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The Different Effects of Income and Educational Level on Prosocial Behavior and Related Ideological Variables

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Abstract

Studies on socioeconomic status (SES) have recently increased in social psychology. The most used indicators to measure objective SES are income and educational level (usually standardizing and summing the scores of these variables). However, income and education possibly have different, even opposite effects on certain variables. Across seven studies, using data from previous research and from international databases, we show that this is true both for prosocial behavior and variables related to prosocial behavior. A higher educational level tends to positively predict prosocial behavior (Studies 1a–1d), structural attributions of poverty (Studies 2 and 3); and negatively predict scores meritocratic beliefs (Study 3), and just world beliefs (Study 4). In most cases, income showed a reverse trend or did not predict the outcome. We discuss the broader implications both for the study of prosocial behavior and social class.

Keywords: socioeconomic status, income, education, prosocial behavior, ideology, attributions for poverty

The Different Effects of Income and Educational Level on Prosocial Behavior and Related Ideological Variables

Research that has dealt with the relationship between socioeconomic status (SES) and prosocial behavior shows inconsistent or even contradictory results: some investigations show a negative relationship between these two variables (the higher the SES, the lower the prosocial behavior), and others have found a positive relationship.

An American national research survey showed that people with higher incomes spend a small proportion of their money assisting others in need (Frank, 1999). Conversely, individuals with lower incomes, but also the wealthiest members of the population, give proportionally more of their incomes to helping others in need, in such a way that giving as a percentage of household income is U-shaped (List, 2011). In a series of studies, Piff et al. (2010) found that individuals with lower SES proved to be more generous (Study 1), charitable (Study 2), trusting (Study 3), and helpful (Study 4) compared with individuals with higher SES. Even in studies conducted with children, both in the U.S. (Miller et al., 2015) and in China (Chen et al., 2013), those from families with lower incomes donate more desirable objects (e.g., prize tokens, stickers) to friends, anonymous peers, or children in hospitals compared to children from families with higher incomes.

There is also evidence of a positive relationship between SES and prosocial behavior. Across eight studies with large and representative international samples, Korndörfer et al. (2015) found that individuals with higher SES were more likely to make a charitable donation and contribute a higher percentage of their family income to charity (Studies 1–3), were more likely to volunteer (Studies 4–6), were more helpful (Study 7), and were more trusting and trustworthy in an economic game when interacting with a stranger (Study 8) than individuals with lower SES. Although the

effects of SES varied somewhat across the kinds of prosocial behavior, countries, and measures of social class, they did not find the negative effect reported above under any conditions. In the same direction, Andreoni et al. (2021) found, after controlling for numerous covariates, that misdelivered letters were substantially more likely to be returned from households with high rather than low SES. Von Hermanni and Tutić (2019) reported results from two European cross-national surveys showing that individuals of higher SES are more likely to donate money to humanitarian causes and engage in volunteer work than individuals of lower SES.

To explain this divergence of results, the existence of different moderator variables has been invoked, such as whether the helping behavior is public or private, the level of inequality in society, the motivations of the helper, or the characteristics of the recipient of the aid. For example, Kraus and Callaghan (2016) found in three studies that people with higher SES were more likely to behave prosocially when the behavior was public, yet people with lower SES were more likely to behave prosocially when the behavior was private. In a nationally (U.S.) representative survey study and an experiment, Côté et al. (2015) found that individuals with higher incomes were only less generous if they resided in a highly unequal area or when inequality was experimentally portrayed as relatively high; this result, however, has not been confirmed in the research of Von Hermanni and Tutić (2019), whose findings suggested the opposite trend. Additionally, these authors found a consistently positive effect of SES, measured as a composite index of income, education, and occupational prestige, on giving behaviors and participation in volunteering. Regarding to helper's motivations, Whillans et al. (2017) found that people with higher incomes were more generous in response to a charitable request that emphasized agency and personal goals, whereas participants with lower incomes were more generous in response to a request that emphasized

communion and shared goals. Finally, regarding the target of assistance, prosociality among people with lower SES may be preferentially directed to others close to them, ingroup members, or those most likely to reciprocate (De Dreu et al., 2014).

