; different from Study 1, greater adherence to hostile sexist beliefs was associated with greater endorsement of gender-based system justification as well as greater support for marital surname change. In contrast, the link between hostile sexism and political orientation was found to be non-significant. Finally, contrary to Study 1, the association between gender-based system justification and support for marital surname change was not significant.

Mediation Analyses

We replicated the same analysis as in Study 1. As expected, the results revealed that adherence to hostile sexist beliefs, but not to benevolent sexist beliefs, was a significant predictor of gender-based system justification (see **Figure 3**). However, the path from gender-based system justification to support for marital surname change was found to be non-significant, suggesting that the mediation observed in Study 1 did not occur in Study 2. Finally, adherence to hostile sexist beliefs was found to be a significant direct predictor of support for marital surname change, while the direct link between adherence to benevolent sexist beliefs and support for marital surname change was non-significant. The total direct effect was significant and large in size (Cumming, 2014), $b = 0.344$, $SE = 0.079$, 95% CI [0.19, 0.50]. The significance of the direct association between hostile sexism and support for marital surname change remained unaffected, $b = 0.355$, $SE = 0.079$, $p < 0.001$, 95% CI [0.19, 0.50], after including benevolent sexism and political orientation as the covariates in the model. Political ideology was found to positively significantly predict system-justification (see **Figure 3**), while it did not predict support for marital surname change ($b = 0.091$, $SE = 0.051$, $p = 0.078$).

In sum, Study 2 conducted among female students in Turkey partially replicated the findings of Study 1 and provided evidence to the idea that hostile (but not benevolent) sexist beliefs predict (i) greater gender-based system justification and (ii) are directly associated with the increased support for marital surname change, while the hypothesized mediation did not occur. The absence of a significant link between gender-based system justification and support for marital surname change could be attributed to a relatively straightforward theoretical model we tested herein. It is possible that these dynamic associations may be more complex, and as such, system justification may manifest among people who make favorable temporal comparisons between their ingroup standing in the past, in the present or in the future (see Caricati and Owuamalam, 2020). Consequently, it would be relevant to replicate the present study by examining whether women's perceptions of both ingroup upward mobility and the increased political opportunity structure affect the link between gender-based system justification and support for marital surname change, thus leading to the occurrence of a moderated mediation. Further, while Study 2 suggests that young and highly-educated Turkish women are likely

TABLE 2 | Means, SDs, and correlations among key variables (Study 2).

Variables	*M (SD)*	1	2	3	4	5
1. Benevolent sexism	3.88 (1.67)	–				
2. Hostile sexism	2.86 (1.24)	0.20*	–			
3. Gender-based system justification	2.25 (1.26)	−0.03	0.23*	–		
4. Political orientation	3.72 (1.88)	0.14	0.16	0.27*	–	
5. Support for marital surname change	2.31 (1.18)	0.16	0.39***	0.16	0.24*	–

***$p < 0.001$, *$p < 0.05$.

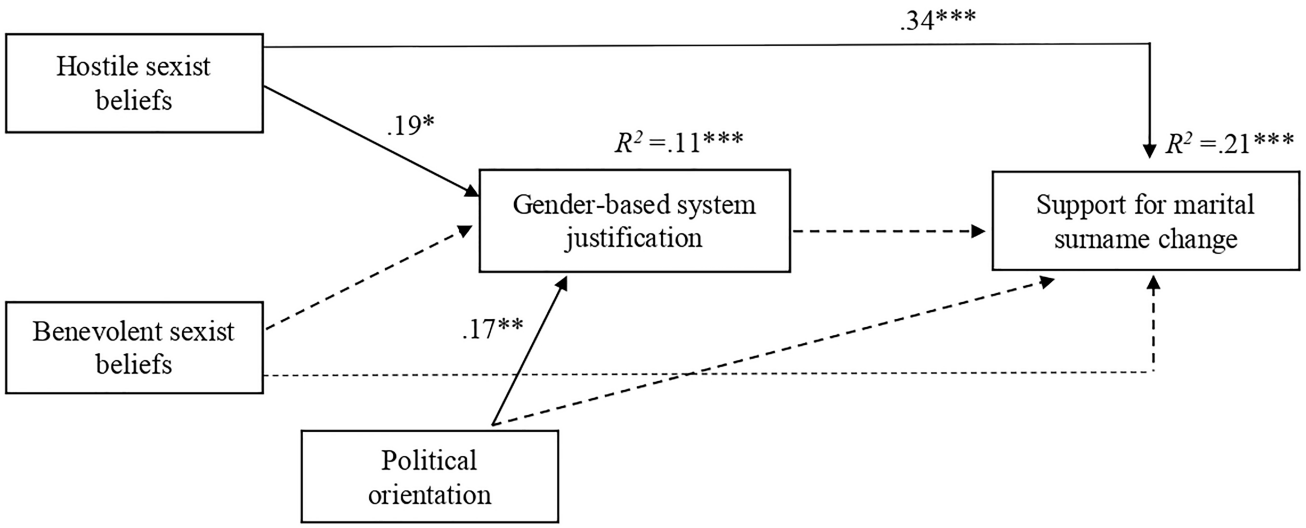

FIGURE 3 | The results of mediation analysis in Study 2. Standardized regression coefficients for the relationship between hostile and benevolent sexism (IVs) and support for marital surname change (DV) as mediated by gender-based system justification and controlled for political orientation, ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$. Non-significant paths are shown as broken arrows.

to support the traditional practice of changing their marital surname upon marriage to the extent that they adhere to hostile sexist beliefs, it is also important to bear in mind that this gendered practice is legally sustained by the Turkish Civil Code (e.g., Engin and Pals, 2018; Kavas and Thornton, 2019). Some legal scholars have speculated that the government is reluctant to change legal policy in matters of marital surname change such that this gendered practice allows the state to maintain existing gender arrangements in the face of increasing pressures of Western institutions and ideologies (Inal, 2020).

STUDY 3: FEMALE UNIVERSITY STUDENTS IN THE UNITED STATES

Study 3 was designed to test our theoretical proposition in the sample of female university students in the United States This country had ranked 53rd among 153 countries in the Global Gender Gap Index 2020 (World Economic Forum, 2020). Compared to Turkey, the United States is considered a WEIRD society and one of the most individualistic cultures in the world, in which people tend to value independence and autonomy (Heine and Buchtel, 2009). In the United States, it is customary for a woman who marries to change her surname to that of her husband. The tradition originated in the law of coverture, which dictated that the identities of a husband and wife merged upon marriage, and that the new unit retained only the husband's identity (e.g., Kopelman et al., 2009; MacEacheron, 2016). The legal practice was first challenged in the mid-nineteenth century by feminist movements that recognized the oppressive nature of the coverture and its marital naming conventions (Kopelman et al., 2009; MacEacheron, 2016). Starting from 1975 and during the following decade, the procedure allowing a married woman to retain her natal surname became legal in all United States (MacEacheron, 2016). Despite these advances, it is still common for women in the United States to change their birth name upon marriage.

Method

Participants and Procedure

Data were collected between November 27 and December 11, 2018. A sample of 143 undergraduate female students was recruited through the *University of Massachusetts Amherst*, Department of Psychology online participant pool (SONA). Participants were told that they would receive 1 SONA research credit as extra credit for one of their classes. They were also told that participating in this study was not the only way to earn extra credit, and they could contact their professors to learn about other opportunities to earn extra credit. Three participants withdrew from the participation and thus were excluded from our analysis. The final sample consisted of 140 respondents. Participants' ages ranged from 18 to 27 ($M = 20.16$; $SD = 1.37$). As in previous studies, sensitivity analysis demonstrated that this sample size was sufficient for detecting a small effect in multiple regression analysis (Cohen's $f^2 = 0.08$).

Measures

Similar to Studies 1 and 2, participants were asked to report the extent they agree with the scale items on seven-point response scales (1 = *completely disagree*, 7 = *completely agree*). We used the same measures as those used in Studies 1 and 2 (a six-item scale for hostile sexism, Cronbach's $\alpha = 0.84$; a two-item scale for benevolent sexism, $r = 0.47$, $p < 0.001$; a three-item scale for gender-based system justification, Cronbach's $\alpha = 0.83$; a five-item scale for support for marital surname change, Cronbach's $\alpha = 0.75$). Factor analysis showed the same dimensionality of the constructs as in Studies 1 and 2. In particular, results of EFAs revealed that the item "*Men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives*" was again loaded on the HS factor (0.50), as in Study 1. We return to this issue in the General Discussion.

Sample Comparisons

To provide a better understanding of the potential cross-cultural (Turkey and the United States) as well as intergroup (self-identified feminist sample and university female student samples) similarities and differences, we performed one-way ANOVAs (see **Table 3**). We found that the mean level for benevolent sexism across the three studies did not differ to a significant extent. With respect to hostile sexism, *post hoc* comparisons (Tukey's HSD) indicated that the mean for feminist women in Turkey (Study 1) was significantly lower than for female students in Turkey (Study 2) and female students in the United States (Study 3). With respect to gender-based system justification, *post hoc* comparisons indicated that the mean for feminist women in Turkey was significantly lower than for female students in Turkey. Further, the mean levels for both feminist women in Turkey and female students in Turkey were significantly lower compared to female students in the United States Last, with respect to support for marital surname change, *post hoc* comparisons indicated that the mean level for feminist women in Turkey was significantly lower than for female students in Turkey and female students in the United States.

Results and Discussion

Preliminary Analyses

Means, SDs, and correlations between the variables are presented in **Table 4**. The mean scores of hostile sexism, gender-based system justification, and the support for marital surname change were rather low. The analysis of descriptive statistics revealed that participants scored relatively high on benevolent sexism. Pearson correlation analyses revealed that greater adherence to benevolent sexist beliefs was associated with greater adherence to hostile sexist beliefs, greater endorsement of gender-based system justification, right-leaning political ideology as well as greater support for marital surname change. Similar to the findings of Studies 1 and 2, adherence to hostile sexist beliefs was correlated with greater gender-based system justification as well as greater support for marital surname change. As in Study 1, greater gender-based system justification was significantly associated with greater support for marital surname change.

Mediation Analyses

The same analyses as in Studies 1 and 2 were carried out. The results indicated that adherence to hostile sexist beliefs, but not to benevolent sexist beliefs, was a significant predictor of gender-based system justification (see **Figure 4**). Gender-based system justification was, in turn, found to significantly predict higher support for marital surname change. Consistent with our hypothesis, we found a significant indirect association between adherence to hostile sexism beliefs and higher support for marital surname change, as mediated by gender-based system justification, $b = 0.075$, $SE = 0.039$, 95% CI [0.01, 0.16]. While the direct path from hostile sexism to support for marital surname change was significant as in Studies 1 and 2, in Study 3, we also found respondents' adherence to benevolent sexism significantly predict support for male-dominated naming practice after marriage. The total direct effect was significant and large in size (Cumming, 2014), $b = 0.285$, $SE = 0.082$, 95% CI [0.12, 0.45]. The direct effect of hostile sexism beliefs on support for marital surname change was significant, $b = 0.210$, $SE = 0.083$, $p = 0.013$, 95% CI [0.05, 0.38], when controlled by BS and political orientation. The significance of indirect effects remained unaffected after controlling for participants' political orientation. As can be seen in **Figure 4**, political ideology was not significantly associated with system-justification ($b = 0.109$, $SE = 0.057$, $p = 0.056$) nor with the support for marital surname change ($b = 0.034$, $SE = 0.041$, $p = 0.404$).

Taken together, the results from Study 3 conducted with the female students in the United States revealed that women's adherence to hostile sexist beliefs was associated with their greater support for marital surname change through gendered-based system justification. Therefore, these findings fully replicated those of Study 1 (i.e., the direct and indirect associations) and partially replicated those of Study 2 (i.e., the direct association). They also showed that, in the context of the United States, benevolent sexism was directly associated

TABLE 3 | Means and SDs among the samples in Studies 1–3.

	Study 1 feminist women in Turkey		Study 2 female students in Turkey		Study 3 female students in the United States		*F*(2,394)
	M	*SD*	*M*	*SD*	*M*	*SD*	
Benevolent sexism	3.52[a]	1.84	3.88[a]	1.67	3.94[a]	1.27	2.60
Hostile sexism	1.85[a]	0.75	2.86[b]	1.24	2.59[b,c]	1.07	27.30***
Gender-based system justification	1.48[a]	0.88	2.25[b]	1.26	3.04[c]	1.37	54.72***
Support for marital surname change	1.43[a]	0.81	2.31[b]	1.18	2.36[b,c]	1.01	46.26***

*Means in a row without a common superscript letter differ at the 0.001 level according to Tukey's HSD test. ***p < 0.001.*

TABLE 4 | Means, SDs, and correlations among key variables (Study 3).

Variables	*M (SD)*	1	2	3	4	5
1. Benevolent sexism	3.94 (1.27)	–				
2. Hostile sexism	2.59 (1.07)	0.35***	–			
3. Gender-based system justification	3.03 (1.37)	0.21**	0.41***	–		
4. Political orientation	4.05 (2.01)	0.19*	0.36***	0.29***	–	
5. Support for marital surname change	2.34 (1.01)	0.33***	0.41***	0.39***	0.25**	–

****p < 0.001, **p < 0.01, *p < 0.05.*

with the support for marital surname change, whereas in our studies conducted in Turkey, this link was non-significant. This result may suggest that in North American culture, not merely hostile sexism but also benevolent sexism may be symbolically driving young women to endorse the marriage norms that perpetuate male dominance in a heterosexual family (e.g., Chen et al., 2009; Scheuble et al., 2012; Stoiko and Strough, 2017). However, importantly and consistent with our hypotheses, hostile sexism was related to the support for marital surname change also indirectly to the extent that young women were likely to justify the existing gender-based system.

GENERAL DISCUSSION

The current research aimed to show that women's support for marital surname change, an entrenched and prevailing feature of heterosexual marriage in many cultures worldwide, can be understood as a powerful signifier of a strong linear association between the adherence to hostile sexism and system-justifying beliefs. Building on the ideas of the Ambivalent Sexism Theory and the System Justification Theory, we proposed that women's adherence to both forms of sexist beliefs – hostile sexism and benevolent sexism – would predict their higher tendency to justify existing gender relations in society, which in turn, would positively predict their support for marital surname change. We further hypothesized that hostile (as compared to benevolent) sexism could act as a particularly strong direct predictor of the support for the traditional (husband-centered) naming practice among women, *above and beyond* benevolent sexism, as the former is the ideology that governs resentful preservation of male domination and female subordination in marriage and family. We tested our theoretical model across three cross-sectional studies conducted among feminists in Turkey (Study 1) as well as female students in Turkey (Study 2) and the United States (Study 3). Consistent with our predictions, in all three studies, hostile (but not benevolent) sexism was associated with higher support for marital surname change directly, and in Studies 1 and 3 also indirectly through gender-based system justification. In contrary to our predictions, in Study 2, the link between system justification and support for marital surname change was not significant, and thus the mediation did not occur. Finally, in Study 3 conducted with female students in the United States, benevolent sexism was found to be a complementary direct predictor of support for marital surname change.

With respect to cross-cultural and between-group differences, our analysis revealed that participants in all three studies did not differ in their mean levels of benevolent sexism. Instead, feminist women in Turkey displayed a significantly lower mean level of hostile sexism compared to female students in both Turkey and the United States Some cross-cultural differences were observed with respect to gender-based system justification. In particular, Women in Turkey (Studies 1–2) displayed lower levels of system justification compared to women in the United States (Study 3). Finally, between-group differences were found between feminists and female students as the former group reported significantly lower support for marital surname

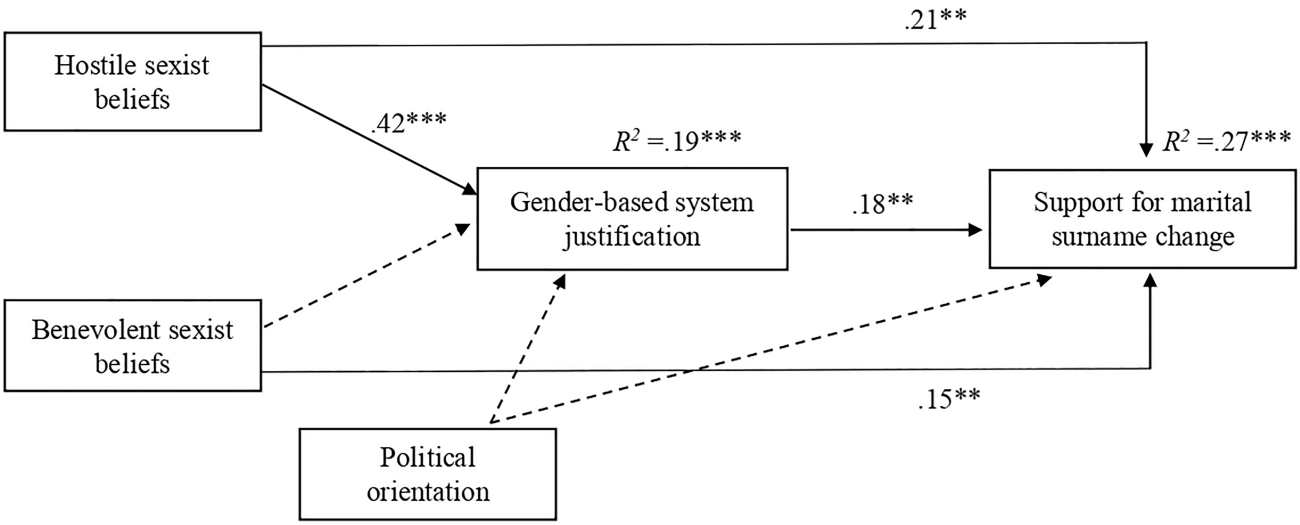

FIGURE 4 | The results of mediation analysis in Study 3. Standardized regression coefficients for the relationship between hostile and benevolent sexism (IVs) and support for marital surname change (DV) as mediated by gender-based system justification and controlled for political orientation, ***$p<0.001$, **$p<0.01$. Non-significant paths are shown as broken arrows.

change. Notwithstanding these observed differences in the mean levels, our findings in general supported the idea that women's support for male-oriented naming practices is related to their adherence to dominant ideologies about gender and marriage.

Two main messages emerge from the current research. First, our research compellingly demonstrates that hostile sexism, the ideology that resentfully preserves male-dominated gender relations, was significantly associated with the support for male-centerd marital surname change across all studies. Importantly, the observed direct link between hostile sexism and support for marital surname change was positive, linear, robust, and replicable among female students in Turkey and the United States, but also among women who categorized themselves as feminists in Turkey. These findings are consistent with other lines of research suggesting that hostile sexism, the ideology that reinforces idealized notions of traditional male-dominated gendered division, is likely to motivate individuals to engage in behaviors aimed to legitimize female subordination in different life domains, including a heterosexual marriage (e.g., Chen et al., 2009; Day et al., 2011; Petterson and Sutton, 2018; Szastok et al., 2019). Importantly, our analysis is among the first to show how hostile sexism directly predicts support for marital surname change even among the subpopulations of women that might be considered as the frontrunners of social change in society, that is, feminists and female college students. Thus, as long as women endorse this ideology, the more likely they are to be contributing to the legitimization of hegemonic masculinity in a heterosexual marriage by supporting male-dominated naming practices.

Second, consistent with our prediction, we found that in two out of three studies, the indirect association between hostile sexism and support for marital surname change was mediated by gender-based system justification. These indirect links were observed among female students in the United States, an individualistic society in the West that claims progressive gender standards (e.g., Pessin, 2018) and also among feminist women in Turkey, the country that has started to claim more gender equality in marriage over the past decade (see Inal, 2020). However, we also highlight that the full mediation did not occur in Study 2 as there was no significant link between gender-based system justification and support for marital surname among female students in Turkey. The absence of a non-significant link can be explained by the fact that legal norms in Turkey require a married woman to adopt her husband's last name upon marriage. Although there have been some high-profile cases in this country when women filed lawsuits to the national and international courts to demand a legal possibility to retain their family surname upon marriage, these cases constitute the exception rather than the rule (e.g., see Inal, 2020; Kartal, 2020). It is possible that support for marital surname change among female students in Turkey can be explained by other context-related factors, beyond ideology, such as women's desire to avoid legal repercussions associated with either retained or hyphenated premarital surname, their fear of costly legal processes, or potential conflicts with their spouses. Therefore, future research in this context should expand on this study to investigate how an array of possibly interwoven processes – group perspectives, group identities, group interests, perceived societal demands, as well as personal motivations – affect women's support for marital surname change in Turkey, the country that is yet to make women free to decide which surname to use upon marriage (e.g., Uluğ, 2015). Scholars should also examine the extent to which women in Turkey perceive the current Turkish Civil Code to be egalitarian and gender-balanced as well as endorse the need to implement legal reforms to grant women with more rights with respect to their surname retention upon marriage.

Furthermore, it is worth noting that, against our hypothesis, we observed no significant direct and indirect associations between benevolent sexism and support for marital surname change *via* gender-based system justification. In fact, the observed associations may be at odds with some previous theorizing and experimental research in social psychology (e.g., Glick and Fiske, 2001; Barreto and Ellemers, 2005; Barreto et al., 2010; Brownhalls et al., 2021). One explanation for this emergent finding can be that across all studies, the role of a more pacifying and inoffensive benevolent sexism might have been suppressed by power-based hostile sexism as they were examined simultaneously. Future experimental research may scrutinize our theoretical model by systematically manipulating and isolating the independent variables. Further, against our prediction, in Study 3, the direct link between benevolent sexism and support for marital surname change was found to be significant, albeit small in size (Cumming, 2014). It is possible that in the United States, the country where women's right to retain their maiden name upon marriage has not been disputed in a legal domain since 1975, one's support for the traditional male-centred naming practice can be the expression of both power-based hostile sexism as well as affectively positive but condescending attitudes to women who embrace traditional gender roles (i.e., benevolent sexism). It is thus plausible that existing legal restrictions, objective gender inequality indexes, normative differences in individualistic and collectivistic cultures, that remained beyond the scope of the current research, can potentially explain the observed discrepancies in the findings. In specific, this observed non-significant association between system justification and support for marital surname change indicate that in a context, where retaining maiden name is prohibited by law, women's support for marital surname change could be perceived as a clear sign of their ideological beliefs about male supremacy and female subordination (especially among feminist and young women), and thus, predicted by hostile rather than benevolent sexism. However, in a context where changing or retaining maiden surname is a matter of choice, women's support for this conventional naming practice might not be seen as a mere sign of their adherence to hostile sexism. Prevailing support for this practice can also reasonably manifest women's tendency to endorse the shared beliefs that men should protect, cherish, and provide for women, especially in marriage. In fact, as previous qualitative research conducted with young women in Western cultures has shown, changing their surnames upon marriage is not just the choice dictated by their approval of traditional norms but also a public declaration of their desire to establish a legally and socially sanctioned union in which two people become one, and this oneness is manifested through a shared family (e.g., Scheuble et al., 2012; Stoiko and Strough, 2017).

Another intriguing issue that our analysis points to is that young women's ideas about what hostile and benevolent sexism mean in the 21st century may differ from those of their mothers and older generations of women. Quite remarkably, one item that was traditionally proposed to measure benevolent sexism (i.e., "*Men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives*") was found to be systematically loaded on the hostile sexism sub-scale in the current research among feminist women in Turkey (Study 1) and female students in the United States (Study 3). However, the same item was found to have significant factor loadings onto both hostile and benevolent sexism sub-scales for female students in Turkey (Study 2). One reason behind these observed results can be the fact that many progressive women such as feminists, especially in the WEIRD societies, have become increasingly concerned with their access to full and equal participation in the paid workforce, including their rights to rewards, resources, and opportunities along with men (e.g., Scarborough et al., 2019; England et al., 2020). Besides, according to the official records, in the past year only, women in the United States and women in Turkey earned around 84% of what men earned for the same job (e.g., International Labour Organization, 2020; Barroso and Brown, 2021). It is possible that the notion that "*men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives*" might be interpreted rather as discriminatory, from a progressive point of view, and thus align more neatly with hostile rather than benevolent sexist ideology, as our EFAs revealed. We believe that future qualitative research should examine this idea to better understand what men's financial provision means for women and what men's willingness to sacrifice in heterosexual relationships can also entail.

Taken together, the current research contributes to growing evidence that shows that sexist ideology, and in particular, hostile sexism, may be responsible for installing in individuals an antiquated conception of gender relations defined through male domination and female subordination. We acknowledge, however, that our findings should be interpreted as culturally specific. It is possible that in United States and Turkey, women's adherence to hostile sexism may explain their support for male-oriented naming conventions, given that in both countries, there are still relatively low numbers of women who retain their original surnames even *after* the legislative changes that allow this option. However, as we mentioned at the onset of this paper, different countries vary in their legal arrangements regarding marital naming practices. For example, in Italy, Greece, and Iceland, women keep their original surnames after marriage, whereas in other countries like Japan, women are required by the law to change their surnames upon marriage unless they marry somebody from another country (e.g., Taniguchi and Kaufman, 2020). It is, therefore, important to emphasize that women's willingness to adopt their husbands' surnames after marriage should not be considered a direct or a mere indicator of their ideological beliefs about gender hierarchy.

While our research aimed to provide an understanding of the ideological factors behind support for marital surname change among different subpopulations of women in Turkey and the United States, it is also plausible that there are other crucial psychological, lifestyle-related, and socio-demographic factors (e.g., marital status, previous romantic/marriage experiences, and socio-economic status) at play that can either

facilitate the endorsement of inegalitarian naming practices or inhibit it. For instance, our research makes an extremely interesting case for further analysis of the role of self-objectification, patriarchal beliefs, perceived stability of male dominance, and perceived legitimacy of gender hierarchy, all of which can help to better understand the obstacles to birth surname retention upon marriage. From a broader cultural perspective, many societies have different naming conventions that may or may not convey gender prejudices, regardless of women's (or men's) marriage surname change. Due to the patrilineal surnaming traditions that are still prevalent in many societies (including the societies we studied), women who choose not to change their surname upon marriage can also be seen as internalizing unequal gender relations (since they retained the surname inherited from their father, but not from their mother). They might also not be familiar with the relevant laws concerning the marital naming practices in their country. This might explain why, according to the results of Study 1, even some feminists did not totally object to women's surname change upon marriage. Several other points of interest can potentially emerge from this line of research with respect to the links between social identity aspirations and gender-based system justification, which have been equivocal so far (see, e.g., Owuamalam et al., 2017, 2021; Pilcher, 2017). In particular, our findings with respect to feminist women in Turkey (Study 1) raise several theoretical questions as to whether social identification with core feminist ideas as well as group-based considerations such as hope to attain equality with the historically advantaged outgroup (Owuamalam et al., 2021) can interact with ambivalent sexism to reduce its effect on the support for marital surname change in this subpopulation of women. Future qualitative research can also shed light on the meaning-making processes to better understand whether feminists in traditionally patriarchal societies such as Turkey consider marital surname change as a gendered practice that reinforces women's subordination and perpetuates hierarchy in marriage. Besides, future research conducted in non-WEIRD societies such as Turkey should also examine the extent to which support for marital surname change among young women is contingent on the normative content of collective identity (e.g., Turkish women), religiosity (e.g., Muslim or Orthodox) as well as perceptions of national identity threat in the face of ongoing cultural and political processes of Westernization.

Although, we obtained consistent support for our theoretical model in the three studies conducted with different subpopulations of women in Turkey and the United States, this strength should not prevent us from seeing some limitations in our research. First, the studies used a cross-sectional design. Our ability to infer causality or assess the prevalence of phenomena from such a design is limited. Additional limitations of the current research include the use of small convenience samples; therefore, the results should be interpreted with caution due to these limitations. Future studies on marital surname change should be strengthened by the inclusion of nationally representative samples of the adult populations in WEIRD and non-WEIRD societies in order to examine the impact of socio-demographic factors (e.g., age, education, urban–rural residence, socio-economic status, education, and mother's surname choice upon marriage) as well as social-psychological variables (e.g., ingroup identity, patriarchal beliefs, and gender-egalitarian beliefs) on the link between ambivalent sexism and support for marital surname change. Finally, future research should also expand on the multidimensionality of benevolent sexism and examine under what conditions the underlying factors of benevolent sexism (i.e., complementary gender differentiation, protective paternalism, and heterosexual intimacy), can facilitate women's agentic behavior, such as the retention of a maiden surname upon marriage. These limitations notwithstanding, the current research is important as it sheds light on the ideological underpinnings of women's surname choices, thus underscoring the importance of detangling the individual-level processes through which macro-level gender status quo and traditional gender roles are installed.

To conclude, at this point in history, marked by the need for accelerated changes in gender practices and social standards toward more equality, we show that as long women themselves endorse sexist ideologies, the more they are inclined to support gendered practices that are likely to perpetuate their inferior status in gender hierarchy. To break this seemingly vicious cycle, we recommend implementing the interventions at the different stages of education and gender socialization that emphasize the value of egalitarianism among the young generation and advocate for legal reforms that secure more equality between women and men in interpersonal relations, family, and work.

DATA AVAILABILITY STATEMENT

The raw anonymized datasets are publicly available on the Open Society Framework (OSF): https://osf.io/xka8g/?view_only=258be4fb6b994493b0731bf0e236e5c0.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by University of Massachusetts Amherst. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

MC: conceptualization, data curation, formal analysis, investigation, methodology, project administration, and writing – original draft. ÖU: conceptualization, data curation, formal analysis, investigation, methodology, data collection, and writing – review and editing. NS: conceptualization, supervision, and writing – review and editing. BK: data collection and data curation. BÇ: data collection and data curation. All authors contributed to the article and approved the submitted version.

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Do Superordinate Identification and Temporal/Social Comparisons Independently Predict Citizens' System Trust? Evidence From a 40-Nation Survey

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Do superordinate in-group bias as well as temporal and social comparisons offer standalone explanations for system justification? We addressed this question using the latest World Value Survey (7th Wave), combining the responses of 55,721 participants from 40 different nations. Results from a random slope multilevel model showed that superordinate (national) identification, temporal comparison (i.e., the outcomes of an individual relative to those of his/her parents at different time points), and social comparison (based on income levels) were *independent* and *positive* predictors of system justification. Specifically, system justification increased when national identification was high, when income increased (i.e., the socioeconomic comparison was positive), and when the outcomes of citizens improved relative to the outcomes of their parents at relevant time points (i.e., the temporal comparison was positive). Incidentally, we also observed an interaction between national identification and temporal comparison (but not with social comparison), indicating that positive temporal comparison seemed to have a reduced effect (but still significant) for highly identified citizens. These results are supportive of the social identity approach to system justification and suggest that support for societal systems is a positive function of people's personal and group interests.

Keywords: system justification, social identity, national identification, social comparison, temporal comparison

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INTRODUCTION

"*Beggars do not envy millionaires, just other beggars who are more successful*"

(Bertrand Russell)

Many people live within unequal social situations that they are often reluctant to challenge and are sometimes ardent supporters of these realities, even when it goes against some of their vested material or symbolic interests. Why is this so? According to the System Justification Theory (SJT; Jost and Banaji, 1994), this happens because people possess a specific "system justification motivation" to pursue the bigger picture (i.e., in believing that the system within which they operate is just and fair). This new motivation is assumed to sit beside the more traditional ego justification

(i.e., the need to achieve a positive self-esteem) and group justification (i.e., the need to achieve a positive social identity) needs, and that it drives people to see societal arrangements, and its inequality, as the way that things should be (and, by so doing, ultimately legitimize the *status quo*). Importantly, system justification is assumed to satisfy existential, epistemic, and relational needs, permitting the reassuring belief that the world is a predictable, certain, and (relatively) safe place (Jost and Hunyady, 2005; Jost, 2019). Thus, according to SJT, the reason why people might be reluctant to challenge unequal social arrangements is that this would be extremely costly to the predictability and stability of realities to which they have become accustomed (Jost and Banaji, 1994; Jost and Hunyady, 2003).

Although most people possess this system justification motive (i.e., it is present for those who are advantaged and disadvantaged by the relevant systems), it is often easier for the advantaged to accommodate their ego-, group-, and system-based needs than for the disadvantaged because, for the former, these interests align. For the disadvantaged, however, meeting the demands of the system motive can generate some difficulty, often because supporting the relevant societal system tends to come at the expense of relegating their ego and/or group justification needs to the background (Jost and Banaji, 1994; Jost et al., 2004). It was for this reason that the classic SJT acknowledged (based on social identity principles) that the justification of societal systems should increase as social advantage also increases (Jost and Hunyady, 2005; Jost et al., 2012). Put simply, the advantaged ought to be more inclined to support a relevant societal system, given their privileged position within it, while the disadvantaged should (ordinarily) be reluctant to do so outside of the system justification motive. When this system motive is operational for the disadvantaged, SJT assumes that this will cause them to intensify their support for their social systems, especially if their ego and group justification needs are sufficiently subdued (Jost et al., 2003; Jost, 2017). But is this the only (or even the most plausible) explanation for system justification among the disadvantaged?

