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EDUCATION, BELIEF STRUCTURES, SUPPORT FOR WELFARE POLICIES, AND VOTE

DIOGO FERRARI¹ 

ABSTRACT: This paper investigates how education affects 1) the structure of beliefs toward social policies, defined as the correlation between attitudes in areas such as education, health, income redistribution, and social security, and 2) the relationship between that belief structure and vote on parties of different ideological affiliations. It is shown that the accumulation of schooling is associated with more structured attitudes. Moreover, in case of structured attitudes that gain an ideological content in favor/against social policies, it is only when schooling is high that these positions are strongly associated with voting for left/right parties. The analysis is based on opinion surveys conducted in 2016 in more than thirty countries.

Keywords: Political psychology. Ideology. Electoral studies. Education. Welfare policies.

EDUCAÇÃO, ESTRUTURAÇÃO IDEOLÓGICA, SUPORTE POR POLÍTICAS SOCIAIS E ESCOLHA ELEITORAL

RESUMO: O objetivo deste artigo é investigar como a educação afeta 1) a estruturação das atitudes por políticas sociais, definida como a correlação entre atitudes em diversas áreas – por exemplo, educação, saúde, redistribuição de renda e seguridade social –, e 2) a relação dessa estruturação com o voto em partidos de diferentes filiações ideológicas. Mostra-se que o acúmulo de escolarização aumenta a estruturação das atitudes, bem como que, em caso de atitudes mais estruturadas que ganhem conteúdo ideológico a favor/contra políticas sociais, é somente quando a escolarização é alta que esses posicionamentos se associam mais fortemente com o voto em partidos de esquerda/direita. Analisam-se opiniões políticas e comportamento eleitoral coletados em surveys de opinião, no ano de 2016, em mais de trinta países.

Palavras-chave: Psicologia política. Ideologia. Estudos eleitorais. Educação. Políticas sociais.

EDUCACIÓN, ESTRUCTURACIÓN IDEOLÓGICA, SUPORTE POR POLÍTICAS SOCIALES Y OPCIÓN ELECTORAL

RESUMEN: El objetivo de este artículo es investigar cómo la educación afecta 1) la estructuración de actitudes por políticas sociales, definida como la correlación entre actitudes en varias áreas – por ejemplo, educación, salud, redistribución del

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ingreso y seguridad social –, y 2) la relación de esta estructuración con el voto en partidos de diferentes filiaciones ideológicas. Se muestra que la acumulación de escolaridad aumenta la estructuración de actitudes y que, en caso de actitudes más estructuradas que adquieran un contenido ideológico a favor/contra políticas sociales, es solo cuando la escolaridad es alta que estas posiciones se asocian más fuertemente con el voto en partidos de izquierda/derecha. El objeto de análisis son las opiniones políticas y el comportamiento electoral recogidas de las encuestas de opinión realizadas en 2016 en más de treinta países.

Palabras-clave: Psicología política. Ideología. Estudios electorales. Educación. Política social.

Introduction

Two goals are sought in this paper. The first is to evaluate how schooling, understood here as years of education, affects the structure of attitudes toward welfare policies. Attitude structure refers to the correlation between attitudes in various policy areas, and this paper focuses on welfare policies such as education, healthcare, income redistribution, and other social benefits. Attitudes are structured if the support for policies in one area helps predict the support in others. For instance, the attitude of a social group can be considered highly structured if everyone in that group favored welfare policies in all areas (education, healthcare, etc.). The first goal of this paper is to evaluate if and how the attitude structure toward welfare policies, regardless of the ideological direction in favor or against those policies, vary with years of education.

Moreover, attitude structures have a direction property, i.e., they can be in favor or against certain policies. Welfare policy attitudes of different people can be equally structured, but have opposite directions. The second goal of this paper is to evaluate if the attitude structure toward welfare policies and its ideological direction (in favor or against those policies) is associated with votes for right- and left-wing parties. In particular, this paper investigates if the correlation between the ideology direction of structured attitudes and vote vary between people with different levels of education. The hypotheses this paper investigates are: 1) does the degree of attitude structure increase with years of education, and; 2) do years of education increase the correlation between the ideological direction of structured attitudes and vote. That is, is the correlation between structured attitudes that are in favor (against) welfare policies and vote for left-wing (right-wing) parties greater among people who have accumulated more years of formal education.

The main contribution of this paper is a systematic analysis of how education influences the relation between voter's choice and their attitude structure toward welfare policies. In this paper, I analyze political opinion and voting behavior collected by public opinion surveys conducted in 2016 in more than 30 European, Asian, and North American countries by the module Role of Government of the International Social Survey Programme (ISSP). Those surveys include information about education, person's attitude toward various welfare policies, and party vote.

To test the arguments about the effect of education, I combine non-parametric estimates and linear structural models, applied to different clusters based on years of education, which were found using Bayesian semi-parametric models.

The results indicate that the accumulation of years of schooling increases the structuring of social welfare policy attitudes, which include dimensions such as provision by the government for education, health, income redistribution and social security. Supporting the hypothesis, education influences how this structuring of attitudes is related to voting in parties of different ideological affiliations. The empirical analysis

presented here shows that, in the case of more structured attitudes that have a specific direction—that is, they are more informed by ideological content in favor or against social policies—it is only when schooling is high that these positions are harmonized with the vote for right-wing or left-wing parties. While among the most-educated, structured beliefs in favor (contrary) to social policies are associated with voting for left (right) parties, this relationship is not maintained or is substantially mitigated among the least-educated.

In the following section, the theoretical-methodological basis that underlies this work is discussed. Next, the data and the research design are described. The empirical analysis and the conclusion are presented subsequently.

Schooling, Attitude Structure, and Vote

Since Converse's (1964) seminal work and other studies related to the Michigan school (CAMPBELL et al., 1960; CONVERSE 1962; LEWIS-BECK et al., 2008), researchers of public opinion and political behavior have demonstrated that the electorate's political belief system is poorly structured. Such a system, in this literature, is approached from the point of view of the correlation or functional dependence (*constraint*) between beliefs or attitudes about different objects or political ideas. In this line, the low structure of the belief system means that, in the electorate in general, the political position in relation to one theme has little relation to positions in relation to other themes, even if, for more sophisticated observers, they are logically connected.

