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## RESEARCH ARTICLE

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### Relationship between Education and Attitude towards Social Welfare among Underdogs and Topdogs in 40 Countries

Emi Iwatani

*University of Pittsburgh*

Feifei Ye

*University of Pittsburgh*

The relationship between education and social welfare attitudes is understudied and potentially complex. Some of the mixed findings to date could be explained by “the underdog principle,” which is the notion that the most vulnerable individuals in society—e.g., women, ethnic minorities, low-income individuals—are more likely to favor social welfare, given its potential benefits to them (Robinson & Bell, 1978). Employing data from the *International Social Survey Programme 2009*, we used hierarchical linear models to explore whether and to what extent education makes a difference in social welfare attitudes among *underdogs* and *topdogs*. The results suggest that after controlling for age and socioeconomic status, educational attainment among topdogs tends to be associated—if at all—with a *less* favorable attitude towards social welfare. For underdogs the association was smaller or non-existent. This reinforces the importance of attending to socioeconomic diversity when examining the effects of education, and supports a concern expressed by a number of scholars (e.g., Biesta, 2009; Labaree, 2014; Nussbaum, 2010; Siegel, 2004) that important non-economic aims of education may be insufficiently articulated and advanced in societies today.

*Keywords:* education, role of education in society, hierarchical linear modeling, social welfare attitudes

In our increasingly interconnected world, at a time when income inequality within and between nations is considered one of the most serious problems in society (Dabla-Norris, Kochhar, Suphaphiphat, Ricka, & Tsounta, 2015), it is important to gather evidence on how education, in its current form, affects attitudes toward income inequality and related notions of social welfare. On one hand, education appears to enlighten (Davis & Robinson, 1991) or transform (Dirkx, Mezirow, & Cranton, 2006) people to care more about those who are less well-off, and adopt more egalitarian attitudes. On the other hand, it is conceivable that current educational systems

make people more individualistic, critical, nuanced, careful, conservative, and/or self-centered, which in turn might enable less favorable attitudes toward egalitarianism and social welfare.

The relationship between education and social welfare attitudes—including attitudes towards income inequality, redistribution and welfare programs—is understudied and potentially complex. Scholarship on the educational effects of “liberalist attitudes” has focused on certain subsets of social values (e.g., civil liberties and tolerance of minorities), and pay very little attention to economics attitudes. Existing studies on predictors of social welfare attitudes tend to include education as a control variable, but not as one of the focal variables of interest, and results from these studies are somewhat mixed. Some show that greater levels of education are associated with less support for social welfare (Andreß & Heien, 2001; Arts & Gelissen, 2001; Bean & Papadakis, 1998; Jæger, 2006; Linos & West, 2003). These scholars theorize that higher education is associated with higher income, making individuals less likely to be the direct beneficiaries of social welfare programs, and thus less likely to support them. On the other hand, there is evidence suggesting that education has a *positive* association with social welfare attitudes (Gelissen, 2000). This argument hinges on the belief that a more educated person is likely to be well socialized on democratic values, and thus more liberally minded (Hasenfeld & Rafferty, 1989).

An important factor to consider when examining these mixed findings is “the underdog principle,” which is the notion that the most vulnerable individuals in society—e.g., women, ethnic minorities, low-income individuals—are more likely to favor social welfare, given its potential benefits to them (Robinson & Bell, 1978). Many studies on attitude toward social welfare have supported the idea that such a principle may hold (Junisbai, 2010; Kelley & Evans, 1993; Linos & West, 2003; Miller, 1992). This may help explain why the association between education and social welfare attitudes is not straight forward: The effect of education may condition on whether individuals are underdogs or not, and may affect different kinds of underdogs in different ways.

One of this study’s main research questions was whether and to what extent education makes a difference in social welfare attitudes among *topdogs*, which we define as working age, non-disabled males who consider themselves to be upper-middle class. We also examined the same question among societal *underdogs*, which we defined as either working age individuals who considered themselves to be of low socioeconomic status, were disabled, or were elderly.

To our knowledge, there has only been one other multi-level analysis of cross-national data focusing on the relationship between education and socioeconomic values (Weakliem, 2002), which did not consider the moderating effect of underdogs. Understanding the relationship between education and attitude towards social welfare is important because those who make decisions about social welfare, and/or sway public opinion about it, are typically more educated. If this key demographic is unconcerned about income inequality and related issues, we could start a conversation about whether this is what is best for society, and whether anything in our current education systems needs changing. Similarly, if underdogs and topdogs differ in their relationship between education and their attitude towards socioeconomic inequality, it should motivate us to think more about whether and how the affordances of education might differ across these two groups, and their associated implications.

## BACKGROUND

A variety of factors have been thought to impact individuals' attitudes and opinions about social welfare. In this section we review these factors in terms of each individual's situational, ideological and demographic factors as well as his or her national factors. We also highlight previous work on the relationship between education and social welfare attitudes to advance this study forward.

### Situational, Ideological and Demographic Factors Related to Social Welfare Attitudes

Life circumstances or situations have been presumed to affect one's attitude toward social welfare. Such factors include, but are not limited to: poverty, unemployment, health levels of self and family, whether individuals are welfare beneficiaries, and whether people live in economically under-resourced areas. Perhaps not surprisingly, those who have benefitted from state resources have often been hypothesized to hold favorable views toward social welfare and related issues, based on some form of utilitarianism (Bentham, 1789; Mill, 1879).

For example, Sevä, Sociologiska, Umeå, and Samhällsvetenskapliga (2009) found that those living in Swedish municipalities suffering from high unemployment rates, ill health and depopulation, tended to be more supportive of welfare. In a longitudinal study of Canadian attitudes, Jæger (2006) found that those with higher incomes tend to be less supportive of the idea that the government should provide a decent standard of living to its citizens, presumably because they have less to benefit from it. Similar negative relationships between income or socioeconomic status, and favorable attitude towards social welfare or egalitarianism have been documented by Andreß and Heien (2001), Arts and Gelissen (2001) and Linos and West (2003). However, human attitudes are complex, and there are variations among, and exceptions to, most discovered relationships. For example, Jæger (2006) found that among Canadians, unemployment was *not* significantly related to attitude towards welfare. In an interesting comparative analysis between Kyrgyzstan and Kazakhstan, Junisbai (2010) found that higher household income appeared to dampen the attitude towards egalitarianism of citizens in the former country, but not the latter, and explained this difference in terms of the differences in the countries' socioeconomic conditions.