An Alternative Explanation of System Justification

The idea that a specific motivation to justify the system is required to explain instances of system justification, beyond personal/group interest, has been challenged by Owuamalam et al. (2018, 2019a,b) in their Social Identity Model of System Attitudes (SIMSA). SIMSA assumes that system justification, especially among the disadvantaged, can be explained by the traditional motives of personal/group interests, without recourse to an independent system motivation explanation. For example, SIMSA assumes that some instances of the puzzling justification of disadvantageous systems, sometimes seen among members of low-status groups, can result from them paying attention to their identity needs but at a more inclusive level of social categorization (e.g., their nation). So, for instance, African-Americans may justify disadvantageous realities in America, if their attention is strongly focused on the needs that are tied to their superordinate identity as Americans rather than the needs that are tied to their subgroup (African) identity. Therefore, African-Americans may justify disadvantageous systems (e.g., the American government) that regulate/oversee the institutional huddles confronting fellow group members (e.g., fatal law enforcement), if their attention is narrowly focused on their national (superordinate) identity as Americans. A similar process should also operate for high-status groups. In this sense, system justification is likely nothing more than a favorable evaluation of one's superordinate in-group.

But, this superordinate in-group bias explanation is not the only one on offer under the social identity umbrella (i.e., social identity theory (SIT); Tajfel and Turner, 1979), especially given that SIMSA and its predecessor (SJT) do not currently say much about system justification of members of groups that are placed in an intermediate position (i.e., those who are disadvantaged but can nevertheless realize downward comparison) relative to those who are clearly advantaged or disadvantaged. This is the vacuum that the Triadic Social Stratification Theory (TSST, Caricati, 2018; Caricati and Owuamalam, 2020) fills, also drawing from SIT (Tajfel and Turner, 1979).

In particular, TSST offers one distinct reason why people might support their social systems, especially the puzzling instances of system justification among the disadvantaged. TSST, similar to its parent framework (SIT), assumes that people are motivated by a need for positive self-worth to improve their social position both personally (i.e., by upward individual mobility) and collectively (by upward social mobility) and that sometimes this goal can be reached by comparing the outcomes of an individual (or the outcomes of an individual's social group) with those of others. Evidence shows that people are often motivated to enhance their own social position by upward *individual* mobility unless this goal is impeded in some way (Wright et al., 1990; Ellemers, 1993; Ellemers et al., 1993; Jackson et al., 1996). So, for example, an African-American may choose to compare him/herself with other in-group members (even their immediate family) who are not doing so well and may embrace America and consequently support its systems simply because it has afforded him/her the opportunity to rise above his/her parents or other members of their African-American community. Beyond the foregoing *social* comparisons, it is also possible for individuals to compare their outcomes against different time points in their life, so that a favorable comparison is achieved when individuals believe that they are doing better now than they did in the past (i.e., temporal comparison, Blanz et al., 1998).

TSST is, therefore, currently unique in its emphasis on the social comparison provision of SIT, arguing that so long as a given social or temporal stratification allows for intermediate positioning (whether it be within groups or between time points), that people may be motivated by the need for positive self-worth to support the *status quo* in which this was made possible. That is, they do so because (1) they are better off than others (individuals or groups) and (2) they are better off *now* than they were in the *past*.

Accordingly, it has been shown that people are more likely to justify their societal systems (Caricati and Sollami, 2018) and are even less likely to question these realities (Becker, 2012) when the *status quo* permits a downward comparison. Similarly, a comparison between actual and past conditions

(Mummendey et al., 1996, 1999; Zagefka and Brown, 2005) has been suggested as an important factor when considering the extent to which people support their social systems. For example, people who successfully realize (or believe in) individual mobility may be more likely to support existing social arrangement and, consequently, also more likely to deny that prejudice or discrimination exists (Ng and Chiu, 2001; Derks et al., 2011, 2015; Owuamalam et al., 2017). Similarly, people who believe that their standard of life has improved with respect to the past may be motivated to justify the system that allowed for such improvement to materialize (Caricati and Owuamalam, 2020).

Aims and Hypotheses

Although research has shown that social and temporal comparisons [as well as superordinate (national) identification] are able to bolster system support, none of these previous studies have examined, so far, these variables together, meaning that their unique contributions with regard to system justification have yet to be determined. This is important for two reasons at least. On the one hand, the national in-group provides the context to appraise the life outcomes of an individual relative to fellow nationals (including family members). From this perspective, it is possible to argue that a downward social comparison with other nationals could enhance the extent to which an individual observes (and appreciates) the benefits of greater (psychological) investments in a national in-group that made this favorable (self-worth-boosting) comparison possible. Therefore, in this situation, system support could be due to social comparison alone, or it could be due to its joint action with national identification. System support could also be due to "love of country" and not due to a favorable social/temporal comparison. In short, understanding the unique contribution of these explanations is difficult, if both are not simultaneously accommodated within the same model, to allow the partitioning of variances in system support that is due to each explanation.

At the same time, it is also possible that "love of country" (i.e., superordinate identification) could bolster entitlement feelings, and such feelings could poison the normally self-enhancing effect of downward temporal comparisons (e.g., when white working-class Americans compare their outcomes at present to what it was in the past, amidst the influx of competing migrant groups). From this perspective, then, it is possible that the ordinarily positive effect of favorable temporal comparison on system justification might cease (or be suppressed) when superordinate identification is taken into account. No other investigation has systematically unpacked these processes by considering them in tandem. Therefore, to be more certain that the social and temporal comparisons of TSST, as well as the superordinate in-group bias explanation of SIMSA are independent influencers of the system justification effect, one should demonstrate that they offer unique insights when considered together. In this investigation, therefore, we focused on three key self/group-interested predictors of system justification, namely, superordinate (national) identification (as per SIMSA), social comparison, with income as an indicator of relative social advantage, and temporal comparison (as per TSST).

First, we expected that system justification would be positively related to national identification over and beyond the alternative explanations (i.e., social/temporal comparisons) because, according to SIMSA, people would be more likely to support the national system to the extent that they identify with their nation (Hypothesis 1). Second, based on TSST, we expected that all otherwise being equal, the advantaged (as well as the intermediately positioned) would be more likely than their relatively more disadvantaged counterparts to justify the system (Hypothesis 2). This is because, in this situation, such individuals can obtain positive personal and group comparisons from a system that enabled their relatively advantaged social position. Finally, based on TSST, we considered the consequence of comparing own standard of living to those of one's parents over time, which we used to proxy temporary comparison. It is important to note that this instance of intragroup comparison is consistent with evidence that people tend to prefer intragroup comparison over intergroup comparison and often engage in comparison with past outcomes as a means of dealing with social identity-based challenges (Major and Forcey, 1985; O'Brien and Major, 2009; Akfirat et al., 2016). Therefore, we expected that system justification would increase when people believe that they are better off at present than in the past, especially when this comparison is tied to those people that one ordinarily look up to (e.g., one's parents, Hypothesis 3).

MATERIALS AND METHODS

Sample

We used the 7th Wave of the World Value Survey (WVS) with 70,867 participants from 49 countries worldwide. We considered only participants with no missing values[1] on the measures that were relevant to our analysis (refer to the explanation below), and this consideration reduced both the *N*-size (now down to 55,721 participants) and the number of nations (down to 40 countries: 47.7% men, mean age = 42.16, SD = 15.97, range = 16–103; **Table 1**).

Outcome Variable

System justification has been operationalized in many ways by its principal proponent, such as out-group favoritism (Jost et al., 2004), general and economic system justification (Jost and Thompson, 2000; Kay and Jost, 2003), and trust/confidence in government (Jost et al., 2003) among others. In this study, we focused on the last operationalization (i.e., trust in government), which we assessed with four items asking participants to indicate the extent to which they were confident in the institutions of governance of their society, namely, parliament, government, political parties, and justice system/courts (1 = *a great deal*, 4 = *not at all*, reverse scored). We focused on trust in government (and its apparatuses) because it satisfies several auxiliary conditions that should enable the system motive to manifest. Because this system motive is theorized to be in conflict

[1]On the whole, there were 21.3% of missing values of which 4.6% were on the dependent variable.

TABLE 1 | Sample demographic details and descriptive statistics for key and contextual variables.

		System justification		Identification		Income		Comparison			Age	Education	GINI	GDP PPP ($)/1000
	N	*M*	*SD*	*M*	*SD*	*M*	*SD*	Same (%)	Better off (%)	Worse off (%)				
Argentina	933	1.90	0.60	3.15	0.75	5.08	1.60	54.2	24.4	21.3	42.62	2.75	41.40	22.95
Australia	1,650	2.23	0.59	3.37	0.70	5.19	2.10	28.9	58.2	12.8	53.70	4.68	34.40	53.32
Bangladesh	1,182	2.87	0.65	3.29	0.74	5.63	2.08	5.0	86.4	8.6	36.62	1.86	32.40	4.95
Bolivia	1,970	1.80	0.59	3.37	0.83	5.03	2.02	51.7	39.6	8.7	37.86	3.41	42.20	9.09
Brazil	1,511	1.79	0.67	2.65	0.93	4.04	2.13	17.3	68.2	14.5	43.56	2.82	53.90	15.26
Myanmar	1,198	2.84	0.71	3.03	0.85	4.70	2.01	30.0	49.5	20.5	40.41	2.38	30.70	5.36
Chile	919	1.97	0.64	3.53	0.71	4.72	1.70	26.4	60.7	12.8	45.10	3.86	44.40	25.15
China	2,950	3.29	0.53	3.26	0.66	4.15	1.85	9.9	88.8	1.3	44.57	2.83	38.50	16.78
Colombia	1,498	1.79	0.60	3.16	0.82	4.43	2.53	51.2	37.2	11.6	38.87	3.12	50.40	15.64
Cyprus	823	2.15	0.71	3.41	0.80	5.20	1.71	21.1	58.9	19.9	45.10	4.28	31.40	41.25
Ecuador	1,138	1.97	0.67	3.17	0.72	4.74	2.20	66.1	24.2	9.8	39.43	3.20	45.40	11.85
Ethiopia	1,190	2.55	0.81	2.93	0.91	4.38	2.25	15.6	63.6	20.8	31.84	2.02	35.00	2.31
Germany	1,431	2.46	0.60	3.34	0.64	5.20	1.68	27.0	61.7	11.3	50.93	4.10	31.90	56.05
Greece	1,122	1.89	0.57	3.58	0.61	4.56	1.77	16.0	56.4	27.6	50.98	3.26	34.40	31.40
Guatemala	1,100	1.65	0.58	2.94	0.82	5.99	2.02	27.7	61.9	10.4	33.51	4.16	48.30	9.00
Indonesia	3,169	2.73	0.66	3.01	0.90	4.24	2.41	26.0	68.3	5.7	39.94	2.27	39.00	12.30
Iraq	1,156	1.77	0.75	3.58	0.86	4.46	1.83	41.3	21.5	37.3	36.59	2.84	29.50	11.33
Japan	1,044	2.47	0.58	3.28	0.66	4.27	2.72	31.5	48.6	19.9	56.42	4.43	32.90	43.24
Kazakhstan	1,058	2.81	0.71	3.26	0.75	5.53	1.68	29.3	56.0	14.7	41.83	4.82	27.50	27.44
South Korea	1,245	2.29	0.55	3.24	0.67	4.84	1.38	24.9	67.6	7.5	45.63	4.12	31.60	43.03
Kyrgyzstan	1,154	2.26	0.78	3.57	0.63	5.07	2.18	28.1	61.5	10.4	41.37	4.45	27.70	5.47
Lebanon	1,184	1.94	0.59	3.70	0.67	5.53	1.82	31.8	42.9	25.3	40.91	3.69	31.80	15.33
Malaysia	1,311	2.45	0.68	3.00	0.84	4.60	2.05	30.1	56.4	13.6	38.32	3.36	41.00	29.53
Mexico	1,699	1.65	0.68	3.42	0.82	4.22	2.38	27.7	57.7	14.6	43.19	3.04	45.40	20.41
Nicaragua	1,199	1.89	0.83	3.00	0.83	4.58	2.52	44.3	43.1	12.6	35.15	2.74	46.20	5.63
Pakistan	1,827	2.54	0.85	3.68	0.69	4.41	2.30	17.9	55.4	26.7	35.58	2.17	33.50	4.88
Peru	1,350	1.44	0.56	3.47	0.76	4.98	1.91	34.2	59.1	6.7	40.23	3.34	42.80	13.38
Philippines	1,198	2.91	0.63	3.30	0.65	4.40	2.08	49.8	41.6	8.6	43.71	2.34	44.40	9.28
Romania	1,047	1.82	0.67	3.34	0.72	5.41	1.95	26.1	58.5	15.4	48.01	3.24	36.00	32.30
Russia	1,608	2.34	0.76	3.08	0.83	4.79	1.93	34.6	46.4	19.0	45.73	4.85	37.50	29.18
Serbia	932	1.84	0.67	3.14	0.77	4.75	1.93	32.6	30.0	37.3	46.94	5.16	36.20	18.99
Vietnam	1,190	3.24	0.51	3.22	0.65	5.11	1.53	6.9	90.3	2.8	37.93	3.23	35.70	8.37
Zimbabwe	1,198	2.32	0.86	3.43	0.80	3.46	2.18	14.9	30.3	54.8	39.12	2.45	44.30	2.95
Tajikistan	1,177	3.18	0.66	3.54	0.73	5.63	1.59	17.9	67.4	14.7	41.21	4.26	34.00	3.52
Thailand	1,367	2.61	0.67	2.53	0.96	4.74	1.77	29.3	54.2	16.5	45.90	2.17	36.40	19.23
Tunisia	1,163	1.75	0.64	3.66	0.63	4.72	2.02	15.0	53.7	31.4	43.07	2.56	32.80	11.20
Turkey	2,260	2.73	0.68	3.23	0.76	5.34	1.72	27.7	45.8	26.5	38.83	2.35	41.90	27.88
Ukraine	1,130	1.81	0.69	3.19	0.73	4.46	1.92	25.7	52.4	21.9	47.90	4.93	26.10	13.34
Egypt	935	1.44	0.59	3.89	0.41	5.13	1.35	16.9	35.8	47.3	39.02	2.86	31.50	12.25
United States	2,505	2.11	0.54	2.97	0.83	5.04	1.88	32.1	46.7	21.1	43.62	4.89	41.40	65.28

with the personal/group interests of people in disadvantaged groups (Jost et al., 2003, 2004), it should create an obstacle for our personal/group-interested predictions to operate. Specifically, systems of governance are institutions that objectively high-, intermediate-, and low-status people are often highly dependent on, also because these entities are stable and inescapable realities of citizens' existence (Kay et al., 2009; Friesen et al., 2019; Jost, 2019). The inability to escape governments that regulate subsystems that undermine people's outcomes could cause a sense of personal control to decrease (Kay and Friesen, 2011; Laurin et al., 2013), and these situations should allow the system motive to take a prime position, while personal and group motives should be relegated to the rear position (based on SJT), meaning that it should be more difficult to find supportive evidence for the interest-based predictions derived from SIMSA and TSST, especially for low- and intermediate-status groups. A multilevel confirmatory factor analysis revealed that the four items on this scale had adequate reliability both within (a = 0.82) and

between nations (a = 0.97). Items were then averaged so that higher scores indicate higher system justification (i.e., trust in governance).

Predictors

National identification was measured with a single item asking participants "how close do you feel to your country?" (1 = *very close*, 4 = *not close at all*), which was reversed so that higher scores indicated high levels of national identification.

A within-group temporal comparison was measured with a single item asking participants "comparing your standard of living with your parents' standard of living when they were about your age, would you say that you are better off, worse off, or about the same?" (1 = *better off*, 2 = *worse off*, and 3 = *about the same*).

An income-based social comparison was measured with a single item asking participants "On this card is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country. We would like to know in what group your household is. Please, specify the appropriate number, counting all wages, salaries, pensions, and other incomes that come in."

Control Variables

To control for the effect of other levels of social advantage and being, thus, able to better estimate the effect of variables of interest to our test, we added some level-1 and level-2 covariates. At level-1, we considered gender, age, and the higher level of education attained by participants (0 = Early childhood education, 8 = Doctoral or equivalent)[2]. At the country level, we considered the GINI index and GDP PPP (Gross Domestic Product based on Purchasing Power Parity) to account for the potential effect of objective wealth inequality in the nation (higher GINI indicates higher inequality) and national wealth level (both GDP and GINI were taken from the WVS database).

Analysis

We performed a series of multilevel hierarchical models in which country was the nesting variable. Model 1 considered income (i.e., social comparison) and national identification as the predictors of system justification (i.e., trust in national governance). In Model 2, we added temporal comparison as a predictor. The income-based social comparison was coded using two dummy variables considering "the same" as a reference category. Model 3 added interactions between national identification and temporal and social comparisons to control for potential interactive effects. In all models, level-1 continuous variables were centered within nations while level-2 covariates were grand-mean centered. The slopes of all level-1 predictors were allowed to have random variation across nations, while covariates were treated as fixed effects. Analyses were performed with restricted maximum likelihood estimation using the lme4 package (Bates et al., 2015) in R (R Core Team, 2021).

[2]We planned to also include left-right political orientation (1 = left, 10 = right). However, this measure was not administered in nine countries and was missing for many participants, so that its inclusion would have decreased sample size to 36,918, representing an attrition rate of more than 30%. Given that political orientation was not a principal variable in this study and that its inclusion did not change results substantially, we decided not to include political orientation in our main analysis. For the sake of transparency, we also reported the results of the models with political orientation as covariate in **Supplementary Tables 1**, **2**.

RESULTS

Preliminary Analysis

Table 2 reports both level-1 and level-2 zero-order correlations and descriptive statistics of measured constructs. At the individual level (refer to the correlation coefficients above the diagonal), the resulting associations between the principal variables were generally weak in magnitude but in the expected direction. Notably, system justification was positively correlated with (1) positive temporal comparison, (2) national identification, and (3) income. With respect to the control variables: women, older and less educated people appeared to be more likely to justify the system.

Hierarchical-Level Modeling

Supporting the use of multilevel modeling, a null model in which only the intercept varied randomly across nations revealed that 36.4% of the variance in system justification was due to the different nations represented in the survey [Intraclass correlation (ICC) = 0.364; $\chi^2(1) = 25638.00$, $p < 0.001$].

Table 3 depicts results from the estimated models. First, models indicated that people, on average, did not express much trust in the system of governance of their nation (i.e., their level of system justification was low). More importantly, as indicated, both income and national identification were significantly and positively associated with system justification in all models. Model 2 indicated, as expected, a main effect of temporal comparison $F(2, 37) = 21.22$, $p < 0.001$ so that those who believed that their situation has worsened now than what it was in the past justified the system significantly less (M = 2.13, SE = 0.072) than people who believed that their social condition was the same (at least relative to their parents, M = 2.22, SE = 0.075). Moreover, those who believed that their situation has somewhat stagnated (i.e., "the same" group) were also less likely to justify the system compared with those who reported being better off now than in the past (M = 2.26, SE = 0.079).

Considering covariates, results indicated that women justified their national systems of governance more than men did. Interestingly, more educated people were *less* (not more) likely to justify their societal systems of governance. GDP (i.e., the objective index of societal wealth) and GINI (i.e., the objective index of societal-level inequality) appeared to have no significant main effects on system justification in the current data.

On an exploratory basis, we considered, in Models 3, the interactions between national identification and temporal and social comparisons, given our *a priori* speculation that national identification could actually fade (or suppress) the

TABLE 2 | Zero-order correlations and descriptive statistics for variables at level-1 (upper triangle) and level-2 (lower triangle).

	M (National level)	*SD*	1	2	3	4	5	6	7
1. System justification	2.24	0.50	–	0.16**	0.05**	0.01*	0.01*	0.01*	−0.10*
2. Temporal comparison^	1.35	0.25	0.48**	–	0.03**	0.14**	0.00	0.01	0.04**
3. National identification	3.27	0.28	−0.19	−0.24	–	0.04**	−0.03**	0.08**	0.02**
4. Income	4.82	0.51	0.01	0.22	0.15	–	−0.03**	−0.12**	0.26**
5. Sex (0 = Male)	0.52	0.04	0.10	0.32*	−0.14	0.06	–	−0.02**	−0.04**
6. Age	42.28	5.31	−0.02	0.04	0.06	−0.07	0.48**	–	−0.13**
7. Education	3.38	0.95	−0.17	0.01	0.07	0.33*	0.39**	0.50**	–
8. GINI	37.55	6.70	−0.25	0.00	−0.40**	−0.27	−0.21	−0.25	−0.26
9. GPD PPP ($)/1000	20.15	15.64	−0.06	0.06	−0.07	0.18	0.13	0.68**	0.54**
M (Individual level)			2.29	1.38	3.25	4.78	0.52	42.16	3.32
x*SD*			0.83	0.76	0.81	2.07	0.50	15.97	2.01

$^*p < 0.01$; $^{**}p < 0.001$; ^0 = worse off, 1 = the same, 2 = better off. N for upper diagonal = 55,721; N for lower triangle = 40.

TABLE 3 | Fixed effects of model estimations.

	Null model	Model 1	Model 2	Model 3
	***b* (SE)**	***b* (SE)**	***b* (SE)**	***b* (SE)**
Income [cwc]		0.017 (0.005)**	0.013 (0.005)**	0.013 (0.005)**
Temporal comparison: The same vs. worse off (D1)			−0.089 (0.015)***	−0.090 (0.015)***
Temporal comparison: The same vs. better off (D2)			0.041 (0.015)**	0.041 (0.015)**
National identification [cwc]		0.091 (0.012)***	0.088 (0.011)***	0.100 (0.013)***
Identification × Income				0.002 (0.002)
Temporal comparison (D1) × Identification				−0.031 (0.011)**
Temporal comparison (D2) × Identification				−0.011 (0.009)
Sex [0 = Male]		0.017 (0.006)**	0.017 (0.006)**	0.017 (0.006)**
Age [cwc]		0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Education level [cwc]		−0.022 (0.002)***	−0.021 (0.002)***	−0.021 (0.002)***
GINI [gmc]		−0.022 (0.011)^	−0.019 (0.010)†	−0.018 (0.010)†
GDP PPP ($)/10000 [gmc]		−0.026 (0.048)	−0.032 (0.045)	−0.032 (0.045)
Intercept	2.24 (0.079)	2.21 (0.078)	2.21 (0.075)	2.21 (0.075)
N	55,721	55,721	55,721	55,721
ICC	0.36	0.37	0.36	0.37
AIC	111786.40	110282.80	109885.80	109908.30
BIC	111813.20	110416.70	110118.00	110167.30

*cwc, centered within clusters; gmc, grand-mean centered. †$p < 0.09$, ^$p = 0.056$, **$p < 0.01$, ***$p < 0.001$. Model 1: predictors were income and national identification; Model 2: temporal comparison (dummy coded, D1 and D2) was added as a predictor; Model 3: interactions between national identification and social and temporal comparison were added.*

effects of social/temporal comparisons on system justification. Results revealed that national identification × income interaction was not significant (b = 0.002, SE = 0.002, p = 0.235), suggesting that social comparison is by-and-large a unique explanation for system justification that may not necessarily be contingent on superordinate identification (at least in this case). However, national identification interacted with temporal comparison to predict system justification, $F(2, 43{,}0341) = 3.867$. $p = 0.021$. When we decomposed this interaction by examining the association between temporal comparisons and system justification when superordinate (national) identification was high (M + 1SD) vs. low (M-1SD), we found, consistent with our speculation, that positive temporal comparisons seem to work best, in terms of its boosting effect on system justification, when national identification was low ($\Delta b_{same-worse} = 0.07$, SE = 0.02, $p = 0.0003$; $\Delta b_{better-same} = 0.05$, SE = 0.02, $p = 0.006$). Meanwhile, when superordinate (national) identification was high, positive temporal comparisons significantly predicted an increase in system justification also, but only in relation to the same vs. worse-off contrast ($\Delta b_{same-worse} = 0.11$, SE = 0.02, $p < 0.0001$) and the better-off vs. worse-off contrast ($\Delta b_{better-worse} = 0.15$, SE = 0.02, $p < 0.0001$), but not in relation to the better-off vs. same contrast ($\Delta b_{same-better} = -0.03$, SE = 0.02, $p = 0.120$).

DISCUSSION

Do superordinate identification and social/temporal comparisons independently predict trust in systems of governance (i.e., system justification)? To answer this question, we simultaneously tested for unique contributions of distinct explanations from the social identity tradition (i.e., SIMSA and TSST). We wanted to observe whether the empirical evidence supports their theorized independence. Results were supportive of their theorized uniqueness: That is, as independent insights into the system justification phenomenon. Specifically, and as expected, national identification (as per SIMSA), temporal comparison, and income-based social comparison (as per TSST) independently predicted system justification along theorized lines, and accounting for either of these explanations did not obscure the visibility of the other accounts. In fact, national identification was positively associated with system justification despite accounting for social/temporal comparisons and vice versa.

In particular, the finding that favorable social comparisons boosted system justification conceptually replicates the studies by Caricati and Lorenzi-Cioldi (2012) and Caricati (2017) and indicates that people who benefit from the *status quo* are also more inclined to believe in (and support) that system. According to TSST, this might be because the possibility to find positive downward comparison becomes enhanced as income rises: That is, as the income of people increases, more opportunities for downward comparison becomes apparent, and therefore, the greater the potential for them to enhance their self-worth by looking at others who have not made it as far as they did.

Nonetheless, we acknowledged that the sizes of the effects that were detected in the current analyses were quite "tiny" (Cohen, 1988). This leaves open the possibility that system justification could also be affected by other variables beyond the ones that we set out to test. For example, results indicated that "country" explained a significant portion of the variance in system trust and this potentially suggests that the contextual conditions of national functioning, as well as culture-related factors, might jointly impact the level of trust of people in their national governments. In this study, we considered only two national factors that were relevant for the intent of the research [i.e., GINI index and gross domestic product based on purchasing power parity (GDP PPP)]. However, it is important to emphasize that we were limited in our use of the current secondary data to obtain appropriate measures of variables relevant to other SIMSA explanations (e.g., hope for future improvement, Bonetti et al., 2021; Owuamalam et al., 2021; and social reality caveats, Owuamalam et al., 2019a) and, for TSST, to directly test the applicability of the fear-of-falling assumption underlying system justification among intermediately positioned groups (Caricati and Owuamalam, 2020; Caricati et al., 2020). Future studies could address these shortcomings using primary data. Such future research could also incorporate other key assumptions underlying both SIMSA and TSST, concerning the manner in which the stability and legitimacy of social stratification could impact system-justifying attitudes (e.g., trust in government) of low- and intermediate-status groups.

Beyond the foregoing limitations, our results suggest, for the most part, that system justification can result from rational choices that people are making to support a system: (1) to which they feel connected and (2) which provides the opportunity to enhance self-worth by positive social and temporal comparisons. These results are important because they cast some doubt over the claim (elsewhere in the literature on SJT) that the system-justifying attitudes of the disadvantaged (including intermediately positioned ones) are irrational (Jost, 2019). It is to be recalled that the bifocal lens of SJT only recognizes the advantaged vs. disadvantaged and, from the standpoint that the system-justifying attitudes of disadvantaged are irrational (Jost, 2019), it would be tempting to conclude the system support of those disadvantaged people who are intermediately positioned in the income distribution, also does not make sense. But, in this study, we have shown that it does make sense because, similar to their wealthier counterparts, the middle (income) class people are uniquely positioned to experience not only the "lows" of the *status quo* (e.g., when the focus of comparison is upward) but also its "highs" (e.g., when the focus of comparison is downward). Therefore, disadvantaged people who are intermediately positioned in the status hierarchy (e.g., the middle class) are the ones, by virtue of their unique position, better able to notice that upward mobility is possible and, consequently, also the ones more likely to have a *realistic* hope that things will get even better in the future, and this can cause support for systems that permit this optimism to thrive (Owuamalam et al., 2021). In short, disadvantaged people in the middle of the income ladder can (and do) support the systems of governance of their nations. Such an orientation may not necessarily be because they are driven by an irrational system motive, but because there is ample opportunity to favorably compare their outcomes with others who are lower than they are in the income distribution (Caricati and Owuamalam, 2020), in manners that provide a realistic hope that future improvements to their outcomes in the existing system are also possible (Owuamalam et al., 2021). Worthy of note is the incidental temporal (but not social) comparisons by national identification interaction effect on system justification. Specifically, we found that positive temporal comparisons were best at boosting system justification for those who are weakly identified with their nation (i.e., system justification increases from negative temporal comparison to positive temporal comparison). Interestingly, however, and for those strongly identified with their nation, favorable temporal comparisons only boosted support for societal systems when the frame of reference concerned a point in time people felt that they were worse off than their parents (e.g., those who experienced improvement or stagnation of their social condition justified the system to the same extent). Thus, although a strong superordinate identification could soften the boosting effect of positive temporal comparisons on system justification as we had speculated, this trend seems to be specific to those instances where temporal contrasts were unlikely to have had a measurable boost in people's self-worth (i.e., a comparison between better off vs. same is unlikely to matter

much to self-worth [because the outcome deficit is narrower] compared to when the frame of reference is being worse off). However, we acknowledged the exploratory nature of the current findings, and future experimental studies could build on this initial correlational evidence to confirm whether elevated self-esteem/worth is, in fact, the mechanism that drives the boosting effect of positive temporal comparisons on system justification among people whose support for the *status quo* already benefits from a strong investment in their superordinate in-group.

Limitation

This research, as any other correlational research, does not allow causal inference, and thus, some caution is needed in this respect. For example, it is possible that people who strongly trust their national institutions may identify strongly with their national in-group, rather than the opposite. However, when we examined this possibility, we found that a model in which national identification was the dependent variable and system justification (i.e., trust in governance) was the predictor, also produced a positive relationship, $b = 0.118$, SE = 0.02, $p < 0.001$, although the fit of this latter model was reliably poorer than the preferred reverse (i.e., Model 2), based on poorer fit indices (difference between Model 2 and alternative model: ΔAIC = −16948.90, ΔBIC = −16948.90, ΔICC = 0.24, **Table 3**). Note that even though this reverse causation is plausible, it would imply that a credible system provides individuals with a reason to identify with their nation, and this outcome will be more consistent with the rationality implied in the social identity perspective than with the irrationality implied in competing frameworks that assume system justification has less (if at all anything) to do with social identity needs.

CONCLUSION

The fact that the disadvantaged people more or less tolerate societal systems that anchor the inequality that adversely affects them could be puzzling, especially in places where the assumption that people can change realities that do not work for them is strong (e.g., Western democracies). However, this puzzle begins to wane when consideration is given to the following:

a) The extent to which disadvantaged people take pride in, or identify with a superordinate (national) in-group that provides another source for positive social esteem;
b) The favorable social comparisons that could allow people to boost their sense of self-worth, especially those disadvantaged people who are intermediately positioned within the status hierarchy;
c) The favorable temporal comparison that allows the disadvantaged to feel worthy, even if their outcomes may not be as promising as those of individuals who come from more affluent backgrounds.

In the foregoing situations, our data shows that intermediately positioned people (either socially or temporally favored with regard to the outcome of the comparison, or simply by embracing their superordinate in-group) can trust and support existing societal arrangements because these realities meet their social identity needs. In short, we demonstrated that the superordinate in-group bias account as well as social and temporal comparisons offer unique insights into the system-justifying attitudes of the disadvantaged (especially those who are intermediately positioned).

DATA AVAILABILITY STATEMENT

Publicly available datasets were analyzed in this study. This data can be found here: https://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

LC and CO contributed equally in drafting and revising the manuscript, data analysis, and data interpretation. CB involved in drafting and revising the manuscript. All authors contributed to the article and approved the submitted version.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.745168/full#supplementary-material

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Do Members of Disadvantaged Groups Explain Group Status With Group Stereotypes?

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Recent research on group attitudes in members of disadvantaged groups has provided evidence that group evaluations closely align with societal stigma, reflecting outgroup favoritism in members of those groups that are most strongly stigmatized. While outgroup favoritism is clearly evident among some groups, there is still debate about the psychological mechanisms underlying outgroup favoritism. The current research focuses on a less intensively examined aspect of outgroup favoritism, namely the use of status-legitimizing group stereotypes. We present data from members of four disadvantaged groups (i.e., persons who self-categorize as gay or lesbian, n = 205; Black or African American, n = 209; overweight n = 200, or are aged 60–75 years n = 205), who reported the perceived status of their ingroup and a comparison majority outgroup and provided explanations for their status perceptions. Contrary to assumptions from System Justification Theory, participants rarely explained perceived group status differences with group stereotypes, whereas they frequently explained ingroup disadvantage with perceived stigmatization and/or systemic reasons. Further exploratory analyses indicated that participants' status explanations were related to measures of intergroup attitudes, ideological beliefs, stigma consciousness, and experienced discrimination. Our results highlight the need to develop a better understanding whether, under what circumstances, and with which consequences members of disadvantaged groups use group stereotypes as attributions of ingroup status and status differences.

