PERCEIVED PROCEDURAL JUSTICE, GROUP IDENTIFICATION, AND SUPPORT FOR ECONOMIC EQUALITY: A TEST OF THE GROUP ENGAGEMENT MODEL

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This study explores the relationship between individual level perceived procedural justice, group identification and support for economic equality at the national (Italian) and supranational (European and global) levels. The aim is to test the assumptions of the Group Engagement Model (GEM), stating that perceived procedural justice encourages group identification, which in turn increases behavioural engagement towards improving the overall group condition – that is to say, towards greater support for equality. Nevertheless, since recent contributions in the social identity approach argue that perceived justice and identification may actually decrease support for equality, GEM's assumptions were updated by encompassing a dual set of hypotheses. Thus, according to the alternative hypothesis, perceived procedural justice is negatively associated to support for equality, and higher group identification is also linked to decreased support for equality. Three multivariate regression models were used to test the hypotheses while mediation analysis was computed separately. The data, obtained via social medias using a self-report questionnaire, represents a sample (N = 222) of Italian adults. Higher perceived levels of procedural justice in the national, European, and global contexts accounted for less support of economic equality for members of these three communities respectively. However, this relationship was not mediated by group identification because of the lack of association between the latter and support for equality. Moreover, participants showed greater support for economic equality at the global level compared to the national and European ones. The results suggest that, while procedural justice successfully provides identity security and encourages group identification, it also decreases the need to mobilize to achieve greater equality. Group norms losing relevance may explain why support for equality is higher at world level.

Keywords: *economic inequality; group engagement model; group identification; social justice; social identity*

1. Introduction

Extensive evidence shows that economic inequality is steadily rising worldwide since the 1970s (Ortiz & Cummins, 2011; Piketty, 2015), touching unprecedented peaks since the Great Depression (Saez & Zucman, 2016). Moreover, economic inequality has a number of detrimental outcomes on health and wellbeing, both at individual and societal levels (Haslam et al., 2012; Wilkison & Pickett, 2010).

Economic equality as an ultimate goal of collective action cannot be pursued without people's willingness to confront injustice, show support for and demand actions reducing inequality. This is also why research in social psychology has identified people's support

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for economic inequality as the missing link between the phenomenon itself and its experience and perpetration (e.g., Piff et al., 2020; Sharif et al., 2016).

Despite emerging research outlining the Social Identity Approach (SIA, Tajfel, 1978; Tajfel & Turner, 1979) as a preferential lens through which the effects of economic inequality can be observed (Jetten et al., 2017b), little attention has been paid to the mechanisms underlying the relationships between perceived (in)justice, social identity, and support for inequality. Evidence coming from organizational identification literature based on SIA hints that group identification may mediate the influence of perceived justice on support for equality (Tyler & Blader, 2003), the latter being intended as a way to enhance the ingroup's condition. At the same time, the most recent research on the role of group identification in pro-group behaviors from both organisational (Blader et al., 2017) and intergroup relations (Jasinskaja-Lahti et al., 2018) contexts suggests that group identification may act as a double-edged sword, mobilising and demobilising support for equality depending on whether it's conceived as an attempt to pursue greater justice or not.

We therefore aim at addressing the substantial gap in research when it comes to inequality-attenuating mechanisms by testing a mediation model of the relationships between perceived justice, group identification, and support for economic equality that relies on organizational identification and intergroup relations research. Our model revolves around group identification as a mediating factor explaining the relationship between perceived procedural justice and support for economic inequality. Based on the Group Engagement Model (Tyler & Blader, 2003), we expect that greater perceived justice is associated with stronger ingroup identification, which is further related to one's support for economic equality among the members of the ingroup. Nevertheless, research from both organisational and intergroup contexts on the "ironic" or demobilising effect of perceived justice and group identification on collective efforts to promote groups' condition (Blader et al., 2017; Jasinskaja-Lahti et al., 2018), drives us to consider an alternative hypothesis. Moreover, it is plausible to hypothesize that the importance of economic equality is experienced differently when affecting one's everyday life conditions compared to the supranational or global contexts. To our knowledge, this issue still lacks insight in social psychological research. Therefore, with the purpose of exploring whether support for economic equality is influenced to different extents according to the context, we test our model at three distinct levels - the national, the European and the global ones.

2. Theoretical background

2.1 Support for economic equality: perception, attitude, and action

Economic inequality has drawn growing interest in the past decade, and while its deteriorating effect on individuals and society has been established, much about how inequality is perceived and perpetuated in people's everyday life is yet to be defined. While people may differ in evaluating inequality levels (Niehues, 2014), this paper will focus on their support towards said level of inequality as they perceive it.