Furthermore, this literature points out that voters have low levels of conceptualization (CONVERSE, 1964; LEWIS-BECK et al., 2008), a concept that, in turn, refers to the reasons offered to justify attitudes toward political objects. Only a minority provide justification for their opinions in terms of more abstract conceptual organizing schemes, such as ideas of political liberalism and conservatism. The general portrait is of an electorate that knows very little, pays little attention, is minimally interested in political matters, has a minimally structured and unstable belief system, and opinions that are not based on broad organizing conceptual schemes. Sniderman, Brody and Tetlock (1993) call this set of arguments the thesis of minimalism.

Although, in general, these findings about public opinion are not entirely disputed, there are several controversies about empirical issues related to the measurement and statistical treatment of data (ANSOLABEHERE; JONATHAN; JAMES, 2008; SMITH, 1980), as well as about the details and the theoretical consequences of the minimalist thesis (SNIDERMAN; BRODY; TETLOCK, 1993). One of these consequences is the differentiation, on the one hand, between more well-informed subgroups among voters and, on the other, the need to understand the factors that explain the formation of attitudes and behaviors given unstructured attitudes and low levels of information for a large portion of the population. With or without an informationally rich and structured belief system, the population adopts political positions, whether expressing support for certain policies or voting for candidates with certain policy views. The question, therefore, is to understand whether these positions are random or follow a specific pattern.

Sniderman, Brody and Tetlock (1993) point out that the inconsistency in attitudes and opinions, caused by low interest and informational scarcity, is compensated by heuristic shortcuts that help to organize and process political information, guide choices, and express positions regarding policy options. More importantly to the investigation of the present work, Sniderman, Brody and Tetlock (1993) argue that the usage of non-cognitive heuristic shortcuts, such as likability heuristics, occurs in inverse relation to the

amount of political information and the capacity to process it.

Levels of political information and the ability to process it are aspects that appear in the literature under the concept of political sophistication (CARPINI; KEETER, 1996; RHEE; CAPPELLA, 1997; DELLI CARPINI, 2000). The theoretical argument is that greater political sophistication increases the role of elements of a cognitive nature in taking positions (*cognitive-driven reasoning*). Traditionally, these cognitive elements concern the organization of information in conceptual groupings associated with terms such as liberalism, conservatism, left, and right. These concepts organize the storage and evaluative processing of information, as well as reduce its acquisition cost (LUSKIN, 1987; SNIDERMAN; BRODY; TETLOCK, 1993), and serve as cognitive shortcuts.

The concept of political sophistication encompasses several dimensions, such as attention, interest, accumulated factual information (DELLI CARPINI, 2000) and conceptual familiarity with political vocabulary terms, the latter often treated under the concept of conceptualization levels, discussed earlier (CONVERSE, 1964). Although the concept of sophistication is multidimensional and comprehensive, researchers have traditionally used formal schooling as a proxy for political sophistication, on one hand because it is a more widely-available measure, but mainly because its measurement is relatively reliable and is strongly correlated with the other dimensions normally used to build the concept of sophistication (SNIDERMAN; BRODY; TETLOCK, 1993). As Sniderman, Brody and Tetlock (1993) argue for the American electorate, “the likelihood that an ordinary person will put his ideological likes and dislikes together consistently depends on the number of years of formal schooling he has had.” In other words, although the evidence indicates that the average citizen has unstructured attitudes about political objects, which increases the role played by emotions (*affect-driven reasoning*) and non-cognitive heuristic shortcuts in their positions, there is also evidence that the role of cognitive elements increases with political sophistication and, more specifically, with years of schooling.

Although schooling can increase elements of cognitive nature in the formation of political positions on different themes, its relationship with the structuring of these positions is ambiguous. This is so because an increase in sophistication can simultaneously cause an effect of differentiation and integration (SNIDERMAN; BRODY; TETLOCK, 1993). The differentiation effect occurs when the increase in information and the cognitive repertoire to process it, in turn, increases the number of factors taken into account in forming an opinion on a given topic.

An example can illustrate the problem. Suppose a relatively well-informed individual supports social policies in a number of areas, such as education, health and unemployment, leading to highly-structured attitudes in favor of social welfare. The degree of structuring can decrease, however, if that person became more informed and learned aspects of the policies or the political-economic context associated with them, such as increases in spending and taxes, as well as factors related to the administration and allocation of resources. A differentiation effect can happen as one learns more dimensions or aspects of the policies, which can lead to a more complex and nuanced evaluation, reducing the correlation between attitudes in various areas and, by definition, the degree the attitudes are structured. However, the *integration* effect can also occur, increasing the structuring of attitudes, if the pro-social policy individual identified common factors that link different themes, such as a tendency to reduce economic inequality. In summary, although political sophistication or, more restrictively, the increase in schooling can increase the relevance of cognitive factors in the formation of political attitudes, their effect can be both an increase or a reduction in the structuring of these attitudes.

The effect of schooling on the degree the attitudes are structured matter because it has behavioral consequences, affecting voters' choices (CARPINI; KEETER, 1996). From the point of view of policy preferences, voters may be led to vote against their own interests in certain areas (idem). This is so because the relationship between the ideological position and the positions on policies is much clearer among the political elite than between the population in general and, in particular, among less-educated groups. When a politician or candidate positions himself to the right of the ideological spectrum, experts can predict his position on certain economic and social policies with some accuracy, precisely because, for that political actor, the concept organizes and synthesizes the direction of his opinions on policies. However, if a demagogue candidate uses caricatured notions of right and left to position himself politically before the electorate, less attentive voters will not necessarily associate such ideological positions with the respective policy positions they entail. The result is that these voters may be in favor of expanding welfare and social protection policies, but led to vote for candidates or parties with the opposite orientation. This ideological "naiveté" (CONVERSE, 1964; KINDER; KALMOE, 2017), according to the literature, is less pronounced among the more-educated strata, which are, comparatively, more sensitive to the positioning on policies than the ideological positioning entails.