In this article, we propose a new moderator to consider: the way SES is measured. SES is commonly measured as subjective (e.g., perceived wealth and prestige) or objective (e.g., verifiable survey indicators). Income and educational level are the most used objective indicators, and a composite score is often calculated by standardizing and summing scores. However, income and educational level may have different or even contradictory effects on certain variables. Previous studies have not been able to determine whether income and education have similar or divergent effects due to the use of composite indices or single income-related indicators. Income and education have often been used interchangeably in research because they tend to be positively related. Nevertheless, this relationship is not always straightforward. For example, while higher education may encourage cultural inclusiveness, it can also lead to conservatism on certain socioeconomic issues. In some cases, education may align with income in its effect on preferences for state intervention, but not in others, such as attitudes towards social protection for vulnerable populations (Attewell, 2022; Gelepithis & Gianni, 2022).

An indirect way of analyzing these divergent influences of people's income and education on their helping behavior is to analyze whether both variables are related in a similar or divergent way to other variables related to prosocial behavior, as ideologies. Thus, the relationship between beliefs in a just world and prosocial behavior is multifaceted. On one hand, personal beliefs in a just world have been shown to be positively associated with prosocial behavior (e.g., Guo et al., 2022). On the other hand, general beliefs in a just world have also been linked to negative attitudes towards

poverty and a preference for harsher prison sentences (e.g., Bègue & Bastounis, 2003). Moreover, research has shown that just world beliefs can lead to the attribution of responsibility to people in poverty (Harper et al., 1990). The attribution of responsibility plays a key role in how individuals perceive poverty and the extent to which they are willing to help. It has been suggested that when individuals believe that people experiencing poverty are responsible for their situation, they may view them more harshly and feel less sympathetic towards them. This, in turn, can lead to a decrease in helping behavior (Weiner et al., 2011). These variables have also appeared related to SES, generally without differentiating education and income, and in the limited research that has differentiated between education and income showing a somewhat ambiguous pattern of results (Carvacho et al., 2013).

The Present Research

This paper examines whether income and education have different effects on prosocial attitudes and behaviors, as well as on ideological variables and poverty attributions. We expect that higher education will increase the likelihood of prosocial behavior and preferences for structural attributions for poverty, while decreasing endorsement of meritocratic beliefs, and just world beliefs. Conversely, higher income will decrease the likelihood of prosocial behavior and increase endorsement of individualistic attributions, meritocratic beliefs, and just world beliefs. In Studies 1a–1d, we tested the different effect of income and education on prosocial behavior. Specifically, in Studies 1a, 1b, and 1c, we reanalyzed data from different studies of our research team to show that income and education differently correlate with distinct types of interpersonal helping behavior. In Study 1d we did the same analyses but with data from many countries (EVS/WVS, 2022). In Study 2, using data from the European Values Survey conducted in 1999 (ESS, 2011), we examined whether income and

education predict poverty attributions differently. In Study 3, we examined again the relationships of Study 2, but using data from World Values Survey (WVS) Wave 3 conducted between 1995 and 1998 (Inglehart et al., 2018). In addition, we tested the relationship of income and education with meritocratic beliefs. Finally, in Study 4 we examined the relationship between income and education with just world beliefs using data from the European Social Survey Round 9 (ESS, 2018). Furthermore, the supplementary materials contain information presenting the correlations between education and income across the studies discussed in this paper. In the studies that employed international databases, we report the results for both the overall sample, comprising multiple countries, and for Spain in particular, where Studies 1a-1c were conducted. Including all countries was intended to increase the sample size and demonstrate that the findings are not culture-specific, although this does not necessarily imply that there are no between-country differences in the relationship between education, income, and the variables of interest. Code used for analyses and links to materials for national and international available datasets can be found at: https://osf.io/fb96j/?view_only=39bc9a69444d4820aefc43dcab39faa2

Participants' SES and Prosocial Behavior (Studies 1a, 1b, 1c, and 1d)

Studies 1a, 1b, and 1c are the only three studies conducted by members of our research team that included a measure of prosocial behavior and measures of objective SES. In Study 1d we analyze the same constructs in an international data base.