Keywords: disadvantaged groups, system justification theory, rejection identification model, intergroup attitudes, status perceptions

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INTRODUCTION

People frequently use attributions—explanations for positive or negative life events and outcomes—to navigate their social worlds (e.g., Heider, 1958; Malle, 2011). Besides creating a sense of understanding, attributions serve further psychological needs, such as desires for meaning and purpose, control and mastery, self-worth and distinctiveness (e.g., Baumeister, 1991). Life outcomes are not only affected by individual behaviors, vices, and virtues, but also by peoples' social group memberships and their embeddedness in social systems and hierarchies. Especially for members of disadvantaged or stigmatized groups, it seems paramount to make sense of the

social conditions and constraints that govern their lives. For example, attributing low societal status of one's ingroup to internal characteristics such as group members' abilities or motivations may have entirely different implications for one's own aspirations and behaviors than attributing lower societal status to systemic inequality or ingroup disadvantage (Dupree et al., 2021).

The current research explores the reasons members of various disadvantaged groups provide when asked to explain the perceived status of their ingroup and whether and to what extent various attributions are associated with evaluations of ingroups and outgroups. This research was mainly stimulated by critical reflections on theoretical assumptions of System Justification Theory (SJT, Jost and Banaji, 1994; Jost, 2020) and was further informed by the Rejection-Identification Model (RIM, Branscombe et al., 1999; Schmitt and Branscombe, 2002). Both theories contain opposing assumptions regarding how members of disadvantaged groups make sense of perceived own group status.

System Justification Theory

The general premise of SJT is that peoples' thinking, feeling, and behavior is influenced by a principal system justification motive as a higher-order psychological need: a motivated desire to perceive social systems in which people are embedded as fair, legitimate, and justifiable (Jost and Banaji, 1994). Applied to perceptions of group status, a major consequence of this motivated perception of social systems is that people attribute objective or perceived disparities between social groups to internal causes rather than to contextual or systemic causes (Jost, 2020). Due to these internal group-focused attributions, beliefs about advantaged groups are presumed to include stereotypic characteristics perceived to cause their relative success (e.g., higher ability or effort) and beliefs about disadvantaged groups are presumed to include stereotypic characteristics perceived to cause their relative failure (e.g., lower ability or effort). SJT further presumes that this group-focused internal attribution style makes social systems and their status hierarchies appear fair, just, and legitimate, because it bolsters the belief that people get what they deserve and deserve what they get (cf. Lerner, 1980). The theory also postulates that system motivation tendencies result in the evaluative preferences for higher status advantaged groups, thus ingroup preference in individuals who are members of these advantaged groups and outgroup preference in individuals who are members of disadvantaged groups.

Although SJT includes assumptions about individual and contextual variations affecting the strength of system-justifying motivations (see Jost, 2020, for a recent overview), its general premise is that system-justifying motivation are shared by both members of advantaged and disadvantaged groups – thus by those who benefit from and those who are harmed by the status quo. Consequently, SJT postulates that both, members of advantaged and disadvantaged groups, employ the same system-justifying strategies and thus endorse similar group stereotypes that explain, rationalize and justify group disparities in society (e.g., in terms of wealth, educational outcomes, health, or representation). In line with this notion, SJT presumes that in members of disadvantaged groups, system-justifying motives result in "internalized inferiority" (Jost et al., 2002, 2004; Mentovich and Jost, 2008; Jost and van der Toorn, 2012)—the holding of beliefs, which are harmful to the self or one's ingroup. Thus, instead of attributing one's own disadvantage or one's ingroup status to societal conditions or situational constraints (e.g., inequality, discrimination), members of disadvantaged groups are presumed to explain perceived status differences by sharing society's stereotypic beliefs about ingroup and outgroup characteristics. SJT further postulates that holding such system-justification beliefs leads to internalized, devaluation of the ingroup, eventually resulting in outgroup favoritism – an evaluative preference for higher status outgroups over the ingroup.

There are ample empirical findings that appear to support SJT's assumptions about group evaluations (Jost et al., 2002; Livingston, 2002; Nosek et al., 2002; Rudman et al., 2002; Ashburn-Nardo et al., 2003). For example, recent meta-analytical findings suggest that intergroup evaluations in members of disadvantaged groups closely align with societal stigmatization: Disadvantaged groups were more likely to display outgroup favoritism to the extent that their ingroup was negatively evaluated by others in society (Essien et al., 2021). Note, however, that this meta-analysis also reported high levels of heterogeneity and systematic differences between groups: Whereas members of the most negatively evaluated disadvantaged groups exhibited outgroup favoritism, members of less negatively evaluated disadvantaged groups exhibited ingroup favoritism.

There are far fewer empirical findings available on the use of stereotypes by members of disadvantaged groups, and as we discuss below, they provide only limited support for SJT's postulate that members of disadvantaged groups use societally shared group stereotypes as explanations for perceived status differences between groups, thus legitimizing and justifying their own group's disadvantage (e.g., Jost and Banaji, 1994). Furthermore, claims about the use of group stereotypes by members of disadvantaged groups are challenged by assumptions embedded in the Rejection Identification Model, as we discuss next.

Assumptions From the Rejection-Identification-Model

The RIM (Branscombe et al., 1999; Schmitt and Branscombe, 2002) proposes that members of disadvantaged groups not only recognize individual and societal prejudice and discrimination as causes of their disadvantage, but also actively use these as attributions of negative interaction experiences and outcomes (Branscombe et al., 1999; Schmitt and Branscombe, 2002; see also Crocker and Major, 1989). The RIM further proposes that the extent to which members of disadvantaged groups attribute negative experiences to group-based discrimination has

important implications for psychological well-being and social identity processes—an assumption widely supported by empirical research (e.g., meta-analysis by Schmitt et al., 2014). Specifically, the RIM proposes that perceiving discrimination can actually support coping with stigma, protect well-being and self-esteem, and strengthen affective ties with the ingroup (i.e., ingroup identification), especially when societal treatment of the ingroup or the self is construed as unjustified and illegitimate. A large body of experimental and correlational research conducted with members of disadvantaged groups has supported the presumed relationships between perceived discrimination, well-being, and social identification (e.g., Giamo et al., 2012; Ramos et al., 2012; Curll and Brown, 2020; Mazzoni et al., 2020). Most importantly for the current research, this literature documents that members of disadvantaged groups often show a willingness to attribute various negative life experiences to pervasive discrimination, and that this tendency is associated with substantial interindividual variation and variation between different groups.

Comparing Theoretical Perspectives and Developing an Empirical Perspective

The apparent opposition between these two theoretical approaches and their supporting empirical findings is acknowledged in SJT. For example, a recent formulation of SJT includes the statement that "few observers would argue that African Americans or other racial or ethnic minorities *explicitly* endorse the legitimacy of racial inequality" (Jost, 2020, p. 119, emphasis added). SJT, however, disputes that open expressions of perceived discrimination and stigma consciousness by members of disadvantaged groups reflect genuine personal beliefs. Instead, such responses are interpreted as reflecting mere conformity to social norms pressuring people to exaggerate self- and group-interested responses—especially in groups that "are known to have been historical targets of discrimination and prejudice" (Jost, 2020, p. 118). When it comes to *personal beliefs*, however, SJT presumes that members of disadvantaged groups often do not acknowledge discrimination as a cause of their disadvantage but instead internalize negative stigmatization and attribute their own group status to internal group characteristics (i.e., stereotypes). However, because of presumed normative pressures, neither group stereotype endorsement nor outgroup favoritism are openly expressed. Given that research supporting the RIM mostly used measures that offer pre-formulated attributions to stigmatization and discrimination (e.g., stigma consciousness scale, Pinel, 1999), rather than investigating participants' own responses, one may indeed argue that the measurement process itself imposes normative pressure, triggering acquiescence biases that lead to an overestimation of agreement with perceived stigmatization attributions. In order to better understand whether and to what extent members of disadvantaged groups hold personal beliefs containing group stereotypes as explanations and/or justifications for group status, SJT proposes to rely on either open-ended, non-reactive, qualitative measures (Hypothesis H6a, Jost et al., 2004; Jost, 2020) or implicit, indirect, and unobtrusive measures (Hypothesis H6b, Jost et al., 2004; Jost, 2020) because both are assumed to be less likely affected by social desirability concerns and perceived normative pressures. Hypothesis 6b has received tremendous attention in the implicit cognition literature with a large number of studies investigating ingroup and outgroup favoritism among members of disadvantaged groups (e.g., Essien et al., 2021). Hypothesis 6a, on the other hand, has rarely been investigated. Although there is a vast body of research demonstrating that ingroup stereotyping in members of disadvantaged groups sometimes align with societal stereotyping (e.g., mainly in research on gender role stereotyping), only few studies have directly investigated SJT's postulate that members of disadvantaged groups use societally shared group stereotypes as explanations of perceived status differences between groups (e.g., Jost and Banaji, 1994). To our knowledge, the only available empirical test of these assumptions stems from three experiments conducted by Jost and Burgess (2000) and Jost (2001). They manipulated perceived ingroup status as relatively high vs. low compared to another outgroup and assessed measures of group stereotyping. Specifically, university students were provided bogus information about average financial incomes, career advancement, and educational outcomes of graduates of their own versus another university (i.e., Yale vs. Stanford; Virginia vs. Maryland; U.C.S.P. vs. U.C.L.A.), such that participants perceived their ingroup as relatively higher or lower in socio-economic success than the outgroup. In one study, the Yale (vs. Stanford) study, participants also provided explanations for the perceived status differences between the two groups (Jost, 2001). Participants' open-ended responses were coded for the use of group stereotypes, by counting favorable, unfavorable, or neutral expressions about either the ingroup or the outgroup.[1]

Results indeed indicated a pattern of ingroup favoritism in the higher-status condition, with more favorable ingroup characterizations and more unfavorable outgroup characterizations, and a reversed pattern in the lower-status condition, with more unfavorable ingroup characterizations and more favorable outgroup characterizations. From these observations (and consistent patterns of trait ratings in the two other studies, see Jost and Burgess, 2000) it was concluded that "*low-status group members do not attribute their inferior position to situational factors or extenuating circumstances, but rather seem to internalize the inequality in the form of internal attributions about unfavorable characteristics of the ingroup and favorable characteristics of the outgroup*" (Jost, 2001, p. 97). While these experiments provide interesting and important insights about effects of perceived status differences on ingroup and outgroup characterizations, they leave several important questions unanswered. For example, participants in these studies were students at elite institutions, posing the question whether findings generalize to life-long experiences of members of disadvantaged groups. Moreover, participants' responses were, to our knowledge, only coded with regard to group characterizations, but not with regard to other (e.g., situational, systemic) attributions. It is thus an open question

[1]In the other two studies, participants completed trait ratings of the groups on status-relevant (intelligent, hard-working, skilled) and status irrelevant attributes (friendly, honest, interesting, see Jost and Burgess, 2000), but these were not elicited as explanations of status differences.

whether members of groups who face real-world disadvantages similarly attribute their own or their ingroup's disadvantage to negative ingroup stereotypes.

We addressed these limitations by asking members of disadvantaged groups to provide explanations of perceived group status and status differences. We used the same open-ended methodology reported by Jost (2001) and coded participants' responses. Our aim was to quantify (a) occurrences of stereotypical ingroup or outgroup characterizations as expected in SJT and, (b) occurrences of perceived discrimination as expected in the RIM. Furthermore, we explored (c) whether participants' responses contained attributions to systemic factors, such as institutionalized disadvantages and group discrimination.

The Current Research

The current research aimed at complementing previous experimental research (i.e., Jost and Burgess, 2000; Jost, 2001) by studying members of four real-life disadvantaged groups: Individuals who self-categorized as gay or lesbian, as Black or African American, as overweight and individuals aged 60–75 years. Instead of manipulating status perceptions, we asked participants first to indicate the perceived status of their respective ingroup and the contrasting advantaged outgroup and then asked them to provide explanations for their status responses in an open-ended, non-reactive, qualitative measure, highly similar to the one used by Jost (2001). Similar to Jost, we coded responses with regard to the occurrence of favorable or unfavorable characterizations of the ingroup and the outgroup. Extending the coding procedure, we additionally coded whether stereotypic group characterizations indicated participants' stereotype endorsement—in terms of expressions of personal beliefs about group characteristics—and stereotype awareness—in terms of perceived societal beliefs about the groups. This differentiation is highly relevant, because only expressions of personally endorsed group stereotypes can be unambiguously interpreted in line with SJT as indicators of internalized ingroup inferiority, whereas expressions of societal group stereotypes may also be interpreted as perceptions of social reality and predominant societal beliefs and evaluations, with which the participants may or may not agree. Such expressions would be rather in line with conceptualizations of perceived prejudice and stigmatization of the RIM. In this line, we additionally coded perceived group evaluations that occurred without specific trait characteristics. We summarize these two variables as 'perceived stigmatization'. Finally, we also analyzed responses with regard to expressions of societal and systemic issues that (dis)advantage one or the other group as explanation for status differences.

The current analyzes were run with data from four studies originally conducted to investigate predictors of group evaluations (i.e., ingroup vs. outgroup favoritism) across four samples of disadvantaged groups. The original goal of these studies was to investigate whether and to what extent individual differences and group differences in system-justifying beliefs, conservatism, and social dominance orientation were related to group evaluations (these pre-registered analyzes will be reported elsewhere). We had specifically chosen to invite members of these four disadvantaged groups because previous research (Essien et al., 2021) let us expect that these groups would vary markedly with regard to group evaluations, with gay and lesbian participants showing ingroup favoritism, overweight and elder participants showing outgroup favoritism, and Black and African American participants' attitudes to be located somewhere in between.

The main objective of the current analyzes is to provide an overview over the relative frequencies of each response category for each sample and compare these with previous experimental findings (Jost, 2001). Because the studies contained a number of further measures, we are also able to report results of additional exploratory analyzes. First, we report the average values of direct and indirect measures of group preferences and ingroup evaluation for the four samples testing whether they replicate response patterns observed in Essien et al. (2021). Second, we explored relationships between participants' status explanations and group evaluations. Given that SJT (Jost and Banaji, 1994; Jost, 2020) conceptualizes both, group stereotyping and group evaluations, as potential manifestations of system-justifying tendencies, one may expect a positive relationship between the two. Third, we explored the relationships between participants' (open-ended) status explanations with participants' individual system-justifying tendencies and three measures assessing different aspects of conservative ideology. We conducted these analyzes because based on Jost's reasoning, one may expect that system-justifying patterns of group stereotyping (i.e., outgroup-favorable, ingroup-unfavorable) in those participants that express higher levels of system justifying tendencies, higher social dominance orientations and more conservative political ideologies. Status attributions to perceived stigmatization and societal issues on the other hand, should be less likely in participants with higher levels of system justifying tendencies, social dominance orientation and/or political conservatism (as recently argued in Howard et al., 2021). Finally, we explored the relationship between participants' group status explanations and two measures of experienced discrimination and stigma consciousness.

Note that the current research is exploratory in nature: Although we had preregistered all measures included in this data collection with the Open Science Framework[2], neither the current hypotheses nor the reported analyzes were pre-registered. We report how we determined our sample size, all data exclusions, and all measures in the study. We did not conduct any experimental manipulations (Simmons et al., 2012).

MATERIALS AND METHODS

Sample Size Determination

We had planned and pre-registered the current data collection with the aim to conduct correlational analyzes. Therefore, we aimed at providing sufficient test power ($1\text{-}\beta = 0.80$ at $\alpha < 0.05$) to test for the small effect sizes of $r = 0.20$, thus requiring valid data of 191 participants per study. With

[2]https://osf.io/2ey4q/

potential data exclusions in mind (see pre-registration), we slightly overpowered all four studies.

Participants were recruited using Prolific[3] and received 2.88 GBP for a study duration of 20–23 min. For all samples, we applied prescreening criteria based on country of residence (United States), native language (English), and no participation in any of the other or previous studies of our lab. A further selection criterion was related to social group membership: For Sample 1, we only invited Prolific users who had registered their sexual orientation with Prolific as gay or lesbian; for Sample 2, we only invited Prolific users who had registered as Black or African American; for Sample 3 we only invited Prolific users with a self-reported Body Mass Index higher than 35 and for Sample 4 we only invited Prolific users aged between 60 and 75 years.

Study 1 was initially commenced by 222 Prolific users, Study 2 by 230, Study 3 by 228 and Study 4 by 223 users. Eventually, $n_1 = 210$, $n_2 = 215$, $n_3 = 219$, $n_4 = 214$ participants completed the data collection and provided informed consent for data storage and analysis after completion (see section "Procedures"). Following our pre-registered exclusion criteria, we excluded the data of 16 participants ($n_1 = 4$, $n_2 = 2$, $n_3 = 5$, $n_4 = 8$) who indicated no nationality or a nationality other than the United States, and 19 participants who did not self-categorize as belonging to the specific disadvantaged groups in question ($n_1 = 2$, $n_2 = 4$, $n_3 = 13$). Note that we also excluded data of one participant from Study 3 who self-categorized as "slightly overweight" but whose BMI of 20.5 fell into the normal-weight category of the WHO and one participant from Study 4 whose age was below the inclusion criteria of 60 years.

We had also pre-registered to exclude data of participants who failed an attention check twice ($n_1 = 7$, $n_2 = 10$, $n_3 = 3$, $n_4 = 3$). Because exclusion of these participants did not alter results in any meaningful way, we decided to deviate from our preregistration and include data of these participants (see also **Supplementary Material**).

All studies were approved by the ethics committee of the Psychology Department at Universität Hamburg (AZ 2020_311).

Participants

The current analyzes rely on valid data of 819 participants from four samples.

Gay and Lesbian Participants

Analyzes are based on data of $N = 205$ persons who self-identified as homosexual (99 female, 87 male, and 18 diverse or non-binary). The majority of participants, $n = 148$ (72.2%), self-categorized as White, further 19 (9.3%) participants self-categorized as Black or African American, 16 (7.8%) as Asian, 13 (6.3%) as Hispanic or Latinx, one (0.5%) as Native Hawaiian or Pacific Islander, and 8 (3.9%) as other. Participants' age ranged from 18 to 73 years ($Md = 29$, $M = 30.56$, $SD = 10.6$).

Black and African American Participants

Analyzes are based on data of $N = 209$ persons who self-categorized as Black or African American (113 female, 96 male). Participants' age ranged from 18 to 76 years ($Md = 31$, $M = 32.23$, $SD = 9.65$).

Overweight Participants[4]

Analyzes are based on data of $N = 200$ participants who self-categorized as overweight (123 female, 68 male, 9 diverse or non-binary). The majority of participants, $n = 164$ (82%), self-categorized as White, further 17 (8.5%) self-categorized as Hispanic or Latinx, 6 (3%) as Black, 6 (3%) as Asian, 2 (1.5%) as Native Hawaiian or Pacific Islander, and 5 (2.5%) as other. Participants' age ranged from 18 to 73 years ($Md = 36$, $M = 38$, $SD = 12.3$). Participants' BMI ranged between 25.45 and 78.56 ($M = 43.85$, $SD = 9.44$). According to self-reports, 16 participants (8%) self-categorized as slightly overweight, 85 (42.5%) as moderately overweight, and 99 (49.5%) as extremely overweight[5].

Older Participants

Analyzes are based on data of $N = 205$ persons aged between 60 and 75 years ($Md = 64$, $M = 65.36$, $SD = 4.2$; 126 female, 79 male). The majority of participants, $n = 189$ (92.2%), self-categorized as White, further four (2%) participants self-categorized as Black or African American, four (2%) as Hispanic or Latinx, two (1%) as Asian, one (0.5%) as Native Hawaiian or Pacific Islander, and 2 (1%) as other.

Measures

Note that the central measure of group status perception and explanation was embedded into a survey containing a number of further measures. We shortly list all measures in the section "Procedure," and describe in detail those that we use for current analyzes. All materials, raw data, and analysis scripts can be found in OSF[2].

Status Measures

Participants completed a two-item adaptation of the MacArthur Scale of Subjective Social Status (Adler et al., 2000) to measure perceived status positions of social groups in society. We presented a ladder with 10 rungs, ranging from 1 (*lowest status*) to 10 (*highest status*) along with an item asking participants where they thought {lesbian or gay people, Black people, overweight people, older people} in the US stood on this ladder in general and where they thought {straight people, White people, normal-weight people, younger people} in the US stood on this ladder in general. Note that in our item formulation we only used the group labels without explicitly referring to them as ingroups or outgroups nor as disadvantaged or advantaged groups (see Materials in OSF).

[3]https://www.prolific.co/

[4]The survey contained a note to participants explaining that we used the terms normal-weight and overweight as reference to two social categories because they related to the widely used classification system by the WHO, that we are aware that these are very diverse groups and also that there are many different forms and causes of overweight, and that we did not imply that being overweight was in any way a negative defect a person has.

[5]When applying the criteria of the World Health Organization, 7 participants (3.5%) would be categorized as pre-obese, 27 (13.5%) as obese class I, 39 (19.5%) as obese class II, and 125 (62.5) as obese class III, respectively (with $n = 2$ not diagnosable because they did not report their body height and/or weight).

Directly afterward, we presented the status value that participants had chosen for their ingroup and outgroup and asked them for an explanation of their response. Specifically, instructions read: "You have indicated a rank of {value} for {ingroup/outgroup} people in the US. What do you think are the reasons for this social ranking? Please list *all* the reasons that you can spontaneously think of. It is enough to list keywords, you do not need to give elaborate explanations." Participants provided their responses in an unlimited multi-line text box. Participants always first completed the ingroup status explanation followed by the outgroup status explanation.

Group Attitude Measures

For comparison to previous work, we used the direct and indirect measure typically employed by project implicit (e.g., Essien et al., 2021).

Implicit Association Test

We had created four parallel versions of the Implicit Association Test (IAT, Greenwald et al., 1998) for a previous research project (Degner and Essien, unpublished manuscript) adapted for use in the Qualtrics survey software (Carpenter et al., 2019).[6] In each IAT, participants categorized attribute words according to their meaning as *Good* vs. *Bad* and target images as belonging to one of the target categories. In Sample 1, the target categories were *Gay vs. Straight*, each represented by 10 images of same-gender and different-gender couples in romantic, yet non-sexual poses (e.g., holding hands, hugging, kissing) from a commercial photo stock website[7]. In Sample 2, the target categories were *Black people vs. White people*, each represented by ten portrait pictures selected from the Chicago Face Database (CFD; Ma et al., 2015). In Sample 3, the target categories were *Overweight persons vs. Normal-weight persons*, each represented by ten morph images, each created from three individuals from Google image searches. In Sample 4, the target categories were *old persons vs. young persons*, represented by ten portrait images, of which two were selected from the Chicago Face Database (Ma et al., 2015) and 18 where AI-generated portraits created with an online service (Generated Photos, 2021). Because copyrights apply to some of these images, we are not at liberty to provide open access to all materials. We provide an overview of all stimuli in OSF and are committed to sharing materials with other researchers upon personal request.

We used the analysis tool provided by iatgen (Carpenter et al., 2019) to calculate an IAT D score (the D600 algorithm, Greenwald et al., 2003), coded such that scores above zero indicate faster responses when the ingroup targets and good attributes vs. outgroup targets and bad attributes shared a response key than when the key assignment was the opposite, which is typically interpreted as indicator of relative ingroup preference. Therefore, we excluded IAT-data of eight participants ($n_1 = 1$, $n_2 = 6$, $n_3 = 1$) with $\geq$10% of trials with response times $\leq$ 300 ms (excessive speed criterion, see Greenwald et al., 2003). All IATs were characterized by satisfying reliability indices with $\alpha_1 = 0.871$, $\alpha_2 = 0.883$, $\alpha_3 = 0.841$, $\alpha_4 = 0.825$.

[6] http://iatgen.org/

[7] shotshop.com

One-item Preference Measure

For reasons of comparability with available research in this domain (e.g., Essien et al., 2021), we employed a one-item group preference measure with a 7-point scale, ranging from outgroup preference (i.e., *I strongly prefer Straight/White/normal-weight/young people to Gay/Black/Overweight/old people*) via no preference (i.e., *I like Gay/Black/Overweight/old people and Straight/White/normal-weight/old people equally*) to ingroup preference (i.e., *I strongly prefer Gay/Black/Overweight/old people to Straight/White/normal-weight/young people).*

Ingroup Evaluation Measure

As further measure of ingroup evaluation, we employed five items adapted from Luhtanen and Crocker (1992), which measure positive identification with the ingroup (i.e. "*I am proud to be Gay/Black/Overweight/old.*", "*I prefer Gay/Black/Overweight/old people to Straight/White/normal-weight people.", "I regret being Gay/Black/Overweight/old* (r).", "*I am glad to be Gay/Black/Overweight/old.*", "*I feel good about being Gay/Black/Overweight/old.*"). The scale was characterized by satisfying reliability indices with $\alpha_1 = 0.813$, $\alpha_2 = 0.798$, $\alpha_3 = 0.828$, $\alpha_4 = 0.796$.

Ingroup Identification Centrality

We adapted two items from Leach et al. (2008; "*Being Gay/Black/Overweight/old is an important part of my identity.", "Being Gay/Black/Overweight/old is an important part of how I see myself."*) with satisfying reliability indices with $\alpha_1 = 0.915$, $\alpha_2 = 0.940$, $\alpha_3 = 0.823$, $\alpha_4 = 0.895$.

Ideology

We employed the eight-item System Justification Scale (Jost and Thompson, 2000; Kay and Jost, 2003) which measures perceptions of the fairness, legitimacy, and justifiability of the prevailing social system, and showed satisfying reliability indices with $\alpha_1 = 0.872$, $\alpha_2 = 0.890$, $\alpha_3 = 0.862$, $\alpha_4 = 0.781$. In order to capture the different facets of conservative beliefs (cf. Jost et al., 2003), we employed the 11-item of the Resistance to Change-Beliefs Scale (RC-B; White et al., 2020), which measures individual beliefs concerning the desirability of change versus stability, in terms of preference for tradition and preference for gradual change. The scale showed satisfying reliability indices with $\alpha_1 = 0.860$, $\alpha_2 = 0.765$, $\alpha_3 = 0.877$, $\alpha_4 = 0.890$. Secondly, we employed the 16-item Social Dominance Orientation Scale, which measures general beliefs that hierarchies in society are inevitable and natural, and respective support for group-based dominance and opposition to equality (Jost and Thompson, 2000). This scale showed satisfying reliability indices with $\alpha_1 = 0.917$, $\alpha_2 = 0.909$, $\alpha_3 = 0.901$, $\alpha_4 = 0.909$. In all these measures, responses were collected on 7-point Likert-like scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Finally, we asked participants to indicate their general political views and ideology on a single item with a 7-point scale ranging from *extremely liberal* to *extremely conservative*.

Stigma Consciousness and Experienced Discrimination

Stigma Consciousness

We adapted the ten-item Stigma Consciousness Questionnaire (SCQ; Pinel, 1999), which measures to what extent participants expect to be stereotyped by others based on their sexual orientation, racialized group membership, or weight status (e.g., "*When interacting with {Straight, White, normal-weight, young} people, I feel like they interpret all my behaviors in terms of the fact that I am {Gay, Black, overweight, old}.*", "*Stereotypes about {Gay, Black, overweight, old} people have not affected me personally.*"). Responses were collected on a seven-point Likert-like scale ranging from "*strongly disagree*" to "*strongly agree*". Scale reliabilities were satisfying with $\alpha_1 = 0.820$, $\alpha_2 = 0.836$, $\alpha_3 = 0.868$, $\alpha_4 = 0.810$.

Experienced Discrimination

We selected six items from the Daily Discrimination subscale (Williams et al., 1997) that measure experiences of unfair treatment in daily live *("You are treated with less courtesy than other people.", "You are treated with less respect than other people.", "You receive poorer service than other people at restaurants or stores.", "People act as if they think you are not as good as they are.", "You are called names or insulted.", "You are threatened or harassed.").* Responses were collected on a five-point Likert-like scale with the anchors "never," "rarely," "sometimes," "often," "always." Scale reliabilities were satisfying with $\alpha_1 = 0.898$, $\alpha_2 = 0.913$, $\alpha_3 = 0.918$, $\alpha_4 = 0.913$.

Procedure

Data collection was conducted online in March 2021 using Qualtrics[8] for creating and running the survey and Prolific[3] for participant recruitment. Upon recruitment, participants were informed that the general goal of the study was to investigate social group attitudes and their relations to group identification. The study started with a welcome page that contained an initial attention check (Oppenheimer et al., 2009) requiring participants to click on a logo instead of the continue button. If participants failed the attention check, they received a notice and were asked to re-read instructions on the welcome page.

Data collection then began with the two group attitude measures: the evaluative IAT immediately followed by the one-item group preference measure. Next, participants were asked to indicate demographic information, including self-categorizations with regard to the social category in question, thus their sexual orientation (Study 1), ethnicity (Study 2), weight-status (Study 3) and/or age (Study 4). All following measures were only presented to those participants, who fulfilled the studies' inclusion criteria, thus self-categorized as homosexual or gay (Study 1), Black or African American (Study 2), at least slightly overweight (Study 3), or indicated their age to be equal or above 60. Participants who did not fulfill these inclusion criteria were forwarded to an end-of-survey message and their data discarded from analyzes. The remaining survey began with the ingroup identification evaluation measure (adopted from Luhtanen and Crocker, 1992) and the ingroup identification centrality items (adapted from Leach et al., 2008). Items of both scales were presented together in an individually randomized sequence. The survey then continued with the System Justification scale (Jost and Thompson, 2000), followed by the two group status items and assessments of status explanations in an open-ended response format. Afterward, participants completed additional ideology measures, including exploratory measures of perceived status stability, perceived group entitativity, and perceived group permeability. Finally, participants completed the experienced discrimination scale and a stigma consciousness questionnaire. The survey ended with an adapted measure of ingroup and outgroup friendship orientations.

After completion of all measures, participants received detailed information on the background and hypotheses of the current research and were asked to confirm their initial consent for storage, analyses, and open accessibility of their (anonymous) data, and were rerouted back to Prolific where they received payment independent of consent. A complete copy of the surveys including all measures is available in the OSF[2].

Data Preparation

In order to analyze participants' open-ended responses explaining ingroup and outgroup status, we developed a coding system that expanded the coding employed by Jost (2001). Like Jost (2001) we first coded whether participants' open responses contained stereotype-related references to the ingroup or the outgroup and whether these implied a positive, negative, or neutral/ambivalent evaluation. Expanding Jost's system, we further categorized each statement as indicating either stereotype endorsement versus stereotype awareness[9] and also coded perceptions of generalized group evaluations. Additionally, we coded whether systemic aspects were provided as explanations of ingroup and outgroup status. We provide a short summary description of the coding system here and further detailed information and coding exemplars in the **Supplementary Figure S1** and **Supplementary Table S1**.

Stereotype endorsement captured statements expressing a personal belief or conviction with regard to characteristics of the ingroup or the outgroup. This applied to statements about group characterizations or characterizations of individual group members (e.g., "*Blacks are . . .*", see examples in **Supplementary Table S1**). We used a very inclusive coding approach. That is, whenever participants' merely mentioned trait words without any further specification (e.g., "*laziness*"), we interpreted these as group-trait associations and coded them as expressions of stereotype endorsement.

Perceived stigmatization contains two sub-facets: stereotype awareness and perceived evaluation by others. Stereotype awareness captures expressions of perceptions of others' beliefs

[8]www.qualtrics.com

[9]Note that we had further coded whether the following five sub-facets were captured by expressions of stereotypes: competence, warmth, ideology, physical health and physical appearance. Because of the low frequencies, we refrained from analyzing these facets. Interested readers can find a short description of these facets, and all coded data in the OSF[2].

or convictions with regard to individual traits and group characteristics, signaled by verbal markers such as "*(they/we) are viewed as*," "*(they/we) are assumed to be*," "*People believe that (they/we) are. . .*" (see **Supplementary Table S1**). Perceived evaluations refer to expressions of perceived generalized evaluations of the ingroup or the outgroup. We included into this category expressions of perceived general (dis)like, (dis)respect, (dis)approval, acceptance or rejection, admiration or hatred, as well as explicit references to terms like bias, stigma, or prejudice (e.g., "*Overweight people are shamed and stereotyped. They are looked down upon. They are openly ridiculed. They are mocked. They are not taken seriously.*"; see **Supplementary Table S1** for examples).