In summary, this discussion leads to the following expectations on the role of schooling in supporting social policies, attitudinal structuring and voting. First, *schooling can increase or decrease the degree the attitudes are structured* i.e., how much opinions in various welfare policy areas are correlated. Second, given that attitudes are structured, if it is true that factors of a cognitive nature become more prevalent for more-educated voters (SNIDERMAN; BRODY; TETLOCK, 1993), we must observe a greater congruence between structured attitudes loaded with specific ideological positions and the respective electoral choices among the most-educated. That is, *among the most-educated, those most favorable (contrary) to social policies, with well-structured attitudes, should also be the ones most likely to vote for left (right) parties. On the other hand, groups that are not politically sophisticated (low education) should be more likely to vote against or despite their own positions in relation to social policies, regardless of how much their opinions are structured, i.e., correlated in various areas.* I assess these propositions in the empirical section, but first, three points deserve greater attention.

First, there is a well-established literature in political science that seeks to explain electoral behavior in Brazil. Several studies point to the importance of social programs such as Bolsa Família (HUNTER; POWER, 2007; TERRON; SOARES, 2010; LICIO; RENNÓ; CASTRO, 2009; ZUCCO JR., 2015), the role of party identification or personalistic attachment to candidates (SAMUELS; ZUCCO JR., 2014; TERRON; SOARES, 2010), social mobility (PEIXOTO; RENNÓ, 2011) and strategic voting (RENNÓ; HOEPERS, 2010) on electoral behavior. However, there are no studies on political behavior in Brazil that investigate the role of schooling in structuring a system of attitudes related to different dimensions of social policies, nor about how education affects the relationship of this structure with the ideological direction of voting, as investigated here. Although the data used in this article excludes Brazil due to the unavailability of the source used, the present work intends to contribute to the aforementioned literature by bringing education to the center of the debate, as well as motivating developments for future work on the role of education in the functioning of democracy in the Brazilian context.

Second, in terms of operationalization, the reduction of the concept of sophistication used by the literature to years of schooling used in this article has some limitations. For certain investigations, reducing a complex concept such as political sophistication to a more crude measure, such as years of formal schooling, does more harm than good. It is enough to recognize, for example, that there is a

substantial variation, on average, by the very nature of training, in the theoretical repertoire of people in different areas of knowledge to think about political issues. In addition, there is a variation in quality and curricular focus between educational institutions. The consequence is that there is a potentially significant variation in the extension of the abstract concepts and information that people with the same years of schooling have and, therefore, in how much they use cognitive repertoires to form and organize their political positions. However, it is not the cross difference between groups of types of schooling and sophistication that matters here. The focus of this paper is the variation between years of schooling and whether this variation produces the same result as those that would be expected by the arguments about the effect of political sophistication. Since years of schooling should affect sophistication, but not the other way around, the focus here is on the total effect of those years, whether mediated or not by political sophistication. In addition, as mentioned above, several authors understand that schooling affects the structuring of beliefs because it creates conditions for the establishment of logical connections between different issues, as well as provides cognitive training in the use of organizing abstract conceptual schemes. In other words, schooling matters because it facilitates the identification of “what goes with what and why,” (CONVERSE, 1964, p. 9) so that the effect of years of schooling alone is of theoretical and practical interest.

The third point that deserves mention concerns the concept of attitude structure itself. This concept refers to the correlation between attitudes about different political objects or public policies, but it does not carry information about the ideological direction of attitudes. That is, what matters is not whether the opinion is or is not favorable to certain content, but whether, for the same individual, an opinion in relation to a theme allows us to predict, with certain accuracy, opinions in relation to other related topics. Both those in favor and those against social policies may have similarly-structured attitudes, but their direction will, of course, be different. This point is relevant because it is not only the structuring of opinions, but also the degree of structuring in combination with the direction of attitudes which should, in theory, depending on schooling, matter for the vote for parties of different ideological affiliations.

Data and Methods

The empirical analysis is based on data collected in 2016 in the Role of Government module by the International Social Survey Programme¹ (ISSP). ISSP is a collaborative initiative that draws on researchers from different nations in Europe, Asia and the Americas. This initiative collects national representative information for the countries included in the sample². The Role of Government (RoG) module is of special interest because it includes several questions on attitudes about the government’s role in reducing inequality and in the provision of welfare policies.

To measure attitudes about social policies, I use 18 questions that include topics on government responsibility for social security provision, unemployment policies, education, health spending, industry financing, and income redistribution. Table 1 presents each of these questions. The questions were coded in whole numbers between -2 and 2, 0 and 10, or using a binary code (0 and 1), depending on the scale originally used in the survey. Higher values in each case represent support for the policy or that the state, not the private sector, is responsible for providing it.

In addition to policy attitudes, the survey contains socio-demographic information about respondents, including per capita household income, coded in deciles, years of schooling and the highest level of schooling achieved. Schooling years were coded between 0 and 25+ (25 or more). Since income is an

important factor in determining both schooling and attitudes toward social policies, the effect of schooling is assessed for each income group separately.

In addition to demographic information, the survey contains data on the party for which the respondent voted in the last general, presidential or parliamentary election, depending on the country. Information about the party vote (party name) is supplemented by the ideological identification of the chosen party. The ranking is derived from the expert judgment of each country's party system. This variable is based on three independent surveys: Chapel Hill Expert Survey³ and two studies from the Centro de Investigaciones Sociológicas (CIS) survey⁴: the CIS Study 3156 (October 2016) and the CIS Study 3164 (January 2017). ISSP uses the average score of each party in these three surveys. The variable was coded here at five levels, following the original format adopted by the ISSP: extreme left, left/center left, center/liberal, right/conservative, and extreme right. This indicator was coded between -2 and 2 for numerical analysis, so that smaller numbers indicate votes for parties more to the left on the ideological spectrum. There is no data available on the positioning of parties and candidates in each of the 18 welfare policy questions asked in the survey. To circumvent this limitation, I adopt an approximate strategy to infer these positions based on the ideological classification of the parties, so that parties classified by specialists as the most to the left are also those I consider as most favorable to social policies.

The attitude structure, as discussed, refers to the correlation between opinions in various policy areas, and the structuring that matters here concerns opinions about welfare policies. To construct a measure of attitude structure and allow a comparison with the results of other studies, I follow the same procedure adopted by the previous literature (CONVERSE 1964; BALDASSARRI; GELMAN, 2008). The measure is constructed from pairs of correlation using Pearson's correlation coefficient for each social group of interest, among the 18 questions that measure the attitudes of respondents about the role of government in the provision of welfare policies.