Study 1a

Data and Participants

We reanalyzed the data from Study 1 of Alonso-Ferres et al. (2019). The sample was composed of 274 Spanish participants (M_{age} = 28.38, *SD* = 10.83; 59.1% women) from the general population.

Measures

Our predictor variable "monthly family income" was coded into six categories, from 1 (< 1,000€) to 6 (> 5,000€), $M = 2.63$, $SD = 1.17$, and participants' educational levels were scored from 1 to 6 (higher numbers indicated greater educational level; $M = 4.07$, $SD = 1.71$).

To measure helping behavior, the study used the "Helping Behavior in Everyday Life" scale (Amato, 1990), comprising 13 items assessing formal planned helping, that assess helping actions individuals have considered and anticipated over a period of time before engaging in, directed towards organizations (e.g., "Donated blood or any other medical item"); 18 items evaluating informal planned helping, a type of help similar to the previous one, but in this case aimed at family, friends or acquaintances (e.g., "Helped someone move into a house"); and 15 items measuring spontaneous helping, that is, immediate helping actions, carried out with little or no prior thought. (e.g., "Delayed an elevator or held the elevator door open for someone who wanted to get in"). Participants indicated how many of the activities described in the scale they had engaged in over the last three months. The items used a dichotomous answer format (0 = no, 1 = yes), and helping behavior was operationalized as the sum of answers to the items.

Results

We conducted several linear regression analyses including income and education as predictor variables and scores in the different subscales of the "Helping Behavior in Everyday Life" scale as criteria on each analysis. Results showed that participants' education positively predicted scores in formal planning help ($b = 0.199$ $t = 2.791$, $p = .006$ [0.059, 0.339]). In the case of spontaneous help, results were in the same direction, although it did not reach a level of significance ($b = 0.185$, $t = 1.826$, $p = .069$ [−0.014,

0.384]). In informal planning help, education was not related with scores on this subscale (b = 0.082, t = 0.605, p = .546 [−0.185, 0.349]). Family income did not predict the scores on the different subscales: formal planning help (b = -0.340, t = -0.584, p = .560 [−0.048, 0.080]), spontaneous help (b = -0.108, t = -1.306, p = .1939 [−0.270, 0.055]), and informal planning help (b = -0.085, t = -0.769, p = .443 [-0.302, 0.132]).

Study 1b

Data and Participants

We also reanalyzed the data, provided by the authors, from Study 2 of Alonso-Ferres et al. (2019). The sample was composed of 588 Spanish participants from the general population (M_{age} = 33.42, SD = 10.02; 68% women).

Measures

Our main predictor variables (income and education) were operationalized in a similar way as Study 1a. In this case, scores in "monthly family income" were M = 2.96, SD = 1.53, and participants' educational levels were M = 4.63, SD = 1.86.

To measure helping behavior, we used the 4-item measure created by Cameron and Payne (2012), α = .84. Participants answered the four items (e.g., "To what extent do you feel it is appropriate to give money" to the person described in two different scenarios in which the protagonist lost his/her job or his/her wallet) on a 7-point Likert scale, ranging from 1 (not at all) to 7 (extremely).

Results

We conducted a linear regression analysis including income and education as predictor variables and scores in the helping behavior measure as criteria. Results showed that participants' family incomes negatively predicted scores on helping behavior, b = −0.078, t = −2.147, p = .032 [−0.150, −0.007]. Participants' education was not related with the criteria, b = −0.011, t = −0.355, p = .723 [−0.069, −0.048].

Study 1c

Data and Participants

We reanalyzed the data of one study conducted by Navarro-Carrillo et al. (2023), in which 1,008 Spanish people participated (M_{age} = 34.358, *SD* = 15.02) from the general population (60.4% were women).

Measures

Our main predictor variables were operationalized as follows. Monthly family income was coded into 10 categories, from 1 (< 650€) to 10 (> 5,800€), *M* = 4.00, *SD* = 2.11. Participants educational levels were scored from 1 to 8 (higher numbers indicated greater educational level; *M* = 5.16, *SD* = 1.59).