An individual's personal beliefs and ideologies, including their political views, religious values, and beliefs about social mobility, should also be strongly related to social welfare attitudes. Generally, studies have found evidence to support the supposition that those who are more socially liberal, and more in favor of the principle of equality, are more in favor of government policies that favor social welfare. For example, in a multilevel analysis of 24 industrialized nations, Blekesaune and Quadagno (2003) found that those who held more egalitarian attitudes tended to also hold more favorable views towards the position that the government should provide support to those who are sick, old, and unemployed. In a multilevel analysis of 14 European nations, Gelissen (2000) reported that those who associate themselves with a more politically liberal position tend to be more supportive of government welfare. Other ideological predictors positively associated with social welfare attitudes include religious traditionalism (Davis & Robinson, 1999, 2006), and the belief that social mobility is difficult and/or that society is unfair (Fong, 2001; Funk, 2000; Linos & West, 2003; Luo, 1998).

Situational and ideological factors at regional and national levels, including sociopolitical structure, neighborhood socioeconomic status, and political beliefs of citizens, have also been identified as potential contributors to individual attitudes about social welfare. Blekesaune and Quadagno (2003), for example, found that average unemployment and egalitarian ideology among industrialized nations were positively associated with agreement for society to support the unemployed, while just the former was positively associated with the view that society should support the sick and old. Gelissen (2000) found that among European nations, regime type was associated with preference for welfare states.

Finally, demographic factors, particularly sex and age, have often predicted whether individuals favor social welfare. Women consistently have a more favorable view towards social welfare than men, among 24 industrialized nations (Blekesaune & Quadagno 2003), Canadian citizens (Jæger, 2006), citizens of Norway, US and Germany (Andreß & Heien, 2001; Linos & West, 2003), or 20 *International Social Survey Programme* participant nations (Arts & Gelissen 2001). This could be because females espouse what Svallfors (1997, p. 290) has characterized as “rationality of caring,” and have a tendency to care more about others. Age has often been included in these and related studies, but has been inconsistent in its ability to predict support for social welfare. For example, Jæger (2006) found that age had a slight negative relationship with whether government should provide a decent standard of living for everyone, though no association with the idea that there should be redistribution. Blekesaune and Quadagno (2003) found that age did not significantly predict attitude towards social welfare after controlling for gender, and egalitarian ideology at the individual and national level.

### Mixed Findings on the Relationship between Education and Social Welfare Attitudes

To the best of our understanding, the only cross-national study that has examined education as the focal variable of interest is that by Weakliem (2002), which used hierarchical linear modeling to explore “the effects of education on political opinions.” Using the *World Values Survey* that included data from 1989 to 1993 in 40 nations, Weakliem examined the relationship between an individual’s age at the completion of full-time schooling, with their responses to over 20 political questions. He found that after controlling for age, gender and socioeconomic class, there was a “clear tendency” for education to be negatively associated with liberal, or more egalitarian, ideas about economic social welfare. For example, a one-year increase in the formal education was associated with a 1.07 percent shift in the population from complete agreement to complete disagreement with the statement that “incomes should be made more equal,” and a 0.57 percent shift towards disagreement with the statement that “the state should take more responsibility to ensure that everyone is provided for.” A seeming exception was that those who were educated were more likely to *disagree* with the statement “it is unfair to give work to handicapped people when able-bodied people can’t find jobs.” Communist rule and the gross domestic product did not make a difference on these particular predictions. However, for environmental and social political views (e.g., on protecting the environment, and status of women in the workplace), more education was associated with more liberal views. Weakliem explained this pattern by arguing that those who were educated were more likely to support individual freedoms and oppose institutional restrictions of such freedoms.

In a study examining the relationship between welfare regime and beliefs about welfare distribution, Arts and Gelissen (2001) hypothesized that all else being equal, those who were more educated would be more likely to support universal rights to social welfare benefits, and/or believe that those who are in need of such benefits should receive them. However, their hypothesis was rejected. Consistent with Weakliem's study, their results revealed that the more educated were more likely to favor an equity-based view (i.e., that those who contribute more to society deserve to receive more benefits), rather than equality or need-based views. Arts and Gelissen surmised that this could be because education may have been accounting for the effects of income.

Negative relationships between education and an egalitarian attitude of social welfare have also been documented across a number of Western nations by Andreß and Heien (2001), Bean and Papadakis (1998), Linos and West (2003) and Jæger (2006). However, since education was not the focal variable in these studies, the reason for the negative relationship has not been sufficiently explored. In addition, empirical findings on the relationship between education and social welfare attitudes have proved inconsistent. While Bean and Papadakis (1998) found negative relationships between education and egalitarian attitude in Austria and the U.S., they found no such effects in four other Western European countries. Junisbai (2010) similarly showed a negative relationship between education and egalitarian attitude in Kyrgyzstan, but not in Kazakhstan, while Robinson and Bell (1978) found a positive relationship between education and egalitarian attitude in the U.K. although not the U.S. In a study of 14 European countries in 1992, Gelissen (2000) was able to show that years of education positively predicted a more egalitarian attitude towards social welfare, although this effect was dampened among the political-right. He inferred that education might socialize or "enlighten" people to accept and more strongly believe in equality, as Hasenfeld and Rafferty (1989) and Robinson and Bell (1978) had also suggested.