Statements about the effect of schooling are evaluated based on non-parametric estimates and linear structural equations, detailed below.

Empirical Analysis

I begin by exploring the relationship between schooling and average support for welfare policies in each area, separately. Table 1 compares attitudes toward social policies by education and income groups. It is clear that, as we move down the scale of education, in each income group, support for social policies increases. The "Low/High" column shows the ratio between the average support for each policy between the low- and high-education groups, for each income group. For example, the table shows that the average support for increasing spending on unemployment insurance is 3.3 times higher among high-income and low-education groups than among high-income and high-education groups (first row, column 5). This may be due to the fact that less-educated groups are more exposed to unemployment (REHM, 2009). Among low-income groups, the average support for increasing spending on unemployment insurance is 2.9 higher among those with low education than among those with high education (first row, last column). In general, unemployment policies substantially differentiate groups with low and high education, for any income level. The least-educated support social protection more than the most-educated, as do the poorest groups within the same education group. Another notable finding in Table 1 is that, among the high-income group, those with less education are five times more likely than those with higher education to support policies that reduce the workday to create jobs.

Table 1. Mean (standard deviation) support for policies by level of education and income (large average means attitudes in favor of the policy or that the government, and not the private sector, is responsible for providing them).

It should be government responsibility to.../ Government should...	All groups	High Income		Low Income			
		High Education	Low Education	Low/High	High Education	Low Education	Low/High
Spend more money in unemployment insurance	0.342 (1.072)	0.134 (1.013)	0.441 (1.111)	3.2845	0.229 (1.019)	0.663 (1.065)	2.8926
Provide jobs for everyone	0.735 (1.377)	0.226 (1.457)	0.851 (1.368)	3.7735	0.605 (1.38)	1.173 (1.173)	1.9386
Reduce the working week to create more jobs	0.203 (1.218)	0.059 (1.221)	0.296 (1.248)	4.9912	0.206 (1.212)	0.382 (1.209)	1.8585
Provide living standard for unemployed	0.712 (1.268)	0.496 (1.267)	0.798 (1.274)	1.6076	0.682 (1.238)	1.027 (1.168)	1.5066
Support declining industries to protect jobs	0.674 (1.076)	0.372 (1.144)	0.819 (1.004)	2.1999	0.608 (1.098)	0.898 (0.986)	1.4781
Spend more money in old age pensions	0.971 (0.875)	0.747 (0.885)	1.11 (0.835)	1.4873	0.861 (0.854)	1.184 (0.831)	1.3746
Reduce income differences between the rich and the poor	0.974 (1.269)	0.675 (1.387)	1.028 (1.239)	1.523	0.997 (1.23)	1.208 (1.136)	1.2121
Give financial help to university students from low-income families	1.26 (0.975)	1.122 (1.023)	1.281 (0.987)	1.1417	1.234 (0.978)	1.418 (0.886)	1.1491
Cut spending	0.772 (1.129)	0.705 (1.152)	0.87 (1.084)	1.2331	0.666 (1.186)	0.755 (1.141)	1.1342
Spend more money on health care	1.108 (0.833)	0.975 (0.872)	1.225 (0.79)	1.2572	1.088 (0.796)	1.227 (0.8)	1.1274
Spend more money on education	1.057 (0.849)	1.045 (0.852)	1.097 (0.848)	1.0502	1.025 (0.83)	1.125 (0.855)	1.0968
Provide care services for the elderly (as opposed to private sector providing services to elderly)	0.701 (0.458)	0.671 (0.47)	0.739 (0.439)	1.1012	0.69 (0.463)	0.736 (0.441)	1.0662
Finance industry to create new jobs	1.121 (0.859)	1.057 (0.906)	1.136 (0.816)	1.075	1.122 (0.86)	1.181 (0.832)	1.0528
Provide a living standard for the elderly	1.45 (0.952)	1.338 (1.02)	1.489 (0.92)	1.1135	1.479 (0.895)	1.55 (0.864)	1.0478
Provide health care for the sick	1.569 (0.761)	1.505 (0.804)	1.61 (0.734)	1.07	1.617 (0.663)	1.621 (0.736)	1.0022
Provide health care (as opposed to private sector providing health care)	0.832 (0.374)	0.809 (0.393)	0.845 (0.362)	1.0445	0.854 (0.353)	0.853 (0.354)	0.9989
Support industry to develop new products and technology	1.103 (0.84)	1.17 (0.832)	1.131 (0.781)	0.9667	1.098 (0.856)	1.066 (0.863)	0.9705
Provide education (as opposed to private sector providing education)	0.888 (0.315)	0.912 (0.283)	0.858 (0.349)	0.941	0.913 (0.282)	0.868 (0.339)	0.9506

Source: Data available in the Role of Government module, collected in 2016 by the International Social Survey Program (ISSP).

Although on average the low-educated are, in each income group, more favorable to social policies than the more-educated, the association between support for these policies and voting in left-wing parties is higher among the more-educated, not among the least. This can be seen in Fig. 1, which presents the relationship between the ideological direction of voting and the preference for social policies by income and education groups. Negative (positive) values indicate that increased support for social policy is associated with a reduction (increase) in voting for right-wing parties. Among the poor (left panel) in Fig. 1, the effect of education on voting appears only for five policies (redistribution of income; reduction of working hours to generate jobs; increase spending on education, and; provide living standards for the unemployed). Consider support for reducing income inequality. In Table 1, the low-income and low-educated groups are, on average, 20% more favorable than the more-educated low-income groups to agree that the government should reduce inequality (last column, seventh row). However, Fig. 1 shows that it is among the high-educated, not among the low-educated, that this position is associated with voting for left-wing parties (bottom row of the left panel of Fig. 1).

Among the affluent group, schooling makes even more difference. In all but five welfare policy questions (opinion that health and education should be the responsibility of the government, not the private sector; government spending on retirement; investment in declining industries, and; investment in industry to create new products and technologies), groups with different levels of education differ substantially in how much their preferences for policies connect with their electoral choices. The effect of schooling is the same as that demonstrated for low-income groups; that is, among the high-income groups, although the less-educated are more favorable to social policies, it is among the more-educated that this preference is more strongly associated with voting on the left.