Systemic aspects were defined as any mentions of perceived societal, institutional, or organizational advantages or disadvantages of either the ingroup or the outgroup (e.g., "*Black peoples' struggles," "white privilege*"). When possible, we further coded responses as referring to economic status or access to resources (e.g., "*wealth gap," "poverty*"), access to status-related opportunities such as employment (e.g., "*systemic racism denying access to jobs and resources*"), education (e.g., "*There is deliberate zoning to keep Black children out of better schools*"), housing (e.g., "*ability to obtain housing and business loans*") or health care (e.g., "*lack of healthcare and appropriate sex education*"), societal norms and normative fit (e.g., "*it is like the world is made for skinny people*"), disparities in legal status (e.g., "*straight people have more legal protections*"), or any acts of discrimination (e.g., "*racist practices still around*") or lack of discrimination (e.g., "*Literally no one will ever discriminate a person for being straight.*"). In each case, we coded whether the disparity was referred to as an ingroup (dis)advantage and/or an outgroup (dis)advantage (see examples in **Supplementary Table S1**).

We additionally coded whether participants mentioned tradition or historical roots of systemic aspects (e.g., "*Even since the end of slavery, the government set up ways that African Americans cannot succeed or be successful*") and the perceived stability, malleability or inescapability of the system (e.g., "*Gay people have come a long way in the last 50 years but things could and should be better*," "*Black people are the recipients of systematic racism, which means it is inescapable.*").

Responses of all participants of Samples 1–3 were coded independently by the first and second author of this paper and all cases of disagreement were resolved via discussion, responses of participants from Sample 4 were only coded by the second author of the paper.

RESULTS AND DISCUSSION

Overview

We first report results of the status perception and group evaluation measures in order to verify that status perceptions indeed support the assumption that participants perceive their ingroup as lower in status than a majority outgroup. We report the descriptive statistics of all further measures in the **Supplementary Table S2**. We then report in detail the results of frequency analyses of participants' open-ended responses explaining group status. Finally, we report explored interrelations between open-ended responses and group attitude measures, experienced discrimination, and stigma consciousness.

Status Perceptions

Our analyses are based on the assumption that participants perceive the status of their ingroup as relatively lower compared to the status of the respective comparison outgroup. In order to verify whether this was indeed the case, we inserted participants' status perceptions into a two (Status group: ingroup vs. outgroup) by four (participant group: Gay vs. Black vs. Overweight vs. Older Aged) ANOVA with repeated measure on the first factor. The analysis revealed a significant main effect of status group, $F(1,815) = 816.994$, $p < 0.001$, $\eta^2_p = 0.501$, 95% $CI = [0.456,0.540]$, a significant main effect of participants group $F(3,815) = 70.505$, $p < 0.001$, $\eta^2_p = 0.206$, 95% $CI = [0.158,0.251]$, and a significant interaction effect, $F(3,815) = 77.239$, $p < 0.001$, $\eta^2_p = 0.221$, 95% $CI = [0.172,0.267]$. As depicted in **Table 1**, participants in Samples 1–3 perceived the societal status of their ingroups as significantly lower relative to the status of the respective comparison outgroup, and this effect was strongest in the sample of Black participants. These results replicate findings with members of these three minority groups (Degner and Essien, unpublished manuscript) indicating that, based on the self-perception of participants, it is adequate to label these groups as disadvantaged groups. Participants in Sample 4, however, did not show a consistent status difference perception. Specifically, the number of participants aged 60–75 who perceived ingroup status to be lower than outgroup status ($n = 98$) was almost equal to the number of participants to who perceived ingroup status to be higher than outgroup status ($n = 89$), and a few participants ($n = 18$) indicated no status difference. Thus, based on participants self-perceptions, there was no agreement on whether people aged 60–75 associate being older with lower status.

The Online Supplement reports descriptive analyses of all further quantitative measures (**Supplementary Table S3**), which replicated previous findings and rankings of groups in terms of intergroup attitudes (e.g., Essien et al., 2021). Importantly, these supplemental analyses demonstrate remarkable levels of heterogeneity in terms of ingroup and/or outgroup favoritism: Gay and lesbian participants exhibited consistent ingroup favoritism in the IAT and self-report measures; Black and African American participants exhibited outgroup favoritism in the IAT but ingroup favoritism and ingroup pride in self-report measures; older participants exhibited outgroup favoritism in the IAT but no group preference in self-report measures; and overweight participants exhibited outgroup favoritism in both the IAT and the self-report measure.

Status Explanations

Stereotype Endorsement

Overall, stereotype endorsement was lower than observed in Jost (2001), but varied strongly between groups. Specifically, 37 (18.0%) gay and lesbian participants, 38 (18.2%) Black participants, 88 (43.8%) overweight participants, and 150 (73.2%) older participants expressed *any* type of ingroup or outgroup stereotype in their open responses. **Table 2** lists the proportion of

TABLE 1 | Group status perceptions.

	Perceived ingroup status		Perceived outgroup status		*t*-Test (within)
	M	**(*SD*)**	***M***	**(*SD*)**	
Study 1	4.620	(1.408)	7.727	(1.753)	$t(204) = -18.940$, $p < 0.001$, $d = -1.492$, 95%*CI* [1.273, 1.711]
Study 2	4.852	(1.741)	8.263	(1.665)	$t(208) = -20.018$, $p < 0.001$, $d = -1.355$, 95%*CI* [1.142, 1.567]
Study 3	4.005	(1.297)	6.620	(1.462)	$t(199) = -19.160$, $p < 0.001$, $d = -1.443$, 95%*CI* [1.223, 1.663]
Study 4	5.200	(1.613)	5.444	(1.675)	$t(204) = -1.353$, $p = 0.178$, $d = -0.094$, 95%*CI* [−0.099, 0.288]

d(repeated measures), see Lenhard and Lenhard (2016).

TABLE 2 | Frequency of endorsed stereotypes (percentages in parentheses).

		Stereotype endorsement					
		Ingroup			Outgroup		
	N	**Positive**	**Negative**	**Ambiguous**	**Positive**	**Negative**	**Ambiguous**
Study 1	205	12 (5.9%)	11 (5.4%)	0 (0.0%)	6 (2.9%)	11 (5.4%)	0 (0.0%)
Study 2	209	15 (7.2%)	10 (4. 8%)	3 (1.4%)	17 (8.1%)	5 (2.4%)	1 (0.5%)
Study 3	201	9 (4.5%)	51 (25.4%)	5 (2.5%)	61 (30.4%)	5 (2.5%)	2 (1.0%)
Study 4	205	64 (31.2%)	65 (31.7%)	10 (4.9%)	63 (30.7%)	66 (32.2%)	5 (2.4%)

participants whose stereotype endorsements contained positive versus negative characterizations of ingroup versus outgroup.

For further analyses, we collapsed response frequencies across system-justifying group stereotypes (i.e., unfavorable ingroup and/or favorable outgroup, marked in light gray in **Table 2**) and opposing group stereotypes (i.e., favorable ingroup and/or unfavorable outgroup). We then conducted a McNemar-test, a non-parametric test comparing frequencies of these two forms of stereotype endorsement as within-participant variables. There was no significant difference within the sample of gay and lesbian participants (14 vs. 21; $\chi^2 = 1.241$, $p = 0.265$), African American participants (23 vs. 18; $\chi^2 = 0.593$, $p = 0.441$), and older participants (90 vs. 91; $\chi^2 = 0.000$, $p = 1.000$), only in the sample of overweight participants did more participants express system-justifying stereotypes than opposite stereotypes (78 vs. 13; $\chi^2 = 54.613$, $p < 0.001$).

In summary, while only very few lesbian and gay and Black participants explained group status with stereotypic characteristics of group members, group characteristics were more frequently invoked by overweight and older participants. Importantly, in Samples 1, 2, and 4, negative ingroup characterizations and positive outgroup characterizations were not more frequent than other group characterizations. Only the stereotype endorsement of 25–30% of overweight participants appeared to fit the pattern predicted by SJT. Further content analyses of stereotype endorsement in the sample of overweight and elderly participants indicated that their high levels of stereotype endorsement were partly due to frequent discussion of health issues related to being overweight and aging (see **Supplementary Table S3**).

Perceived Stigmatization

Overall, the proportion of participants who mentioned any kind of stereotype awareness or perceived evaluation was higher as compared to stereotype endorsements in the first three samples, with 128 (62.4%) gay and lesbian participants, 55 (26.32%) African American participants, 120 (59.70%) of overweight participants. Among older participants perceived stigmatization was mentioned by 76 participants (37.1%), and thus less frequent than stereotype endorsement. As can be seen in **Table 3**, the proportion of participants mentioning perceived evaluations is relatively high, whereas stereotype awareness is generally less frequent. Again, we inspected whether the relative frequency of system-legitimizing stereotypes or evaluations (ingroup-negative and/or outgroup-positive, columns marked in gray in **Table 3**) was different from opposite stereotypes or evaluations. This was indeed the case. That is, the number of participants expressing perceived stereotyping to be system-legitimizing (ingroup-negative and/or outgroup-positive) was significantly higher than the number of participants expressing opposed perceived stereotyping, with 21 vs. 2; $p < 0.001$ in the sample of gay and lesbian participants, 10 vs. 0; $p = 0.002$ in the sample of Black participants, 53 vs. 2; $p < 0.001$ in the sample of overweight participants, and 15 vs. 3; $p = 0.002$ in the sample of older participants.

Perceived group evaluations was generally more frequently expressed and showed a similar pattern: A higher number of participants reported perceived negative ingroup evaluations and/or positive outgroup evaluations than vice versa, with 117 vs. 4; $\chi^2 = 103.669$, $p < 0.001$ in the sample of gay and lesbian participants, 46 vs. 1; $\chi^2 = 41.191$, $p < 0.001$ in the sample of Black participants, 104 vs. 2; $\chi^2 = 96.236$, $p < 0.001$ in the sample of overweight participants, and 55 vs. 18; $\chi^2 = 18.254$, $p < 0.001$, in the sample of elderly participants.

Systemic Reasoning

In a final set of analyses, we explored the frequency of participants whose responses included references to systemic

TABLE 3 | Frequency of perceived stereotyping and group evaluations.

		Perceived stereotyping					
		Ingroup			Outgroup		
	N	Positive	Negative	Ambiguous	Positive	Negative	Ambiguous
Study 1	205	1 (0.5%)	20 (9.8%)	0 (0.0%)	3 (1.5%)	1 (0.5%)	0 (0.0%)
Study 2	209	0 (0.0%)	4 (1.9%)	0 (0.0%)	7 (3.3%)	0 (0.0%)	0 (0.0%)
Study 3	201	2 (1.0%)	47 (23.4%)	0 (0.0%)	21 (10.4%)	0 (0.0%)	0 (0.0%)
Study 4	205	1 (0.5%)	13 (6.3%)	0 (0.0%)	2 (1.0%)	2 (1.0%)	0 (0.0%)
		Perceived evaluations					
		Ingroup			Outgroup		
	N	Positive	Negative	Ambiguous	Positive	Negative	Ambiguous
Study 1	205	3 (1.5%)	108 (52.7%)	4 (2.0%)	36 (17.6%)	1 (0.5%)	0 (0.0%)
Study 2	209	1 (0.5%)	41 (19.6%)	4 (1.9%)	13 (6.2%)	0 (0.0%)	3 (1.4%)
Study 3	201	2 (1.0%)	97 (48.3%)	2 (1.0%)	51 (25.4%)	0 (0.0%)	1 (0.5%)
Study 4	205	16 (7.8%)	49 (23.9%)	1 (0.5%)	16 (31.3%)	8 (3.9%)	0 (0.0%)

reasons for ingroup and/or outgroup status. This was the case for a majority of participants in each sample. Specifically, 187 (91.2%) participants in the gay and lesbian sample, 181 (89.6%) participants in the Black sample, 136 (67.7%) participants in the overweight sample, and 161 (78.5%) participants in the elderly sample mentioned systemic explanations of group status. Whenever possible, we further coded whether their reasoning referred to perceived ingroup (dis)advantages and/or perceived outgroup (dis)advantages. In samples 1–3, a visibly larger group of participants described ingroup disadvantages and outgroup advantages than vice versa (see **Table 4**), whereas older participants of Sample 4 mentioned both systemic advantages and disadvantage for both ingroup and outgroup.

We identified a number of recurring themes that we coded as systemic explanations of group statuses (see **Table 5**), most importantly the relative (dis)advantage with regard to material resources (e.g., poverty, lack of generational wealth), opportunities (e.g., access to work, housing, education, health care), and experiences of discrimination.

Relations of Status Explanations With Intergroup Attitudes, Ideology, Experienced Discrimination and Stigma

In the following analyses, we explored whether coded status explanations extracted from participants' open-ended responses were related to participants' intergroup attitudes, ideological beliefs, or interindividual differences in experienced discrimination and stigma consciousness. Because our coding procedure resulted in binary variables (i.e., we coded whether a specific content was either mentioned or not), we conducted simple independent group comparisons between those participants who mentioned any of the aforementioned contents in their group status explanations and those who did not. **Table 6** reports the effect sizes Cohen's *d* of these exploratory independent *t*-tests for each of the three group attitude measures, the ideology measures as well as the two measures of stigma consciousness and experienced discrimination, respectively.

As can be seen from the most left panel of **Table 6**, there appear to be no systematic differences in any of the dependent variables between those participants who expressed (any kind of) stereotype endorsement and those who did not. It thus seems that the endorsement of group stereotypes in general was not related to intergroup attitudes, suggesting that stereotype endorsement and outgroup favoritism were independent from each other. Also, participants who expressed group stereotypes as explanations of group status differences were not characterized by higher levels of system-justifying and conservative beliefs.[10]

There were, however, a number of systematic group differences with regard to the perceived stigmatization response category: Participants whose responses contained references to stereotype awareness and/or perceived evaluation tended to exhibited higher IAT scores and higher levels of self-reported group preferences (both indicating higher ingroup favoritism or lower outgroup favoritism, respectively) than those who did not mention these issues (see **Table 6**, central panel). There were also differences in the ideology measures: Participants who mentioned perceived stigmatization as explanations for group status expressed significantly lower levels of system-justifying beliefs, social dominance orientation, and traditionalist resistance to change, although these effects appeared to be smaller in the sample of African American and older participants as compared to the two other samples of disadvantaged group members. These results appear consistent with previous findings that system justifying mindsets were related to reduced recollections of perceived discrimination (e.g., Owuamalam et al., 2017).

Additionally, we observed systematic relationships to stigma consciousness: Participants who reported perceived

[10]A very similar pattern of results was observed when reducing this analysis to mentions of only SJT-compatible stereotype endorsement (ingroup-negative, outgroup positive).

TABLE 4 | Systemic reasoning.

		Systemic reasoning			
		Ingroup		Outgroup	
	N	Advantage	Disadvantage	Advantage	Disadvantage
Study 1	205	12 (5.9%)	132 (64.4%)	145 (70.7%)	1 (0.5%)
Study 2	209	3 (1.4%)	153 (73.2%)	159 (76.1%)	1 (0.5%)
Study 3	201	6 (3.0%)	99 (49.3%)	115 (57.2%)	0 (0.0%)
Study 4	205	61 (29.8%)	80 (39.0%)	64 (31.2%)	60 (29.3%)

TABLE 5 | Content analysis of systemic status explanations.

		Systemic reasoning II								
		Material resources		Opportunities		Discrimination		Other mentions		
	N	Ingroup advantage	Outgroup advantage	Ingroup advantage	Outgroup advantage	Ingroup discrimination	No outgroup discrimination*	Legal status	Historical roots#	Normative fit
Study 1	205	10 (4.9%)	13 (5.9)	4 (1.5%)	57 (27.8%)	102 (49.8%)	55 (26.8%)	50 (24.4%)	39 (19.0%)	112 (54.6%)
Study 2	209	1 (1.0%)	88 (42.1%)	1 (0.5%)	102 (48.8%)	112 (53.6%)	21 (10.0%)	17 (8.1%)	36 (17.2%)	17 (8.1%)
Study 3	201	2 (1.0%)	31 (15.4%)	1 (0.5%)	62 (30.8%)	48 (23.9%)	19 (9.5%)	2 (1.0%)	0 (0.0%)	51 (25.4%)
Study 4	205	61 (29.8%)	59 (28.8%)	19 (9.3%)	44 (21.5%)	14 (6.8%)	3 (1.5%)	0 (0.0%)	7 (3.4%)	18(8.8%)

**Absence of discrimination explicitly mentioned as outgroup advantage/outgroup privilege; #mentioned mostly with reference to religious norms in Sample 1 and to slavery in Sample 2.*

stigmatization were characterized by higher averaged levels of stigma consciousness in all four samples, which lends validity to our coding of the open responses. The relationship to experienced discrimination was less consistent and only significant in Sample 3.

Finally, systemic reasoning for group status and status differences was similarly related to ideological variables. That is, participants who mentioned societal and/or systemic reasons for ingroup or outgroup status, expressed significantly lower system-justifying beliefs, lower social dominance orientation, and lower traditionalist resistance to societal change than those who did not mention any systemic reasons. Again, we observed a positive relationship with stigma consciousness in three out of four samples, with those expressing systemic reasons for group status differences being characterized by higher levels of stigma consciousness. Again, we observed no systematic relationship with experienced discrimination, nor with group attitudes.

Overall, the relations between the ideological variables and our coding of participants' open-ended responses lend validity to our findings and indirectly fit SJT: Participants who referred to perceived stigmatization and/or provided systemic reasons for group status differences, were on average more liberal, less likely to perceive the current system as fair and legitimate, and had lower levels of social dominance orientation and resistance to change (cf. Howard et al., 2021).

Our exploratory analyses of interrelations between participants responses and other available measures revealed some unexpected results. Most striking to us were the interrelations with the group attitude measures. Specifically, IAT scores and the one-item preference measures were only related to perceived stigmatization and no other response code, a result confirmed by multiple regression analyzes reported in the **Supplementary Table S4**. Importantly, we observed a *reversed* relationship, that is participants who reported perceived stigmatization as explanations for group status were more likely to exhibit ingroup favoritism (Sample 1) or reduced outgroup favoritism (Samples 2 and 3) than those who did not mention perceived stigmatization. Only in Sample 4 did we not observe any such interrelations (see **Supplementary Table S4**).

GENERAL DISCUSSION

The current research explored whether and to what extent members of disadvantaged groups express group stereotypes as explanations of perceived ingroup and outgroup status or status differences. Our content analyses of open-ended responses of over 800 participants from four different disadvantaged groups revealed that only few participants referred to stereotypical group characterizations as explanations for ingroup or outgroup status. Moreover, we observed substantial variability between groups, with overweight and older participants more often using stereotypical group characterizations, but gay and lesbian or Black and African American participants rarely using stereotypical group characterizations. Importantly, among participants who mentioned stereotypic group characterizations, system legitimizing characterizations (of negative ingroup traits and/or positive outgroup traits) were not more frequent than other characterizations. Instead, participants in all four samples frequently referred to perceived stigmatization (such as awareness of others' group stereotypes and perceived group evaluations) and systemic aspects to explain ingroup disadvantage.

TABLE 6 | Group comparisons reported as Cohen's *d* [95% CI].

	Stereotype endorsement				Perceived stigmatization				Systemic reasoning			
	Sample 1 (37 vs. 167)	**Sample 2 (38 vs. 170)**	**Sample 3 (87 vs. 112)**	**Sample 4 (150 vs. 54)**	**Sample 1 (128 vs. 76)**	**Sample 2 (55 vs. 153)**	**Sample 3 (120 vs. 79)**	**Sample 4 (76 vs. 128)**	**Sample 1 (187 vs. 17)**	**Sample 2 (181 vs. 27)**	**Sample 3 (135 vs. 64)**	**Sample 4 (150 vs. 54)**
Evaluation IAT	0.375 [0.017, 0.733]	0.138 [-0.219, 0.495]	0.084 [-0.196, 0.365]	0.120 [-0.431, 0.191]	-0.407 [-0.694, -0.121]	-0.334 [-0.649, -0.018]	-0.400 [-0.687, -0.112]	0.043 [-0.240, 0.327]	0.013 [-0.448, -0.509]	-0.151 [-0.562, 0.260]	-0.157 [-0.455, 0.141]	0.007 [-0.329, 0.344]
One-item evaluation	0.167 [-0.189, 0.524]	0.196 [−0.156, 0.549]	−0.002 [−0.282, 0.278]	−0.155 [−0.466, 0.157]	−0.414 [−0.700, −0.127]	−0.236 [−0.544, 0.074]	−0.295 [−0.581, −0.010]	−0.213 [−0.498, 0.071]	−0.038 [−0.535, 0.458]	−0.383 [−0.789, 0.023]	0.021 [−0.277, 0.318]	0.010 [−0.34, 0.327]
Ingroup pride	0.326 [−0.032, 0.683]	0.375 [0.021, 0.728]	0.083 [−0.197, 0.363]	−0.322 [−0.635, −0.009]	−0.237 [−0.521, 0.048]	0.031 [−0.277, 0.339]	0.029 [−0.255, 0.313]	0.111 [−0.173, 0.395]	−0.169 [−0.666, 0.328]	0.068 [−0.337, 0.442]	−0.176 [−0.474, 0.122]	0.063 [−0.274, 0.399]
Ingroup identity	0.035 [−0.321, 0.391]	0.497 [0.142, 0.852]	0.052 [−0.228, 0.332]	−0.242 [−0.554, 0.069]	−0.385 [−0.672, −0.099]	0.188 [−0.121, 0.496]	−0.191 [−0.475, 0.094]	0.010 [−0.274, 0.294]	−0.369 [−0.866, 0.129]	0.194 [−0.210, 0.599]	−0.331 [−0.630, −0.032]	−0.072 [−0.408, 0.265]
SJ beliefs	−0.296 [−0.653, 0.062]	−0.099 [−0.451, 0.253]	−0.142 [−0.423, 0.138]	−0.252 [−0.564, 0.060]	0.468 [0.180, 0.755]	0.285 [−0.024, 0.595]	0.510 [0.222, 0.799]	0.144 [−0.140, 0.429]	0.698 [0.197, 1.199]	0.497 [0.090, 0.904]	0.251 [−0.047, 0.550]	0.158 [−0.179, 0.494]
SDO	−0.062 [−0.418, 0.294]	−0.674 [−1.032, −0.317]	−0.119 [−0.399, 0.161]	−0.055 [−0.366, 0.256]	0.606 [0.316, 0.896]	0.342 [0.032, 0.652]	0.560 [0.271, 0.849]	0.211 [−0.074, 0.495]	0.520 [0.021, 1.019]	1.019 [0.603, 1.435]	0.343 [0.044, 0.643]	0.210 [−0.127, 0.547]
Change resistance	−0.025 [−0.381, 0.332]	−0.099 [−0.451, 0.253]	−0.165 [−0.492, 0.070]	−0.089 [−0.400, 0.222]	0.486 [0.180, 0.755]	0.146 [−0.162, 0.455]	0.508 [0.220, 0.796]	0.114 [−0.170, 0.398]	0.671 [0171, 1.172]	0.495 [0.088, 0.902]	0.493 [0.192, 0.794]	0.267 [−0.070, 0.605]
Political ideology	−0.115 [−0.472, 0.241]	−0.119 [−0.471, 0.233]	−0.195 [−0.476, 0.085]	−0.087 [−0.399, 0.224]	0.299 [0.013, 0.584]	−0.008 [−0.316, 0.300]	0.278 [−0.007, 0.563]	0.017 [−0.266, 0.301]	0.449 [−0.050, 0.947]	0.164 [−0.240, 0.569]	0.278 [−0.021, 0.577]	0.299 [−0.039, 0.637]
Experienced discrimination	0.198 [−0.158, 0.555]	0.148 [−0.204, 0.500]	0.016 [−0.265, 0.296]	0.221 [−0.091, 0.533]	−0.023 [−0.307, 0.261]	−0.044 [−0.352, 0.264]	−0.434 [−0.722, −0.147]	0.097 [−0.187, 0.381]	0.080 [−0.416, 0.577]	−0.078 [−0.482, 0.327]	−0.354 [−0.654, −0.055]	0.131 [−0.206, 0.468]
Stigma consciousness	0.147 [−0.209, 0.504]	0.240 [−0.113, 0.592]	0.037 [−0.243, 0.318]	0.074 [−0.237, 0.386]	−0.389 [−0.675, −0.103]	−0.260 [−0.569, 0.049]	−0.844 [−1.140, −0.548]	−0.258 [−0.543, 0.027]	−0.286 [−0.783, 0.211]	−0.746 [−1.156, −0.335]	−0.457 [−0.758, −0.157]	0.033 [−0.303, 0.370]

Effect size calculations were adjusted for different group sizes by including weights for groups sizes into the calculation of the pooled standard deviation (see Hedges and Olkin, 1985), Positive d-values imply that those who did not mention a response category (column) scored higher in the DV (line). Negative d-values indicate that those who mentioned a response category (column) scored higher in the DV (line) than those who do not.

These findings diverge from previous experimental studies, in which a majority of participants expressed system-justifying ingroup and/or outgroup stereotypes (Jost and Burgess, 2000; Jost, 2001). These findings are, however, in line with the shared reality explanation of stereotype expressions pointed out by Rubin and Hewstone (2004) and illustrate the importance of a theoretical separation of measures of stereotype awareness versus stereotype endorsement. Realizing societal views about one's ingroup and understanding these as reasons for the ingroup status does not necessarily imply endorsement of these views as personal beliefs (see also consideration on passive reflection of reality in Owuamalam et al., 2018b). Also, contrary to assumptions in SJT, participants, who did mention group stereotypes in their status explanations were not characterized by higher levels of system-justification tendencies, or other ideological beliefs. There were also no systematic relationships between group attitudes and stereotype endorsement: Participants who expressed stereotype endorsement did not systematically differ in their IAT scores or their self-reported ingroup or outgroup favoritism from those who did not express any stereotype endorsement. This is somewhat inconsistent with SJT, which construes both variables as interrelated manifestations of system-justification tendencies in members of disadvantaged groups.

In our view, there are two potential reasons why our results diverge from previous findings from Jost's (2001) study. First, it is possible that coding procedures in previous research may have conflated stereotype endorsement with stereotype awareness and perceived stigmatization and may thus have overestimated the degree of stereotype internalization. We do, however, believe that this clear conceptual separation is paramount: Expressions of stereotype awareness and perceived stigmatization cannot be interpreted as indicators of stereotype endorsement and internalized personal beliefs as hypothesized in SJT. Second, group status and status differences were operationalized very differently in past and present research. Present findings relied on data collected from members of real-world groups, thus from people who have potentially have made long-term—often life-long—experiences of pervasive disadvantages and stigmatizations. Previous studies, on the other hand, were conducted with students from prestigious universities and relied on temporal manipulations of status perceptions (i.e., by providing information of relatively higher or lower socioeconomic success of graduates from their own or another university; Jost and Burgess, 2000; Jost, 2001). Although experimental manipulations do provide advantages for causal interpretation, they may suffer from threats to external validity with regard to real-world phenomena and risk mischaracterizing or even trivializing real-live group disparities and inequality (e.g., Jost, 2019).

Previous experimental studies are also open to alternative interpretations. For example, one could speculate whether the obserevd high levels of stereotype use (Jost, 2001) primarily reflected attributional strategies that people use when explaining relatively lower levels of *advantage* rather than relatively higher levels of *dis*advantage. Alternatively, one could speculate whether stereotype use is only a spontaneous initial strategy that people use when first learning about an ingroup disadvantage (and when they have little or no experience of belonging to a systematically disadvantaged social group), but that they may abandon in the long. Such reasoning is supported by recent developmental research indicating that young children initially and dominantly use personal attributions of novel group status disparities but shift toward structural explanations during middle childhood (Peretz-Lange et al., 2021). Such differences in initial versus long-term use of stereotype-based versus structural attributions might account for differences between present findings and previous research.

The present findings appear consistent with assumptions of the Rejection Identification Model (RIM; Branscombe et al., 1999) in that many participants expressed perceived stigmatization as well as systemic factors as causes of status differences. Note, however, that relationships of these responses with social identification were not entirely consistent with the theory: Whereas gay and lesbian participants (Sample 1) and overweight participants (Sample 3) who mentioned perceived stigmatization and/or systemic aspects exhibited higher levels of ingroup identification, which is consistent with the RIM, no such relationships were observed among Black and African American participants (Sample 2). Conversely, we observed that the few Black and African American participants who mentioned group stereotypes as status explanations were characterized by lower levels of ingroup identification, which again can be considered as consistent with the RIM, but this pattern was not observed in the other two samples. Note, however, that we had only employed a two-item measure of identity centrality and may have missed other important facets of social identity (Leach et al., 2008). Furthermore, ingroup identification was skewed toward relatively high identification in Samples 1 and 2 and toward relatively low identification in Samples 3 and 4 (see **Supplementary Table S2**). At this current point in time, we cannot say whether these variance restrictions are a result of unrepresentative sampling or should be considered a valid characterization of these groups. Correlational analyses thus need to be interpreted with caution.

Taken together, our current exploratory analyses provide only limited support for SJTs assumption of stereotype use as attributions of ingroup status in members of disadvantaged groups. That is not to say that members of disadvantaged groups may not employ group stereotypes at all. In the present studies, only a minority of participants used group stereotypes when asked to explain abstract *group* status. But they may nevertheless use stereotypes when making sense of their own or other's concrete and *individual* experiences or outcomes. For example, research on race-status associations suggests that stereotyping might differ depending on whether they are assessed at the individual (i.e., exemplar) level or group level (Dupree et al., 2021).

Note, however, that the mere observation of group stereotypes being expressed as explanations of ingroup status in members of disadvantaged groups would actually not provide sufficient empirical support for the claim that stereotype use stems from an underlying system justification motive. For example, the recently proposed social identity model of system attitudes (SIMSA, Owuamalam et al., 2018a,b) disputes the existence of a unique system-level motive and instead argues that instances of outgroup favoritism and system legitimization can be more

parsimoniously explained by social identity considerations. Specifically, they show that identification with a social system along with a hope or expectation for future system change and ingroup advancement is also related to system-justifying attitude expressions (e.g., Owuamalam et al., 2021). Other theoretical approaches also would predict stereotype use in members of disadvantaged groups without relying on an underlying system justification motive. For example, the recently proposed Bias of Crowds model (BoC; Payne et al., 2017) conceptualizes measures of intergroup attitudes as indicators of properties of places and situations. The BoC account proposes that context-based availability and accessibility of group stereotypes and prejudice can influence individual thinking and behavior (e.g., Stelter et al., 2021). Given that members of disadvantaged groups—like all members of society—are continuously exposed to societally shared stereotypes and prejudice, one may expect effects of context-based stereotype activation and application among members of disadvantaged groups (cf. Essien et al., 2021). This approach does not rely on the assumption of personally endorsed or internalized stereotypes, because it locates the activation of stereotypes in societal contexts rather than in the individual, an assumption which is also consistent with the shared reality explanation (Rubin and Hewstone, 2004) and the passive reflection assumption (Owuamalam et al., 2018b) in social identity-based approaches. These considerations indicate that further theorizing and research is needed to better understand the use of group stereotypes in members of disadvantaged groups.

Finally, one repeated pattern of results should be highlighted, namely the relatively consistent relationships between participants group attitudes and the different indicators of perceived stigmatization. We observed in three out of four samples that participants whose status explanations contained references to perceived stigmatization exhibited higher levels of ingroup favoritism (in Sample 1) or lower levels of outgroup favoritism (in Samples 2 and 3) on both direct and indirect attitude measures. Multiple regression analyses (see **Supplementary Materials**) confirmed that perceived stigmatization was the only predictor of intergroup attitudes. Further relationships with the stigma consciousness questionnaire and the experienced discrimination scale yielded widely consistent results. Only in the sample of older participants did we not observe such interindividual differences and relations. These results point toward an intriguing dissociation of group-level vs. individual-level effects. On the group level, our results are consistent with previous findings showing that group attitudes in disadvantaged groups closely align with societal stigma (Essien et al., 2021). We had selected the four disadvantaged groups for this study because they are associated with different levels of societal stigma and their mean group attitudes indeed closely follow this ranking: The sample of gay and lesbian participants exhibited ingroup favoritism, the sample of overweight and older participants exhibited outgroup preference and the sample of Black and African Americans ranked in between. At the individual level, however, we mostly observed *reversed* relationships between group attitudes and indicators of stigma: Participants who demonstrated higher levels of stigma consciousness or experienced discrimination and participants who reported perceived stigmatization as status explanations, exhibited higher levels of ingroup favoritism (Sample 1) or lower levels of outgroup favoritism (Samples 2 and 3). Before jumping to conclusions, these unexpected findings should be replicated, ideally in a pre-registered, hypotheses-testing approach. Should these patterns be replicable, they would point toward intriguing questions of which group- and individual-level processes in members of disadvantaged groups are responsible for groups (on average) to align their group attitudes with societal stigmatization but individual members of these groups with high levels of stigma consciousness diverge from societal stigmatization. The differences between samples with regard to effect size and direction of these relationships also point toward potentially important characteristics of different disadvantaged groups that warrant further attention.

