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Education-based affective attitudes

Higher educated-bias is related to more political trust and less populism

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Abstract

Recent political trends and events have been marked by strong educational differences. Additionally, education has also been shown to be a basis for group identity and group conflict. In this paper, we argue that educational groups are likely to understand their position in society and their inclusion or exclusion (in politics) as being related to their educational level. Thus, it is likely that education-based affective attitudes are related to evaluations of the societal and political status quo. Using data from nine European countries, this article charts the relationships of higher educated-bias (i.e., the preference for higher educated compared to less educated groups) with different political outcomes. In analyses of preregistered hypotheses, we demonstrate that the higher educated show ingroup bias, in particular those who identify strongly with their educational group. The less educated do not show (significant) ingroup bias. Those who have a stronger (positive) bias towards the higher educated display more political trust and satisfaction with democracy, and are less likely to be populist. We measured support for populism in four different ways with populist attitudes, populist voting, affective attitudes towards populist party supporters compared with mainstream party supporters, and identification with ‘the common people’.

Keywords

education, affective polarization, populism, trust, intergroup conflict

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Introduction

Some recent political phenomena have been marked not *per se* by strong class differences (i.e., income or occupation), but rather by differences in educational level (Häusermann & Kriesi, 2015; Kitschelt & Rehm, 2022; Piketty, 2020). While this does not entail the disappearance of economic class or income as a relevant political factor, it does raise questions on what it means to have political conflict being organized around educational groups, rather than economic position (Spruyt & Kuppens, 2015; Stubager, 2009; Bornschieer et al., 2021). Educational differences in political behavior and thought have been understood in different ways, ranging from cultural capital (Van der Waal, Achterberg, & Houtman, 2007), network position (Nie et al., 1996), to education as an indicator for (political) skills and resources (Verba et al., 1995). Recent literature has focused on how education is also a basis for social status and social identity *per se*. This strand of thought argues that educational differences in politics revolve to an important degree around education-based intergroup processes (Spruyt & Kuppens, 2015), and thereby a struggle over resources, power, and social status, that is, educational conflict.

This perspective raises two questions. First, in what ways does this conflict express itself? There have been discussions on the likelihood of educational conflict (Bovens & Wille, 2017; Hakhverdian et al., 2012; Spruyt, 2014). Based on the observation that the ‘less educated’ identity is stigmatized and elicits little identification among less educated people, authors have argued that (overt) conflict, where groups adopt explicitly negative attitudes towards each other, is unlikely (Hakhverdian et al., 2012; Spruyt, 2014). The asymmetric nature of conflict between educational groups would then not lead to any form of organized political mobilization. From the perspective of asymmetric group conflict (Jackman, 1994), we argue below that it is indeed unlikely for such *open* conflict to arise. Such conflict is unattractive for the higher educated, as they likely prefer the status quo, and difficult to initiate for the less educated, as they lack the (political) resources to change the status quo. But this does not negate the tangible educational inequalities and centrality of education in modern society that make it likely that education becomes a basis for identity and social status (Spruyt & Kuppens, 2014; Van Noord et al., 2019). As such, educational inequalities might still elicit *affective* reactions towards educational groups (Kuppens et al., 2018; Sandel, 2021; Spruyt & Kuppens, 2014). Recent research has indeed documented educational intergroup (affective) attitudes (Kuppens et al., 2018) showing that some (especially among the higher educated) are willing to express attitudes that reflect educational conflict.

Second, what are the political outcomes of educational conflict? If education is indeed a basis for political conflict, this is likely to influence both the attitudes and behavior of

educational groups. Across the globe, and in Western democracies in particular, there is a strong dominance of the higher educated in political institutions (Bovens & Wille, 2017; Gerring et al., 2019). Indeed, we see a strong educational inequality both in *who represents* (Bovens & Wille, 2017) and *who is represented* (Schakel & Van der Pas, 2021) in modern politics. We argue that in this context, political attitudes and behaviors of educational groups are likely to relate to *process* preferences rather than *issue* preferences. Indeed, research has demonstrated that the low political power position of less educated vis-à-vis higher educated people is salient among citizens (Noordzij, Van der Waal, & De Koster, 2019). The result of this would be that a preference for the higher educated (i.e., higher educated-bias) reflects support for the current power difference and is therefore negatively associated with political dissatisfaction, such as political distrust, or populism.