Consider, for example, attitudes toward the government offering financial aid for university students from poor families. Table 1 shows that, among high-income groups, the least-educated are 15% more favorable to this type of policy (row 8, column 5), on average. Figure 1 shows, however, that among that same high-income group, it is the most-educated, not the least, who tend to vote for the left when they are more favorable to this policy.

In summary, Table 1 and Fig. 1 together show that, for both high- and low-income groups, the least-educated are the most favorable to social policies. At the same time, the greater intensity of support for social policies does not translate into greater support for left-wing parties among the group with less schooling. To the extent that schooling is associated with political sophistication, this evidence is in line with the normative argument about the effect of political sophistication in the democratic context (CARPINI; KEETER, 1996). Schooling narrows the link between preference for policies and electoral choice that matches those preferences.

So far, we have seen the relationship between education, income, ideological direction of voting and preferences for policies addressed individually. Let us now examine the problem of attitude structure, or the correlation between preferences on various policy dimensions. As discussed, the concept of attitude structure captures the idea of how much attitudes in several areas are related to each other; that is, how much the attitude in one area (e.g., investing in public education) allows one to predict the attitude in relation to another (e.g., provide social insurance). The two arguments highlighted above result in opposite hypotheses about the effect of schooling on a person's attitude structure. The structuring increases with schooling if it helps to organize opinions toward different policies in broader abstract conceptual schemes, such as ideals of conservatism or liberalism (heuristic effect of synthesis). It decreases the structure if it increases the dimensionality of the factors that are taken into account to evaluate each policy or issue separately (differentiation effect).

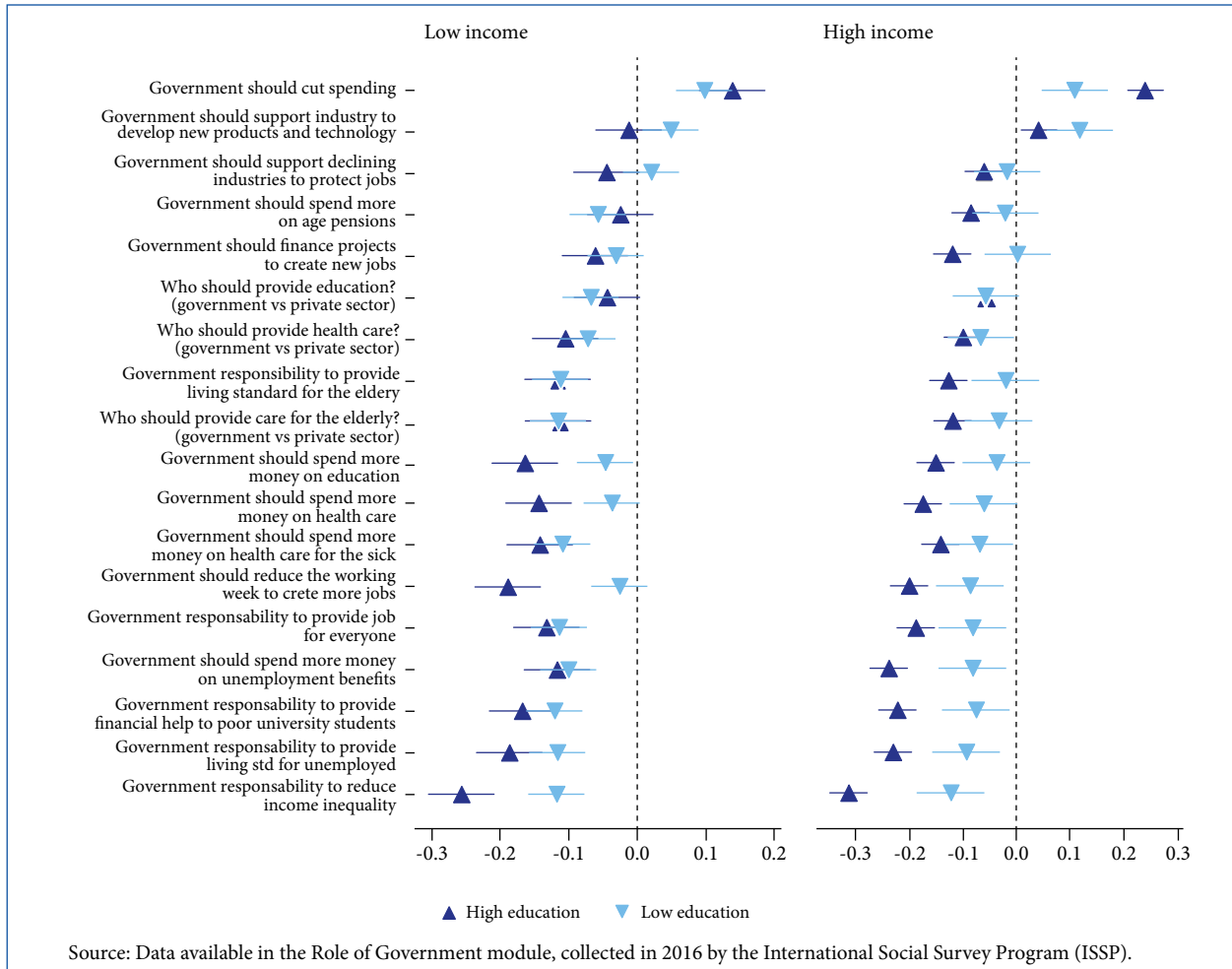


Figure 1. Correlation between attitudes towards different social welfare policies and voting for right-wing vs. left-wing parties by income and education groups.