To conclude, we believe that our exploratory analyses do not only challenge the generalizability of previous findings of stereotype use in members of disadvantaged groups, they also point toward novel and intriguing questions that should be addressed in future research.

DATA AVAILABILITY STATEMENT

The datasets presented in this study can be found in the Open Science Framework; https://osf.io/2ey4q/.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Local Ethics Committee Faculty of Psychology and Human Movement Science Von-Melle-Park 5 20146 Hamburg. The participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

JD conceived of the presented idea, programmed the studies, and supervised data collection as part of several Masters theses at Universität Hamburg. J-CF and JD developed the coding manual, conducted the response coding, and statistical analyses. All authors discussed the results and contributed to the final manuscript.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.750606/full#supplementary-material

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Exploring Higher Education Pathways for Coping With the Threat of COVID-19: Does Parental Academic Background Matter?

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First-generation students (FGS) are more likely to feel misplaced and struggle at university than students with university-educated parents (continuous-generation students; CGS). We assumed that the shutdowns during the Coronavirus-pandemic would particularly threaten FGS due to obstructed coping mechanisms. Specifically, FGS may show lower identification with the academic setting and lower perceived fairness of the university system (system justification). We investigated whether FGS and CGS used different defenses to cope with the shutdown threat in a large sample of German-speaking students (N = 848). Using Structural Equation Modeling, we found that for all students, independent of academic parental background, high levels of system justification were associated with perceiving the learning situation as less threatening, better coping with failure, and less helplessness. However, in comparison to CGS, FGS showed small but significant reductions in system justification and relied more on concrete personal relationships with other students as well as their academic identity to cope with the threatening situation. We discuss implications for helping FGS succeed at university.

Keywords: COVID-19, defensive strategies, first-generation students, system justification, social belonging

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INTRODUCTION

Educational pathways are filled with challenges and obstacles for every student, independent of their socio-demographic background. Attaining an academic degree means having to overcome a number of barriers and taking advantage of the right opportunities at the right time. However, for some students these hurdles can be harder to face than for others. One group of students who might face unique challenges in the academic context are first-generation students (FGS). Coming from families where no parent achieved an academic degree places them in a different situation than students whose parents attained post-secondary education (continuous-generation students, CGS).

This situation might have been particularly challenging with the COVID-19 pandemic posing a tremendous threat not only to society in general, but especially to education systems as institutions were ordered to close from spring 2020 (Aristovnik et al., 2020). Universities were forced to swiftly transition to only online teaching, providing a great challenge for universities, faculties, and especially students (Oliveira et al., 2021). Not only did the learning environment transfer from university grounds' back into the students' bedrooms, but social contact with other students was reduced to a bare minimum or vanished completely. Subsequently, the two key elements of student identification, contact with peers and the university environment (Barber et al., 2021), were

no longer available during lock-down. This sudden and urgent change caused uncertainty for all involved (Jeong et al., 2021).

The loss of social interaction with other students might harm FGS more than CGS as they have fewer inherent connections to the academic system. Accordingly, the resulting social isolation of pandemic living conditions may have led FGS to struggle more with their studies than CGS during this time (Terenzini et al., 1996; Pascarella et al., 2004; Soria and Stebleton, 2012; Stebleton and Soria, 2013). The transition to online learning might therefore have had a disproportionate impact on FGS and their identification as a student, leading them to feel especially isolated and abandoned by the university to face their academic challenges alone. Thus, they potentially perceived the university system as more unfair and disadvantageous than CGS, resulting in blaming the university for the threatening situation. Our aim in the present study was to investigate whether FGS and CGS differ in how they coped with the threat the COVID-19 pandemic had on their educational progress. Therefore, we investigated if FGS and CGS differentiate in their use of strategies such as justifying the university system, relying on their academic identity, and capitalizing on their peers (i.e., social belonging).

First-Generation Students

With the steady increase of student numbers in Austria in recent years, students' backgrounds have become more diverse (Institut für Höhere Studien, 2021). In addition to ethnic or socioeconomic differences, the differentiation between FGS and CGS has gained interest. FGS can be defined as students at the tertiary level of education whose parents did not achieve a post-secondary degree (Spiegler and Bednarek, 2013). Extensive research has portrayed FGS as a vulnerable group, with deficits regarding their academic achievement compared to their peers with parental academic backgrounds (Spiegler and Bednarek, 2013). FGS are less likely to graduate from university than CGS (Soria and Stebleton, 2012; Cataldi et al., 2018). Twenty-seven percent of FGS drop out of American universities compared to only seven percent of students with parental academic backgrounds (Jehangir, 2010). Moreover, FGS tend to achieve lower grade point averages than CGS (Redford and Hoyer, 2017). In addition, FGS seem to struggle more with their mental health in the university setting. FGS report higher rates of feeling stressed as well as higher levels of depression (Stebleton et al., 2014).

These differences between first- and CGS are commonly assumed to stem from the social capital they acquired from their environment (Soria and Stebleton, 2012). Social capital summarizes the amount of information, resources, and knowledge obtained through social interactions (Robison et al., 2002). This mainly occurs with people one is in close relationships with, such as parents or caregivers (Bourdieu, 1986). Students can rely on this capital to understand which norms and rules are established in the academic context. This conglomerate helps students to navigate their lives in the academic context and make the right educational choices (Pascarella et al., 2004). Students whose parents did not attain tertiary education lack these personal relationships as a resource for guidance (Pascarella et al., 2004; Gofen, 2009; Ives and Castillo-Montoya, 2020). The absence of knowledge and resources on how to navigate the university setting might lead to FGS feeling out of place in academia. Whereas CGS seem to just fit in with the higher educational setting, FGS might struggle more to find their way around (Jehangir, 2010). A possible way for students to overcome obstacles posed by the pathway to an academic degree is to seek support from their instructors during class. However, FGS also differ from CGS regarding the way they interact with their social environment. Although many FGS seek interaction with the faculty, they seem not to obtain it in the same way CGS do. Miyazaki and Janosik (2009) found that FGS ask fewer questions and seek less help from the faculty members in comparison to their peers with an academic parental background. One probable explanation is that FGS avoid interacting with faculty due to concerns over being perceived as incompetent, leading to lower-quality interactions with faculty (Ives and Castillo-Montoya, 2020). Accordingly, FGS may perceive the university setting as less supportive than CGS, which fosters a sense of isolation in the academic context (Spiegler and Bednarek, 2013).

Besides support from faculty, social interaction with peers can also help overcome challenges in the educational setting. Unfortunately, in comparison to CGS, FGS also face unique challenges when connecting with other students (Spiegler and Bednarek, 2013). Studies show that FGS must work significantly more in their spare time to finance their academic education in comparison to peers whose parents attained an academic degree (Spiegler and Bednarek, 2013). In addition, working a side-job seems to obstruct cognitive ability more for FGS than CGS, further impairing academic growth (Pascarella et al., 2004). For FGS, such work obligations also reduced the time they could spend with other students leading to less social interaction and thus to a lower feeling of social belonging with other students (Terenzini et al., 1996).

Yet, social interaction with other students may be particularly beneficial for FGS (Pittman and Richmond, 2007). Studies have shown that FGS can be characterized as prosocial learners as they exhibit not only the desire to learn together with their peers but that their learning is also beneficial to their communities (Pelco et al., 2014; Ives and Castillo-Montoya, 2020). Moreover, Eddy and Hogan (2014) showed that an interdependent approach to learning not only increased the feeling of community amongst students but also minimized the gap in grades between FGS and CGS. Therefore, fostering social interaction in the university setting, which FGS seem to lack, might help to compensate for the lack of social capital in comparison to CGS.

Consequences of the COVID-19 Pandemic for Students

COVID-19 disrupted the lives of people around the globe in many ways by posing a threat to everyone's health. Up until November 2021 the deaths of around 5.2 Million people were related to COVID-19, making it one of the most incisive events in recent history (Organization World Health, 2021). Governments were forced to implement restricting measures like curfews, bans of social gatherings, and the mandatory wearing of face masks to mitigate the spread of the virus. Thus, people greatly restricted

their personal freedom to keep themselves and others safe. The longer the pandemic lasts, and in the face of limited hope the virus will vanish anytime soon, the more we understand about the psychological implications of these restrictions. Such restrictions likely interfered with basic human psychological needs, such as autonomy and relatedness (Deci and Ryan, 2000).

Students were particularly impacted by the pandemic as educational institutions were shut down (Aristovnik et al., 2020). Firstly, universities faced the sudden and urgent challenge to adapt courses to online learning and struggled with putting a well-grounded eLearning environment into place from 1 day to the next (Oliveira et al., 2021). Due to this unexpected transition, teaching was put on hold or was continued rudimentarily, meaning that interaction between faculty staff and students was reduced to a minimum. In a short time, students went from having a well-structured academic timetable to finding themselves in an uncertain and unpredictable environment. Secondly, for many students, universities are the primary place to meet and connect with their peers. Due to the lockdown measures, students were denied the possibility of meeting their social contacts at or outside of university. Limitations on social interactions might have led to students feeling less integrated with their peers and experiencing less social belonging than those from uninterrupted years. Thus, the closing of the universities impacted not only the educational development of students but their social interaction as well.

These circumstances might have been particularly challenging for FGS (Soria et al., 2020). Lacking interaction with both faculty and peers may harm FGS more than CGS as this might completely remove any social connection to the academic environment. Additionally, many FGS faced the unique challenge of moving back to their family home, finding themselves in an environment unfamiliar with academic study and often unable to effectively provide assistance with any uncertainties related to studying at a tertiary level. As a result, FGS might have felt even more isolated during the lockdown and thus experience even lower social belonging. Thus, when facing challenges in the educational context, their social contacts are not a resource they can rely on in pandemic times. FGS might therefore have perceived the consequences of the pandemic in the education context as more threatening than CGS. The loss of both the structure provided by the university system as well as social contact with their fellow students for support means they might not have had sufficient coping mechanisms at their disposal. Consequently, FGS may have felt more helpless and overwhelmed by the situation than their peers with parental academic background.

System Justification as a Defensive Strategy

First-generation students may feel more threatened and impacted by the COVID-19 pandemic than their counterparts with a parental academic background. They suffer from missing social interaction with both their peers as well as the faculty. The feeling of isolation may be further fostered by students moving back home to their parents and finding themselves in an environment that might have been unable to provide sufficient support for their academic education. In sum, the pandemic and the resulting consequences might have led FGS, more than CGS, to feel helpless, overwhelmed, and under a great amount of stress.

These circumstances might result in FGS feeling disadvantaged due to their parents' education. System justification theory (SJT; Jost et al., 2004) takes on the question of how underprivileged individuals can rely on the system they are living in, and what function this reliance serves. Initially, SJT assumed that people are motivated to keep a positive image of themselves at all times (Jost et al., 2004). This motive can occur on different levels. Firstly, people strive to maintain a favorable self-image by seeing themselves as legitimate and valid individuals (ego justification). Secondly, people try to establish a positive image of the group they identify with. Therefore, they try to justify the actions of ingroup members and to maintain a positive image of their respective groups (group justification). The last level of justification refers to the system one is part of. People see the *status quo* of the system as fair, inevitable, and legitimate (Jost et al., 2004).

A major tenet of SJT is disadvantaged individuals can still show justification for the system, nonetheless. The radical form of SJT even proposes that disadvantaged people show more system justification than members of groups favored by the system (Jost et al., 2004). The motivation to defend a system one has a low status in goes against the principle of both ego and group justification and therefore creates cognitive dissonance. This cognitive tension is accompanied by negative psychological states such as anxiety, guilt, and uncertainty (Harding and Sibley, 2013). To reduce these negative states, SJT assumes that disadvantaged people justify the system even more, and therefore accept their underprivileged position (Caricati and Sollami, 2018). System justification can reduce cognitive dissonance and collateral negative states, thereby operates as a defensive strategy (Jost and Hunyady, 2003; Harding and Sibley, 2013). Even as an underprivileged member, defending the system can lead to positive affect as well as increased life satisfaction (Rankin et al., 2009). For instance, in the context of the pandemic, an experiment by Jutzi et al. (2020) showed that the threat salience of COVID-19 led participants to report higher levels of behavioral inhibition and collateral anxiety. This increase in behavioral inhibition was then related to further justifying the political system. Apparently, system justification serves as a defensive strategy to defend against the threat of COVID.

Further research on this counterintuitive phenomenon has brought the aspect of social identity theory (SIT) into play. One tenet of SIT is that people always try to establish a positive self-image, both individually but especially on a collective level (Tajfel and Turner, 1979). Disadvantaged groups are therefore expected to challenge systems that are perceived as illegitimate and unfair. Thus, SIT and SJT propose different approaches for disadvantaged groups facing an unfair system: Whereas SIT proposes an active, challenging role for disadvantaged groups and suggests they exhibit lower levels of system defense, SJT expects underprivileged people to come to terms with their role in the system and even defend it (Caricati and Sollami, 2018).

System Justification Amongst First-Generation Students

We argue that FGS are disadvantaged in the higher education system and assume FGS pose a vulnerable group in the academic context, especially in threatening situations like the COVID-19 pandemic. System justification would be one possible defense strategy. However, there are several reasons why FGS might justify the system less in comparison to CGS.

First-generation students deviate from other disadvantaged groups as they are actively striving to establish themselves in the unknown educational environment. By striving for a tertiary degree, FGS are challenging their own (comparatively) low hierarchical status in the university system and aiming to change rather than justify their disadvantaged position. Furthermore, in their theoretical paper, Kay and Friesen (2011) claim that system justification should be higher amongst disadvantaged groups that are both dependent on the system and perceive it as inescapable. Laurin et al. (2010) manipulated the ease of transferring universities and afterward presented participants with critical statements about the university. Students who thought switching universities was difficult and thus perceived the system as inescapable were less supportive of the criticism. Consequently, these students reported more system justification than students who assumed they could transfer easily between universities. We argue that FGS may report less justification of the university system than CGS in the wake of the pandemic. Although studies have shown that defending the system can help cope with threat and therefore operates as a defensive strategy (Harding and Sibley, 2013), it is yet to be investigated if system justification works for both FGS and CGS in the same way.

We assume that CGS benefit more from system justification as a defensive strategy than FGS. Due to their parental background CGS perceive the university system as just and can therefore rely on it when facing threats. FGS however, may be less likely to capitalize on system justification as an effective defense.

Present Research

We assert that lacking social interaction with their peers and faculty as well as feeling misplaced in the higher education setting makes FGS a vulnerable group when facing threats to their educational progress. Due to FGS specific circumstances, such threatening conditions should easily deplete the resources required to counteract negative consequences of threat. The mechanisms of how FGS deviate from their peers with an academic parental background in the way they perceive the burden of the pandemic, have yet to be investigated.

We assume that both the perception of the university as fair and legitimate as well as maintaining fruitful social interactions act as defensive strategies when students are faced with pandemic threat. To explore the different pathways FGS and CGS took while coping with the pandemic, we focused on both students' perception of the situation as well as their reported ability to act. We assessed whether students perceived the altered learning situation more as a threat or as a challenge. We further explored the impact of three collective defensive strategies, system justification, academic identity, and social belonging, on students' reported coping with failure in the academic setting as well as their experienced helplessness during the transition to online learning.

We conducted a large-scale online survey to assess coping mechanisms among Austrian students and the differences between FGS and CGS regarding the use of defensive strategies: We first explored the defensive function of system justification for all students independent of their parental academic background. The more students justify the university system and perceive it as fair, the less they should feel helpless, and show better coping with failure and rate the pandemic as less threatening. In a second step, we explored whether FGS and CGS differed regarding the amount of system justification. As argued above, FGS may report lower levels of system justification in comparison to CGS. We then analyzed pathways that students use to cope with the threat to their academic progress. Specifically, we contrasted their use of system justification, academic identity, and social belonging in the form of personal relationships to deal with this threat. Students without parental academic background may rely more on their social belonging in the form of personal relationships than CGS.

MATERIALS AND METHODS

Participants were recruited *via* social media, with the data being collected between the start of April and May 2020. Only students enrolled at Austrian universities were allowed to take part, with $N = 895$ completing the online survey presented on LimeSurvey. We excluded 47 participants either because of suspicious and unrealistic response patterns (aspired number of credits during summer term of 60 or more credits) or because of being older than 39 years, which was more than two standard deviations above the mean. Furthermore, we expected that because of different living circumstances, participants older than 39 years would not be comparable to the majority of the student sample, which was in their early twenties. The final sample consisted of 848 participants in the analysis (M_{age} = 23.91 years, range 18–35 years, SD_{Age} = 4.04 years; 159 identifying as male, 677 as female and 12 as diverse; 644 Austrian, 142 German, 62 other/no nationality indicated).

Before partaking, participants gave informed consent consistent with the declaration of Helsinki with instructions and were informed they could leave the survey at any point. To determine the first-generation status of the participants, we asked for the highest educational degree of both parents. Academic parental background was assumed when at least one parent attained a bachelor's or higher degree. According to this classification, 515 (60.73%) participants were classified as FGS and 333 (39.27%) participants were categorized as CGS. The present study was part of a larger research project and we report only the measurements pertinent to the current investigation.

Perceived COVID-19 Threat for Academic Progression

We assessed the perceived threat of the pandemic on individual academic progress with the item "I am afraid of not being able

to complete enough ECTS[1] this summer semester 2020 due to the COVID-19 pandemic." Participants could respond on a six-point Likert scale ranging from "disagree completely" to "agree completely" (M = 3.60, SD = 1.96). Despite being a single-item scale, the perceived threat of the pandemic on individual academic progress seems to be a valid measure showing a strong correlation with the behavioral proxy of uncertain credits, $r(846) = 0.46$, $p < 0.001$, due to the pandemic. In addition, perceived threat of the pandemic on individual academic progress correlates with additionally collected outcomes such as satisfaction, $r(846) = -0.38$, $p < 0.001$, and wellbeing of the students, $r(846) = -0.36$, $p < 0.001$, during lockdown. All three measures used for validation were each assessed using single-item scales (see **Supplementary Materials 1.1.1–1.1.3** for exact item descriptions).

System Justification

We measured system justification with an adaptation of the system justification scale from Kay and Jost (2003) to fit the university setting (see **Supplementary Material 1.2**). Participants answered seven items on a six-point Likert scale ranging from "completely disagree" to "completely agree" (e.g., "Current teaching at my university is structured so that students generally get what they deserve;" Cronbach's alpha: $\alpha = 0.91$). CFA indicated a good fit for a single factor solution, χ^2 (6) = 7.786, RMSEA = 0.019, SRMR = 0.008, CFI > 0.999 (Hu and Bentler, 1999). The estimated latent variable was used for all subsequent analyses. Latent variables and the resulting factor models are a covariation-based method to investigate and measure unobservable constructs, e.g., system justification (Borsboom et al., 2003). In addition, the fit of these factor models indicates to what extent the data supports the suggested underlying latent variable structure, making it a more comprehensive approach than mean score scales.

Academic Identity

Academic identity was measured using a newly developed scale (see **Supplementary Material 1.3**). The scale consisted of eight items (e.g., "I can identify well with my studies"). Participants responded to the statements with a six-point Likert scale ranging from "completely disagree" to "completely agree." Cronbach's alpha was good, $\alpha = 0.84$. We estimated the latent variable using a CFA, which showed a good fit for a single factor solution, χ^2 (5) = 6.479, RMSEA = 0.019, SRMR = 0.010, CFI = 0.999. This latent variable was used for all following analyses.

Social Belonging

We measured social belonging focusing on personal relationships using a novel scale (e.g., "I already have many good contacts with the other students in my department," see **Supplementary Material 1.4**). Participants responded to five statements on a six-point Likert scale ranging from "completely disagree" to "completely agree." Cronbach's alpha indicated good reliability, $\alpha = 0.83$. CFA indicated a good fit of a single factor solution, which we used for all subsequent analyses, χ^2 (1) = 0.049, RMSEA < 0.001, SRMR = 0.001, CFI > 0.999.

Helplessness

The students' perceived helplessness regarding learning digitally was assessed with the subscale *Amotivation* of the *Situational Motivation Scale* (Lonsdale et al., 2011; see **Supplementary Material 1.5**). We presented four items which were answered on a ten-point Likert scale ranging from "Not true at all" to "completely true." The items were reformulated to fit the digital learning context e.g.: "I don't know: I can't see what digital learning brings me." Cronbach's alpha was very good, $\alpha = 0.90$, and CFA supported a single factor solution, χ^2 (1) = 4.155, RMSEA = 0.061, SRMR = 0.006, CFI = 0.999. The estimated latent variable was used for the following analyses.

Threat Versus Challenge

The perception of the learning situation during the shutdown of educational institutions as a threat and as a challenge were measured using an eight-item scale, adapted from Drach-Zahavy and Erez (2002). The statements, respectively, four for threat and challenge, were adapted for the students' learning situation (see **Supplementary Material 1.6**). Example items for threat and challenge are "I worry that I lack the skills to handle the situation" and "The situation gives me the opportunity to expand my skills." Cronbach's alpha was good for both the threat and challenge scale, $\alpha = 0.85$ and $\alpha = 0.80$. We conducted a CFA for threat, χ^2 (1) = 6.419, RMSEA = 0.080, SRMR = 0.013, CFI = 0.996, and challenge, χ^2 (1) = 0.608, RMSEA < 0.001, SRMR = 0.005, CFI > 0.999, respectively. Both confirmatory factor analyses indicated an acceptable fit and the estimated latent variables were used in the subsequent analyses.

Maladaptive Coping With Failure

To assess maladaptive coping with failure we used the German subscale "Coping with failure" of the SSI-K3 (Kuhl and Fuhrmann, 1998; see **Supplementary Material 1.7**). Participants answered four statements on an eleven-point Likert scale ranging from "not at all" to "exceptionally" (e.g., "When something bad has happened, it takes me a long time to focus on something else."). Cronbach's alpha indicated good reliability, $\alpha = 0.87$. CFA implied a good fit for a single factor solution, which was further used for following analyses, χ^2 (1) = 0.624, RMSEA < 0.001, SRMR = 0.003, CFI > 0.999.

Data Analysis

To explore which pathways FGS and CGS use when faced with threat we calculated structural equation models using lavaan 0.6-7 in R 4.0.2 (Rosseel, 2012; R Core Team, 2021). Structural equation model parameters were estimated *via* maximum likelihood method with 5,000 bootstraps. We opted to use structural equation modeling in contrast to ordinary regression methods for several reasons. Firstly, structural equation modeling does not only estimate the relationships between dependent

[1]ECTS stands for "European Credit Transfer and Accumulation System." One ECTS is equivalent to 25 h of workload. Subsequently the term "credits" will be used to ensure comprehensibility (Bundesministerium für Bildung Wissenschaft und Forschung, 2021; European Commission, 2021).

and independent variables, it also incorporates a confirmatory factor analysis (Lei and Wu, 2007). Therefore, this statistical method allows for investigating how well indicators load on the construct in contrast to calculating mean scores. This integral part is missing in conventional regression-based approaches. Moreover, structural equation modeling also takes measurement errors into account and thus provides a corrected estimation of coefficients (Anderson and Gerbing, 1988; Lei and Wu, 2007). In comparison to conventional regression-based analysis, structural equation modeling offers the possibility to estimate the influence of predictors on multiple dependent variables and therefore facilitates the testing of complex relationships between variables (Biddle and Marlin, 1987). Lastly, structural equation modeling allows for correlations between indicators and variables which represents the data collected in the field more appropriately (Lei and Wu, 2007). For correlations between the tested variables, see **Table 1**. To test for differences in system justification between FGS and CGS we conducted an independent students' *t*-test. If pathways from defensive strategies on dependent variables were significant for FGS but not CGS, or vice versa, we used moderation analysis to investigate the influence of first-generation student status. The corresponding defensive strategy, first-generation student status, and its interaction functioned as predictors.

RESULTS

The Defensive Role of System Justification

We first explored the use of system justification as a defensive strategy for all students, independent of their parents' academic background and investigated the relationship between the perceived threat of the pandemic obstructing academic progress and system justification. Assuming system justification is an effective means to cope with threat, it should be related to less helplessness, less maladaptive coping with failure, and perceiving the altered learning situation less as a threat and more as a challenge.

SRMR indicated an acceptable model fit (SRMR = 0.080), but other indicators showed weaker fit (CFI = 0.943; RMSEA = 0.060). The model and unstandardized regression coefficients are depicted in **Figure 1**. Perceived COVID-19 threat for academic progression was significantly negatively related to system justification, meaning that students who feared a lack of academic progress due to the pandemic also justified the university system less, $b = -0.28$, SE = 0.02, $p < 0.001$, 95% CI (−0.33, −0.23). We observed a defensive function of system justification for helplessness, $b = -0.67$, SE = 0.06, $p < 0.001$, 95% CI (−0.80, −0.54), perception of the learning circumstances as a threat, $b = -0.35$, SE = 0.04, $p < 0.001$, 95% CI (−0.44, −0.27), and maladaptive coping with failure, $b = -0.33$, $SE = 0.07$, $p < 0.001$, 95% CI (−0.47, −0.18). System justification was also associated with higher levels of perceiving the current education situation as challenging, $b = 0.53$, SE = 0.04, $p < 0.001$, 95% CI (0.45, 0.61).

Differences in System Justification Regarding First-Generation Student Status

We first extracted the latent variable system justification from the structural equation model above to compare first- and CGS. An independent student's *t*-test indicated a small but significant difference between FGS and CGS, $t(731.19) = 2.29$, $p = 0.022$, $d = 0.16$. FGS ($M = -0.08$, SD = 1.23) justified the university system in the wake of the pandemic significantly less than CGS ($M = 0.12$, SD = 1.18).

Further, investigating whether first-generation status had an impact on the relationship between threat and system justification, we added the parental academic background as a moderator on the path in the structural equation model. The parental academic background did not influence the association between COVID-19 threat and system justification, main effect FGS status, $b = 0.07$, SE = 0.18, $p = 0.683$, 95% CI (−0.27, 0.43), FGS status × threat interaction, $b = -0.06$, SE = 0.05, $p = 0.204$, 95% CI (−0.15, 0.03), and the influence of threat on system justification remained significant when including FGS status into the model, $b = -0.24$, SE = 0.04, $p < 0.001$, 95% CI (−0.32, −0.17) (**Figure 2** for direct effects of first-generation student status on dependent variables see **Supplementary Table 3**).

However, it has yet to be investigated whether system justification and other defensive strategies are associated with the students' perception of the altered learning situation in the same way for FGS and CGS. To compare the different pathways both student groups may take, we conducted separate analyses for FGS and CGS.

TABLE 1 | Means, standard deviations, and correlations of tested variables.

Variable	*M*	SD	1	2	3	4	5	6	7
1. Threat of COVID-19	3.60	1.96							
2. System justification	3.60	1.26	−0.41***						
3. Academic identity	4.56	1.02	−0.15***	0.45***					
4. Social belonging	4.37	1.13	−0.19***	0.19***	0.35***				
5. Helplessness	3.89	2.50	0.21***	−0.36***	−0.23***	−0.08*			
6. Digital learning perceived as challenge	3.06	1.39	−0.26***	0.45***	0.24***	0.06	−0.41***		
7. Digital learning perceived as threat	2.70	1.35	0.40***	−0.31***	−0.20***	−0.19***	0.39***	−0.39***	
8. Maladaptive coping with failure	5.15	2.53	0.12***	−0.17***	−0.18***	−0.13***	0.18***	−0.17***	0.44***

*$p < 0.05$; ***$p < 0.001$.

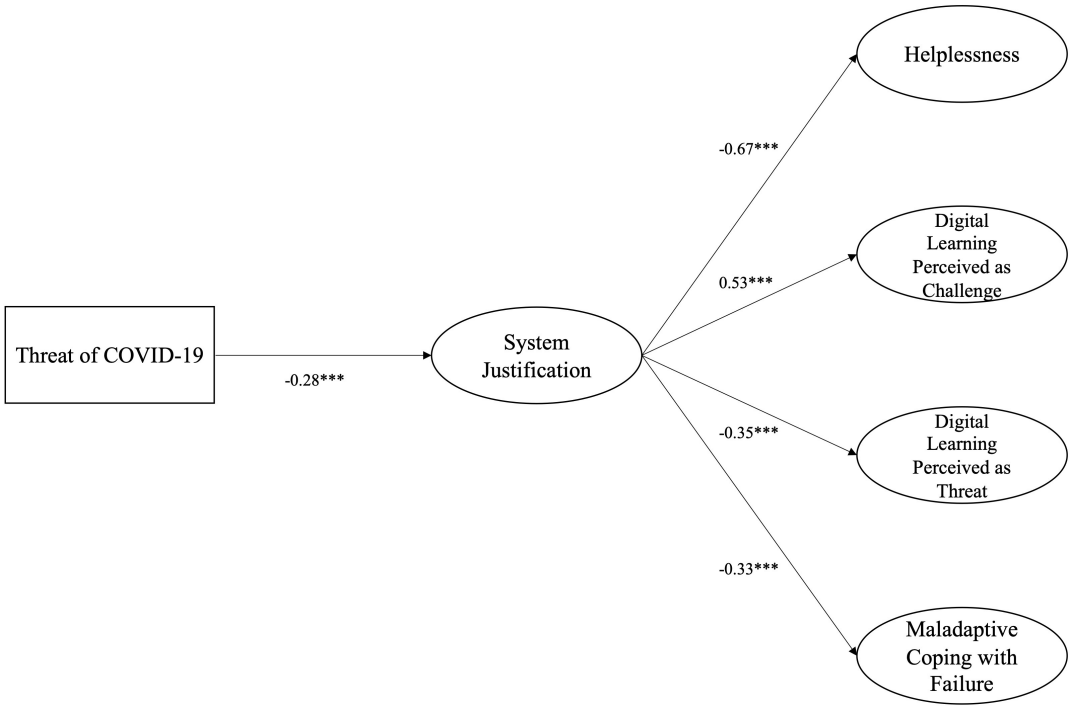

FIGURE 1 | Structural Equation model of the defensive function of system justification. N = 848, CFI = 0.943; RMSEA = 0.060; SRMR = 0.080. The model shows the unstandardized regression coefficients. Only significant paths are depicted. For paths, see **Supplementary Table 2**. ***$p < 0.001$.

Continuous-Generation Students

We investigated whether FGS and CGS differ regarding their use of system related defenses. Therefore, we tested the model above for FGS and CGS separately. For CGS, model fit was somewhat weak (CFI = 0.885; RMSEA = 0.065; SRMR = 0.126). Threat was negatively associated with all three defenses. For CGS, higher levels of threat led to significantly less system justification, $b = -0.23$, SE = 0.04, $p < 0.001$, 95% CI (−0.31, −0.16), academic identity, $b = -0.10$, SE = 0.03, $p < 0.001$, 95% CI (−0.14, −0.05), and social belonging, $b = -0.09$, SE = 0.04, $p = 0.029$, 95% CI (−0.16, −0.01). However, only system justification showed any relation to the dependent variables. The more CGS justified the system, the less helplessness, $b = -0.72$, SE = 0.14, $p < 0.001$, 95% CI (−0.99, −0.46), lower levels of threat perception of the learning situation, $b = -0.26$, SE = 0.08, $p = 0.001$, 95% CI (−0.43, −0.11), and maladaptive coping with failure they reported, $b = -0.37$, SE = 0.15, $p = 0.013$, 95% CI (−0.67, −0.09). Furthermore, a significant positive relationship between system justification and perception as a challenge was observed, $b = 0.44$, SE = 0.08, $p < 0.001$, 95% CI (0.28, 0.60). Neither academic identity nor social belonging had a significant impact on the dependent variables (see **Figure 3**).

First-Generation Students

For FGS, the model delivered a somewhat weak fit (CFI = 0.881; RMSEA = 0.069; SRMR = 0.141). Perceived COVID-19 Threat for academic progression was significantly related to system justification, $b = -0.30$, SE = 0.03, $p < 0.001$, 95% CI (−0.36, −0.25), academic identity, $b = -0.06$, SE = 0.03, $p = 0.020$, 95% CI (−0.11, −0.01), and social belonging, $b = -0.13$, SE = 0.03, $p < 0.001$, 95% CI (−0.19, −0.09). When FGS justified the university system they significantly reported less helplessness, $b = -0.48$, SE = 0.09, $p < 0.001$, 95% CI (−0.67, −0.32) and perception of the educational situation as a threat, $b = -0.31$, $SE = 0.06$, $p < 0.001$, 95% CI (−0.43, −0.21), but more perception as a challenge, $b = 0.52$, SE = 0.06, $p < 0.001$, 95% CI (0.40, 0.63). Academic identity led to less maladaptive coping with failure, $b = -0.40$, SE = 0.17, $p = 0.019$, 95% CI (−0.70, −0.05), but higher levels of perception as a challenge, $b = 0.20$, SE = 0.10, $p = 0.035$, 95% CI (−0.03, 0.34). Social belonging was significantly negatively related to the perception of the learning situation as a threat, $b = -0.25$, SE = 0.09, $p = 0.006$, 95% CI (−0.45, −0.09), and maladaptive coping with failure, $b = -0.36$, SE = 0.14, $p = 0.009$, 95% CI (−0.65, −0.11) (see **Figure 4**). Comparing both structural equation models, it suggests that FGS, in comparison to CGS, not only use system justification as a defensive strategy but also rely on their academic identity as well as their connection to peers and faculty staff.