To measure helping behavior, three different measures were used: (a) daily help (8 items): participants answered how often in the last 12 months they have performed different helping behaviors (e.g., given food or money to a person experiencing homelessness, let a stranger pass in a queue, etc.; α = .77); (b) one item about money donation: "Now, we ask you to indicate the frequency with which you have donated money to some social, religious, cultural, charitable, or philanthropic work without expecting any type of reward in return (this donation can be large or small amounts of money)," with a response format from 0 (never in the last year) to 5 (more than once a week); (c) one item about volunteering: "… to indicate the frequency with which you participate as a volunteer in associations, organizations, or social services during your free time," with a response format from 0 (never) to 3 (every week).

Results

We conducted several linear regression analyses including income and education as predictor variables, and scores in the different measures of helping as criteria. In the case of daily help, only participants' education predicted (positively) scores on this

scale (b = 0.047, t = 2.679, p = .008 [0.013, 0.082]); family's income: b = -0.010, t = -0.730, p = .465 [-0.036, 0.016]. In the case of economic donations, both income (b = 0.096, t = 5.143, p < .001 [0.06, 0.133]) and participants' education (b = 0.054, t = 2.166, p = .031 [0.005, 0.102]) positively predicted scores on this variable. Finally, in volunteering, only participants' education (b = 0.063, t = 3.653, p < .001 [0.029, 0.097]) was positively related; income: b = -0.006, t = -0.447, p = .655 [-0.032, 0.020].

Study 1d

This study aimed to examine the relationship between income and education with prosocial behavior using a database that included samples from multiple countries. Specifically, we investigated the relationship between income, education, and participation in voluntary associations as a measure of prosocial behavior. Volunteering is one of the most widely used variables as a measure of prosocial behavior (Midlarsky et al., 2015).

Data and Participants

We used the joint 2017-2022 EVS/WVS datafile (EVS/WVS, 2022). This data is constructed from the one EVS and one WVS source datasets. However, we removed countries where the variables of interest were not measured, resulting in a final dataset of 152,501 observations (M_{age} = 45.71, SD = 17.19; 53.89% female). To ensure the robustness of our findings, we conducted additional analyses using imputation methods for missing values and performing a pooled analysis with the imputed datasets. Results of these analyses are presented in the Supplementary Materials.

Measures

Prosocial Behaviour

Participants were asked to indicate their level of involvement in various organizations. For more detailed information on the response format and the specific organizations included in the survey, we refer interested readers to the supplementary materials. We calculated a sum score. That is, higher scores mean higher pro-sociality. The Cronbach alpha of the scale was .85. This measure has been used before in the same way to measure volunteering, a commonly used indicator of prosocial behavior (e.g., Chen, 2023).

Income

Participants were asked about their income level with one question, adapted to each country, containing incomes in ten categories from 10% lowest to 10% highest income category (M = 4.92, SD = 2.32).

Education

Participants were asked to indicate their highest attained educational level with eight possible responses from "1. Early childhood education / no education" to "8. Doctoral or equivalent" (M = 3.69, SD = 1.97).

Results

To test the effect of income and education on prosocial behaviour we built two multilevel multiple regression models using lmer4 package (Bates et al., 2015) in the R program (R Core Team, 2020). Individual variables were cluster-centered by subtracting the mean of each predictor within each cluster from each individual's score on that predictor. This adjustment allows us to accurately estimate the effects of our predictors while accounting for the influence of between-cluster variation (Enders & Tofighi, 2007). We did this because we were interested in the effect of the individual level of income and education on our dependent variables at Level 1. After fitting an intercept-

only model we observed an intraclass correlation index of .22. Given this evidence of the between-country variation, we decided to conduct multilevel regression analyses (Gelman & Hill, 2007). Thus, we conducted a multilevel analysis and added education and income as predictor variables in the second model. Based on the results presented in Table 1, it can be observed that both income and education had a positive relationship with prosocial behavior in the multilevel model.

Table 1.