We owe the first definition of support for economic equality to Wiwad and colleagues (2019), according to whom it refers to "the degree to which one supports or opposes the current level of economic (in)equality as they perceive it" (p. 2). Nevertheless, support for economic equality is not conceived as a dichotomous measure leading either to one's endorsement or opposition to it. Rather, the concept is to be measured on a continuum. While some may endorse inequality as the allocation of all resources in the hands of one actor,

others may prefer a condition of moderate inequality similar to a hierarchic distribution of resources. Lastly, one may prefer resources to be equally distributed between all people.

Support for economic equality may be secondary to rooted psychological beliefs, such as the belief that people act according to their own free will (Mercier et al., 2019). Despite being mostly referred to one's attitude towards economic equality, support for economic equality becomes concrete action when talking about political choices and policy preference, bridging the gap between ideology and behaviour. In these regards, Piff et al. (2020) have found a link between support for economic inequality, preference for egalitarian policies and causal explanation of poverty.

We consider support for economic equality as a combination of those aspects, that is to say a continuous variable spacing from opposition to endorsement of the subjectively evaluated level of inequality, both influenced by deeper psychological beliefs and shaping action, especially in the field of political and policy choices.

2.2 The two faces of social justice: Is inequality fair or unfair?

Justice is defined as the perceived adherence to rules that reflect how appropriate decisions are in a specific context (Colquitt & Rodell, 2015). Jetten et al. (2017) suggest that inequality enacts very specific mechanisms when it comes to evaluating communities as fair or unfair. According to their socio-structural hypothesis, people only judge inequality to be unfair when either there is systemic instability (for example, political unsteadiness), the income gap is perceived to be downstream to any kind of illegitimacy (which would be the case for corruption) or it is thought to be impossible for those who belong to one group to pass to another one (impermeability of group boundaries). As far as systemic stability is concerned, it has been found that when people witness or perceive the system to be stable and long-lasting in future perspective, they are more likely to enact justifying mechanisms towards existent levels of inequality, especially when compared to those witnessing systemic change (Laurin et al., 2013). When it comes to the legitimacy of the wealth gap, extensive evidence shows that individuals tend to support inequality when the differences in income come from individual effort rather than luck (Krawczyk, 2010), while they perceive those who merely benefit from luck to be illegitimately favoured (Dawes et al., 2007).

As far as inequality is concerned, procedural justice (PJ), namely the evaluation of fairness of the processes that led to the final decision (Leventhal, 1980), plays a primary role. High perceived procedural justice has been shown to have positive outcomes in a variety of settings, one of them being tax laws and compliance, with particular regards to cooperation (Hartner et al., 2008; Murphy & Tyler, 2008), a context that may have important implications in terms of equality-enhancing strategies and perception of inequality.

2.3 Group identification and the Group Engagement Model

The social identity approach (SIA; Tajfel, 1978; Tajfel & Turner, 1979) defines social identity as that part of the self-concept that derives from group membership. Jetten et al. (2017) argued that SIA forms an ideal theoretical platform to study economic inequality, which shapes intergroup relations *per se* as well as group reactions in response to the increasing wealth gap.

Relying on SIA, the Group Engagement Model (GEM; Tyler & Blader, 2003) provides evidence of the effects of perceived procedural justice on group behaviour. GEM is built on the basic tenet of SIA that groups provide their members with a social identity, which is to

say that individuals actively *build* a definition of themselves based on the features of the groups they belong to (Sedikides & Brewer, 2001). One may derive their feelings of worth and psychological well-being from their group's status and characteristics by linking them to the collective self (Sedikides & Brewer, 2001). The model also builds on the social identity mediation hypothesis, which assumes that the degree of identification with the group is directly influenced by perceived procedural justice in the group and in turn determines group members' willingness to cooperate, both on mandatory and discretionary bases (Tyler & Blader, 2003).

But why do identity judgements flow from procedural justice? Tyler and Blader (2003) argue that when people perceive that the procedures being applied in the group are fair in a matter of contents and application, they assume that merging their self with the group is safe. In other words, perceived procedural justice offers identity security. The process of using a group to determine one's identity does indeed imply risks, for one's identity may be damaged both by receiving unfair treatment in the group and by having the group as a whole receiving negative external feedbacks – this may give rise to a so-called process of rejection-disidentification (Jasinskaja-Lahti et al., 2009; Verkuyten & Yildiz, 2007; Maliepaard, & Verkuyten, 2018). Perceived procedural justice thus provides a safe way to infer to which extent one can identify with the group without being exposed to identity threat, since high identifiers are also usually more damaged by the group's possible negative behaviour (Brockner et al., 1992). Conversely, a group that has a high status and provides its members with feelings of affirmation and self-worth can be a great source for identity, and even more so for high identifiers compared to low ones. The sense of identification then triggers behavioural engagement, which is described as cooperative behaviour with other members of the group in order to reach shared goals and to further improve the group's status (Tyler & Blader, 2003).