Differences in Pathways for First-Generation Students and Continuous-Generation Students

There were a total of five paths that were either significant for FGS but not CGS, or vice versa: (1) System justification on maladaptive coping with failure, (2) academic identity on perception of the learning situation as a challenge, (3) academic

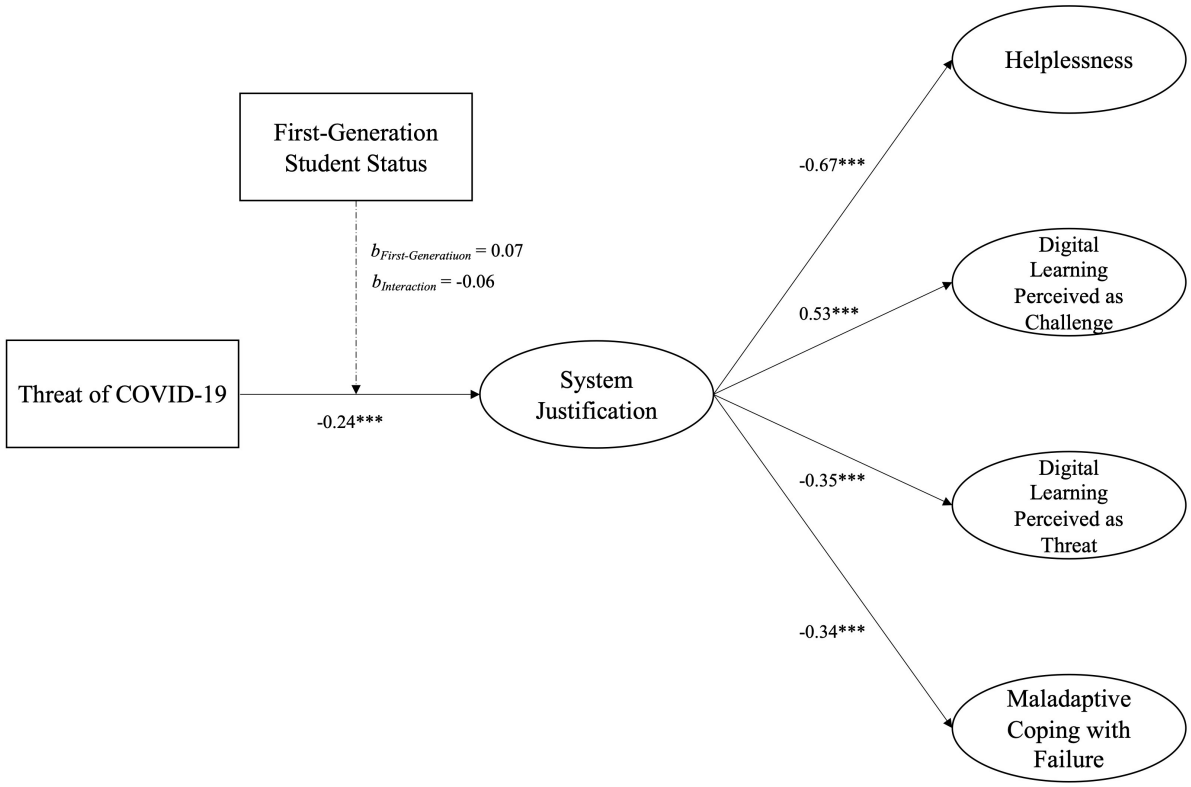

FIGURE 2 | Structural Equation model of the defensive function of system justification including first-generation student status. N = 848, CFI = 0.943; RMSEA = 0.055; SRMR = 0.077. The model shows the unstandardized regression coefficients. Only significant paths are depicted. For paths, see **Supplementary Table 3**. $^{***}p < 0.001$.

identity on maladaptive coping with failure, (4) social belonging on perception of the educational circumstances as a threat, and (5) social belonging on maladaptive coping with failure. To investigate whether first-generation student status had an influence on these pathways, we calculated moderation analyses.

To this end, we extracted all latent variables estimated by the structural equation model above and then conducted a multiple regression on the dependent variables (see **Supplementary Tables 6–10**). The corresponding collective defensive strategy, first-generation student status, and the interaction functioned as regressors. We found a significant moderation for social belonging and first-generation status on perception of the altered learning situation as a threat, $b = -0.21$, $p = 0.015$. Thus, FGS benefited more from social belonging in the form of close relationships than CGS and thus reported lower levels of threat perception. Moreover, FGS status moderated the association of social belonging on maladaptive coping with failure, $b = -0.32$, $p = 0.043$. Feeling socially integrated therefore had a significantly stronger impact for FGS than for CGS. In addition, results showed a significant moderation effect for the regression from academic identity and first-generation status on perception as challenge, $b = 0.22$, $p = 0.043$, with a significant main effect of academic identity, $b = 0.23$, $p = 0.006$. FGS interpreted the situation more as a challenge in comparison to CGS when reporting higher academic identity.

DISCUSSION

This large-scale study explored how first-generation and CGS differed in how they used system justification and social belonging as defensive strategies to cope with the threat of the COVID-19 pandemic to their academic progress. Firstly, we observed that the perceived threat of COVID-19 on academic progress was negatively related to system justification, such that students with higher threat perceptions also defended the university system less. System justification was used as a defensive strategy during the shutdowns by both CGS and FGS. Independent of their parental academic background, students who defended the academic system more reported less helplessness, less maladaptive coping, and perceived their altered learning situation as a challenge rather than a threat. However, we found that FGS reported significantly less system justification in comparison to CGS. Apparently, FGS do not fully exploit the defensive function of system justification. Using structural equation models, we explored the pathways FGS and CGS relied on when faced with this threat to their academic progress. CGS only used system justification as a defensive strategy to cope with the threat. CGS who justified the system more felt less helpless, perceived the learning situation as a challenge rather than a threat, and reported less maladaptive coping with failure. Academic identity and

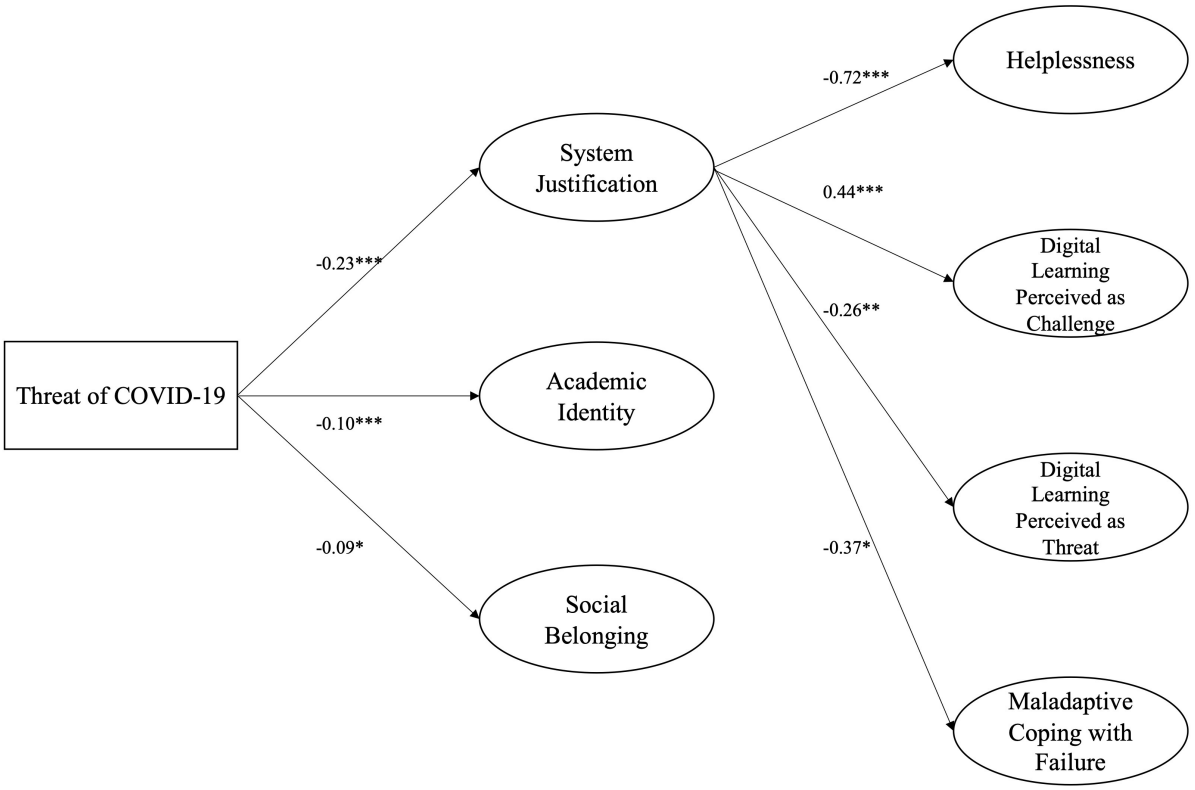

FIGURE 3 | Structural Equation model of defensive strategies for CGS. *N* = 333, CFI = 0.885; RMSEA = 0.065; SRMR = 0.126. The model shows the unstandardized regression coefficients. Only significant paths are depicted. For paths, see **Supplementary Table 4**. $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

social belonging were not significantly related to these threat responses. However, FGS relied on all three defensive strategies when coping with threat. Similar to CGS, they benefited when perceiving the university system as just; however, academic identity and social belonging in the form of personal relationships helped them cope more effectively with the threat to their academic progress.

Contribution to System Justification Theory

We explored the role of SJT under the acute threat of the COVID 19 pandemic. The observed higher levels of FGS are in contrast to classic system justification research (Jost et al., 2004). According to classic research, FGS should be a disadvantaged group due to their parental academic background, and defending the system should help them perceive their underprivileged position as more legitimate. While in our sample FGS and CGS indeed both benefited from this defensive function of system justification (i.e., reduced feelings of helplessness and threat as well as better coping with failure) FGS justified the university system not more but actually less than CGS. Although contrary to initial SJT research, our exploratory findings are in line with Caricati and Sollami (2018) who reported similar patterns when evaluating system justifications amongst disadvantaged people.

A possible explanation for this phenomenon could be that our sample of Austrian students may differ from other evidence regarding system justification amongst disadvantaged individuals. Extensive research on system justification has been conducted for groups who are in an underprivileged position in society in general due to their ethnic or socioeconomic background (Hässler et al., 2019; Negrete and Hurd, 2020; Essien et al., 2021). Although FGS are often part of other marginalized groups, for most FGS this disadvantaged position only applies to the isolated area of the tertiary education system. Moreover, representing approximately 60% of all students in Austria, FGS may be disadvantaged but are not the minority. In sum, our findings point to the need for further systematic research on the role of system justification in coping with threat, both for advantaged and disadvantaged groups.

When interpreting the present results with regard to previous research on FGS, it is important to take into account that most of the research on FGS has been conducted in the United States (Spiegler and Bednarek, 2013). Whereas in the United States, FGS account for only a third of all students, FGS in Austria are even in the majority with approximately 60%, as in our sample (Ives and Castillo-Montoya, 2020; Institut für Höhere Studien, 2021). In Austria, FGS might experience unique challenges on their educational pathways due to their parental academic background, but this applies to the majority of students. Therefore, connecting with peers might be particularly beneficial for FGS in Austria

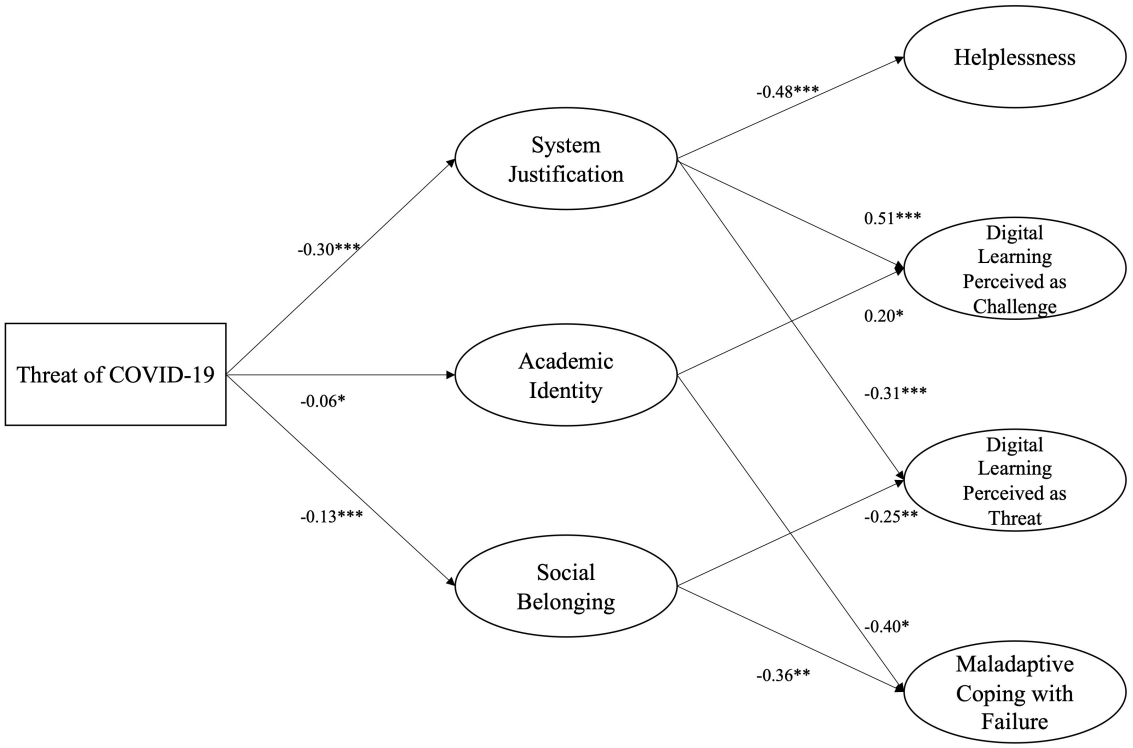

FIGURE 4 | Structural Equation model of defensive strategies for FGS. $N = 515$, CFI = 0.881; RMSEA = 0.069; SRMR = 0.141 The model shows the unstandardized regression coefficients. Only significant paths are depicted. For paths, see **Supplementary Table 5**. $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

as many students can relate to their shared situation. In our sample, FGS are disadvantaged (university-related social capital) but not marginalized. In the United States, they are most likely both. Another difference to the United States is the importance of tertiary education. Different to central Europe, the likelihood of attaining a well-paid job without a post-secondary degree is low (Greiner et al., 2004; Autor et al., 2008). This might lead to lower standards of living and resulting challenges. Therefore, the difference between FGS and CGS in the United States may carry more weight than it does in central European countries.

Contributing to Understanding Continuous-Generation Students and First-Generation Students at University

Our analyses indicated that CGS solely relied on system justification to cope with the pandemic threat. Academic identity and social belonging were not related to the perception and experience of CGS. Therefore, a university system perceived as just and legitimate by CGS can operate as a buffer against the burdening consequences of the pandemic. Close relationships with peers or a strong academic identity were not as important for students with parental academic background.

In contrast, our analyses showed that FGS rely on a variety of defensive strategies when faced with threat. Similar to CGS, FGS benefited from perceiving the university system as fair and legitimate. Yet, the importance of academic identity and social belonging set them apart from CGS. To effectively cope with the threat of the pandemic to their academic progress they relied heavily on concrete relationships with peers and faculty. Apparently, FGS benefit the most when they can trust and lean on a conglomerate of both abstract strategies, such as system justification as well as concrete defenses in the form of personal relationships. This is good news as FGS may have more strategies at their disposal and are not as dependent on system justification as CGS.

Abstract and concrete defensive strategies differ in the way they are available to individuals. Abstract strategies such as system justification are always at the individual's disposal since they are only mentally constructed. Furthermore, this resource can not be depleted and thus individuals can endlessly rely on it. In contrast, concrete defensive strategies such as social belonging require an external basis. Social belonging can hardly be established without making and maintaining personal relationships. In addition, these external resources, such as friendships, can be depleted, meaning individuals can not rely on them infinitely. Therefore, it is important for both CGS and, more especially, FGS to make use of abstract strategies in addition to concrete strategies.

Limitations and Future Research

Some limitations of our research should be noted. Although we draw on a large sample during a crucial time, we used a cross-sectional correlational design that precludes strong causal

conclusions. In our model, we proposed that students were first faced with the threat of the pandemic to their academic progress. Defensive strategies such as system justification or social belonging then helped them cope to feel less helpless or interpret the altered situation more as a challenge. However, it is also arguable that collective strategies come first. Students could feel less integrated with others and do not perceive the university system as just and legitimate in the first place, leading to them feeling helpless or cope less well with failure. These constraints could then be positively associated with perceived threat to their academic progress. We tested this approach by conducting another structural equation model (see **Supplementary Table 11**). The model showed a comparable fit to our initially suggested approach for FGS and CGS. Another option to be considered is that the perceived threat on academic progress, defensive strategies, and the feeling of helplessness for example could reinforce each other. High levels of perceived threat could lead to low system justification and then to increased helplessness, which then further fosters the perceived threat. This vicious circle makes it difficult to determine a precise causal model without experimental manipulation. In summary, it is yet to be investigated which causal relationships occur for both FGS and CGS following the threats to academic progress due to the COVID-19 pandemic. Therefore, we would encourage further research to focus on exploring the possible causal relationship. For instance, experimental manipulation could provide insight into whether FGS and CGS differ in the way they establish and capitalize on system justification as a defensive strategy.

Furthermore, this article presents a cross-sectional study. Thus, only statements about the students' situation at the beginning of the pandemic can be derived. Taking into account the rapidly and ever-changing dynamics of the pandemic it can be assumed that the pathways students use to cope also change. With the pandemic still ongoing, institutions have been able to make adjustments to improve the online learning environment. This could be especially beneficial to FGS as an increase in interactive tools allows for more social contact with their peers. Thus, it would be insightful to compare the students' situation and their strategies at the beginning of the pandemic to the current circumstances. In addition, we used social media to recruit participants for our study. Although the composition of our sample represents a large part of the target population, this method of collecting data could pose a limitation to the generalizability of our findings. We thus would encourage future research to strive for fully representative samples.

The somewhat poor fit of some of the structural equation models has to be taken into account when interpreting the results. Yet, this methodological approach to analyzing the data seems appropriate for several reasons. Firstly, it also allows us to test complex relationships between variables which assume occur in the field as well. More importantly, structural equation modeling uses latent variables for calculation and therefore is a more conservative analysis than other conventional regression-based models. The poor fit could also potentially stem from the adequate but not stratified sample.

We found that disadvantaged individuals, in our case FGS, justified the university system less than privileged students. This observation challenges a large body of research on SJT and is therefore in need of further replication. Future research could lead to a more balanced view of the role system justification plays for disadvantaged individuals. In particular, the defensive function of system justification when threatened could be further explored. Moreover, this study focuses on defensive strategies when faced with the threat of COVID-19 pandemic solely in tertiary education. To further understand the role of these strategies it would be interesting to investigate the function of system justification and social belonging in the younger population in general. Are these defensive strategies bound to the university system or are these opportunities to cope with the threat of COVID-19 on educational progress transferrable to primary or secondary schools?

The different pathways FGS and CGS use give an insight into how to support disadvantaged groups such as FGS in threatening situations. With FGS being heavily reliant on concrete personal relationships to cope effectively with the altered learning situation, educational institutions should foster possibilities for students to connect. This could be accomplished by establishing more interactive courses and using innovative digital tools through which personal contact can be easily increased. Furthermore, institutions can focus on setting up or maintaining extracurricular activities even in pandemic times to encourage these personal relationships. That could lead to higher social belonging among FGS and CGS, making it a reliable resource for coping with threats to their academic progress. Fostering social belonging through interventions may be particularly beneficial for disadvantaged students, in our case FGS. Walton and Cohen (2007, 2011) showed social belonging interventions improved academic outcomes, particularly amongst disadvantaged and minority students, reducing the academic achievement gap to privileged students. As FGS seem to rely on social belonging as a defensive strategy when threatened, they could particularly profit from these interventions.

Besides interventions or adaptations by the university, students can also make changes to their own behavior to help them cope with the COVID-19 pandemic. Recent research indicates that planning is an effective way for groups and teams to navigate through pandemic times. In particular, collective implementation intentions, or We-if-then planning, seems to be beneficial when under threat (Thürmer et al., 2013, 2020, 2021; Wieber et al., 2015). By planning collectively (e.g., maintaining or establishing learning groups) students could attain their goal of making academic progress more effectively.

CONCLUSION

In conclusion, this study explores how students use defensive strategies such as system justification and social belonging to cope with the threat of the COVID-19 pandemic to academic progress. We observed that the parental academic background of students played an important role in which of these strategies students relied on. CGS only benefited from abstract defenses,

such as justifying the university system, whereas FGS relied on a conglomerate of both abstract and concrete strategies, like personal relationships. We hope that our research will contribute to helping all students succeed and reach their full potential.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Ethikkommission Universität Salzburg. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work, and approved it for publication.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.768334/full#supplementary-material

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OPINION
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Future Directions in the Research on Unemployment: Protean Career Orientation and Perceived Employability Against Social Disadvantage

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Keywords: unemployment, protean career orientation, employability, career planning, job search strategies

INTRODUCTION

The level of uncertainty and fear introduced by COVID-19 pandemic has threatened the relationships, work and meanings of existence.

From the point of view of the labor market, the COVID-19 crisis has undermined the illusion of security at work, leading to a massive career shock and accentuating the existing inequities in the labor market, with severe economic and societal implications in terms of career experiences, job opportunities and career paths (Akkermans et al., 2020). During a pandemic, the loss of employment opportunities represents a source of fear which aggravates the intense concerns and anxieties about health and death.

According to a preliminary report from the International Labor Organization (ILO., 2020) estimating between 5.3 and 24.7 million unemployed, the most negative impact will be felt by low-wage and low-skill employees. Jobless individuals tend to be those who have had precarious jobs in fields that typically do not offer long-term contracts, decent wages, and health benefits (ILO., 2020).

Since the individuals' work-lives represents a source of motivation, expression of personal believes and high-quality interpersonal interaction (Crayne, 2020), reconstructing life after this pandemic will need to consider a new perspective of work as a core value in creating decent and decorous work, which has been limited by COVID-19 crisis (Blustein and Guarino, 2020).

This situation has leading researchers to ask questions about the processes by which individuals cope with a job loss experience and the mechanisms triggering attitudes of resilience and exploration of sustainable careers that would imply seeing oneself either in a constantly evolving path, or developing additional skills, or retooling for other jobs and building new career networks (Hite and McDonald, 2020). Studying these aspects will help direct active labor policy interventions aimed at promoting and supporting the employability of people looking for work.

THE LITERATURE ON UNEMPLOYMENT

Most literature has focused on the negative effects of job loss on well-being, such as physiological symptoms, depression and suicide (McKee-Ryan et al., 2005; Paul and Moser, 2009; Wanberg, 2012), limited to the examination of the influence of stress, response, and coping with the results of one's job loss (Gowan, 2014). This is also reflected in the social negative evaluation of being unemployed and the stigmatization of personal weaknesses of the unemployed, which in turn lead to less sympathy, and finally to disadvantaged hiring decisions (Monteith et al., 2016).

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In fact, from the point of view of the dominant outgroup represented by employed persons, the stigmatization of unemployment status influences recruiters, hiring managers, and interview panelists in the decision to not hire an unemployed worker. Unemployment status as a social identity is shamed, as with other stigmatized social groups, and psychological processes associated with social identity and stigma contribute to the discrimination (Norlander et al., 2020). Particularly, people who possess system-justifying beliefs are more likely to judge unemployed and their deservingness negatively. Beliefs in a just world are likely to affect negative judgments of an unemployed person's competences (Monteith et al., 2016).

From the point of view of the unemployed themselves, the social stigma of the unemployed as being unmotivated, depressed and without professional abilities or personal resources can generate feelings of weakness and blushing on jobless people, and may in turn negatively impact social connections (Grimmer, 2016). McFadyen (1995) argued that the coping processes used by unemployed people to face this stigma could be influenced by whether they categorized themselves as unemployed or adopt some other categorization.

The social identity approach sustained that social image that arises from group memberships has important consequences for how people view and feel about themselves, and also how they are viewed and evaluated by others. If social identities do not provide positive resources for group members, this negatively reflects on individual self-esteem and well-being (Jetten et al., 2017).

The researches that have focused on the attributional processes used by jobless individuals to explain their condition are heterogeneous and also COVID-19 crisis seems to have altered these processes.

On the one side, unemployment is an undesirable and uncontrolled event and there is an ample literature focused on this view. In this sense, from the unemployed person's point of view on his/her perception of social disadvantage, some studies showed that jobless individuals generally show a greater empathy with unemployed people and attribute unemployment to environmental, rather than personal, factors (Furåker and Blomsterberg, 2003; Van Oorschot and Meuleman, 2014). They seem to justify their situation as a painful experience beyond their control. Consistent with a social identity theory perspective, some authors underlined that jobless individuals use both intragroup and intergroup comparisons and these processes were related to their self-esteem. In period of very high unemployment, like the current one where the stigmatization is less pronounced because external causes are attributed to unemployment, the perception of being similar to the unemployed group (at the intra-group level) enhanced feelings of self-worth. However, greater perceived differences between unemployed people and employers were associated with reduced self-esteem (Sheeran et al., 1995). This finding supports the view that feelings of self-worth are contingent, at least in part, on the perceived status of one's own group relative to other groups (Sheeran et al., 1995).

On the other side, there is also evidence that unemployed people do not share similar experience of unemployment (Creed et al., 2001). (Creed and Evans, 2002) highlight the importance of individual differences when considering the psychological impact of unemployment. In fact, some researchers have found that jobless people hold a stronger prejudices and stigma on unemployed individuals than do employed individuals, especially regarding overall value, ability, motivation, and mental health (Takahashi et al., 2015).

In addition, a few studies on the process of in-group identification showed that the unemployed identified little with their own disadvantaged category, which was perceived as a group to distance themselves from (Wahl et al., 2013). In this sense, unemployed could carry out a process defined by literature as self-group distancing that represents an individual mobility response to dissociate from their stigmatized in-group and avoid the negative experience of being stigmatized (Van Veelen et al., 2020).

Other studies have underlined that the process of in-group identification seemed to be more related to the personal stress one experienced (Ybema et al., 1996), or to family-extended employment (Curtis et al., 2016), or to length of time they are unemployed (Cassidy., 2001), rather than to a comparison between social categories characterized by different statuses. In terms of effects of self-categorization on social support, locus of control and problem-solving, previous experience of unemployment plays a crucial role (Cassidy., 2001). In a Danish study (Pultz and Mørch, 2015), researchers showed that some jobless individuals challenge the traditional representation of the unemployed and describe them as innovative, skilled and able to cope with economic insecurity even though it is stressful. These authors take up the concept of strategic self-management, which refers to a pro-active career orientation.

The identity of "unemployed" can be perceived as flexible and transient, and how person adopts this identity has implications for the person's core cognitive beliefs that influence person's ability to adapt to career events (Thompson et al., 2017). The possibility of perceiving one's unemployment status only as a phase of one's working career and not as a condition of a stigmatized social group could be due to the perception of the permeability of the boundaries between groups of unemployed and employed people. Probably even today, in a situation of large-scale emergency crisis, the boundaries between employed and unemployed people are still much less clear and the perception of failings, poor competencies and welfare stigma previously attributed to the unemployed has changed consistently. In fact, from the out-group point of view, in the HR selection process evaluators tend to have less bias toward unemployed individuals because unemployment has become today a vast and global scale phenomenon (Suomi et al., 2020).

Also from the in-group perspective, unemployment is now much more seen as a temporary phase of the career path rather than a fixed social category. Rather than justifying the system that excluded them from the productive world, which is an attributional process that usually characterizes employed workers in their perception of unemployed category (Monteith et al., 2016), some employees who have lost their job seem to be more engaged in coping with the resulting change and the discontinuity of their working life.

The framework of a career planning concept and career paths over time (Wanberg, 2012) could be considered as yet another approach through which it is possible to examine job loss, by pointing out the dynamic career planning activities over the course of one's unemployment. Furthermore, research focusing on career exploration during the unemployment conditions following a job loss, has the potential to reconsider and change the meaning of job loss to individuals (Zikic and Klehe, 2006).

Our contribution moves in this direction, as it explores some constructs that can influence the perception of unemployment directly from people experiencing job loss, and could be the precursor to a more realistic interpretation of the condition of social disadvantage, thus promoting a more proactive attitude toward job reintegration.

Particularly, we will focus on protean career orientations that play a pivotal role in the search for growth opportunities within the job loss transition and that help people to face, not only the negative factors associated with their situation of uncertainty in connection with the crisis of their professional project, but also to re-evaluate their wider life goals and career paths (Waters et al., 2014).

The protean career concept is strictly related to the employability that refers to "individual's beliefs about the possibilities of finding new, equal, or better employment" (De Cuyper et al., 2011). It arises from a combination of knowledge, practical skills and abilities that individuals develop over the course of their working life in order to achieve their career path, allowing them to make sense of their previous professional experiences and to explore new opportunities (Fugate and Kinicki, 2008).

THE PROTEAN CAREER ORIENTATION AND PERCEIVED EMPLOYABILITY AS KEY STRATEGIES FOR WORK REINTEGRATION

Current literature on unemployment emphasizes how the success of one's job search depends on the sense of individual responsibility and the desire for self-fulfillment in guiding one's career choices, as well as individual beliefs about the possibility of achieving one's goals. In this sense, the concept of Protean Career Orientation (PCO) refers to one's attitude toward career choices, based on the search for self-realization. This attitude implies that an individual is responsible for managing his/her own career and for making career-related decisions shaped on personal values, rather than labor market demands (Briscoe and Hall, 2006).

The two aspects of a protean career orientation are: being self-directed and being value-driven. Self-direction refers to the degree to which an individual has control over his/her own career (Mirvis and Hall, 1994). The aspect of value-driven places career decisions as closely linked to one's own personal values, rather than one being driven by categories of the social system (Briscoe and Hall, 2006). As underlined by Lysova et al. (2015), the sense of meaning that workers derive from work, however, is impacted by work values, understood as the end states people desire and feel they ought to be able to realize through working (Nord et al., 1990). People who show a high level of intrinsic values, as freedom and self-growth, has an higher protean career orientation and defines career success in terms of psychological factors as compared with traditional career; protean career orientation is also focused on continuous learning in professional development (Hall, 2004).

One of the critical aspects connected with the state of unemployment is the perception of uncontrollability, which can lead one to focus on external factors and to feel closer to other social disadvantaged groups (Bukowski et al., 2019), rather than to focus on internal motivational resources. On the other hand, in the context of unemployment, the protean career orientation activates a reverse process of reworking one's career path, offering a different interpretation of one's social condition, because the person focuses on his/her aspirations and goes back to feeling like he/she still has the personal resources to invest in a new professional project. The prerequisite for a protean career attitude is the overcoming of the categorization and evaluation imposed by the external social world, because those values are founded on the notion of career actors—as opposed to organizations—who take responsibility of their own careers (Hall, 2002). Protean people seem to have more internal control over their career path and this is in line with unemployment research, that underlined the role of internal LOC in predicting reemployment (Meyers and Houssemand, 2010). Applying the perspective of the social determination theory to unemployment, some authors (Vansteenkiste et al., 2005) found that perception of being forced to search for a job, moving by controlled motivation accompanied by stressful and pressuring experiences, negatively predicted their general health. On the contrary, if unemployed perceive the search for a job as an autonomous and personal choice because employment is seen as an opportunity to develop their skills, they have an internal motivation that enhance behavioral effectiveness, greater volitional persistence, and enhanced subjective well-being. This motivational process is the basis of the perception of controllability of the protean orientation. Also social cognitive career theory highlighted the importance of self-regulatory efficacy, which involves beliefs about controlling motivational aspects of the job search, and personal goals, as behavioral intentions to act in ways that produce desired outcomes, in predicting reemployment success (Thompson et al., 2017).

In this sense, when considering re-employment, Waters et al. (2014) emphasized that a protean career orientation helped individuals to clarify and express their goals during unemployment and to find a sense of positive identity (Zafar et al., 2017).