Multilevel Linear Regression Model Predicting Prosocial Behavior in Study 1d.

	b	*SE*	*CI*	*p*
(Intercept)	1.71	0.11	1.49, 1.93	< **.001**
Income	0.05	0.00	0.05, 0.06	< **.001**
Education	0.13	0.00	0.12, 0.14	< **.001**
Random Effects				
σ^2		4.74		
$\tau_{00\ country}$		1.16		
ICC		0.20		
$N_{\ country}$		89		
Observations		141,128		
Marginal R^2 / Conditional R^2		0.014 / 0.208		

Our findings were robust across different datasets generated using multiple imputation for missing values with the mice package (van Buuren & Groothuis-Oudshoorn, 2011). However, in the Spanish sample, we found that while education remained a significant predictor of prosocial behavior (b = 0.07, p = .002), income did not show a significant effect (b = 0.01, p = .479), as reported in the Supplementary Materials.

Discussion of Studies 1a–1d

These findings suggest that the relationship between income, education, and prosocial behavior is ambivalent. Using various measures of individual prosocial behavior, we discovered that income and education had different effects on these variables. Studies 1a-1c demonstrated that education tended to be a stronger positive predictor of individual prosocial behavior. This was also found in Study 1d, which analyzed prosocial behavior (volunteering) across multiple countries using the EVS/WVS database. In the case of income, the results were less conclusive, as we found a positive relationship in two studies (1c and 1d), a negative relationship in another (1b), and no significant relationship in 1a. It is possible that income may not directly influence the attitudes we are examining, but rather may be related to a broader perception of the world and impact other ideological variables that, in turn, affect these attitudes. For example, higher income may lead people to make more individualistic attributions about poverty, which has been linked to lower support for social protection policies. Thus, the relationship between income and attitudes may be through other ideological factors. In our studies, we aim to investigate how education and income predict several relevant ideological variables that could influence prosocial attitudes and behaviors, specifically attributions about poverty, meritocratic beliefs, and just world beliefs.

Study 2

The aim of this study was to examine the effects of income and education on individualistic and structural attributions of poverty using an international dataset with samples from multiple countries.

Data and Participants

We used data from the European Values Survey carried out in 1999 (EVS, 2011). This database contains the responses of 41,125 participants (53.98% women) from 33 countries/regions. We only use country data (e.g., West and East Germany data were grouped). We used all data available for our analyses by applying list-wise deletion, making the number of participants lower in our models. In addition, we only used participants who choose the individualistic-blame or the structural-blame attribution. After deleting the other participants, 26,325 observations remained (M_{age} = 45.24, *SD* = 17.15; 53.29% female). To ensure the robustness of our findings, we conducted the same additional analyses that in Study 1d. Results of these analyses are presented in the Supplementary Materials.

Measures

Attributions for Poverty

The EVS questionnaire included a question asking respondents about their attributions for poverty, with four possible reasons provided from which they were asked to choose the one that was most important to them. For our analysis, we focused on the comparison between individualistic ("Because of laziness and lack of will power") and structural ("Because of injustice in our society") attributions and therefore used only the data from respondents who selected one of these options. Further information on the measurement of poverty attributions, the response options, and the percentages of selection for each option can be found in the supplementary materials.

Income and Education

The measures for income (*M* = 4.76, *SD* = 2.55) and education (*M* = 4.51, *SD* = 2.13) were comparable to those used in Study 1d. However, for specific wording and response options, please refer to the Supplementary Materials.

Results and Discussion

Although our dependent variable has four levels, we built two multilevel models for only one pair of comparisons (e.g., individual-blame vs. individual-fate attributions). That is, here we present only the comparison between individual-blame, or individualistic, and social-blame explanations, or structural (see Table 2). This study replicates the different effect of education and income on attributions for poverty found in previous studies (Marquis, 2020). Both income and education were significant predictors of preference for one type of poverty attribution over the other. Crucially, they were related with these attributions in a different way. As people's income levels increases, they are more likely to prefer individualistic explanations of poverty; as people's educational level increases, they are more likely to prefer structural explanations for poverty. Our findings were consistent across the different databases generated through multiple imputation for missing values. However, in the Spanish sample, we observed that while education remained a significant predictor of a preference for structural attributions (OR = 1.14, p = .003), income did not show a significant effect (OR = 0.96, p = .432). These results are presented in Supplementary Materials.