Although it is not possible to address these effects in detail here, Fig. 2 indicates that there is a relationship between years of schooling and degree of attitude structure, the latter constructed as described in the previous section. The figure presents a linear model adjusted for three different schooling groups. The groups were suggested by an exploratory cluster analysis using the semi-parametric Bayesian model⁵. For groups with less than eight years of schooling, there is no relationship between degree of attitude structure and schooling. However, for those between eight and 18 years of schooling, the structuring of attitudes systematically increases, on average, for each additional year of schooling. After 18 years of schooling, there is a tendency, although not discernible from zero, to reduce the degree of attitude structure. The figure also shows that the variability in the degree of structuring between the lowest (less than eight) and highest (more than 18) years of schooling is much greater than between the intermediate groups (between eight and 18). Thus, the evidence seems to agree with both theoretical expectations. After a certain level, schooling contributes to the structuring of beliefs, but at the highest levels, the average tendency is to produce the opposite effect.

Finally, the remaining question is whether the variation in the degree of attitude structure is related to the electoral choice between education and income groups. How much attitudes are structured, by itself, does not allow us to form any expectation regarding electoral choices. Liberals and conservatives can both be equally and highly cohesive in their attitudes toward different policies, but one would

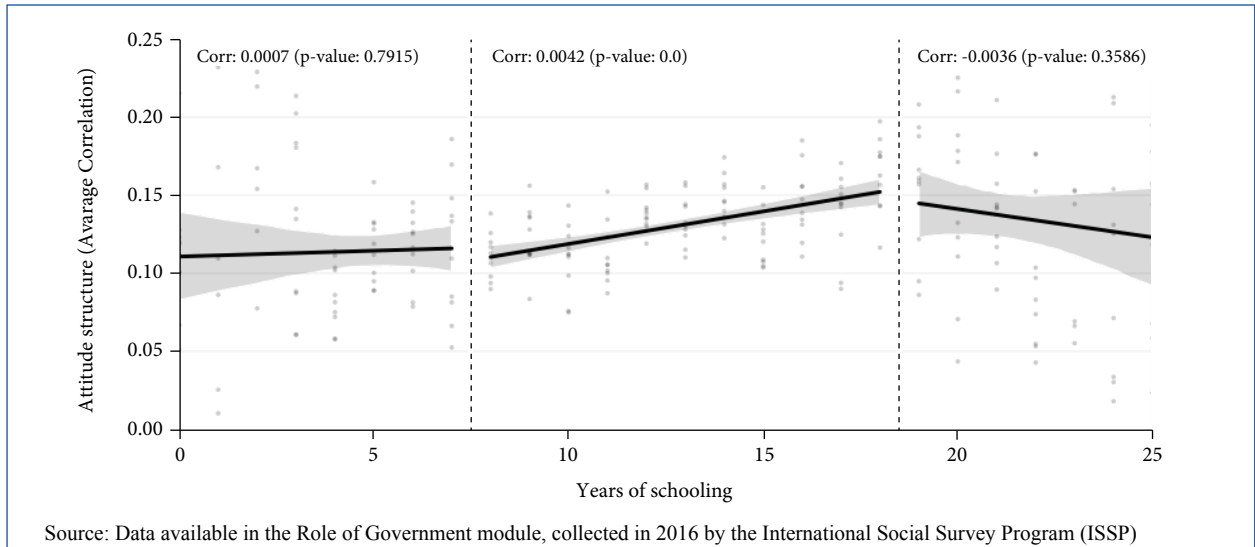


Figure 2. Relationship between years of schooling and degree of attitude structure (average between pairs of correlations of attitudes in different areas of welfare policies).

expect—insofar as their positioning for policies is associated with voting—ideologically opposed electoral choices, precisely because of this cohesion. Therefore, we must supplement the information on the degree of attitude structure with the direction of attitudes toward the policies that form the structuring measure. This combination of structuring and directing attitudes can be captured by four categories constructed based on Fig. 3.

Figure 3 shows the distribution of scores of degree of attitude structure and support for welfare policies for each group of years of schooling and per capita household income. The attitude structure was built as previously described. The score of support for social policies is the average of support for the 18

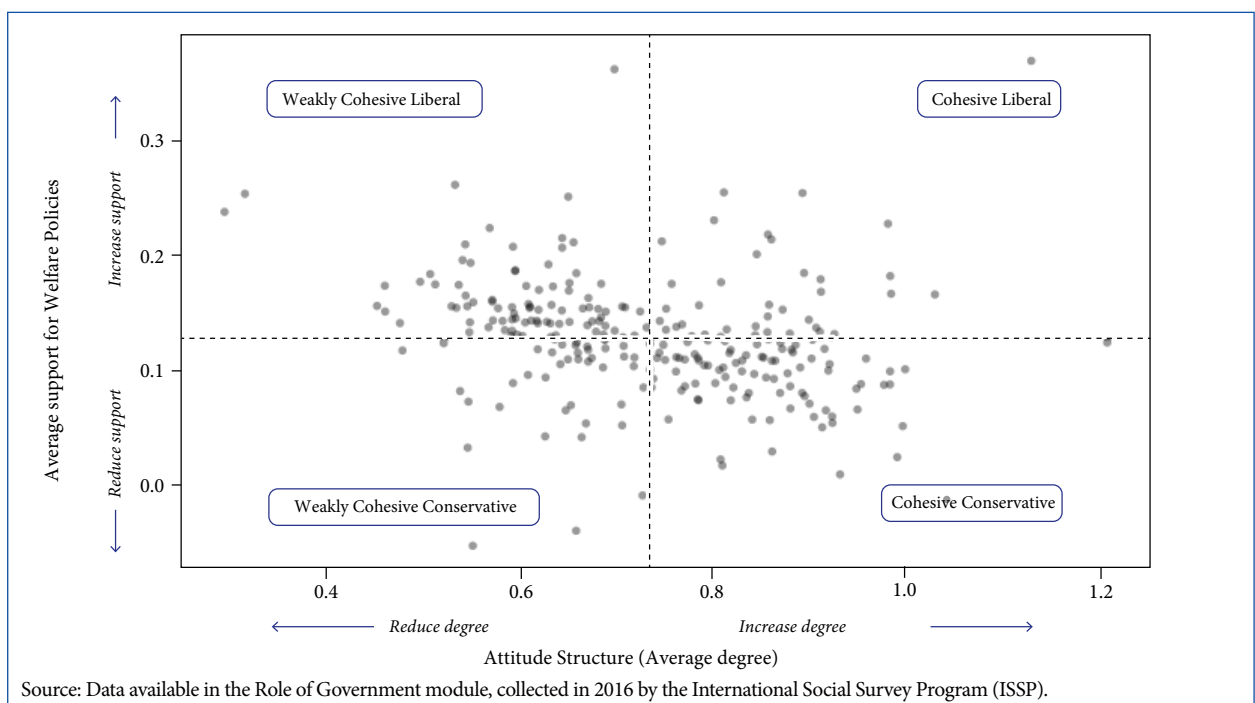


Figure 3. Classification of education and income groups based on the average degree of attitude structure and average score of support for welfare policies.