Secondly, another core aspect is related to the loss of self-esteem (Kanfer et al., 2001), that represents a psychological consequence of unemployment. During unemployment PCO may help unemployed people to maintain a positive self-esteem. Protean orientation could be interpreted as a mechanism through which unemployed feel much more similar to people who belong to the world of work and activate a self-group distancing process also for the type of careers that characterize working life. In fact, there were disruptive and macroeconomic factors in the labor market that have changed how individuals conceptualize their

careers more fragmented and discontinuous compared to the past (Briscoe et al., 2012).

People who manage their careers from a protean orientation do not link their career identity to the organization and loss. This perception does not lead to the lack of the sense of identity that sometimes occurs after the job loss (Waters et al., 2014). Instead, people with low PCO levels will be less proactive in finding resources for the enhancement of their skills, and their level of self-esteem will likely be lower during the period of unemployment. This can discourage people from looking for a new job, as it affects the belief that they can find it (Hirschi et al., 2017).

Thirdly, people with a high protean career level become more independent and flexible in managing their career opportunities in response to social changes in work organization (Wiernik and Kostal, 2018). In the literature, the concept of protean career has been associated with the concept of boudaryless career which refers to a career characterized by different levels of physical and psychological movement among organizations (Sullivan and Arthur, 2006), which metaphorically recalls the permeability of the boundaries between workers and unemployed. Consequently, high-PCO individuals are in charge of their own career development (Hall et al., 2018) and can adjust to the current dynamic labor market. People with a high PCO tend to: be more learning-oriented; have high self-esteem and clearer goals; and formulate specific career plans (Li et al., 2019).

This proactive attitude translates to a more effective job search during unemployment (Waters et al., 2014). In fact, adopting a protean self-directed approach may lead individuals to regularly explore the situation of work environment in order to increase their chances of finding a job that will help them achieve their personal projects.

Self-managing one's career leads people to become more aware of their acquired professional skills but also increases the knowledge and competencies required in the labor market (Bozionelos and Bozionelos, 2015).

In this sense, recent studies have shown that people oriented toward a protean career are likely to have a high level of perceived employability (Baruch et al., 2019; Cortellazzo et al., 2020).

The perceived employability is the second key construct that plays a central role in managing one's work history in unemployment conditions.

When considering changes in career development and paths, increasing one's employability is an important task for both the unemployed and those seeking new employment, as their career may depend on perceived employability.

Employability has been studied mainly from three perspectives. Fugate and Kinicki (2008) proposed a dispositional approach to employability which identifies a range of traits (for example, openness to change, proactivity, and resilience), that facilitates proactivity in adapting to work and career environments. Van Der Heijde et al. (2006) elaborated a competence-based conceptualization of employability, in which the dimension of occupational expertise is complemented with four general competences: anticipation and optimization, personal flexibility, corporate sense and balance. The authors distinguish between two different types of adaptation to changes in the internal and external labor market, the first one that is referred to as anticipation and optimization, and one more passive variant entitled personal flexibility. The concept of corporate sense refers to participation and performance in different workgroups, such as the department, working teams, occupational community or other networks. Finally, balance is defined as compromising between opposing employers' interests as well as one's own opposing work, career and private interests. Finally, the third perspective focuses on perceptions of employability which Vanhercke et al. (2014) define as the individual's perceptions of possibilities of obtaining and maintaining employment.

In the field of unemployment, we refer to the third perspective concerning external perceived employability, that has been also defined by Berntson et al. (2006) as the subjective individual perception of the ability to evaluate one's skill at getting a job. In this sense, employability represents the perception of employment opportunities with the current employer or with another employer (Rothwell and Arnold, 2007; De Cuyper and De Witte, 2008). The subjective perception, in fact, of being able to relocate to the professional world had a strong motivational impact, which in turn affected the implementation of realistic assessments of one's actual possibility of relocation and the use of functional strategies to achieve one's professional goals (Van den Broeck et al., 2010), such as skill development (De Vos et al., 2011; Vanhercke et al., 2014).

Furthermore, perceived employability increases the feelings of control over careers and job search activities, and it is related to a minor duration of unemployment, and to re-employment (Consiglio et al., 2021).

Research also showed that perceived employability could help mitigate the negative effects of job loss, such as emotional implications (Hodzic et al., 2015; Consiglio et al., 2021).

In the context of job loss, individuals who are more employable will perceive less impairment from the job loss, will engage in more job search activity and will achieve higher quality reemployment (Fugate et al., 2004). Koen et al. (2013) showed that employability also increased long-term reemployment opportunities (McKee-Ryan et al., 2005; Paul and Moser, 2009; Lim et al., 2016; Lo Presti and Pluviano, 2016). Perceived employability could represent an individual's belief that reduces the differences with the people who are in the job market because it focuses on the perception of one's personal skills and opportunities for change affecting proactive behaviors and cognitive reinterpretation of job loss. According to social identity theory, especially if boundaries between groups are perceived more permeable, protean career orientation and perceived employability could be seen as an individual mobility strategy to distance from a devalued social group and achieve more positive social identities.

Protean individuals who see themselves as more employable are less likely to feel as they are part of a stigmatized category allowing to protect themselves from social stigma, even if the stigma consciousness of employment does not always have negative consequences in terms of proactivity (Krug et al., 2019) especially in in the context of the COVID-19 health crisis. A high levels of protean career orientation and perceived employability

allow to evaluate the experience of unemployment differently and this approach leads jobless individuals to believe in the future. In fact, their perception of available opportunities in the labor market may be selective and more engaged in targeted research (Zakkariya and Nimmi, 2021).

CONCLUSION

As a career shock, the COVID-19 crisis has led us to develop new studies to identify and implement targeted actions that could contribute not only to improving the general well-being of unemployed persons, but also to increasing their likelihood of finding work.

In the actual socio-economic context characterized by a general lack of job opportunities, and considering the diffusion of new career paths characterized by frequent work changes and transitions, our question is: "Are the unemployed still stigmatized or do they perceive themselves to be a disadvantaged category today?".

Following the economic consequences of the pandemic, the social perception of unemployment has changed, limiting prejudices against jobless people by employed individuals. This could have an impact on the unemployed perception of their work condition. Unemployed people should therefore suffer a lesser loss of the sense of self-esteem and self-efficacy and rely on their own proactivity to find a new job. To be successful in finding employment a person must believe they have the skills and abilities to do so. In this sense, gaining deeper understanding of the role of a protean career orientation and of perceived employability can offer unemployed people new ways to create change for themselves. In fact, people with a high level of protean career and employability are less likely to feel that they are part of a disadvantaged category, have a high self-esteem and self-efficacy, as they evaluate their experience of unemployment differently and this approach activates proactive behavior in preparatory and active job search.

Even in the case of unemployed individuals seeking guidance and advice to support their return to the labor market, protean people with a high level of perceived employability tended to better estimate their skills and better define their professional goals by identifying possible perspectives for getting out of the unemployed group in which they do not recognize themselves.

In terms of career counseling, working with unemployed clients should focus on building positive perspectives in connection with the clients' career goals and their sense of self direction and responsibility in order to promote control over their career paths. In fact, people with high levels of PCO are less identified in a disadvantaged social category, and this aspect could be used during the counseling to modify the cognitive interpretation of the unemployment status and promote proactivity and agency. In this sense, a counseling centered on protean career orientation and perceived employability should be compared to the develop of proactive coping strategies. Counselors should help people to evaluate the period of unemployment as an opportunity to redefine professional goals in a flexible way and develop a plan for achieving them. For example, starting by the reflection on the pandemic situation in terms of changed traditional working methods and roles, counseling can be viewed as a chance to invest in training and updating one's skills, to respond to a significantly changed labor market, especially from the point of view of digital skills. High PCO and perceived employability represent a great motivational and emotional investment in job search that can help to reach job goals, but it may happen that unemployed have to face difficulties and failures in job search. In this sense, a high PCO allows people to collect informations and reflect about their skills, and make plans based on realistic and objective opportunities. Through this step of research and evaluation, people should gain self-awareness and define achievable goals and evaluate alternatives in case of failure, protecting themselves, partially, from emotional negative consequences.

Furthermore, when the protean career orientation is adopted, employability is more effectively used in job searching, because unemployed become more aware of their values, projects, technical and soft skills and develop proactive career strategies (Panari et al., 2020). This perspective can maintain a positive sense of personal professional identity whilst focusing on solutions to get out of the social disadvantage, rather than on the causes of the unemployment situation.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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Brexit and Trump: Which Theory of Social Stasis and Social Change Copes Best With the New Populism?

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Why do voters seek to change the political landscape or to retain it? System justification theory (SJT) proposes that a separate system motive to *preserve* the existing order drives support for the status-quo, and that this motivation operates independently from personal and collective interests. But how does this explanation apply to recent populist shifts in the political order such as Brexit and the emergence of Donald Trump? While the system motive may seem useful in understanding why the usual progressives (Remain/Clinton voters) may want to stick with an established order, it seems insufficient to explain why the more conservative voters (Brexit/Trump voters) would want to upend the establishment. Thus, we compared SJT's system motive explanation for the system attitudes of voters on both sides of the political divide to an alternative explanation drawn from the newer social identity model of system attitudes (SIMSA). According to SIMSA, the difficulty in explaining the system attitudes of Brexit/Trump and Remain/Clinton voters from SJT's system motive standpoint can be resolved by focusing instead on the *collective interests* that both camps seek to satisfy with their votes. We examined these explanations in two studies conducted soon after Brexit ($N = 313$) and Trump's election ($N = 289$) in 2016, with results providing more support for SIMSA than for SJT.

Keywords: Brexit and Trump, social identity, SIMSA, system justification, disadvantage, voter attitudes

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INTRODUCTION

There has been a growing anti-establishment populism in Europe and North America (United States), of which Brexit and Donald Trump's election to the office of the US president are two prominent examples. In these examples, the populists have clamoured for a change to the status quo vis-à-vis the United Kingdom exiting the European Union (EU; Brexit) or the election of a non-politician, anti-establishment member of a nonincumbent political party to power (Donald Trump). In contrast, opponents of these movements have sought to maintain the existing social order by retaining the United Kingdom's membership of the EU or nominating a professional politician who is a member of the incumbent political party and the Washington establishment (Hillary Clinton). In the present paper, we referred to these two political developments in order to examine how prominent social psychological theories account for social stasis and change. Specifically, we investigated explanations derived from system justification theory (SJT; Jost and Banaji, 1994) and the social identity model of system attitudes (SIMSA;

Owuamalam et al., 2018, 2019a,b) regarding the motives underlying people's political attitudes and voting preferences.

System justification theory (Jost and Banaji, 1994) proposes that a fundamental *system justification motive* helps to explain why people might want to cling on to existing systems. Central to SJT is the idea that people have an inherent need to preserve societal hierarchies "even at considerable cost to themselves and to fellow group members" (Jost and Hunyady, 2005, p. 260). According to SJT, threats to the status quo can often bring about uncertainties, and the resulting fear and anxiety could, in turn, undermine people's control over their life's outcomes (see Jost and Hunyady, 2005; **Table 1**). Hence, people (e.g., British EU referendum and US election voters) may be motivated to *rationalize* the status quo in order to escape uncertainty and to maintain control over their lives.

However, much of the theoretical debate between system justification theorists (e.g., Jost et al., 2004, 2019; Jost, 2019, 2020) and social identity theorists (Spears et al., 2001; Reicher, 2004; Rubin and Hewstone, 2004; Owuamalam et al., 2019a,b) has centered on whether a system justification motive is *necessary* to explain cases of system support or change, especially among people who might be disadvantaged by the established political system. Social identity theorists have suggested that a separate system justification motive may not be necessary to explain system justification-like attitudes, and that rationalization of the status quo may be more parsimoniously explained as either (a) a passive acceptance of the social realities of the intergroup context (Spears et al., 2001; Rubin and Hewstone, 2004), (b) a form of ingroup bias expressed at a superordinate level of self-categorization (e.g., Afro-Americans may support American systems when their collective American identity is salient; Caricati et al., 2021), or (c) an identity-management strategy in which the system is supported in the hope that it will eventually yield benefits for the ingroup Owuamalam et al., 2016a, 2017, 2021; Bonetti et al., 2021; Carvalho et al., 2021). We refer to this family of social identity explanations as the social identity model of system attitudes (SIMSA; Owuamalam et al., 2018, 2019a,b). Crucial to SIMSA is the idea that group-interests drive attitudes toward both stasis or change: People support the established order or want to change it because of their identification with relevant social groups (see also Caricati and Sollami, 2017). Our central question is how well SJT and SIMSA can be applied to understanding the political populism represented by Brexit and Trump, in the context of a change that seems driven by "reactionary radicalism"?

THE NEW POLITICAL POPULISM

By *the new political populism* we mean recent social movements, epitomized by Brexit in the United Kingdom and the election of Trump in the United States in 2016, in which a backlash against the prevailing political establishment seemed apparent. This populism is typically right-wing (i.e., more conservative-leaning) rather than progressive/liberal, and it can also be seen in authoritarian and anti-immigration shifts in other European countries (e.g., Germany, Hungary, Turkey, etc.).

We argue that this new political context raises a problem for SJT. SJT equates resistance to change as support for the "system," which is typically seen as the established social order. However, because the new populism in some respects goes against the prevailing political order, and is mostly championed by people on the political right, it places SJT in contrast to the impetus for this populism because it promotes radical (political) change rather than support for the existing establishment. On the other hand, because this populism is typically conservative in character, it also arguably harks back to an even older and more established political order and its associated values. For example, Brexit involved a nostalgia for a lost political sovereignty that might be regained, and Trump's election reflected the reassertion of America internationally and the largely white working- and middle-class at home. Common nationalist and anti-immigration themes thus define this radical but reactionary agenda. In short, it is not clear how SJT orients to this more ambiguous political landscape despite a recent foray into this topic (Azevedo et al., 2017). In particular, it is unclear how the typical system justification motives might predict political attitudes in this context. Where exactly do we locate "the system" that might be justified in this context? This question is especially important in light of the operational dogma of the system justification motive, defined as a force that propels people to support "existing" arrangements in their society, otherwise referred to as the status-quo (Jost and Banaji, 1994, p. 2; Jost et al., 2004, 2017, p. 883, p. 74; Jost, 2019, p. 263, 265, 266). Thus, while we can extrapolate some principles around support for stasis vs. change from SJT, we may need to be circumspect about what to predict on the basis of SJT in this new and ambiguous context.

In contrast to SJT, SIMSA is more grounded in the intergroup analysis of social identity theory (Tajfel and Turner, 1979), which emphasises collective interests while being less dependent on defining "the system." This emphasis on "the group" rather than "the system" makes prediction in this political context arguably less problematic. Specifically, SIMSA predicts that political motives will typically reflect the group identities and interests of the camps involved without a separate motivation to defend the status quo, or system as such, however this is defined by SJT.

In the present research, we *explored* whether each theoretical framework (SJT and SIMSA) could account for political attitudes in this specific political context. We measured the relevant motives, including uncertainty avoidance, the need for control, and the pursuit of group interests. We then examined which motive(s) were most predictive in the Brexit and Trump contexts.

One of the central assumptions of SJT is that a system justification motive is most visibly demonstrated among the disadvantaged because supporting the status quo is oppositional to their personal and group interests. Hence, we also measured participants' social class as an index of advantage and disadvantage (Jost et al., 2004, p. 887; see also Brandt, 2013; Brandt et al., 2020). Following SJT, the salience and/or strength of collective interests should be less prominent reasons for system support among those at the lower rung of the social class ladder. In contrast, for SIMSA, collective interests are key predictors of

system attitudes, even among members of disadvantaged groups. Note that, following past research, we included both subjective measures of social class (based on a sense of personal power; Van der Toorn et al., 2015) and objective measures (based on income band; Li et al., 2020; Buchel et al., 2021).

STUDY 1: THE UNITED KINGDOM'S 2016 EU REFERENDUM

The United Kingdom is one of 28 member states of the EU. However, there has been a popular concern in the United Kingdom over the EU's policy of free movement between borders, with perceived (or actual) pressures on social systems, such as healthcare, education, and social welfare, especially in regard to EU citizens moving from less affluent nations (e.g., Poland) to more affluent member states (e.g., the United Kingdom). However, despite the unpopularity of immigration in the United Kingdom, opinions were clearly divided about whether to leave the EU or to remain in it. Those who wanted to *leave* the EU were concerned about sovereignty and the pressures that mass immigration places on their societal systems, whereas those who wished to *remain* were concerned about escaping economic uncertainties and avoiding the loss of the benefits of EU membership.

These political conditions provided a context within which to test SJT's propositions because the relatively high levels of system threat (Jost and Hunyady, 2005), system dependency (Kay et al., 2009), and system inevitability (Kay and Zanna, 2009) provide optimum conditions for system justification. For example, there was a clear threat to the status quo vis-à-vis (a) the possibility of detaching the United Kingdom from the EU and (b) the potential of the collapse of the EU. Also, citizens depended on their EU membership to travel freely across European borders (i.e., high system dependency). Finally, our study was conducted post-referendum when the outcome was known and a new Brexit era became inevitable. Hence, following our deductions from SJT's system inevitability caveat, we reasoned that the motives underlying the system justification effect would be more visible among active supporters of the status quo (i.e., remain voters) in the immediate aftermath of Brexit (i.e., rendering the remain voters by this point the clearly disadvantaged group). We measured participants' support for the new Brexit order in the current study and, based on a straightforward reading of SJT's inevitability caveat, we anticipated that Remain voters should succumb to the inevitability of the new Brexit order and offer their support to it.

However, as we noted earlier, this reasoning can also be countered by the argument that the Leave/Brexit camp harks back to a reassertion of the system, qua political sovereignty of the United Kingdom, prior to joining the EU. This ambiguity renders the test as more *exploratory* with respect to SJT and the role of its key predictors. Indeed, the exploratory nature of the assumptions that we derived from SJT's system inevitability caveat is also compounded by what we already know from classic (e.g., Paicheler, 1979) and contemporary (Van Bavel and Pereira, 2018) views about bipolarization and the hardening of attitudes in an opposing group context, which point to the possibility of remain voters clinging on to their preference to stick with the EU post-referendum. These ambiguities, however, do not present as much of a problem for SIMSA's explanation for system justification because it relies on the premise that people act in their collective interests. Hence, a SIMSA-based account would predict that both sides of this political divide will see their position and/or voting preferences as being tied to their group interests.

Method

Sample Size and Participants

The most nuanced analysis in our design involved the relationship between the antecedents of system justification and voter group as a function of social class (equivalent to an ANCOVA with one moderating covariate plus the interaction term). Assuming a small-to-medium effect size of $f = 0.20$ (Cafri et al., 2010) and a numerator $df = 1$, we determined from G*Power (Faul et al., 2007) that we would need 199 cases to power this analysis if we set power to 0.80 and, 265 cases if we set power to 0.90 (Cohen, 1992). We therefore aimed to recruit up to 300 participants (a) to account for unusable data and (b) to provide a more powerful test of our predictions. Data collection was completed within 2 weeks of the 2016 EU referendum. The response rate was high, with 426 attempts from members of the Prolific participant pool. However, only 313 of these attempts contained complete and usable data.[1] To ensure quality data, we excluded participants who spent less than 5 min completing our 15–20 min survey, which also included measures that were unrelated to specific ideas that are discussed here. Participants (128 men, 185 women, $M_{age} = 34.64$ years, $SD_{age} = 12.67$ years) were mainly Whites, residing in the United Kingdom, and who voted in the 2016 EU membership referendum. They received a pro-rata payment of £5 per hour in exchange for participation. We programmed Qualtrics to collect an equal number of cases for each group of voters, and while the numbers in each group varied slightly after excluding unusable cases, this difference was negligible: *remain* ($n = 168$) and *leave* ($n = 145$) voters, $X^2(1) = 1.69$, $p = 0.194$.

Materials and Procedure

Participants were first asked to indicate what their actual votes were. Specifically, participants indicated their voting record by selecting one of the following two options: "I voted to leave the EU" vs. "I voted to remain in the EU." Participants then responded to the following motive items which we treated as

[1]The studies reported in this paper were posted online *via* Prolific.ac with a link to Qualtrics where they were set-up. We *manually* screened participants in order to generate roughly equal numbers of Remain/Hillary Clinton and Leave/Donald Trump supporters, a screening options in Prolific.ac at the time. Therefore, those who clicked the study link and read the study information but then found out that they were not eligible were also recorded in Qualtrics as attempts. This resulted in many noncompletion hits. A paid research assistant who collated the data cleared out those non-completed attempts, and the analyses across both studies were based on cases that actually provided data.

single items: "I voted the way I did…" (1) "to escape economic uncertainty (i.e., uncertainty avoidance)," (2) "due to fear mongering" (i.e., fear, a state that is closely tied to existential motives under SJT framework, see Douglas et al., 2017), (3) "to maintain control over my life" (control maintenance), (4) "because my personal interest was at stake" (personal interest), and (5) "because it was in the best interest of my country" (collective interest). The first three items captured the key antecedents of the system justification motive which we examined individually. The last two items tapped personal and collective motives respectively.[2] Participants responded to these items using a seven-point scale (1 = strongly disagree, through 4 = neither agree nor disagree, to 7 = *strongly agree*).

To validate voting preference as an indicator of behavior related to system support (vs. change), we included a three-item measure of the extent to which people trusted their government: "How much of the time do you think you can trust the government to do what is right?" (1 = none of the time, 5 = *always*); "How much of the money paid into taxes do you think the government wastes?" (1 = *waste a lot*, 5 = do not waste much); and "How many of the people running the government are crooked, in your opinion? (1 = quite a few, 5 = *hardly any*, $\alpha = 0.74$). Assuming a vote to remain in the EU represents support for the status quo, then the trust that people have in their current government should be stronger for remain than for leave voters.

We included a measure of voters' combined annual household income as an objective indicator of social class (Diemer et al., 2013). On this measure, participants could select whether their combined annual household income fell into one of the following income brackets: "less than £30,000," "£30,000–£39,999," "£40,000–£49,999," "£50,000–£59,999," "£60,000–£69,999," "£70,000–£79,999," "£80,000–£89,999," "£90,000–£99,999," and "£100,000 or more." In addition, we included an eight-item measure of personal sense of power that we derived from Anderson et al. (2012); e.g., "I can get people to listen to what I say;" 1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = 0.879$. Following the principles of SJT (the strong cognitive dissonance-inspired version, Jost et al. (2003), aka the status-legitimacy thesis, Brandt, 2013), we predicted that less powerful people should be most likely to show system justification effects (see also Van der Toorn et al., 2015).

Finally, we measured participants' post-referendum support for Brexit with a three-item scale in order to test SJT's system-inevitability caveat: "I am pleased that Britain has voted to leave the EU"; "The EU is a failed project and I support Britain having voted to leave"; and "I would vote to leave the EU if a second referendum was presented to the public" (1 = *strongly disagree*, 6 = *strongly agree*, and $\alpha = 0.97$).

Results and Discussion

Table 1 depicts the bivariate correlations between the motives that were measured in this study. To confirm our assumption that a vote to remain in the EU represented greater support for the existing establishment compared to a vote to leave, we compared participants' level of trust in their government across *leave* and *remain* voters. Consistent with SJT, this analysis revealed that remain voters reported greater confidence in their government ($M = 2.53$, $SD = 0.83$) than their Brexit counterparts ($M = 2.15$, $SD = 0.79$), $t(311) = 4.19$, $p < 0.001$, Cohen's $d = 0.47$, $SE = 0.12$, 95% CI [0.243, 0.693].

Are the Antecedents of the System Justification Motive More Apparent Among Remain (Relative to Leave) Voters?

To answer this key question, we conducted independent sample *t*-tests on each motive to compare the leave and remain voters' responses (see **Table 2**). Consistent with SJT, uncertainty avoidance was a significantly more prominent reason for remain voters compared to leave voters, $t(311) = 5.90$, $p < 0.001$ (see **Table 2** for descriptive statistics). However, contrary to SJT, the need to maintain control over life outcomes was no more prominent for remain voters than it was for leave voters, $t(307.73) = 0.82$, $p = 0.407$, and fear was a *less* (not more) prominent reason for system supporters (remain) relative to system changers (leave), $t(292) = 3.28$, $p = 0.001$. In addition, consistent with SIMSA, collective interests were a more prominent reason for remain voters than for leave voters, $t(262.26) = 4.51$, $p < 0.001$ (see **Table 1**). Contrary to SJT, personal interests

[2]It is important to note that prominent SJT scholars have identified interests that are tied to the superordinate ingroup (e.g., country) as a group-relevant motive rather than a system motive (e.g., Kay et al., 2009, p. 428).

TABLE 1 | Zero-order bivariate correlation between mechanisms related to system justification and personal/collective interests.

	1	2	3	4	5	6	7	8
1. Collective interest	–	0.32***	0.28***	−0.20***	0.30***	0.03	0.19***	
2. Personal interest	0.41***	–	0.30***	−0.06	0.27***	−0.03	0.12*	
3. Uncertainty avoidance	0.24***	0.37***	–	0.04	0.10	−0.06	0.01	
4. Fear	−0.09	0.16*	0.17*	–	−0.03	0.03	0.02	
5. Control maintenance	0.37***	0.50***	0.38***	0.14*	–	0.01	0.11+	
6. Social class (household income)	−0.07	0.06	0.09	0.02	0.09	–	0.06	
7. Personal sense of power	0.16**	0.18**	0.08	−0.03	0.12*	0.22***	–	
8. To preserve the establishment	0.07	0.03	0.01	0.25***	0.11	0.06	−0.03	–
9. Confidence in the system	−0.03	0.02	−0.02	0.17**	0.08	0.06	0.04	0.73***

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Coefficients in the upper diagonal of the correlation matrix relate to Study 1, while those in the lower diagonal relate to Study 2.

TABLE 2 | Reasons for System Support vs. System Change.

	Study 1: The United Kingdom's 2016 EU Referendum			Study 2: United States's 2016 Presidential Election			Meta-analysis
	System change (leave) voters	System support (remain) voters	Cohen's *d* [95% CI]	System change (Trump) voters	System support (Clinton) voters	Cohen's *d* [95% CI]	Cohen's *d* [95% CI]
Collective interest	5.86 (1.12)	6.36 (0.83)	−0.51 [−0.739, −0.287]	5.84 (1.23)	6.13 (1.17)	−0.24 [−0.473, −0.10]	−0.38 [−0.644, −0.113]
Personal interest	4.17 (1.43)	5.30 (1.57)	−0.75 [−0.980, −0.520]	4.78 (1.54)	5.25 (1.67)	−0.29 [−0.524, −0.060]	−0.52 [−0.970, −0.073]
Uncertainty avoidance	4.37 (1.49)	5.41 (1.62)	−0.67 [−0.894, −0.438]	5.28 (1.45)	4.62 (1.69)	0.42 [0.185, 0.651]	−0.12 [−1.187, 0.938]
Fear	3.03 (1.81)	2.39 (1.62)	0.37 [0.150, 0.598]	2.54 (1.57)	3.19 (1.96)	−0.36 [−0.595, −0.130]	0.01 [−0.716, 0.728]
Control maintenance	5.30 (1.11)	5.19 (1.43)	0.09 [0.137, 0.307]	4.73 (1.44)	4.71 (1.76)	0.01 [−0.218, 0.243]	0.05 [−0. 110, 0.210]
System justification motive	–	–	–	2.88 (1.52)	3.64 (1.68)	−0.47 [−0.707, −0.240]	–

Means for each voter group are presented outside parentheses, while their corresponding SDs are presented within parentheses.

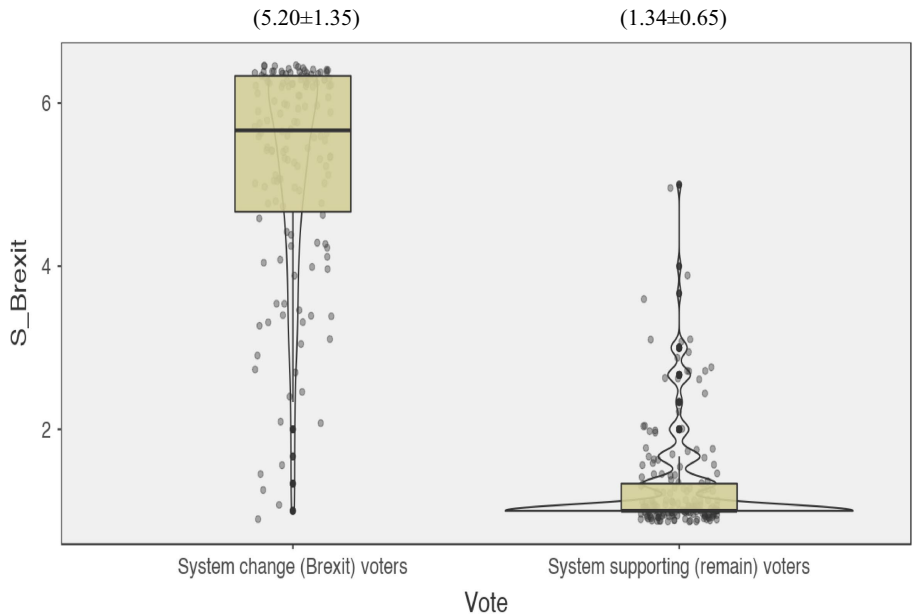

FIGURE 1 | Violin plots for the distribution of scores within the system supporting vs. system change voting groups for post-referendum support for the new Brexit era. Numbers above the plots = (Mean ± *SD*). S_Brexit = support for Brexit.

were also more prominent reasons for remain voters than for leave voters, $t(311) = 6.60$, $p < 0.001$. Finally, contrary to the strong cognitive dissonance-inspired version of SJT, these effects were not moderated by either income-based social class ($ps > 0.100$) or a sense of personal power ($ps > 0.170$).

Is SJT's System-Inevitability Caveat Applicable in the New Political Populism?

Contrary to SJT's system-inevitability caveat, results from an independent *t*-test revealed that post-referendum support for Brexit was significantly *weaker* among system supporters (remain) than among system changers (leave), $t(200.26) = 31.38$, $p < 0.001$, Cohen's $d = 3.73$, 95% CI [3.618, 4.103] (see **Figure 1**).

It is possible that the effect of voter group on post-referendum support for Brexit is fully mediated by the mechanisms of fear, uncertainty and control (Hayes, 2009). Hence, we ran a multiple mediated regression model in which these three mechanisms explained the effect of voting preferences on post-referendum support for Brexit. We further included the mechanisms of collective interests in order to test the alternative SIMSA proposition that post-referendum support for Brexit is more parsimoniously explained by group motives (Owuamalam

TABLE 3 | Direct effects of voter preference and motives on support for Brexit (Study 1).

Effect of…	Mediator model				
	Uncertainty	**Fear**	**Control**	**P_interest**	**C_interest**
	***B* [95% CI]**	***B* [95% CI]**	***B* [95% CI]**	***B* [95% CI]**	***B* [95% CI]**
Voter preference	0.32 [0.204, 0.417]	−0.18 [−0.288, −0.085]	−0.05 [−0.155, 0.069]	0.35 [0.244, 0.445]	0.25 [0.155, 0.351]
	Dependent variable model Support for Brexit				
	***B* [95% CI]**				
Uncertainty	−0.02 [−0.074, 0.040]				
Fear	−0.04 [−0.103, 0.012]				
Control	0.05 [0.004, 0.102]				
Personal interest (P_interest)	−0.06 [−0.123, 0.000]				
Collective interest (C_interest)	0.09 [0.014, 0.170]				
Voter preference	−0.88 [−0.931, −0.825]				
R^2	0.79, $p < 0.001$				

Voter preference is coded 1 = system change (Brexit) voters, 2 = System supporting (remain) voters. This saturated model was generated in Mplus, and reported are standardized regression coefficients. Bootstrap resamples = 1,000.

TABLE 4 | The indirect effect of voting preference on Post-Referendum Support for Brexit (Study 1), Post-Election Support for a Trump administration (Study 2).

	Study 1	**Study 2**
***via*…**	**Support for Brexit** ***B* [95% *CI*]**	**Support for Trump** ***B* [95% *CI*]**
Uncertainty	−0.006 [−0.027, 0.012]	−0.023 [−0.047, −0.007]
Fear	0.008 [−0.001, 0.023]	0.006 [−0.006, 0.020]
Control maintenance	−0.002 [−0.013, 0.003]	0.001 [−0.007, 0.012]
Personal interest	−0.022 [−0.049, −0.001]	−0.003 [−0.019, 0.006]
Collective interest	0.023 [0.005, 0.049]	0.014 [0.001, 0.043]
System justification motive	–	−0.003 [−0.021, 0.014]

Standardized regression coefficients are reported. Bootstrap resamples = 1.000. Bootstrapped CIs are bias corrected (Hayes, 2017).

et al., 2016a, 2018, 2019a). Finally, we included personal interests to check whether these were also influential. We ran this analysis in Mplus using 1,000 bootstrap resamples to examine the theorized indirect effects (see **Table 3**).