### Possible Explanations for Mixed Findings: Conflicting Educational Aims & Underdog Principle

These mixed findings may not be surprising considering that education is used to achieve multiple, and often conflicting aims of individuals and societies. Labaree (1997) has argued, for example, that education in the U.S. has historically been used by the state to foster democratic citizenship and economic development, and used by citizens to improve or preserve their socioeconomic status. Similarly, and from a cross-national perspective, Biesta (2009) has suggested that education qualifies citizens in professional and life skills (qualification function), helps them become part of "social, cultural and political 'orders'" (socialization function), and at the same time helps them individuate from such orders (subjectification function). While education's citizenship development and socialization aims may positively impact social welfare attitudes, its economic development and social mobility aims may counter such effects. These scholars and others (e.g., Nussbaum, 2010; Siegel, 2004) have also raised concern that globally and in the U.S., economic aims of education have been heavily prioritized at the expense of other important aims. If so, we would expect education to be associated with negative attitudes towards social welfare, since more education would not only qualify people for higher wages, but also provide more opportunities to perceive and analyze problems in terms of economics (i.e., in terms of costs, benefits, risks, investments, etc.).

An important confounding factor to consider when examining these mixed findings on the impact of education on social welfare attitudes, is the “underdog principle,” or the idea that the more vulnerable individuals in society are more likely to favor social welfare and egalitarian principles, given their potential to benefit from them (Robinson & Bell, 1978). If one’s education impacts social welfare attitudes, and if underdog status has divergent effects on these attitudes (e.g., Junisbai, 2010; Kelley & Evans, 1993; Linos & West, 2003; Miller, 1992), it seems possible that underdogs and topdogs differ in the relationship between educational attainment and their attitudes towards social welfare. Therefore, this study explores whether education is related to social welfare attitudes, and whether this relationship is conditional on one’s underdog status.

## RESEARCH QUESTION & METHODS

We asked, after controlling for a variety of demographic factors, 1) how is education related to social welfare attitudes for socioeconomic topdogs, 2) how is education related to social welfare attitudes for socioeconomic underdogs, and 3) does the relationship between education and social welfare attitudes differ between underdogs and topdogs? Based on aforementioned concern about the over-prioritization of economic aims in education, we hypothesized that more education may be associated with less support for social welfare. We hypothesized that the pattern would be weaker or reversed for underdogs because they, or people they know and care about, would be more likely to be social welfare beneficiaries, and therefore they would be more amenable to valuing social welfare.

We used data from the *International Social Survey Programme 2009: Social Inequality IV* (ISSP 2009), which includes attitudinal data about social inequality in 40 countries. The sampling procedure differed for each country, but consisted generally of simple and multi-stage stratified random sampling. Methods used for data collection included, but was not limited to, paper and pencil, face-to-face, and online surveying.

Data in ISSP 2009 (N=54,733) was collected between February 2008 and January 2012. The sample in our first analysis was limited to the 7,365 respondents who identified as “topdogs,” meaning they were men aged 25-65, who placed themselves on the top half of a 10-point societal scale, and who are not permanently disabled. Those who reported themselves to be unemployed were included in the sample because it seemed likely, given their high self-perceived SES, that such respondents were not in the labor force by choice rather than necessity. However, those who reported that their current employment status was “housewife, houseman, home duties” were excluded, since this seemed to connote a less powerful and less mainstream societal position than those who are employed or unemployed by choice.

The “underdog” sample was limited to 17,792 respondents who were of approximate working age (age 25 to 65) and *either* considered themselves to be of low socioeconomic status (i.e., rated themselves as lowest to third-lowest rung on a 10-point scale), *or* were permanently disabled, *or* were age 66 or above (and likely receiving state assistance for income).

Ideally, for both samples, we would have screened for ethnic and religious minority status, and for sexual orientation, such that these other minority groups would have been represented. However, there were no variables that clearly and consistently identified these characteristics across countries. Those who fit the inclusion/exclusion criteria, but had missing data on any of

the predictors (<1% of topdogs and <5% of underdogs) and dependent variables (<5% for most questions, see Tables 4 and 5), were also excluded.

The data were analyzed through a 2-level hierarchical linear model, using individuals at level 1 and country at level 2. HLM 7 software (Raudenbush, Byrk, Cheong, Congdon, & du Toit, 2011) was used to perform the analysis, while SPSS 22 was used for descriptive statistics and checking assumptions. The dependent variable in this model comprised of responses to 8 five-point Likert-scale items that tapped individuals' attitudes about social inequality. For example, respondents were asked to express their level of agreement with statements such as, "It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes" (Table 3 lists all items). Since the correlations between most responses were not high enough to warrant combining the items into one scale, each of the items were considered as separate, continuous dependent variables. These variables were recoded, when necessary, so that higher scores indicated a more positive attitude towards egalitarianism and social welfare.

Given that we wanted to compare results across models, we used the same model structure to predict each of the dependent variables. For both topdog and underdog analyses, independent variables at the individual level were age, educational attainment (DEGREE), and SES. Level of education was considered as a continuous variable on a 6-point scale (1=no formal qualification, 2=lowest formal qualification, 3=above lowest formal qualification, 4=higher secondary completed, 5=above higher secondary level, and 6=university degree completed). SES was based on self-perceived social standing, reported on a scale of 1 through 10. All three level-1 variables were grand-mean centered so the intercept could be interpreted as adjusted country mean. Since the underdog sample included both men and women, sex (a dummy predictor, where female = 1) was additionally included at the individual level without centering.

The country-level predictors included the mean educational attainment (MEAN\_DEGREE) and the proportion of topdogs or underdogs (PROP\_TOPD, or PROP\_UD). The former was included to account for any contextual effects of education on the outcome, such that the coefficient for education at the individual level would only include the within-country effect. The latter was included to capture any differential effects associated with the prevalence of topdogs that exist in each country. Each were included only as predictors of the level-1 intercept. Both predictors were grand-mean centered. For both samples, the level-1 intercept, and educational attainment slopes were modeled as random, as were the underdog SES slopes. This was because the preliminary analyses indicated these and not the other level-1 coefficients, varied significantly between countries for each of the outcomes.

Thus, the following HLM models were constructed for each dependent variable:

#### Level-1 Model for Topdog

$$ATTITUDE_{ij} = \beta_{0j} + \beta_{1j}*(AGE_{ij} - \overline{AGE}_{..}) + \beta_{2j}*(DEGREE_{ij} - \overline{DEGREE}_{..}) + \beta_{3j}*(SES_{ij} - \overline{SES}_{..}) + r_{ij}$$

where  $r_{ij} \sim N(0, \sigma^2)$

*Note.* The model for underdogs was the same, except that it also included sex as a predictor.