Table 2.

Multilevel Logistic Regression Model Including Attributions for Poverty as Criteria Variable in Study 2 and Study 3.

	Study 2[1]			Study 3[1]		
Predictors	*Odds Ratio*	*CI*	*p*	*Odds Ratio*	*CI*	*p*
(Intercept)	1.67	1.32, 2.10	**< .001**	2.64	2.13, 3.28	< .001
Income	0.94	0.92, 0.95	**< .001**	0.92	0.91, 0.92	< .001
Education	1.08	1.07, 1.10	**< .001**	1.03	1.02, 1.04	< .001
Random Effects						
σ^2		3.29			3.29	
τ^2		0.42			0.59	
ICC		0.11			0.15	
$N_{Country}$		31			49	
Observations		19,493			52,983	
Marginal R^2 / Conditional R^2		0.01 / 0.12			0.01 / 0.16	

Note: Reference category for attributions for poverty is structural attributions.

Study 3

In this study, we aimed to replicate results from Study 2 regarding the different effect of income and education on poverty attributions using a different international database. In addition, we tested the effects of income and education on meritocratic beliefs.

Data and Participants

In this study, we used the World Values Survey (WVS) Wave 3 conducted between 1995 and 1998 (Inglehart et al., 2018). Not all variables of interest were queried in every country (see the Measures section). Therefore, for the analysis of poverty attributions, we excluded countries where questions about income, education, and poverty attribution were not asked. In this case, after excluding those countries where our dependent variable was not tracked, 65,144 observations remained (M_{age} =

41.01, *SD* = 15.90; 52.14% female). For the analysis of meritocratic beliefs, we followed a similar approach by excluding countries where questions about income, education, and meritocratic beliefs were not asked. After applying this criterion, the dataset was reduced to 64,860 observations (M_{age} = 40.92, *SD* = 15.90; 51.62% female). Again, we used all data available for our analyses by applying list-wise deletion, making the number of participants lower in our models. Like in the previous study, as robustness checks, we performed the same analyses applying imputation methods for missing values and conducting a pooled analysis with the imputed datasets. We present this results in the Supplementary Materials.

Measures

Attributions for Poverty

Participants indicated their views on why people live in poverty by choosing between two options: "They are poor because of laziness and lack of will power," and "They are poor because society treats them unfairly." The first option corresponds to an individualistic attribution, and the second to a structural attribution. This question was not asked in Switzerland and United Kingdom.

Meritocratic Beliefs

Participants indicated their degree of agreement using a 10-point scale ranging from 1 ("In the long run, hard work usually brings a better life") to 10 ("Hard work doesn't generally bring success; it's more a matter of luck and connections"). We reversed the scores so higher scores meant higher meritocratic beliefs. This question was not asked in Colombia, Pakistan, and United Kingdom.

Income and Education

In this study the questions used to measure income (*M* = 4.45, *SD* = 2.51) and education (M = 5.56, SD = 2.32) were comparable to those used in previous studies

with the international datafiles used in this paper. Specific wording, response options, and countries where these questions were not asked are presented in the Supplementary Materials.

Results and Discussion

Attributions for Poverty

To test the effect of income and education on attributions for poverty, we fitted two multilevel logistic regression models, using lmer4 package (Bates et al., 2015) in the R program (R Core Team, 2020). Again, individual variables were cluster-centered. The intraclass correlation coefficient in the random intercept multilevel model was .14. As Table 2 shows, the ORs show that the odds of preferring structural attributions over individualistic attributions (measured as 0 = selecting the individualistic attribution and 1 = selecting the structural attribution) decrease as income increases. The odds of preferring structural attributions over individualistic ones increase as participants' educational levels rise, although this effect was very small. We repeated these analyses after generating five databases by imputing missing values. These analyses yielded similar results (for the pooled model and more details, see Supplementary Material).