Despite being applied mostly to organizational contexts (Blader & Tyler, 2009), GEM has been used in a variety of settings, including research on interethnic relations (Jasinskaja-Lahti et al., 2018). Yet, it has never been applied in a proactive perspective towards inequality-reducing strategies. In this study, we intend to build on GEM by testing whether support for economic equality can be associated with one's group identification via perceived procedural justice. Our position relies on the fact that support for economic equality can be intended as a way to enhance a group's status. For example, individuals with high national identification might support economic equality if they think it will benefit their own country through greater allocation of resources.

Nevertheless, recent research in the field of organizational identification has also shown some contradictory evidence that perceived justice and group identification may influence support for economic equality in the opposite way. Blader and colleagues (2017) highlight that highly identified individuals don't always enact behaviour aimed at improving the group's well-being and status. Indeed, it depends on what they think benefits the group (Fuller et al., 2006). Thus, group identification may also make people challenge group norms when they no longer perceive them as bringing benefit to the group. Therefore, they may show reduced support for equality.

Furthermore, research using GEM theorisation in the context of ethnic relations similarly suggests that the relationship between perceived justice, group identification, and willingness to engage in collective action to promote equality may not be as straightforward when it comes to complex social identities such as the national and supra-national ones. Indeed, a recent revision of the Rejection-Disidentification Model (RDIM, Jasinskaja-Lahti et al., 2009; Jasinskaja-Lahti et al., 2018) shows that perceptions of justice along with higher identification with the national majority group may act as a double-edged sword on discriminated minorities, decreasing their intention to fight systemic unfairness by boosting

their belief that they will be treated fairly. As such, high identifiers and those who perceive greater justice may be less likely to support economic equality.

3. Aim of this study

We aim at merging the previously examined SIA-based contributions in the fields of organizational and ethnic relations in a joint framework that explains the relationship between perceived justice, group identification and support for economic equality. Moreover, we explore how perceived justice, group identification and support for economic equality are interrelated in groups that are set at different societal levels. Namely, we assessed each participant's identification as an Italian citizen (national level), a citizen of the European Union (supranational, European level), and a member of the global community (global level) and to what extent these ingroup identifications explain the relationships between perceived justice and support for economic equality at these three group levels. Indeed, we may expect perceived justice and identification to have a weaker relation with support for equality at more distal levels (i.e., the global one), for enhancing the group's situation may be regarded as more difficult compared to a proximal context. At the same time, group norms are more relevant at proximal levels (Terry et al., 1999), subsequently discouraging any attempt to transgress norms by challenging the status quo (i.e. less support for equality). Despite these tentative notions, we do not set specific hypotheses for the potential differences in the relationships at three different levels.

Our first set of hypotheses tests the positive association between perceived procedural justice, group identification and support for economic equality in a group, as assumed by original GEM.

The hypotheses are spelt out as follows (see also Figure 1).

H1a: perceived procedural justice in Italy is expected to be positively associated with support for economic equality in Italy via increased national (Italian) identification.

H2a: perceived procedural justice in the European Union is expected to be positively associated with support for economic equality in the European Union via increased European identification.

H3a: perceived procedural justice in the world is expected to be positively associated with support for global economic equality via increased identification with the global community.

Nevertheless, recent contributions to GEM from organisational and intergroup relations research have led us to assume a dual pathway through which perceived procedural justice and group identification would act on support for equality. When perceived procedural justice is high and people identify more with the ingroup, they could demobilise and show less intent of confronting injustice (i.e. less support for economic equality). Moreover, high levels of identification with the ingroup may act as anobstacle towards supporting economic equality in a group when this is not thought to bring benefit to the group. Subsequently, we have formulated a set of alternative hypotheses (see Figure 1).

H1b: perceived procedural justice in Italy is expected to be negatively associated with support for economic equality in Italy via increased national (Italian) identification.

H2b: perceived procedural justice in EU is expected to be negatively associated with support for economic equality in EU via increased European identification.