## Level-2 Model for Topdog

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(PROP\_TOPD_j - \overline{PROP\_TOPD}) + \gamma_{02}*(MEAN\_DEGREE_j - \overline{MEAN\_DEGREE}) + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20} + u_{2j}$$

$$\beta_{3j} = \gamma_{30}$$

$$\text{where } \begin{bmatrix} u_{0j} \\ u_{2j} \end{bmatrix} \sim N \left( \begin{bmatrix} 0 \\ 0 \end{bmatrix}, \begin{bmatrix} \tau_{00} & \tau_{02} \\ \tau_{20} & \tau_{22} \end{bmatrix} \right)$$

*Note.* The model for underdogs was the same except that it additionally modeled the slope of sex, and it modeled the slope of SES as random.

Assumptions were checked for all models, and the null-model ICC and proportion of variance explained were calculated for all models.

## RESULTS

## Descriptive Statistics

Approximately 78% of the 7,365 topdogs were employed full time, less than 7% were employed part time or less than part time, 9% were retired, 4% were unemployed, and less than 2% had other responses. In contrast, just 23% of the 17,792 underdogs were employed full time, while 43% were retired, 8% performed home duties, 8% were unemployed, 7% were part-time or less than part-time employed, 6% were permanently disabled, and 3% were either students or otherwise not in the workforce. On a scale of 1 (lowest) to 10 (highest) of social status, approximately 49% of topdogs reported a score of 6, 31% a 7, 14% an 8, 3% a 9, and less than 2% a 10. In contrast, 62% of the underdogs rated themselves a 3 or below, 82% a 5 or below, and only 3% above a 7. Approximately 31% of the topdogs and 9% of underdogs completed a university degree. 18% of topdogs' and 11% of underdogs' highest education level was a degree above higher secondary level. 23% of topdogs and 22% of underdogs completed just up to higher secondary, while 19% and 22%, respectively, completed above lowest qualification, 8% and 27% completed the lowest formal qualification, and less than 2% and 10%, respectively, had no formal educational qualification. 55% of underdogs were female. The mean (and standard deviation of) SES, education and age across countries were 6.74 (.90), 3.45 (1.27) and 44.6 (11.22), respectively for topdogs, and 3.82 (1.73), 2.27 (1.31) and 58.9 (16.8), respectively for underdogs. To provide a further contrast, the mean (and standard deviation of) SES, education and age of all ISSP 2009 respondents were 5.07 (1.67), 2.85 (1.35) and 46.8 (16.8), respectively. On average, 14% of each country's sample met the topdog criteria. The 15 countries with the most topdogs (17-27%) were all highly-industrialized Western nations, while the 14 countries with the smallest proportion of topdogs (3-10%) consisted of 9 Eastern European countries, 2 Asian countries, Chile and Portugal. The descriptive statistics of topdogs, underdogs, and the overall sample by country, are provided in Tables 1 through 3.



TABLE 1  
Descriptive Statistics of Topdogs by Country (N = 7365)

Country	SES		Education		Age		N
	Mean	SD	Mean	SD	Mean	SD	
Argentina	6.66	.83	3.06	1.43	43.4	12.06	136
Australia	6.89	.91	4.20	1.03	49.8	10.41	250
Austria	6.75	.86	2.68	1.24	45.4	10.96	240
Belgium	6.81	.82	3.43	1.04	46.1	11.38	238
Bulgaria	6.69	1.02	3.81	.99	46.6	11.43	140
Chile	6.62	.86	4.06	1.32	43.0	11.19	69
China	6.41	.78	2.59	1.27	43.6	11.67	454
Croatia	6.64	.87	3.34	1.20	41.5	10.97	94
Cyprus	6.91	1.07	3.82	1.31	42.8	10.85	179
Czech Republic	6.59	.88	3.07	1.19	43.8	12.09	150
Denmark	6.84	.91	3.70	.90	47.4	10.60	346
Estonia	6.73	.97	3.41	1.03	42.4	13.11	80
Finland	7.18	.97	3.58	1.30	47.9	11.42	180
France	6.67	.84	3.55	1.49	51.6	10.45	374
Germany	6.74	.83	2.72	1.48	45.7	11.03	296
Great Britain	6.72	.93	3.30	1.70	47.0	11.11	151
Hungary	6.40	.66	3.34	1.14	43.6	10.91	65
Iceland	6.85	.84	3.33	1.57	44.5	11.12	195
Israel	7.12	1.15	3.29	1.36	43.9	12.20	198
Italy	6.47	.69	3.55	1.19	47.8	10.79	115
Japan	6.57	.72	4.12	1.17	49.0	10.01	99
Latvia	6.84	.95	3.72	1.18	42.2	11.68	74
New Zealand	6.96	.92	3.61	1.53	48.1	11.83	198
Norway	6.89	.90	3.74	1.26	47.1	11.06	394
Philippines	6.80	1.14	3.08	1.30	41.6	10.50	76
Poland	6.72	.98	3.34	1.33	43.2	12.45	179
Portugal	6.80	1.06	2.88	1.56	44.6	11.69	89
Russia	6.41	.77	3.86	1.15	41.5	11.26	153
Slovak Republic	6.65	.77	3.51	1.24	43.7	12.07	113
Slovenia	6.76	.91	3.43	1.28	43.1	11.26	105
South Africa	7.05	1.07	3.10	1.53	42.9	10.76	385
Spain	6.57	.85	3.33	1.38	43.1	11.22	136
South Korea	6.49	.74	4.35	.93	42.3	9.96	170
Sweden	6.87	.91	3.33	1.43	46.2	10.35	246
Switzerland	6.95	.88	3.31	1.31	44.5	11.34	219
Taiwan	6.38	.73	3.88	1.20	43.6	10.83	162
Turkey	6.79	1.02	2.71	1.59	42.6	11.43	101
Ukraine	6.47	.83	4.24	.95	40.2	10.82	51
US	6.66	.94	3.82	1.09	45.5	11.25	325
Venezuela	7.11	1.14	2.77	1.22	40.6	11.23	140
Unweighted Avg	6.74	.90	3.45	1.27	44.6	11.22	184