Meritocratic beliefs

We followed the same procedure to test the effect of income and education on meritocratic beliefs. However, here we fitted multilevel linear models, as our dependent variable is continuous. In this case, the ICC in the only intercept model was .09. As Table 3 shows, income positively predicted meritocratic beliefs. In turn, educational level negatively predicted the latter. Again, we repeated this analysis in several imputed data sets and the results were similar (see Supplementary Materials). In sum, the higher income level, the greater belief that hard work brings a better life. Conversely, the higher the educational level, the lesser support for meritocratic beliefs. However, it

should be noted that both the effects and the model's variance explained, for attributions for poverty and for meritocratic beliefs, were small.

Table 3.

Multilevel Linear Regression Model Predicting Meritocracy in Study 3.

	b	*SE*	*CI*	*p*
(Intercept)	6.71	0.14	6.44, 6.97	< **.001**
Income	0.02	0.01	0.0, 0.03	**.002**
Education	–0.03	0.01	–0.04, –0.02	< **.001**
Random Effects				
σ^2		5.60		
$\tau_{00\ country}$		0.80		
ICC		0.12		
$N_{\ country}$		44		
Observations		54,067		
Marginal R^2 / Conditional R^2		0.008 / 0.131		

Study 4

Our study aimed to examine the influence of income and education on just world beliefs. To achieve this goal, we utilized the European Social Survey Round 9 (ESS, 2018), which includes several items relevant to our research question.

Data and Participants

In this study we used the European Social Survey Round 9 (ESS, 2018), composed of 49,519 observations (53.51% women, M_{age} = 51.06, *SD* = 18.65) collected in 29 countries. Like in previous studies, we used all data available for our analyses by applying list-wise deletion and performed the same analyses applying imputation

methods for missing values and conducting a pooled analysis with the imputed datasets. These results are presented in the Supplementary Materials.

Measures

Just World Beliefs

To measure just world beliefs, participants answered these items: "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." These items cohered well in this survey in terms of internal consistency (α = .75). We conducted a multilevel confirmatory factor analysis showing that this model has a perfect fit. The response scale ranged from 1 (agree strongly) to 5 (disagree strongly). We reversed the scores in some items so higher scores meant higher beliefs in a just world.

Income and Education

Income (M = 5.24, SD = 2.78) and education (M = 4.00, SD = 1.80) were measured using methods that were largely consistent with those used in the other studies presented (see Supplementary Materials)

Results and Discussion

We followed the same analytical procedure described in Study 3, in this case including in our multilevel regression model the variable just world beliefs as criteria. As Table 4 shows, income positively predicted just world beliefs in our model. In turn, educational level negatively predicted just world beliefs. That is, people with a higher level of education are less willing to believe that we live in a just world whereas an increase in income is associated with an increase in belief in a just world.. However,

even if its effects were significant, the regression coefficient is small and the model, in general, explains little variance.

Table 4.

Multilevel Linear Regression Model Predicting Just World Beliefs in Study 4.

	b	*SE*	*CI*	*p*
(Intercept)	2.90	0.03	2.83, 2.96	< **.001**
Income	0.01	0.00	0.01, 0.02	< **.001**
Education	–0.05	0.00	–0.05, –0.04	< **.001**
Random Effects				
σ^2		0.69		
$\tau_{00\ country}$		0.03		
ICC		0.05		
$N_{\ country}$		29		
Observations		39,379		
Marginal R^2 / Conditional R^2		0.008 / 0.053		

General Discussion

Previous research on the relationship between SES and prosocial behavior has yielded mixed results. We propose that the different effects of income and education, two components of SES, may explain some of these inconsistencies.

Reanalyzing data from previous studies on SES and individual's prosocial behavior, we have found a clear pattern in the relationship between people's education and prosocial behavior: of the ten analyses carried out, the positive relationship between education and help was confirmed in seven of these analyses. In the case of people's income, the relationship is weaker: of the ten analyses, only the negative relationship was confirmed in one (see Table 5), and we found a positive relation on two of them. In

any case, these results suggest researchers should be more careful when considering the SES variable, discouraging the *a priori* calculation of SES as a simple average of the scores in education and income.

Table 5.