H3b: perceived procedural justice in the world is expected to be negatively associated with support for global economic equality via increased global community identification.
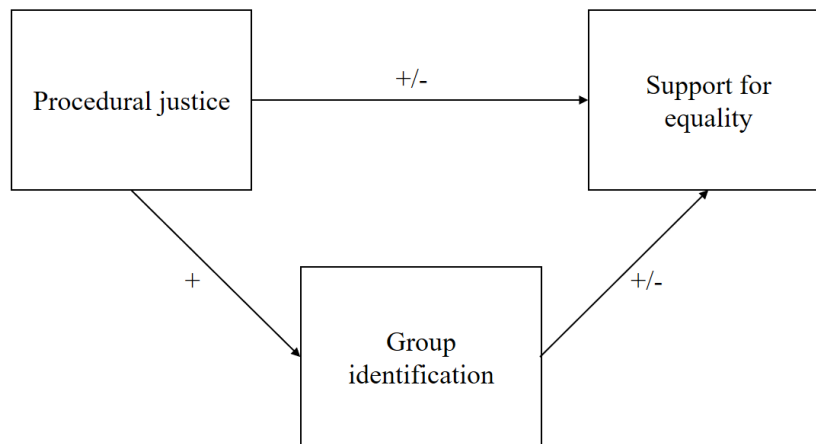

Figure 1. Conceptual model

1. Method

4.1 Participants

The sample consisted of 222 respondents, of whom 36% were male and 64% female. Respondents aged between 18 and 76 years (M_{age} = 37.35, SD_{age} = 13.25). Compared to the Italian average wage of 2,700 EUR (OECD, 2019), the respondents had roughly the same income (M_{income} = 2,600-3,000 EUR) and a slightly higher level of educational attainment. Means and SDs can be found in Appendix B, alongside maximum and minimum values.

4.2 Procedure

The participants were recruited through convenience sampling on social media. A self-report questionnaire was used to collect data. The participants answered on the web platform SurveyMonkey and were recruited mainly on social media on voluntary basis, without any kind of reward being implied. To avoid possible biases, they were informed of the actual purpose of the study only after finishing the questionnaire. Data collection took place in 2018 in Italy. It took around 15 minutes to complete the questionnaire.

4.3 Measures

The dependent, independent, and mediating variables were measured on three levels of interest (Italian, European, and world-level) and as such were reworded and repeated to fit each one of these. For each repeated scale, we computed an averaged Cronbach alpha, accounting for the internal consistency of the measure at all three levels. For single alphas, see Appendix A. Each scale was back-translated into Italian. Subsequently, the control

variables (namely subjective SES, age, gender and educational attainment) were assessed through single items. Indeed, women show more support for economic equality than men, and young age and education are also positively associated to support for equality (Mols & Jetten, 2017).

Procedural justice was measured through a 5-item scale adapted from Colquitt (2001) and previously used in organizational settings. It was slightly revised to fit the context of procedural justice at the national, European, and global levels (item examples are "European laws have been applied consistently" and "Italian laws are enforced based on accurate information"). At the global level participants were provided with some instructions to address the concept of global justice: "You'll now be asked some questions regarding justice in the world. As a reference point, think for example to universal human rights laws, international trade agreements, climate policies". Every item was measured on a Likert scale (1=*strongly disagree*, 7=*strongly agree*). Cronbach alpha was .87.

Group identification was assessed through an adapted 5-item scale from Hains and colleagues (1997) that is highly built on the social identity construct of group identification and has been extensively used by social identity researchers for decades (i.e., Hogg et al., 1998; Badea et al., 2010). These items were reworded and repeated to assess the respondents' identification with their country, European Union and the global community. Example of items before they were back-translated into Italian are "I feel a part of (Italy/the European Union/the global community)" and "Concerning my opinions and my values, I am like other citizens/members of (Italy/the European Union/the global community)". Responses were rated on a scale ranging from 1= *completely disagree* to 6=*completely agree*. The scale had a good internal consistency, with a Cronbach alpha of .84.

Support for economic equality was measured with the Support for Economic Inequality Scale (SEIS), developed by Wiwad et al. (2019). Its aim is to measure one's support for economic inequality in the world, regardless of how wide the gap is perceived to be – which is to say, one's subjective perception of economic inequality. The scale's global standpoint was adapted to fit the national and European levels as well. The measure included items such as "I am very disturbed by the amount of economic inequality in (Italy/the European Union/the world) today" and "we need to do everything possible to reduce economic inequality in (Italy/the European Union/the world) today". The administered scale included five items to be answered on a Likert-scale from 1=*completely disagree* to 7=*completely agree*. To facilitate the reading of results, we reverse-scored the original Support for Economic Inequality Scale and labelled it "support for economic equality". In the present study the Cronbach alpha was .72.