TABLE 2  
Descriptive Statistics of Underdogs by Country (N = 17792)

Country	SES		Education		Age		Proportion	N
	Mean	SD	Mean	SD	Mean	SD	Female	
Argentina	3.84	1.71	1.53	1.34	59.6	18.4	.51	360
Australia	5.17	1.85	1.97	1.22	66.1	15.1	.50	182
Austria	5.17	1.95	2.74	1.88	67.2	13.9	.50	427
Belgium	4.90	1.82	2.28	1.17	66.6	15.0	.48	295
Bulgaria	3.46	2.29	2.87	1.31	59.0	17.2	.57	405
Chile	2.80	1.45	1.86	1.23	54.9	18.9	.58	659
China	2.62	1.65	1.74	1.24	48.4	15.1	.49	1045
Croatia	3.23	1.62	2.20	1.41	60.1	15.8	.58	385
Cyprus	3.76	1.49	1.75	1.26	61.0	13.5	.47	152
Czech Republic	3.55	1.56	2.23	1.01	57.6	16.8	.63	375
Denmark	4.74	1.97	2.99	1.31	66.6	14.6	.55	402
Estonia	3.91	1.79	3.02	1.17	64.6	15.4	.69	401
Finland	4.62	2.05	2.54	1.48	61.1	15.0	.55	173
France	4.08	1.79	2.21	1.41	64.4	15.3	.48	1133
Germany	4.80	1.82	1.70	1.19	66.0	16.3	.54	415
Great Britain	4.08	1.87	1.51	1.72	59.7	19.0	.59	302
Hungary	2.97	1.28	1.95	1.19	51.5	17.4	.60	464
Iceland	4.81	1.91	2.05	1.40	62.9	17.7	.54	209
Israel	3.87	2.08	2.60	1.35	52.5	21.7	.50	345
Italy	3.44	1.80	2.59	1.22	56.2	18.6	.52	385
Japan	3.72	1.75	2.87	1.34	58.0	18.1	.49	519
Latvia	2.90	1.22	2.70	1.26	55.1	15.8	.63	378
New Zealand	5.12	2.11	2.63	1.72	65.5	17.2	.52	238
Norway	5.21	1.97	3.15	1.40	62.6	13.9	.51	321
Philippines	2.85	1.73	2.00	1.32	51.3	18.6	.47	402
Poland	3.80	1.84	2.23	1.19	60.7	16.7	.57	319
Portugal	2.98	1.77	1.40	1.08	58.1	18.4	.60	442
Russia	3.19	1.80	3.04	1.27	58.4	18.1	.66	651
Slovak Republic	3.39	1.48	2.20	1.10	57.6	17.1	.62	323
Slovenia	3.77	1.69	1.94	1.29	61.3	18.1	.56	298
South Africa	2.91	1.55	1.30	1.46	45.5	18.6	.64	993
Spain	2.88	1.23	2.45	1.45	53.4	17.6	.54	485
South Korea	3.89	1.61	1.81	1.16	62.9	17.5	.53	332
Sweden	5.01	1.90	2.37	1.44	64.0	13.8	.48	275
Switzerland	4.95	1.87	2.18	1.14	69.1	15.2	.58	332
Taiwan	2.83	1.40	2.13	1.43	52.4	18.6	.47	781
Turkey	2.47	1.38	1.27	1.14	46.7	17.2	.52	588
Ukraine	2.57	1.24	3.30	1.07	56.1	17.2	.69	1017
US	5.03	2.08	3.30	1.28	66.7	15.9	.56	397
Venezuela	3.42	1.77	2.09	1.47	46.3	19.4	.50	187
Unweighted Avg	3.82	1.73	2.27	1.31	58.9	16.8	.55	445

TABLE 3  
Descriptive Statistics of ISSP:2009 by Country (N = 55238)

Country	SES		Education		Age		Proportion	N
	Mean	SD	Mean	SD	Mean	SD	Non-UD	
Argentina	4.96	1.54	2.32	1.46	46.7	17.5	.12	1133
Australia	6.01	1.37	2.43	1.23	45.1	17.1	.24	1019
Austria	5.84	1.55	3.46	1.64	52.5	16.8	.17	1525
Belgium	5.86	1.53	2.91	1.16	48.9	17.6	.21	1115
Bulgaria	4.89	2.16	3.41	1.24	49.1	17.2	.14	1000
Chile	4.03	1.66	2.53	1.43	46.6	17.6	.05	1505
China	4.60	1.96	2.18	1.31	43.0	14.1	.15	3010
Croatia	4.62	1.68	2.71	1.28	45.7	17.6	.08	1201
Cyprus	5.50	1.54	3.07	1.39	42.6	15.4	.18	1000
Czech Republic	4.87	1.56	2.57	1.09	46.8	16.8	.13	1205
Denmark	5.77	1.59	3.38	1.15	50.2	17.0	.23	1518
Estonia	4.94	1.75	3.24	1.13	50.9	18.8	.08	1005
Finland	6.04	1.73	3.02	1.53	47.6	16.5	.21	880
France	4.89	1.63	2.83	1.53	55.1	15.7	.13	2817
Germany	5.70	1.53	2.24	1.38	49.6	17.9	.21	1395
Great Britain	5.24	1.70	2.43	1.84	50.1	17.2	.17	958
Hungary	4.04	1.51	2.48	1.24	46.2	15.9	.06	1010
Iceland	5.86	1.55	2.84	1.62	46.1	17.3	.21	947
Israel	5.42	1.93	3.09	1.33	43.5	17.5	.17	1193
Italy	4.61	1.70	2.99	1.26	48.3	17.1	.11	1084
Japan	4.65	1.59	3.20	1.31	49.2	17.6	.08	1296
Latvia	4.47	1.71	3.07	1.24	44.4	17.0	.07	1069
New Zealand	5.94	1.62	3.27	1.64	50.6	17.0	.21	935
Norway	6.10	1.50	3.58	1.29	47.4	15.4	.27	1456
Philippines	4.50	1.82	2.61	1.42	42.5	16.1	.06	1200
Poland	5.27	1.70	2.89	1.30	46.0	17.1	.14	1263
Portugal	4.42	2.07	2.04	1.45	49.4	18.1	.09	1000
Russia	4.66	1.90	3.47	1.18	46.8	18.4	.10	1603
Slovak Republic	4.86	1.58	2.73	1.17	46.3	16.3	.10	1159
Slovenia	4.93	1.53	2.66	1.38	46.7	17.8	.10	1065
South Africa	4.90	1.97	2.13	1.59	39.3	15.7	.12	3305
South Korea	4.51	1.57	3.39	1.35	43.5	15.2	.11	1599
Spain	4.98	1.41	2.57	1.37	47.1	17.9	.11	1215
Sweden	5.89	1.53	3.01	1.48	48.5	16.3	.22	1137
Switzerland	5.71	1.56	2.62	1.28	50.1	17.7	.18	1229
Taiwan	4.26	1.63	2.95	1.51	44.8	16.6	.08	2026
Turkey	4.23	1.86	1.77	1.38	41.2	15.5	.07	1569
Ukraine	3.74	1.68	3.56	1.04	48.2	17.7	.03	2012
United States	5.79	1.60	3.65	1.14	49.5	17.1	.21	1581
Venezuela	5.42	1.91	2.71	1.32	36.8	15.0	.14	999
Unweighted Avg	5.07	1.67	2.85	1.35	46.8	16.9	.14	1381