policy questions described earlier, for each group of years of schooling and income. We can distinguish four groups based on the position of each one in relation to the average value (dotted lines) in these two dimensions. We call *cohesive conservatives* those whose support for welfare policies is less than the average, but whose structuring of attitudes is greater than it. This group is in the lower-right quadrant of Fig. 3. Those conservatives that have a below-average degree of structure, we call *weakly cohesive conservatives*. We call *cohesive liberals* those whose support for social policies is greater than average and have well-structured attitudes. This group is in the upper-right quadrant of the figure. Similarly, those who support social policies but whose attitudes are less-structured than average are called *weakly cohesive liberals*. The groups form four aggregates of ideological structuring. In other words, they vary in both the ideological dimension of attitudes (more or less in favor of social policies) and in the degree of structuring (greater or lesser cohesion between opinions in different areas).

Table 2 shows the average and the standard deviation of the ideological vote for different groups of schooling, income and ideological structure. The purpose of this table is to compare, first, how the ideological bias of the vote varies with the ideological structuring of attitudes about policies, keeping schooling and income groups fixed. We can also compare groups with the same ideological structure and income, but different levels of education. The last column shows the averages for each group. Negative values indicate that votes in left-wing parties predominate and, the lower the value, the more left-leaning are the votes. Some groups are absent due to lack of data in the sources used.

Table 2. Average score of the ideological bias of voting by education groups, income and ideological structure of attitudes (group). A negative average score represents propensity to vote for left-wing parties, and the smaller the score, the more left-leaning are the votes.

Education	Income	Ideological structure of attitudes	Average (std. deviation) of ideological direction of vote (left-right)
High	High	Cohesive Liberals	-0.6923 (0.0)
High	High	Weakly Cohesive Conservatives	-0.1159 (0.2395)
High	High	Cohesive Conservatives	-0.0928 (0.0536)
High	Low	Cohesive Liberals	-0.3118 (0.3934)
High	Low	Weakly Cohesive Conservatives	-0.303 (0.1673)
High	Low	Cohesive Conservatives	-0.1363 (0.0663)
High	Low	Weakly Cohesive Liberals	-0.1074 (0.2352)
Low	High	Weakly Cohesive Conservatives	-0.5263 (0.4737)
Low	High	Weakly Cohesive Liberals	0.0298 (0.0668)
Low	High	Cohesive Liberals	0.1513 (0.1792)
Low	High	Cohesive Conservatives	0.1523 (0.1919)
Low	Low	Weakly Cohesive Liberals	0.1006 (0.0388)
Low	Low	Cohesive Liberals	0.2495 (0.0627)

Source: Data available in the Role of Government module, collected in 2016 by the International Social Survey Program (ISSP).

In general, more-educated groups vote more on the left. In this more-educated group, cohesive liberals tend to vote more to the left, for any income group. Consider the groups with high income and education (first three lines of the table). In these groups, cohesive liberals vote more to the left than conservative groups, cohesive or not. For groups with low education, this relationship is reversed. Among those with low income and education (last two lines), the increase in cohesion leads to more right-wing votes. Among those with high income and low education, the increase in the structuring of attitudes is also associated with votes for the right.

These results support the normative argument about the behavioral effect of political sophistication or, more strictly, of schooling, in which political sophistication in the democratic context favors the translation of policy positions into electoral choices that are congruent with those positions (CARPINI; KEETER 1996). In other words, more structured liberal attitudes, when compared to cohesive conservative attitudes, increase the average propensity to vote in leftist parties only among those with more schooling. While cohesive liberals with low income and high schooling (fourth row) vote more on the left, cohesive liberals with low income and low schooling vote on the right (bottom line).

Finally, the diagrams in Fig. 4 show the relevant variables with the effects of education and the intermediation of ideological structuring for the different schooling groups identified in Fig. 2. In the diagrams, the measure “liberal ideological structuring” was built from the four categories displayed in Fig. 3, coded between -2 (more conservative) and 2 (more liberal). Therefore, higher values represent more structured and liberal attitudes (in favor of social policies). Figure 4 shows the estimated values using linear structural equations (KLINE, 2015) for each group of schooling identified in Fig. 2, separately.