Subjective socioeconomic status was used as a control variable. It assessed one's personal perception of their relative position across the social ladder to influence their attitudes the most, compared to objective SES (Cohen et al., 2008). As it has been highlighted that subjective and objective SES are only fairly correlated (Adler et al., 2000), we included the MacArthur Scale of subjective SES (Goodman et al., 2001), having the participants marking which one out of ten rungs on a ladder best represented their own social class rank in comparison to the rest of society. We have used subjective SES as a control variable because there is evidence that higher group status (i.e. SES) is linked to greater endorsement of social inequality (Morrison et al., 2009).

4.4 Analytic approach

First of all, three paired samples t-tests were used to compare the mean scores of support for equality at different levels. Our hypotheses were tested using three multivariate regression models, respectively computed at the national, European, and global levels. R

software (R Development Core Team, 2013) was used to perform analyses. The dependent variables' normality was checked graphically (see Appendix C). The parameters were estimated through the R package Lavaan (Rosseel, 2012), as well as the mediation models, assessing for the direct and indirect effects of perceived procedural justice over support for equality via group identification (see Figure 1). While we have included all the control variables (namely subjective SES, age, gender, and educational attainment) in the parametric analysis, the mediation models are reported without them, still having been tested without significant changes also accounting for their influence. For this reason, and since all models had consistent outcomes hinting the absence of mediation, we decided to present our mediation models without the control variables. 95% confidence intervals were also estimated in order to determine the significance of mediations. To do so, we used R package piecewise SEM (Lefcheck et al., 2016). As far as mediation models were concerned, we computed a post-hoc statistical power analysis using the R package powerMediation (Qiu, 2017).

We used the coefficient of determination (R^2) as an effect size index. Furthermore, we computed the total coefficient of determination (TCD) of the whole models, accounting for the joined effects of the independent variables on all dependent variables.

Following an increasing consensus on the necessity to integrate orthodox statistics with the Bayesian approach (see for example Dienes, 2011), we also computed the Bayes factor for each parameter estimate model. The Bayes factor can be defined as the likelihood of an outcome given two competing hypotheses, of which one is usually null. For each model, we computed Bayes factor against the null model. Therefore, the resulting BF shows how much our model is more likely than the null one. Precisely, we have used the Bayesian Information Criterion (BIC) to estimate a close approximation to BF (Raftery, 1995)[1].

4. Results

Firstly, we computed three paired samples t-tests to compare the mean scores of our dependent variable - support for equality at national, European, and global levels. The results showed that all couples of means differed significantly. In particular, the average support for equality in Italy (M=21.63, SD=5.61) was higher than the average support for equality in EU (M=20.93, SD=5.63, p<.05), but the average support for equality in Italy (p<.001) and EU (p<.001) were both lower than the average support for equality in the world (M=23.38, SD=5.33).

Secondly, we tested our hypotheses in terms of the predictors of support for equality at national, EU, and global levels. Table 1 shows the regression models at all levels.

When it comes to our predictions concerning the direct link between perceived procedural justice and support for economic equality, the results were contrary to GEM's assumptions, but supported our alternative hypotheses based on the most recent updates of GEM and RDIM models. Namely, higher perceived procedural justice in Italy, EU, and the world was found to be negatively associated to support for economic equality in these contexts respectively. In other words, those participants who thought that perceived procedural justice was fairly applied in their country (Italy), EU and globally also showed less willingness to promote equality in these contexts.

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[1] $BF_{(1)} \approx exp\left(-\frac{BIC(M_0)-BIC(M_1)}{2}\right) = \exp\left(-\frac{\Delta BIC}{2}\right)$

Table 1. R^2, standardized betas and TCD for the regression models

	Italy						European Union						World					
	Group identification		Support for equality				Group identification		Support for equality				Group identification		Support for equality			
	R^2	β	R^2	β	TCD	BF	R^2	β	R^2	β	TCD	BF	R^2	β	R^2	β	TCD	BF
	.21		.11		.29	1.6^{14}	.32		.19		.43	$1.4e^{18}$	.11		.06		.16	0.01
Procedural justice		.45***		-.20**														
National identification				.04														
Procedural justice in EU								.52***		-.35***								
European identification										.04								
Procedural justice in the world														.27***		-.17*		
World identification																.08		
Gender (woman)		-.03		.19**				.07		.16**				.14*		.16*		
Age		.02		-.02				-.01		.07				-.04		-.06		
Education		-.06		-.07				.04		-.07				.06		.01		
Perceived SES		-.02		-.15*				.06		-.17**				.00		.00		

* $p < .05$; ** $p < .01$; *** $p < .001$

Regarding control variables, men and those who perceived themselves as better-off than the average showed less willingness to support equality at national and European levels, with men also showing lower levels of support for equality in the world.