Results revealed that only the mechanisms of personal and collective interests explained post-referendum support for Brexit among system supporters relative to system changers. For system supporting remain voters (relative to leave voters), personal interest explained significantly *reduced* support for the new post-referendum Brexit era (see **Table 4**), while collective interest explained significantly *increased* post-referendum support for Brexit (see **Table 4**). None of the SJT mechanisms of fear, uncertainty, and control maintenance explained post-referendum support for Brexit among system supporting voters (see **Table 4**).

Summary

Taken jointly, these analyses show that personal and collective interests (a) are more prominent reasons among system supporting Remain voters than among those Leave voters who clamored for system change, and that (b) group motives best explained post-referendum support for Brexit. In addition, Study 1 also raises questions about the system inevitability caveat that we derived from the SJT literature (see, e.g., Gaucher et al., 2010), in that after the referendum those who voted to remain should have scored higher (or equally) in their post-referendum support for Brexit compared to those who voted to leave, given the inevitability of Brexit. In other words, facing the inevitability of a new Brexit era, remain voters ought to have strongly embraced the "new system." However, contrary to this SJT-based prediction, remain voters maintained their voting preference prior to the results being announced, and this outcome is more consistent with an identity-based account that accommodates the possibility of polarization or the hardening of political positions after the referendum (see Paicheler, 1979; Van Bavel and Pereira, 2018).

In short, these findings are more supportive of SIMSA's position that group interests and identities provide a better explanation of system justification than does a separate system justification motive that operates independently of collective interests. They also suggest that SJT might be ill-equiped to explain system-related attitudes, and/or what the system might be with respect to the new political populism. However, Study 1 only assessed the proposed antecedents of the system justification motive; it did not assess the endorsement of the system justification motive itself. Also, Brexit is just one context, focused on a very specific policy issue and therefore perhaps not representative of other examples of the new political populism. Therefore, Study 2 examined another political context that is perhaps more representative of the new populism: the election of Trump.

STUDY 2: THE UNITED STATES'S 2016 PRESIDENTIAL ELECTION

Commentators have likened the 2016 United States election of the anti-establishment candidate Donald Trump to the populist Brexit movement in the United Kingdom (e.g., Witte, 2016). As with the Brexit context, the system justification enabling conditions of heightened system threat, dependency and inescapabilty were apparent in the current context (Jost and Hunyady, 2005; Kay and Zanna, 2009). For example, the election of Trump to office of the president threatened the status quo of not only the political establishment in Washington (with his "drain the swamp" campaign promise, see McGee, 2016), but also the health insurance system (i.e., Obamacare) on which many American citizens depended. Finally, the inescapability of a Trump administration should be apparent to system-supporting Hillary Clinton voters post-election, when results revealed that Trump had won, which was why the current data was collected after the election results announcement.

Method

Sample Size and Participants

We used a similar sample size as in Study 1. However, of the 545 attempts on this survey *via* Prolific, only 289 cases were complete and useable based on the exclusion criteria that we used in Study 1. Of this number, 150 were men and 138 were women (1 did not indicate their gender). Participants (150 men, 138 women, and one non-disclosure; $M_{age} = 36.02$ years, $SD_{age} = 13.90$ years) resided in the United States and voted in the 2016 presidential election. Seventy-three percent were White, 14.5% were Black, and 12.1% were Latino. Participants received a pro-rata payment of US $6 per hour in exchange for completing the study questionnaire, which also included other measures unrelated to specific hypotheses tested here. We programmed our online survey software to collect equal numbers of cases for each group of voters in the 2–3 weeks following the 2016 United States election, and while the numbers in each group varied slightly after exclusions, this difference was negligible: Hillary Clinton voters ($n = 150$) and Donald Trump voters ($n = 139$), $X^2(1) = 0.42$, $p = 0.518$.

Materials and Procedure

The materials and procedure in the current study were similar to Study 1 except that we also directly tapped the system justification motive using two items: "I voted the way I did…" (a) "because I want to *preserve* the existing political system," and (b) "because the existing political systems function as they should." As in Study 1, we measured SJT's mechanisms of fear, uncertainty, and control maintenance. We also assessed personal and collective interests as in Study 1. All motives were measured on a seven-point scale (1 = *strongly disagree*, 7 = *strongly agree*).

We assessed participants' trust in their government using the same three-item scale described in Study 1 ($\alpha = 0.739$), and we measured combined annual household income as an indicator of social class ("Less than $10,000," "$10,000–$19,999," "$20,000–$29,999," "$30,000–$39,999," "$40,000–$49,999," "$50,000–$59,999," "$60,000–$69,999," "$70,000–$79,999," "$80,000–$89,999," "$90,000–$99,999," "$100,000–$149,999," and "more than $150,000"). We included the same eight-item measure of personal sense of power that we described in Study 1 (1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = 0.90$).

Next, we measured participants' post-election support for a Trump administration with a three-item scale that was similar to the one that we used in Study 1 in order to test SJT's system-inevitability caveat: "I am pleased that America voted Donald Trump into the White House;" "the Obama Administration is a failed project and I support America's decision to elect Donald Trump to the Presidency;" and "I would vote for Donald Trump if a second Presidential Election was opened to the public" (1 = strongly disagree, 7 = *strongly agree*, $\alpha = 0.97$).

Results and Discussion

As in Study 1, we checked whether those who voted for the establishment candidate (Hillary Clinton) were more likely to have greater trust in their government compared to those who voted for the change candidate (Donald Trump). Thus, we compared participants' level of trust in their government across the two voter groups. Consistent with Study 1, system supporters (Clinton voters) reported greater trust in the prevailing government ($M = 2.47$, $SD = 0.73$) compared to system changers ($M = 2.25$, $SD = 0.81$), $t(287) = 2.43$, $p = 0.016$, Cohen's $d = 0.29$, $SE = 0.12$, and 95% CI [0.054, 0.518].

The results of our correlation analysis of the key SJT mechanisms and those related to personal and group interests are shown in **Table 1**. Next, we examined whether the mechanisms proposed by SJT were more apparent for system supporters than for system changers (see **Table 2**). Contrary to SJT, the need to escape uncertainty was *less* (not more) prominent for system supporters compared to system changers, $t(285.09) = 3.55$, $p < 0.001$ (see **Table 2**). Corroborating the evidence in Study 1 and contrary to SJT, the need to maintain control over one's life outcomes was no more prominent for system supporters than for system changers, $t(283.10) = 0.07$, $p = 0.944$ (see **Table 2**). Again, as in Study 1, group and personal interests were more prominent for system supporters than for system changers: group interests $t(287) = 2.07$, $p = 0.039$; personal interests $t(287) = 2.48$, $p = 0.014$ (see **Table 2**). As in Study 1, none of these effects were moderated by income-based social class ($ps > 0.100$) or by personal sense of power ($ps > 0.220$). Hence, high and low social class individuals' support for the status quo were similarly motivated by personal and group interests.

Does the Effect of Voter Group on System Justification Motive Depend on Social Class/Power?

To answer this question, we performed a moderated regression analysis in which voter group (effect coded: −1 = system changers, 1 = system supporters) predicted the system justification motive conditional upon social class/power (centered around their means, Aiken and West, 1991). Considering the strong correlation between the two system justification items (see **Table 1**), and because both are often theorized to be part of a broader construct (Jost and Hunyady, 2005), we combined them to form a single index of system justification motive.

Consistent with SJT, results revealed that system supporters disagreed with the system justification motive less strongly than system changers, $t(287) = 4.05$, $p < 0.001$ (see **Table 2** for descriptive statistics). Results further revealed a significant voter group by social class interaction, $ß = 0.13$, $SE = 0.06$, $p = 0.025$, and 95% CI [0.017, 0.250]. However, contrary to the strong dissonance-inspired version of SJT, inspection of the simple slopes revealed that the voter group effect was restricted to the higher social class ($M + 1$SD; see **Table 5** for simple slope estimates and **Figure 2** for estimated means) and absent among the lower social class (M – 1SD; see **Table 5** and **Figure 2A**). It is also possible to investigate these effects within each voter group (adjusting the alpha level downwards to 0.025 to account for multiple comparisons). This analysis corroborated the earlier one and showed—among system supporters—a positive (rather than negative) relationship between social class and system justification

motive, $\beta = 0.10$, $SE = 0.04$, $p = 0.012$, and 95% CI [0.022, 0.756]. This relationship was absent for system changers, $\beta = -0.04$, $SE = 0.04$, $p = 0.432$, and 95% CI [−0.122, 0.052]. We repeated the same moderated regression analysis, this time substituting social class with a sense of personal power (see **Table 5**): the results were similar to those obtained using the social class index ($M - 1$SD, see **Figure 2B**; **Table 5** for simple slopes).

TABLE 5 | The moderating role of Objective and Subjective Social Status Indicators on the Effect of Voter Group on System Justification Motive.

Effects	Indicators of social class (and Disadvantage)	
	Objective social status (Social class)	Subjective social status (Sense of personal power)
	β [95% *CI*]	*β* [95% *CI*]
Main and interactive effects of…		
• Voter group	0.39 [0.204, 0.574]	0.39 [0.199, 0.570]
• Social status	0.11 [−0.075, 0.296]	−0.01 [−0.193, 0.179]
• Voter group × Social status	0.21 [0.027, 0.400]	0.20 [0.013, 0.385]
Simple slopes when social class is…		
• Low ($M - 1SD$)	0.18 [−0.089, 0.439]	0.19 [−0.077, 0.449]
• Moderate (M)	0.39 [0.204, 0.574]	0.39 [0.199, 0.570]
• High ($M + 1SD$)	0.60 [0.341, 0.864]	0.58 [0.321, 0.846]

Dependent variable in both models is the combined index of system justification motive. Social status is an umbrella expression that we have used to describe objective (income-based social class) and subjective (personal sense of power) social status.

Testing System-Inevitability Induced Support for Trump

Corroborating the evidence in Study 1, and contrary to SJT's system-inevitability caveat, results from an independent *t*-test revealed that post-election support for Trump was significantly *weaker* among system supporters than among system changers, $t(258.68) = 28.12$, $p < 0.001$, Cohen's $d = 3.31$, 95% CI [3.504, 4.032] (see **Figure 3**).

As in Study 1, we followed up this simple descriptive analysis with the same multi-mediation regression model in which fear, uncertainty, control, personal, and collective motives, plus the system justification motive explained the effect of voter group on post-election support for a Trump administration. As before, we ran this analysis in Mplus using 1,000 bootstrap resamples to examine the theorized indirect effects (see **Table 6**).

Results revealed that the mechanisms of uncertainty avoidance reliably explained a *reduction* in support for Trump among system supporters relative to system changers (see **Table 4**). Also, corroborating the pattern of results from Study 1, collective interest explained a significant *increase* in post-election support for Trump among system supporters relative to system changers (see **Table 4**). None of the other SJT mechanisms of fear, control maintenance or the system justification motive itself explained post-election support for a Trump administration among system supporters (see **Table 4**). Although personal interest explained reduced post-election support for a Trump administration among system supporters (relative to system changers), this mediational effect was not reliably different from zero ($\beta = -0.003$, see **Table 4**).

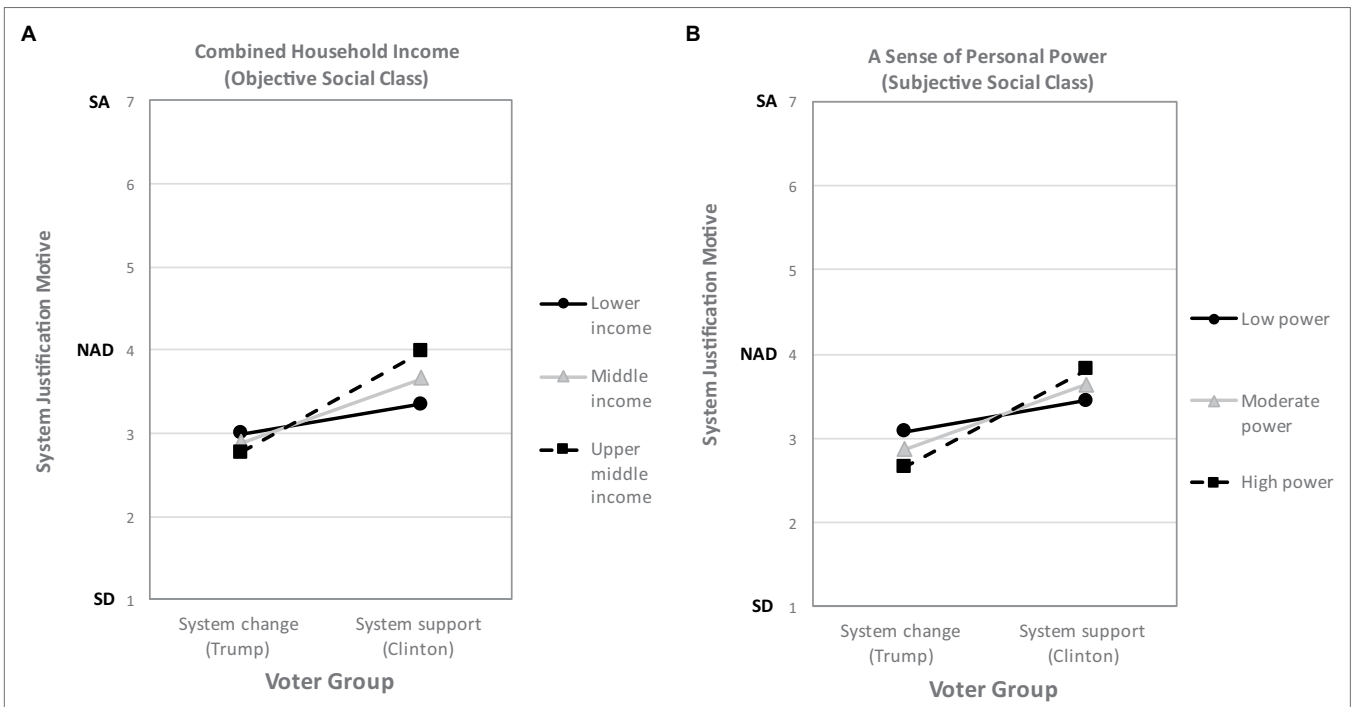

FIGURE 2 | The effect of voter group on the system justification motive is qualified by indicators of objective **(A)** and subjective **(B)** social class. SA, strongly agree; NAD, neither agree nor disagree (unsure); and SD, strongly disagree.

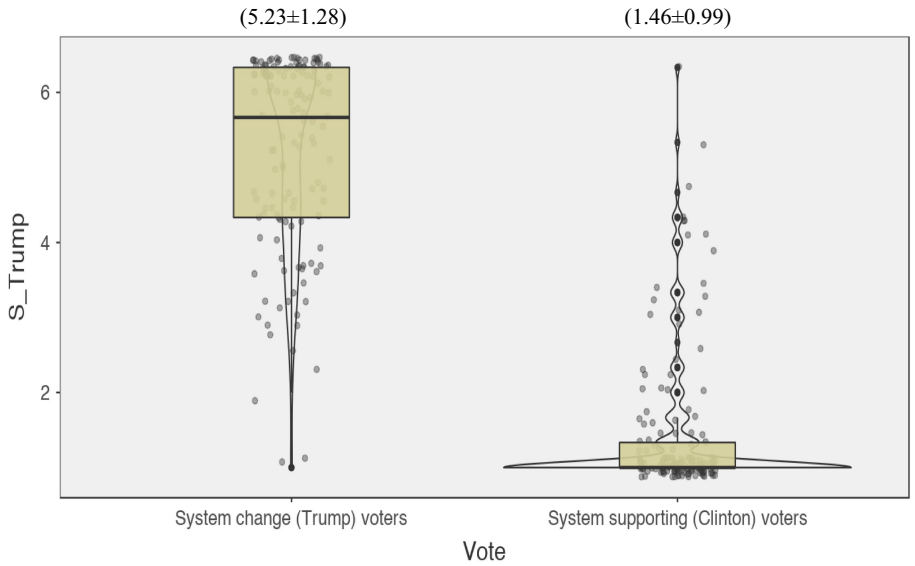

FIGURE 3 | Violin plots for the distribution of scores within the system supporting vs. system change voting groups for post-election support for the new Trump era. Numbers above the plots = (Mean ± *SD*). S_Trump = support for Trump.

TABLE 6 | Direct effects of voter preference and motives on support for Trump (Study 2).

Effect of…	Mediator model					
	Uncertainty	**Fear**	**Control**	**P_interest**	**C_interest**	**SJM**
	***ß* [95% *CI*]**	***ß* [95% *CI*]**	***ß* [95% *CI*]**	***ß* [95% *CI*]**	***ß* [95% *CI*]**	***ß* [95% *CI*]**
Voter preference	−0.21 [−0.332, −0.109]	0.18 [0.063,282]	−0.01 [−0.129, 0.100]	0.14 [0.034, 0.256]	0.12 [0.008, 0.241]	0.24 [0.118, 0.348]
Effects of…			Dependent variable model Support for a Trump administration			
			ß [95% CI]			
Uncertainty			0.11 [0.038, 0.177]			
Fear			0.03 [−0.036, 0.102]			
Control			−0.07 [−0.150, 0.003]			
Personal interest (P_interest)			−0.02 [−0.099, 0.040]			
Collective interest (C_interest)			0.12 [0.040, 0.195]			
System justification motive (SJM)			−0.01 [−0.084, 0.059]			
Voter preference			−0.84 [−0.882, −0.785]			
R^2			0.74, $p < 0.001$			

Voter preference is coded 1 = system change (Trump) voters, 2 = System supporting (Clinton) voters. Saturated model generated in Mplus using maximum likelihood (with bootstrap) estimation. Standardized regression coefficients are reported. Bootstrap resamples = 1.000.

GENERAL DISCUSSION

An unresolved question in the debate between system justification and social identity scholars has been whether support for the status quo especially amongst the disadvantaged (e.g., losing voters) is due to collective interests or to a separate system justification motive. We addressed this question in the context of two real-world political events (Brexit and Trump's election) by examining whether the system justification mechanisms of uncertainty avoidance, fear, and control maintenance were more apparent for (a) system supporters relative to those who rejected the system and sought social change, and (b) the disadvantaged lower class relative to the privileged class. We further explored the predictive potential of SJT's system inevitability caveat, in order to test whether people relinquish their preferred systems once a new arrangement that sits at odds with their (collective) interests has been established (Gaucher et al., 2010).

In two studies, we found little consistent evidence for SJT's proposal that uncertainty avoidance, fear, or the need to maintain control over one's life predicted justification of the status quo. Consistent with SJT, Study 1 found that uncertainty avoidance was a significantly more prominent reason for system supporters (remain voters) compared to system changers (leave voters). However, in Study 2, uncertainty avoidance was a significantly

less prominent reason for system supporters (Clinton voters) compared to system changers (Trump voters). Need to maintain control over one's life outcomes did not differ significantly between system supporters and system changers in either study. Finally, fear was a *more* prominent reason for system supporting voters in Study 2, but a *less* prominent reason for them in Study 1.

Both studies found that personal and collective motives (a) were more consistently prominent for system supporters (i.e., supporters of the extant/prior system) than for system changers and (b) group interest operated as mediator of the relation between voter group and post-voting support for the imminent system. In relation to point "b," in particular, the findings that system supporters were more likely to embrace the imminent system "because it was in the best interest of *my country*" aligns with SIMSA's proposition that an awareness of interests that are connected to an inclusive identity can elicit an ingroup favoring system justification at the superordinate level of self-categorization (Owuamalam et al., 2018, 2019a,b; Caricati et al., 2021). That is, Remain/Clinton supporters may embrace the status quo because it serves the interest of their country to do so.

System justification theory predicts that personal and collective interests are most likely to motivate system justification among members of privileged groups and least likely to motivate system justification among members of disadvantaged groups. As we highlighted previously, Remain and Clinton supporters can be described as disadvantaged groups in the sense that they lost at the polls. With this in mind, we observed, contrary to SJT, that for these *ad-hoc* disadvantaged groups, collective interests were much stronger drivers of their voting preferences relative to the winning Leave/Trump voters. SJT's proposition (i.e., the strong system justification thesis, Jost et al., 2004), would have anticipated the antecedents of the system motive to be more prominent for these political camps also (i.e. Remain and Clinton voters). In addition, the strong dissonance-based version of SJT also predicts that social class/sense of personal power should act as a moderator of voter group preferences when it comes to the mechanisms of uncertainty, fear, control maintenance, personal and collective interests. Contrary to this prediction, social class/sense of power did not qualify any effects involving personal and collective motives in either study. Hence, personal and collective interests seemed equally important for people at the lower and upper rungs of the social hierarchy (see also Owuamalam et al., 2016b; Owuamalam and Spears, 2020 for arguments against the strong dissonance-based version of SJT).

Finally, Study 2 found that although system supporters (Clinton voters) agreed with system justification more than system changers (Trump voters), this effect was restricted to participants who had a stronger sense of their personal power or who were high in income-based social class. These moderating effects of social class/subjective power further suggest that personal and collective interests underpin support for the status quo because people with a higher social class have vested personal and group interests in maintaining the status quo. A meta-analysis across the two studies also corroborated the conclusion that personal and collective motives were consistent and unambiguous drivers of support for the status quo (see **Table 1**).

Limitation and Opportunities for Future Research

A key strength of the current investigation is that it examined some of the key arguments between SJT and SIMSA with regard to competing system and group motives as they played out in the real world. However, a disadvantage of this approach is that it precluded tight control over a number of potentially important moderator variables. In the view of Kay and Zanna (2009, p.162), two factors determine the potency of the system-inevitability caveat: "(i) perceptions of the extent to which the system is likely or unlikely to change (that is, its stability) and (ii) perceptions of the relative ease or difficulty with which the individual can exit the system and enter a new one (that is, its escapability)." Hence, SJT mechanisms should be most apparent when the system is seen as stable and people are unable to escape from it. This caveat may explain why the system motive was not particularly prominent in the context of the uncertainty that lingered over Brexit (post-referendum when the data were collected), although it does not explain the similar pattern of results that we obtained from the more *stable* American electoral context, in which a new system became *inevitable* once the election results were known.

It is also possible that the story might be different if the voting preferences were treated as the outcome rather than the predictor of the underlying motives that featured in our analysis. Hence, we re-ran our primary analysis, this time calculating a logistic regression function in which voting preference was the outcome, while all the motives were entered as predictors. Results from this analysis corroborated the ones that we reported earlier (see **Appendix A**, **Figure A1**): In Study 1, greater reports of personal and collective interests predicted reports of voting to remain in the EU, while fear and control anxieties predicted reports of voting to leave the EU. Identical patterns to those reported in our results section for Study 2 were also observed in a logistic regression re-analysis (see **Appendix A**, **Figure A2**). Again, we observed mixed evidence in Studies 1 and 2 with regard to the mechanism of seeking to avoid economic uncertainty: Supporting SJT, increased economic uncertainty was a potent predictor of self-reported vote to remain in the EU (Study 1). However, contrary to SJT, increased economic uncertainty predicted self-reported voting for social change (Trump) rather than system support (Study 2).

Another objection to the current findings could be that we used different measures of collective interest, personal interest, and system justification to those that are commonly used for these constructs in the literature. However, the use of other measures that are conceptually related to the traditional scale (e.g., for self/personal interest: personal and collective self-esteem; and for system justification: the general, economic, and political system justification measures) is arguably a key strength of the current investigation precisely because it addresses the question of convergent validity: the extent to

which different operationalisations of an underlying construct yield the same result. For example, Jost et al. (2012, p. 200) recognized the importance of converging evidence in stating that:

> to the extent that the various operationalizations of theoretical variables in different studies yield similar patterns of results, this research program as a whole will provide convergent evidence that general processes of system justification are at work and are not attributable to specific features of the groups or contexts under investigation

Although Azevedo et al. (2017) has examined system justification processes in the context of the 2016 United States presidential elections using a number of different measures of system justification, they did not examine (a) the roles that personal and group interests play or (b) how these processes might unfold across similar populist revolts elsewhere in Europe (e.g., Brexit). By closing these important gaps in the literature, and doing so with other operationalisations of the relevant constructs, the present analyses offer more complete and complementary insights. Nonetheless, future studies could aim to incorporate more widely used measures that are relevant to social identity and system justification to ascertain whether the pattern of results reported here replicate with such measures.

A further objection to the outcome of the current investigation, which was raised in the peer review process, is that:

> right-wing contemporaneous populism is anchored on a notion of national nostalgia and the desire to go back in an attempt to return to a glorious past (Mudde, 2019). Therefore, *it is hard to catalog these movements as system-changing*, as they rather represent a reactionary approach that tries to go back to a past that involved essentially the same political system as that of today, *only based on more traditional, nationalist value* (Our emphasis in italics)

It is important to reiterate that we recognize the difficulty in characterising Brexit/Trump voters as system changers because their behaviour could be seen as support for traditional systems of the bygone era that may resemble aspects of the status-quo. However, there is at least one problem with this objection. *Reverting* to a bygone era, regardless of whether it shares certain things in common with the present, implies that some change (even if not absolute) must occur. Hence, it is accurate to catalog the populists' preferences as "system-changing" because the action they took (i.e., voting) has a change implication for the *existing* system. That is, wishing to revert to a more traditional bygone system implies that the status quo must first be put aside or dismantled in some way (e.g., by "draining the swamp"), in order for its replacement with an older more nationalist system to occur. As we had stated in our opening preamble, the issue of where to locate the system (the present vs. the bygone era) is problematic only for SJT, because it is concerned with peoples' attitudes toward "existing" rather than bygone societal arrangements (Jost and Banaji, 1994, p. 2; Jost, 2017, p. 74, Jost et al., 2004, p. 883; Jost, 2019, p. 266). In short, even if we were to accept that, for the populist voters, the system they had in mind was the bygone era, this would fall outside the explanatory remit of SJT, despite the recent attempt of Azevedo et al. (2017) to apply SJT in this context. Note, however, that this conundrum is absent under the social identity perspective because it accommodates the possibility of system change [*via* the social identity model of collective action (SIMCA), van Zomeren et al., 2008] and social stasis (*via* SIMSA; Owuamalam et al., 2018, 2019a,b).

A final objection to the present contribution is that we have acknowledged and measured the "system justification motivation" while the idea that such a motive exists–independent of personal and social identity needs–has received strong theoretical (e.g. Owuamalam et al., 2016b) and empirical (e.g., Owuamalam and Spears, 2020) opposition. It is important to note that our use of the term is in service of the system justification theory and, we would like to point out that SIMSA researchers have yet to acknowledge the existence of a separate system justification motivation that functions independently of personal and group motives. In terms of measurement, it is perhaps also informative to note that participants did not really agree with the two items that assessed the system motive in Study 2: Indeed, responses largely fell on the *disagree* end of the scale (i.e. below the neutral midpoint) on average.

CONCLUSION

In light of the new political populism across Europe, North America and elsewhere, we examined whether a system justification perspective or a social identity model of system attitudes best explains the motivations of people who wanted to retain the existing order or to change it. Findings from our analyses suggest that the motivations for both camps of the political divide are best characterized as rooted in personal and collective interests rather than resulting from a separate system justification motivation (see also in this issue works by Caricati et al., 2021; Carvalho et al., 2021; Degner et al., 2021; Lönnqvist et al., 2021).

AUTHOR'S NOTE

For the first time, we address the key issue concerning the underlying motivation for supporting societal systems sometimes found among society's disadvantaged, from the perspectives of system justification theory and social identity model of system attitudes. We show that in the real world context of the populism movement that gripped the United Kingdom and United States in 2016 (in the wake of Brexit and the election of Donald Trump to the office of United States presidency) that personal and collective interests more parsimoniously explained people's system support relative to motives rooted in the system.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article; further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by University of Nottingham, Faculty of Science Ethics Committee. The patients/participants provided their digital informed consent to participate in these online studies. The studies were conducted in line with the guidelines set by the British Psychological Society.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

APPENDIX

Appendix A

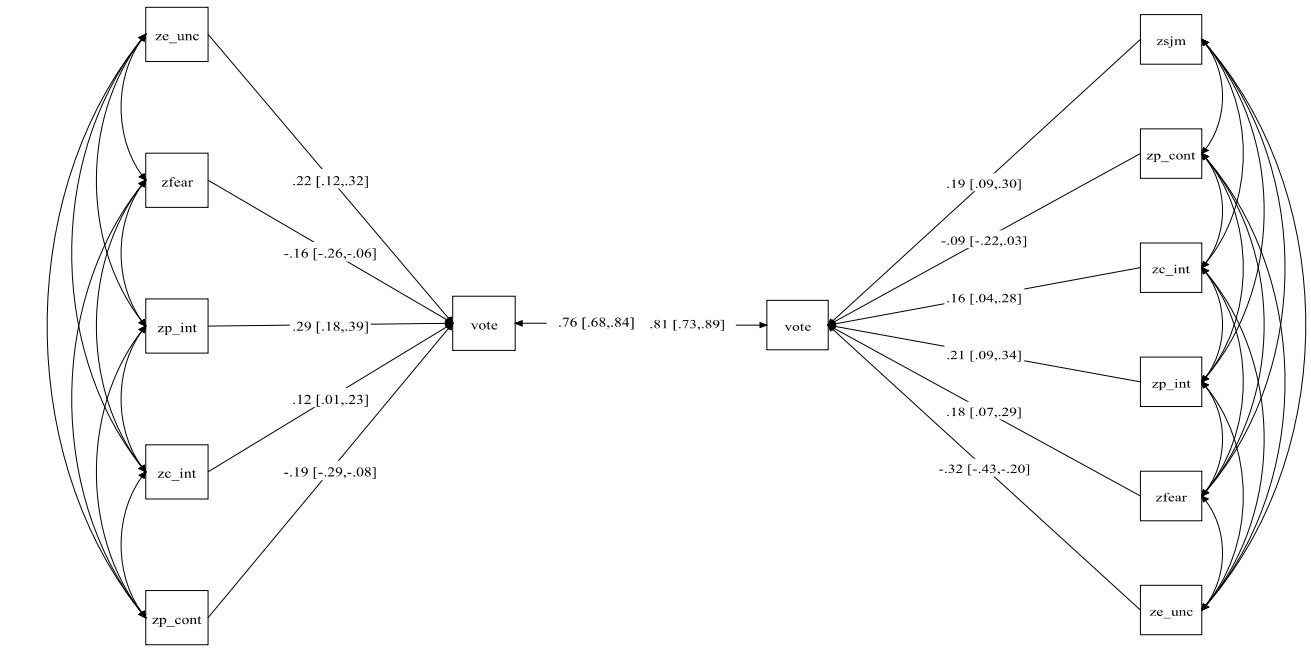

FIGURE A | Logistic regression model with reasons for voting as predictors while reported voting preference (vote) is the outcome. Reported are standardized estimates are presented outside the parentheses, while the 95% CIs are presented within the parentheses. The analyses (and figures) were generated in Mplus version 7 (using maximum likelihood estimation). Variable Key: zc_unc = uncertainty; zfear = fear; zp_int = personal interests; zc_int = collective interest; zp_cont = need to maintain control; zsjm = system justification motive.

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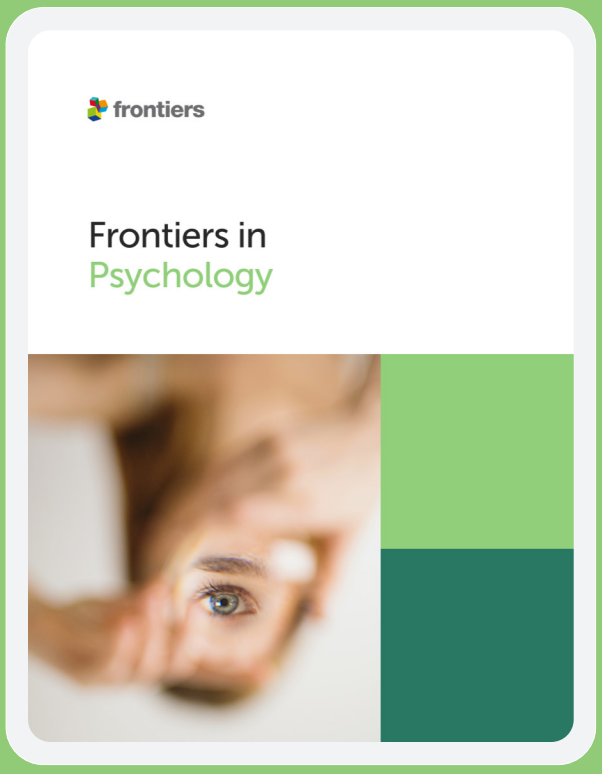

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