The relative response patterns on inequality and egalitarianism attitudes varied across the 8 Likert-items, across each country, and between the two study samples. The descriptive statistics and interclass correlation coefficients (ICCs) for the null models for topdogs and underdogs, respectively, are provided in Tables 4 and 5. The means were generally higher for underdogs than topdogs, supporting previous findings about the underdog theory. The ICCs for the dependent variables, which represent the proportion of between-country variance, ranged from .099 to .189, with the exception of item 5, which had an ICC of .07 for both groups.

TABLE 4  
Descriptive Statistics, ICC and Response Rates of Dependent Variables  
(Socioeconomic Inequality and Egalitarianism Attitudes) for Topdogs

Question	Mean	SD	ICC	N	Resp rate
1. Differences in income in <R's country> are too large (1=SA, 5=SD). [reversely coded]	3.96	1.04	.174	7275	.988
2. It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes (1=SA, 5=SD). [reversely coded]	3.50	1.23	.148	7230	.981
3. The government should provide a decent standard of living for the unemployed (1=SA, 5=SD). [reversely coded]	3.70	1.06	.116	7238	.983
4. The government should spend less on benefits for the poor (1=SA, 5=SD).	3.64	1.14	.109	7198	.977
5. Do you think people with high incomes should pay a larger share of their income in taxes than those with low incomes, the same share, or a smaller share (1=Much larger, 5=Much smaller)? [reversely coded]	3.88	0.77	.069	7177	.974
6. Generally, how would you describe taxes in <R's country> today for those with high incomes (1=Much too high, 5=Much too low)?	3.14	1.07	.106	7017	.953
7. Is it just or unjust - right or wrong - that people with higher incomes can buy better health care than people with lower incomes (1=Very just, 5=Very unjust)?	3.30	1.31	.153	7226	.981
8. Is it just or unjust - right or wrong - that people with higher incomes can buy better education for their children than people with lower incomes (1=Very just, 5=Very unjust)?	3.32	1.30	.159	7214	.979

Note. Higher mean value indicates greater agreement with egalitarian statements; ICC = interclass correlation coefficient; Resp rate = response rate for item.

TABLE 5  
Descriptive Statistics of Dependent Variables (Socioeconomic Inequality and  
Egalitarianism Attitudes) for Underdogs

Question	Mean	SD	ICC	N	Resp rate
1. Differences in income in <R's country> are too large (1=SA, 5=SD). [reversely coded]	4.37	.84	.136	17343	.975
2. It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes (1=SA, 5=SD). [reversely coded]	4.05	1.03	.151	17176	.965
3. The government should provide a decent standard of living for the unemployed (1=SA, 5=SD). [reversely coded]	4.06	.93	.099	17313	.973
4. The government should spend less on benefits for the poor (1=SA, 5=SD).	3.76	1.24	.115	17154	.964
5. Do you think people with high incomes should pay a larger share of their income in taxes than those with low incomes, the same share, or a smaller share (1=Much larger, 5=Much smaller)? [reversely coded]	4.14	.78	.071	16647	.936
6. Generally, how would you describe taxes in <R's country> today for those with high incomes (1=Much too high, 5=Much too low)?	3.50	1.10	.133	15291	.859
7. Is it just or unjust - right or wrong - that people with higher incomes can buy better health care than people with lower incomes (1=Very just, 5=Very unjust)?	3.68	1.31	.178	17081	.960
8. Is it just or unjust - right or wrong - that people with higher incomes can buy better education for their children than people with lower incomes (1=Very just, 5=Very unjust)?	3.60	1.34	.189	17087	.960

*Note.* Higher mean value indicates greater agreement with egalitarian statements; ICC = interclass correlation coefficient; Resp rate = response rate for item.

## Model Results

Tables 6 and 7 show the fixed and random effects from the models predicting socioeconomic inequality and egalitarianism attitudes (Q1-Q8). Robust standard errors were used for all models because the assumption of homogeneity of level-1 residual variance was violated for each outcome variable. Social welfare attitudes, after controlling for all covariates, ranged between 3.2 and 4.0 for topdogs and 3.5 and 4.3 for underdogs, on a scale of 1 through 5. For both groups, mean country education level and age were generally not significantly and/or practically related to attitude. For both groups, for about half of the questions, the higher the proportion of topdogs (or the lower the proportion of underdogs) in the country, the lower the social welfare attitudes. Individual SES was negatively related to attitude, on most questions, for both groups.

Interestingly, the association between educational attainment and attitude towards social welfare differed across the two groups, as detailed below.