Next, we evaluated the hypothesised mediation models via group identification. The results concerning the link between perceived procedural justice and group identification supported our hypotheses and showed that perceived procedural justice in Italy, EU, and the world is positively associated with identification with national, European, and global communities respectively. At the national and European level, no control measure had any influence on group identification. Yet, women were more likely to identify as citizens of the world compared to men.

However, we did not find any further association between the hypothesised mediator (i.e. group identification) and support for economic equality at any of the group contexts studied. In other words, no relation was found between Italian, European, and global identification and support for equality in Italy, EU, and the world respectively. Moreover, the hypothesised mediation effects of perceived procedural justice on support for equality via national, European, and global community identification were all non-significant (see Table 2).

As for the effect sizes, TCD shows that the model at the national level accounts for 29% of the total variance, confirming a good fit of the model. The Bayes factor is also extremely high, suggesting that the model is 1932865 times better than the null one in terms of likelihood. When taking into account singular dependent variables, R^2 shows that, while national identification has a high percentage of variance explained by the model (21%), support for equality's is as little as 11%. The mediation models accounted for 23% of the variance of support for equality at the national level, as shown by TCDs.

As for the explained variance in the model at the European level, R^2 shows that the model accounts for 32% of the variance of European identification. When holding support for equality as the dependent variable, the model accounts for 19% of the total variance. TCD shows that the model accounts for almost half of the total variance (43%). More evidence in favour of this model is provided by an extremely high BF, signifying that it is $1.4e^{18}$ times more likely than the null one. The mediation models accounted for 37% of the variance of support for equality at the EU level.

At the global level, the R^2 for the first dependent variable shows that 11% of the variance of global community identification is explained by perceived procedural justice and the control variables. When it comes to support for equality, the model accounts for roughly 6% of the variance. As a whole, the total variance explained by the model is 16%. A BF of 0.01 shows that the model is worse than the null one in terms of likelihood. At the global level, while the direct effect of perceived procedural justice on support for equality is still present, the attenuating indirect effect of global identification causes a significant reduction of the total effect. In line with this, the mediation model only accounts for 10% of the variance of the dependent variable.

To conclude, consistently with the results for unmediated models, the mediation models (see Table 2) showed that perceived procedural justice was a direct negative predictor of support for equality at national, European, and global contexts. Moreover, while perceived procedural justice was positively associated with group identification at all three levels, its indirect effects on support for equality via national, European, and global identifications were neglectable. Regarding control variables, at the Italian and European levels, gender (woman) was associated to support for equality, as well as lower perceived SES. At the global level, gender (woman) was positively linked to both support for equality and group identification. A post-hoc analysis of statistical power revealed that, given our sample size and total coefficients of determination, the mediation models at the national, European, and global levels achieved a statistical power

of respectively .10, .08 and .33. Given that a desirable power should reach 0.80, our sample size is not adequate to draw reliable conclusions.

Table 2. Total, direct and indirect effects on the dependent variables

	Support for equality in Italy		Support for equality in EU		Support for equality in the world	
	β	CI (95%)	β	CI (95%)	β	CI (95%)
Procedural justice in Italy						
Total effect	-.20**	-.32, -.07				
Direct effect	-.22**	-.36, -.08				
Indirect effect via national identification	.02	-.05, .09				
TCD	.23					
Procedural justice in EU						
Total effect			-.35***	-.47, -.24		
Direct effect			-.37***	-.51, -.24		
Indirect effect via EU identification			.02	-.06, .10		
TCD			.37			
Procedural justice in the world						
Total effect					-.13†	-.26, .00
Direct effect					-.16*	-.29, -.03
Indirect effect via world identification					.03	-.01, .07
TCD					.10	

* p < .05; ** p< .01; *** p< .001; †p < .10

5. Discussion

This study examined the dual relationship between perceived procedural justice and support for economic equality via group identification. Consistently with the hypotheses based on GEM, perceived procedural justice at national, European, and global level was associated with higher identification with these three social communities respectively. Moreover, perceived justice was negatively associated with support for equality at all three levels, which was against the predictions based on original GEM but supported by the most recent research on organizational identification and intergroup relations. Contrary to predictions, there was a lack of association between group identification and support for equality. As such, there was no mediating effect of group identification on the relationship between perceived justice and support for equality.