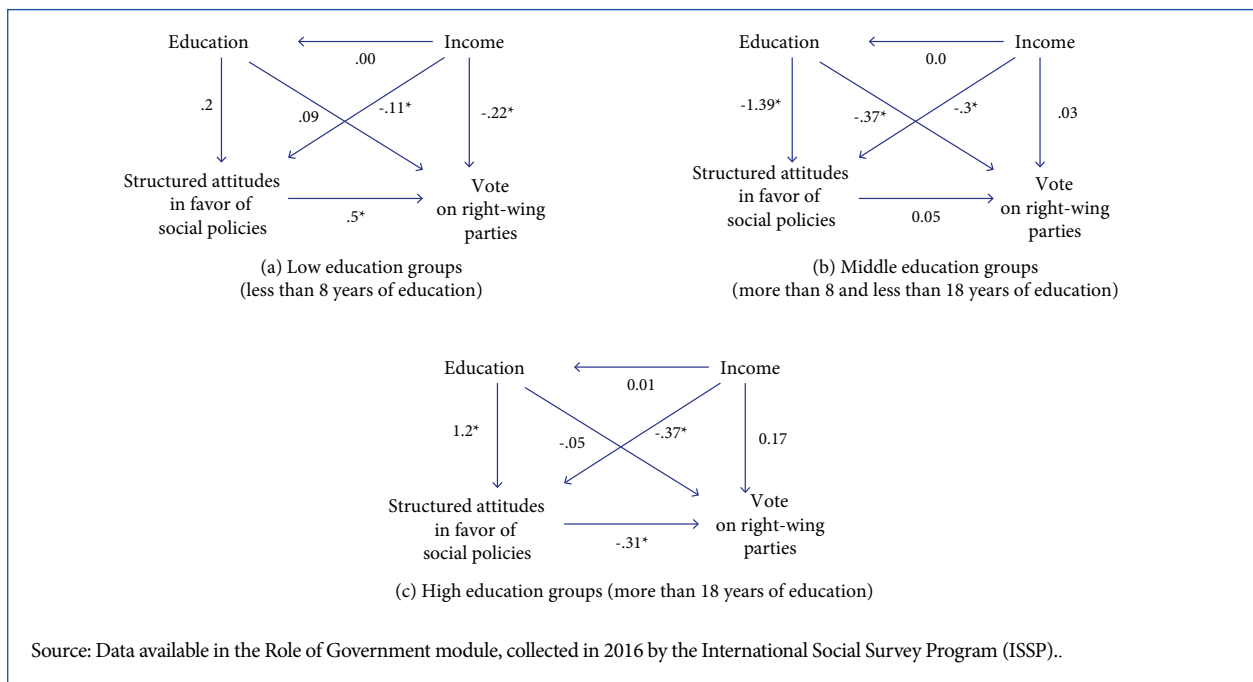


Figure 4. Estimates of linear structural models for different schooling groups. Numbers indicate the estimated effect and the asterisk indicates a statistically significant association with a p-value less than or equal to 0.1.

First, income is the main factor that explains the vote and the tendency to have a structured attitude with liberal content for less-educated groups (above and to the left in the figure). For this group, more structured liberal attitudes are associated with voting for right-wing parties. For the intermediate group (above and to the right in the figure), education has a relevant role in the ideological structuring of attitudes, as expected by Table 1 and Fig. 2. While schooling increases the structuring of attitudes (Fig. 2), support for welfare policies decreases (Table 1). However, ideological structuring is not associated with voting. For this group, education reduces the vote in right-wing parties, but through channels other than the ideological structuring of attitudes. It is only for the most-educated groups (bottom diagram on Fig. 4) that the normative expectation of agreement between structuring the ideological position and voting is realized. In other words, education affects voting by structuring attitudes only for the most-educated groups. In fact, for this group, this is the only

path linking schooling and voting. For more-educated groups, schooling increases the tendency to support social policies cohesively, which, in turn, increases the tendency to vote in left-wing parties. As in other groups, income has the opposite effect and reduces the structure in favor of social policies.

In summary, the analysis in this section showed that, for any income group, in general, the least-educated have a greater tendency to support social welfare policies (Table 1). However, it is among the most-educated that this trend is most strongly associated with voting for left-wing parties (Fig. 1). Furthermore, for those who have between eight and 18 years of schooling, the degree of structuring of attitudes toward different social welfare policies increases with the years of schooling (Fig. 2). In other words, after eight years of schooling, and the closer we get to the upper limit of 18 years, the more attitudes toward the various dimensions of policies correlate to, and the more the attitude in one area is able to predict, the attitude in another. This relationship does not occur at levels where respondents have less than eight or greater than 18 years of schooling. Finally, the combination of structure and direction of attitudes toward welfare policies, called here *ideological structuring*, is associated with voting in right and left parties, but only among the more-educated is there a congruence between ideological structuring and ideological bias of the vote (Table 2 and Fig. 4). Among groups with the same schooling (high) and income (any), cohesive liberals (supporters of welfare policies with more structured attitudes) tend to vote for leftist parties more than more conservative groups, and cohesion of attitudes (greater structuring) among conservatives increases the vote in right-wing parties. However, when schooling is low, more cohesive liberals tend to vote for right-wing parties more than other groups (Table 2). Hence, less-educated groups contradict, in behavior (vote), their attitudinal tendency to support welfare policies.

Final Discussion

This work demonstrated how education, treated generically as years of schooling, affects political attitudes and behavior. In short, schooling favors the congruence between the ideological direction of the vote and the ideological structuring of attitudes, particularly among individuals with more schooling. Only for this group, structured attitudes were more favorable (contrary) to social policies and increased the propensity to vote in left-wing (right-wing) parties.

These results directly dialogue with some normative concerns about the functioning of the representative system and the cognitive demand it imposes for electoral participation. Minimally, one of these demands is the recognition of one's own interests and policy preferences, as well as the political positions of the different groups that make up the polity, especially parties and representatives. This recognition is a necessary, though not sufficient, condition for the vote to be used as an instrument of representation of the interests of social groups.

Evidently, voters may be led to vote for certain parties for various reasons, such as religion, or because they disproportionately weight only a few factors; for example, support for a high-profile social program or the promise of eliminating political corruption among the establishment. When this is the case, these voters may be sacrificing their preferences in other areas, perhaps even in most of them, and in this sense, they end up voting against their own interests (CARPINI; KEETER, 1996). The results here suggest, however, that the more-educated groups are less likely to make these ideological sacrifices when social policies are in question.

Finally, it is worth mentioning a limitation of this work. First, due to the analytical strategy adopted and the selection of 18 variables to compose the measure of attitude structure, only results aggregated in

opinion surveys conducted in several countries were considered. It is possible that there are significant variations between the countries studied, which are worth exploring. Due to data and space limitations, these comparisons are left for future work.

Notes

1. Available at: <https://dbk.gesis.org/dbksearch/sdesc2.asp?no=6900&db=E&tab=3>. Last access: October 2020. Details about the sampling process and data collection can be found at that link.
2. The countries included are Australia, Belgium, Chile, Croatia, the Czech Republic, Denmark, Finland, France, Hungary, Iceland, India, Japan, South Korea, Latvia, Lithuania, New Zealand, Norway, Russia, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, and the United States.
3. Available at: <https://www.chesdata.eu/>. Last access: October 2020.
4. Available at: <http://www.cis.es/cis/opencms/ES/index.html>. Last access: October 2020.
5. These models look for latent subgroups that are better described by different regression models. The discussion of these methods is beyond the scope of this work, but detailed information can be found in Ferrari (2020), Teh et. al. (2006) and Hannah, Blei and Powell (2011).

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