TABLE 6  
Prediction of Social Welfare Attitudes for Topdogs

<i>Fixed Effects</i>	Model Q1	Model Q2	Model Q3	Model Q4	Model Q5	Model Q6	Model Q7	Model Q8
	<i>Coefficient (SE)</i>	<i>Coefficient (SE)</i>	<i>Coefficient (SE)</i>	<i>Coefficient (SE)</i>	<i>Coefficient (SE)</i>	<i>Coefficient (SE)</i>	<i>Coefficient (SE)</i>	<i>Coefficient (SE)</i>
Attitude								
Intercept	4.042 (.053)** *	3.610 (.060) ***	3.740 (.053)* **	3.659 (.058)** *	3.901 (.031)** *	3.180 (.054)** *	3.378 (.080)** *	3.377 (.080)** *
NUD propn	-3.949 (.950)** *	-3.843 (.979) ***	-2.765 (.880)* *	.409 (.932)	-1.369 (.547)*	-1.582 (.848)	.204 (1.077)	1.034 (1.144)
Mean degree	-.169 (.098) <sup>+</sup> .005 (.001)** *	-.191 (.133) .001 (.001)	.016 (.122) .003 (.001)* *	.236 (.133) .006 (.001)** *	.015 (.075) .004 (.001)** *	.118 (.121) .007 (.001)** *	.060 (.183) .003 (.001)*	.091 (.182) .001 (.001)
Age								
Degree	-.060 (.015)** *	-.101 (.016) ***	-.033 (.015)*	.026 (.016)	-.023 (.011)*	-.036 (.016)*	-.080 (.018)** *	-.061 (.017)**
SES	-.115 (.026)** *	-.117 (.023) ***	-.020 (.016)	-.038 (.020)	-.053 (.012)** *	-.116 (.022)** *	-.099 (.021)** *	-.103 (.019)** *

*Random  
Effects  
(Variance  
components)*

Variance in adjusted group means	.113***	.142***	.114***	.133***	.035***	.117***	.264***	.264***
Variance in degree slopes	.007***	.005***	.004***	.006***	.002***	.007***	.008***	.006***
Variance within groups	.858	1.250	.978	1.135	.553	.998	1.367	1.353
Lv1 variance explained	3.9%	3.1%	1.0%	1.7%	1.3%	2.9%	2.3%	1.7%
Lv2 intercept variance explained	36.4%	34.2%	9.7%	2.3%	10.3%	<1%	<1%	<1%

*Note.* <sup>†</sup> $p < .1$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . All regression coefficients and their standard errors, and variance components are calculated based on restricted maximum likelihood estimation.

TABLE 7  
 Prediction of Social Welfare Attitudes for Underdogs

<i>Fixed Effects</i>	Model Q1 <i>Coefficient (SE)</i>	Model Q2 <i>Coefficient (SE)</i>	Model Q3 <i>Coefficient (SE)</i>	Model Q4 <i>Coefficient (SE)</i>	Model Q5 <i>Coefficient (SE)</i>	Model Q6 <i>Coefficient (SE)</i>	Model Q7 <i>Coefficient (SE)</i>	Model Q8 <i>Coefficient (SE)</i>
Attitude								
Intercept	4.341 (.042)***	4.028 (.050)***	4.026 (.037)***	3.853 (.061)***	4.129 (.029)***	3.530 (.062)*	3.721 (.086)**	3.676 (.088)**
UD propn	1.729 (.398)***	1.836 (.566)**	1.248 (.397)**	-.601 (.508)	1.205 (.303)***	1.301 (.522)*	.535 (.781)	.096 (.710)
Mean degree	-.077 (.064)	-.057 (.101)	.006 (.084)	.324 (.129)*	.085 (.048) <sup>+</sup>	.170 (.121)	.297 (.160) <sup>+</sup>	.285 (.152) <sup>+</sup>
Age	-.001 ( $< .001$ ) <sup>+</sup>	$< .001$ (.001)	-.001 (.001)	-.001 (.001)	.002 (.000)***	.002 (.001)*	-.001 (.001)	-.001 (.001)
Degree	-.004 (.009)	-.046 (.008)***	-.017 (.009) <sup>+</sup>	.004 (.012)	-.002 (.006)	.008 (.010)	-.038 (.012)**	-.026 (.012)*
SES	-.052 (.006)***	-.072 (.008)***	-.061 (.007)***	-.040 (.007)***	-.042 (.006)***	-.059 (.008)*	-.058 (.010)**	-.062 (.011)**
Female	.014 (.014)	.028 (.014)*	.019 (.015)	.005 (.018)	-.017 (.010)	-.053 (.015)*	.077 (.019)**	.078 (.018)**



*Random  
Effects  
(Variance  
components)*

Variance in adjusted group means	.071***	.103***	.058***	.152***	.031***	.147***	.307***	.336***
Variance in degree slopes	.002***	.001***	.002***	.003***	.000***	.002***	.004***	.004***
Variance in SES slopes	.001***	.002***	.001***	.001***	.001***	.002***	.004***	.004***
Variance within group	.598	.880	.779	1.300	.550	1.001	1.332	1.361
Lv1 variance explained	4.5%	3.6%	3.0%	1.2%	2.0%	2.8%	2.4%	2.8%
Lv2 intercept variance explained	25.0%	34.8%	30.6%	8.8%	22.8%	4.2%	<1%	<1%

*Note.* <sup>+</sup> $p < .1$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . All coefficients and standard errors of fixed effects, and variance components are calculated based on restricted maximum likelihood estimation.

After controlling for covariates, the mean level of agreement with the statement that income inequality is too high (question 1), was 4.04 for topdogs and 4.34, for underdogs. All else being equal, a topdog with a university degree was likely to express more disagreement with that statement—on average, by 0.3 points on a 5-point scale— than someone with no formal education. In contrast, there was no difference in the level of agreement with that statement between more and less well educated underdogs.

The mean level of agreement with the statement that the government should be responsible for redistributing income (question 2), after controlling for all variables in the model, was also higher for underdogs (4.03) than topdogs (3.61). All else being equal, a topdog with a university degree was likely to express more disagreement with that statement—on average, by over 0.5 points— than someone with no formal education. In contrast, an underdog with a university degree was less likely to express disagreement with the statement by about 0.2 points.

Regarding the statement that it is the government's responsibility to provide a decent standard of living for the unemployed (question 3), all else held constant, underdogs were again more in agreement (4.0) than the topdogs (3.7). And again, educational attainment was associated with less support among topdogs (university degree holders disagreed by approximately 0.16 points), but held no relationship among underdogs.