On a theoretical level, high perceived procedural justice provides subjects with identity security which facilitates identification with the ingroup (Tyler & Blader, 2003), be it national, European, or global. At the same time though, perceived justice does not necessarily increase their support for the group's common good, particularly economic equality. Conversely, it may

work as a deterrent towards support for equality, most likely because it leads to expect a fair treatment, making it needless to mobilize for there is no perceived need to confront injustice, as suggested by RDIM (Jasinskaja-Lahti et al., 2009; Jasinskaja-Lahti et al., 2018).

Another explanation of the negative relation between perceived justice and support for equality relies on system-justifying attitudes. According to System Justification Theory (Jost & Banaji, 1994), believing that the system is fair provides individuals with a good reason not to challenge the status quo. People provide a justification for the current level of inequality based on individual deservingness, considering that the process of allocation of resources is just. Furthermore, it's consistent with the findings that people are more likely to perceive inequality as a problem if the accumulation of resources is thought to come from illegitimate earning, since attitudes against inequality are more likely to accentuate in a condition of unfair or undeserved wealth acquisition, such as corruption or luck (Krawczyk, 2010).

Additionally, the negative association of perceived justice and support for equality leads to argue that, since respondents were required to bring attention on the process of application of laws, those who came to the conclusion that the system – be it national, European, or global – was fair, underestimated the need to contrast inequality and showed little interest for its reduction. Indeed, expressing support for equality in a system that had just been defined as fair would have been evaluated as unnecessary, ultimately leading to cognitive dissonance. In other words, perceived justice acted similarly to a long-term priming, meaning that there was an increased accessibility of the perception of justice that might have resulted in an unwanted influence in the process of evaluating the dependent variable. Therefore, having the optimal experimental settings would imply measuring perceived procedural justice before support for equality.

Nevertheless, the lack of mediation effect of group identification at all levels hints that other factors, such as the previously cited system justifying attitudes, could play a crucial role in explaining the relationship between perceived procedural justice and support for economic equality. We argue that our measure of support for economic equality was possibly unsuited to detect the greater behavioural engagement that we aimed at assessing, for its focus isn't on behaviour itself, but rather on a broader evaluation of economic equality (Wiwad et al., 2019). It is also possible that respondents lacked interest in greater equality because they considered it as equally benefitting group members (i.e. Italians) and outsiders, such as ethnic minorities. This would make support for equality an unneeded feature for high identifiers, as it wouldn't advance the group. Furthermore, there's a chance that the European and global groups weren't characterized by enough entitativity, namely a sort of groupness based on the strength of boundaries and defining structure, internal homogeneity, common goals, and the perception of shared fate (Campbell, 1958). While groups with high entitativity have greater influence on their members' selves, those characterized by weak entitativity may have a negligible influence (Campbell, 1958; Hamilton & Sherman, 1996). As such, subjects evaluating the European and global ingroup as provided with little entitativity wouldn't show interest in supporting economic equality, even when highly identified.

Women were more likely to support equality at all levels compared to men, consistent with the expectation that they showed greater universalistic values than men (Schwartz & Rubel, 2005). The result that women have higher global identification compared to men can be explained on the same grounds.

When it comes to observing support for equality at three levels, it was significantly higher in the world compared to the national and European contexts, suggesting that support for equality tends to rise at more distal levels, for group norms (e.g. monitoring deviance and disloyalty) lose relevance there (Terry et al., 1999). This would make it easier to challenge them, moving the focus from intragroup concerns and intergroup comparisons to a

superordinate common ingroup, and to adhere to universalism values at distal levels, through showing greater support for global economic equality. Furthermore, support for equality at the European level being significantly lower compared to the national one also hints that the supranational context may lead to intergroup comparisons. These would cause ingroup bias, as economic equality in EU may be regarded as less profitable for the national ingroup. Future research should further investigate this issue.

5.1 Limitations and future research

We acknowledge that our research is not lacking weaknesses. First of all, despite our intention to test the Group Engagement Model, some methodological hindrances are thought to have occurred. GEM's dependent variable is indeed behavioural engagement, a dimension that is only partly encompassed by the scale used to measure the willingness to reduce inequality. Despite SEIS being the first and only instrument specifically built to assess one's attitude towards economic inequality, it is possibly encompassing different aspects of it, including the extent to which they support it (Wiwad et al., 2019). Only one of the five items is explicitly dedicated to the behavioural component ("we need to do everything possible to reduce economic inequality in the world today"), possibly implying the lack of appropriate focus on GEM's assumptions.