Summary of the Relationships found in the Different Studies Analyzed.

Study in this paper	Original paper	Variable	Income effect	Education effect
Study 1a	Alonso-Ferres et al. (2019). Study 1	Formal planned helping	ns	+
		Informal planned helping	ns	ns
		Spontaneous helping	ns	ns
Study 1b	Alonso-Ferres et al. (2019). Study 2	Helping behavior	-	ns
Study 1c	Navarro-Carrillo et al. (2023)	Daily help	ns	+
		Money donation	+	+
		Volunteering	ns	+
Study 1d	This paper	Participation in voluntary associations	+	+
Study 2	This paper	Preference for structural attributions over individualistic poverty attributions	-	+
Study3	This paper	Preference for structural attributions over individualistic poverty attributions	-	+
		Meritocratic beliefs	+	-
Study 4	This paper	Just world beliefs	+	-

We found that income and education have different effects on cognitive and ideological variables that may impact the relationship between SES and prosocial behavior. Education is positively related to structural attributions of poverty, meritocracy, and just world beliefs, while income shows the opposite relationship with these variables. Future research should examine whether these ideologies mediate the

relationship between income and education and different forms of prosocial behavior. Our findings do not discount the value of existing research on the topic but emphasize the importance of not assuming that income and education act as predictors in the same direction. Education is the result of a specific socialization process that has ideological effects beyond self-interest, while income may be more closely tied to the self-interest hypothesis (Gelepithis & Giani, 2022). The direction of their effects can vary depending on the outcome being studied. For instance, education can positively relate to deservingness perceptions of welfare recipients and negatively relate to preferences for the wider scope of a welfare system (Attewell, 2022); educational level also has shown a consistent effect on trust, political interest, health and well-being, political cynicism, and intergroup attitudes (Easterbrook et al., 2016). Income, due to self-interest, can influence attitudes toward redistribution and individualistic attributions of poverty.

Although we have only focused on one type of behavior (prosocial), it is possible that the same dissociation between education and income may exist in other variables traditionally studied for the effects of SES (e.g., political issues, psychological well-being, academic achievement, etc.). In the field of politics, Manstead et al. (2020) suggested that the effects of education and income might vary depending on the type of dependent variable considered (e.g., left–right political orientation, nationalism, anti-immigration attitudes, etc.) and the societal context (proportion of university students, level of inequality in the country, etc.). For example, research has shown that when asking about the role of the government in income redistribution, education and income have a similar effect but not in the case of other closely related variables, or another way of posing the question about redistribution (Attewell, 2022).

Our research presents some limitations. The first question deals with the meaning and implications that education has in each society. Education is usually only

considered in a simple way (e.g., number of years of schooling or possession of university studies). However, the meaning and implications of this variable are much more complex and differ greatly depending on the country. Secondly, the effects of education and income may also change depending on the contextual situation. For example, higher levels of education may influence the preference for structural attributions of poverty over individualistic ones in general, but this pattern can change when there is a rapid deterioration of economic conditions, such as in a crisis (Marquis, 2020). In addition, an important area for future research would be to investigate generational differences in the relationships we have studied. As we noted earlier, higher education and university degrees are becoming increasingly common, but a higher level of education no longer guarantees a highly paid job. Therefore, it is important to explore how these changing economic and educational contexts may affect the relationships we have examined. By studying generational differences in these factors, we may gain a better understanding of how social and economic changes shape our interpersonal connections. In the introduction, we mentioned that List (2011) found a U-shaped relationship between income and prosocial behavior. However, due to the specific focus of our research, we have not investigated this concept in the present study. Future research endeavors could delve into this idea more comprehensively, examining the intricate effects of income on these variables.

In no way is it our intention to suggest that SES, or social class, *á la* Thatcher, is unimportant. We believe it is a fundamental category for understanding society and individual and collective psychosocial processes. Rather, we intend to emphasize a problematization of its study and the way we conceptualize social class and SES in social psychology. Accordingly, we also recommend using several different markers and measures of social class or SES before attempting to establish a firm and clear

relationship between social class and researchers' interest variables (for different methods, see Diemer et al., 2013).

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