All else held constant, educational attainment was not related to the statement that the government should spend less on the benefits for the poor (question 4), for both topdogs and underdogs. The general sentiment regarding this question, after controlling for all variables, was also quite similar between the groups (3.67 for topdogs and 3.85 for underdogs).

After controlling for covariates, both topdogs and underdogs thought high earners should pay a relatively larger proportion of taxes (question 5, means were 3.90 and 4.13, respectively). All else being equal, those with a university degree were likely to express less support with this idea than those with no formal education if they were a topdog (by 0.12 points), but not if they were an underdog.

Similarly, after controlling for covariates, both topdogs and underdogs thought, on average, that taxes for the rich in one's country were somewhat too low (question 6), although the underdogs had a stronger such belief (3.53) than topdogs (3.18). Here again, those with a university degree were likely to agree less with that idea than those with no formal education if they were a topdog (by .18 points), but not if they were an underdog.

Question 7 asked whether it was just or unjust that people with higher incomes can purchase better healthcare. All else held constant, underdogs were more likely to feel that this was more unjust (3.72) than topdogs (3.38). Furthermore, all else held constant, topdogs with a university degree scored 0.40 points lower on the scale than those with no formal education, while the discrepancy among the two educational groups was only 0.19 points (in the same direction) for underdogs.

The pattern was similar for the question on whether it was just that those with a higher income could afford better education for their children (question 8). Underdogs, after controlling for other variables, tended to feel that this was more unjust (3.67) than topdogs (3.38). The university educated topdog was estimated to score .31 points lower on the scale than a non-formally educated topdog, while the university educated underdog was estimated to score just 0.10 points lower on the scale than a non-formally educated underdog.

## DISCUSSION

The results suggest that among topdogs, after controlling for mean country educational attainment, proportion of topdog, age, and socioeconomic status, educational attainment tends to be associated with a less favorable attitude towards social welfare. Seven out of eight attitude responses had a non-zero association with educational attainment, and all were negative. The greatest association (in terms of raw scores) was observed for question 2, which stated it was the government's responsibility to reduce differences in income between people with high and low incomes. After controlling for all other variables in the model, on average, someone who has completed a university degree, would disagree more by 0.50 points on a 5-point scale than someone with no formal education. More education was also associated with less support for the following statements: 1) income difference in one's country was too large, 2) the government should provide a decent standard of living for the unemployed, 3) people with high incomes should pay a larger proportion of their income in taxes, or that taxes are much too low for the wealthy, and 4) it is unjust for those with higher income to be able to afford better education for their children and better health care.

These results contrasted sharply from the parallel analyses we conducted on underdogs. After controlling for age, SES, gender, mean degree, and proportion of underdogs, educational attainment of the underdogs had either *no relationship, or markedly less (less than half) of a negative relationship relative to topdogs* with the eight attitude outcome variables.

There are several possible reasons that education was negatively associated with egalitarianism and social welfare attitudes for these topdogs. For instance, it could be that education makes people less compassionate and/or more self-centered, and thus less likely to agree with egalitarian views. This would be consistent with recent concerns that education has been too narrowly focused on improving students' capacity to function in the economic marketplace and not attentive enough to other important aims such as good citizenship, or knowledge acquisition for the sake of being wiser (Biesta, 2009; Labaree, 2014; Siegel, 2004). Alternatively, education may make people more complex and nuanced in their views, more moderate, and less likely to agree with general statements, like those asked in this cross-national survey. It could also be the case that those with education are less supportive of social welfare because they consciously or subconsciously wish to take advantage of structures that produce social inequalities. Because these results were based on cross-sectional data, there is also a possibility that social welfare attitudes and egalitarianism affect one's desire to pursue higher levels of education, rather than the other way around.

It was interesting to us that education was *not* related to social welfare attitudes among underdogs. Having a minority status may provide immunity or protection against the aforementioned (hypothesized) effects of education on attitude among topdogs. This could be because one's status and/or identity as a societal minority much strongly shapes one's attitude towards social welfare than formal education. It could also be that the education that minorities receive is qualitatively different than what those in power receive, or that social minorities seek out different kinds of educational experiences than the majority, which in-turn produce differential effects.

A limitation to our study is that many potentially relevant covariates such as academic ability, academic motivation, field of academic interest, quality of schooling, beliefs about egalitarianism prior to schooling, parent education level, and religious and political conservatism, were unavailable to be included in these analyses. In addition, while all variables

(dependent and independent) were treated as continuous, age was the only true continuous variable. Attitude, educational attainment and SES were, strictly speaking, categorical variables each with just 5 or 6 levels. As such, the level-1 and level-2 residuals were less likely to be normally distributed.

## IMPLICATIONS

Our results suggest that educational attainment, by itself, may not help people become more accepting of social welfare, and that it may even make people less likely to support social welfare. Policymakers and proponents of social welfare may find this concerning and want to investigate this relationship further to find out, for example, whether particular kinds of educational curricula or experiences are contributing to these effects. Perhaps even more importantly, the education communities within and across countries should seriously reexamine and discuss what the fundamental aims for education are, and whether non-economic aims are sufficiently articulated and addressed in our current system.

Results also suggest that those trying to obtain support on social welfare from topdogs may have to work harder or differently to convince topdogs with more education about supporting their agenda. The tactics and arguments that garner support from less educated topdogs may not work as well with topdogs who are more educated. For educational theorists, these results suggest that more research is warranted to find out what education does to people's beliefs and attitudes (if anything), how that affects their actions, and ultimately influences the direction of society.

Finally, our results suggest that the education social minorities attain may differ importantly from that attained by topdogs, given education appears to change social welfare attitudes for just the topdogs. The nature, mechanism and desirability of this difference should be studied further. We hope these results can support researchers' and practitioners' recent calls to improve the field's understanding and practice of transformative education—education aimed to foster global sustainability and moral inclusion (“Education for sustainable development,”; Harris, Shealy, Sternberger, Thomas, & Wishon, 2015; Opatow, Gerson, & Woodside, 2005).

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