Secondly, even though we chose to measure national identification, European identification, and global identification through the same scale in order to compare results on different levels, we recognize that global identity may be a confounding concept that can easily take on multiple interpretations. Therefore, it would be advisable to choose a specific measure of it (in this regard, see Shokef & Erez, 2008).

As far as methodological approach is concerned, our study is cross-sectional, and as such it doesn't allow to establish causality between variables. Furthermore, the power analysis of the mediation models showed that given our sample size, there was a high chance of making a type II error. As such, increasing the sample is desirable to improve the chance of eventually detecting mediation effects.

It's also widely recognized that convenience sampling on social media implies several risks as a procedure. It has been suggested that respondents recruited through push-out strategies, namely those strategies targeting users who are engaged in unrelated online activities and are therefore not actively looking to participate in research, give less thoughtful answers and are less willing to provide the necessary information to be qualified for the research. Regardless, such strategies provide greater demographic diversity among respondents and better cost-effectiveness (Antoun et al., 2016).

Lastly, our sample was not comparable to the national population in terms of age (our sample was notably younger) and gender distribution. The educational attainment was also slightly higher than the national average (this may be due to the sample's age distribution). It is also advisable to replicate the study in a different cultural context than the Italian one, in order to draw more reliable conclusions.

This research has attempted to answer questions about social identity and justice from a global standpoint without losing sight of contextual features, still acknowledging that more work is required to address the issue of global identity. Despite the results providing some preliminary confirmation for the Group Engagement Model applied to support for equality, further research is needed to clarify such findings. Developing greater insight along these lines would be necessary for psychology to leverage its unique position in enhancing equality through predicting which social factors would have greater impact on it and how to maximize

their effect depending on societal features (Jetten et al., 2017a). It is suggested that the hypotheses of the Group Engagement Model would be tested on the same sample, possibly with at least a one-week gap between perceived procedural justice measurement and the willingness to reduce inequality, so to prevent any long-term priming to occur (Molden, 2014; Mussweiler, 2001). Nevertheless, this theoretical standpoint has great potential when it comes to bringing forward equality-enhancing strategies, for it provides clarity about what brings people together with the shared goal to reduce wealth inequality, a topic in which research is still lacking evidence.

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Appendix A

Correlations and Cronbach's alphas

	PJ (Italy)	PJ (EU)	PJ (world)	National id.	EU id.	World id.	Support for equality (Italy)	Support for equality (EU)	Support for equality (world)	Perceived SES	Education	Gender (female)
PJ (Italy)	.87											
PJ (EU)	.48***	.89										
PJ (world)	.35***	.48***	.84									
National identification	.41***	.06	.12†	.82								
EU identification	.28***	.56***	.28***	.19**	.84							
World identification	.19**	.35***	.32***	.14*	.51***	.85						
Support for equality (Italy)	-.14*	-.21**	-.09	-.05	-.02	-.03	.74					
Support for equality (EU)	-.22***	-.34***	-.25**	-.01	-.19**	-.08	.59***	.73				
Support for equality (world)	-.04	.01	-.12†	.08	.13*	.06	.47**	.42**	.69			
Perceived SES	.08	.15*	.15*	.00	.14*	.06	-.19***	-.24***	-.02			
Education	.03	.07	-.07	-.05	.09	.05	-.10	-.12†	.03	.12***		
Gender (female)	-.02	.07	.03	-.05	.11	.16*	.19**	.13*	.17**	.00	.07	
Age	-.08	-.17*	-.25***	-.02	-.16*	-.12†	-.03	.10	04	.03	.04	-.10

Note. Cronbach's α coefficients are on the main diagonal for multi-item scales.
* p < .05; ** p< .01; *** p< .001; †p < .10

Appendix B

Means, standard deviations, maximum and minimum values

	Min.	Mean	Max.	SD
PJ (Italy)	5	12.88	32	5.97
PJ (EU)	5	17.64	35	5.99
PJ (world)	5	14.06	30	5.99
National identification	5	16.91	30	6.3
EU identification	5	20.86	30	6.13
World identification	5	19.26	30	5.5
Support for equality (Italy)	5	21.63	30	5.61
Support for equality (EU)	5	20.93	30	5.63
Support for equality (world)	9	23.38	30	5.33
Perceived SES	1	7.40	11	1.49
Education[a]	1	4.46	6	1.18

Note. [a] The highest level of education attained was coded as following: 1 = completed elementary school, 2 = completed middle school, 3 = completed high school, 4 = completed bachelor's degree, 5 = completed master's degree, and 6 = completed a PhD.

Appendix C

QQ plots for the dependent variables