In this preregistered research¹, we make two main contributions: (1) we investigate across nine European countries (N = 11,218) to what extent educational groups display education-based affective attitudes. While existing research has demonstrated the existence of education bias, we expand this to countries where such education-based intergroup attitudes have not been studied before such as Greece, Hungary, and Poland. (2) We investigate to what extent these affective attitudes are indeed associated with anti-establishment attitudes and behaviors, namely political trust, satisfaction with democracy, and populism. Additionally, to pay justice to the complexity of populism as a political phenomenon, we rely on four different indicators: populist attitudes (Akkerman, Mudde, & Zaslove, 2014), identification with ‘the people, as a group’, positive affect towards populist parties compared with non-populist parties, and a vote preference for populist parties.

Theory

To further elaborate our perspective, we delve into the different aspects that make education-based identity a relevant factor in politics. First, we argue *why* education might be a basis for identity and intergroup conflict. Second, we elaborate on *how* this group conflict might influence people’s political attitudes and behavior.

¹ https://osf.io/bejp3?view_only=3decae9ef61340c3b811104613f7f57c This URL leads to a pdf document of the original preregistration without identifying information, for peer review. This URL will be replaced with one that leads to a public preregistration after peer review.

Education-based groups and conflict

Scholars have frequently observed that education is central to a large number of political events, phenomena, and trends across many Western countries, for instance in recent events such as Brexit (Hobolt, 2016), the 2016 US election (Sides, Tesler & Vavrek, 2017), and the general phenomenon of populism (Spruyt, Keppens, & Van Droogenbroeck, 2016) and the rise of new left and new right political parties (Abou-Chadi & Hix, 2021). This relevance of education is multi-fold, since it is not only related to people's political opinions on policy issues (Inglehart, 1977; Kitschelt & Rehm, 2022). It also relates to levels of political participation, trust, etc. (Bovens & Wille, 2017; Mayne & Hakhverdian, 2017; Persson, 2015; Verba et al., 1995). The fact that education is consistently related to not only different outcomes in the political sphere, but indeed outcomes in a large number of different societal spheres (e.g., health, economics, culture, etc.), is indicative of a growing centrality of school-based education as an organizing principle, which is strongly related to the expansion of the educational institution in contemporary (Western) societies (Baker, 2014; Meyer, 1977). The fact that educational credentials often act as a gatekeeper renders education an important factor for people's lifestyle and -chances. This is further enhanced by the fact that, unlike differences in income for example, educational credentials (and the institutional practices that rely on credentials) introduce sharp categorical differences between people (Sayer, 2005).

This has led to a situation where educational credentials have become central to attaining a dominant position in society. As a consequence, the economic and political power and social status of higher educated far exceeds that of the less educated (Bovens & Wille, 2017; Van Noord et al., 2019). The combination of the importance for life chances and sharp categorical differences (Domina, Penner, & Penner, 2017; Sayer, 2005) create the potential for *group-conflict* over resources, power, and social status. This group-conflict would be the result of the formation of educational groups, whereby individuals see themselves as part of an educational group and at the same time perceive a competition with another educational group or endorse negative intergroup attitudes (Spruyt & Kuppens, 2015). However, precisely due to the unequal distribution of resources and power, this group-conflict is likely to be an *asymmetric* group-conflict (cf. Jackman, 1994). Here, conflict is latent and might only become overt if a successful effort is made by the involved groups. Such an effort can take many forms, both formal and informal, but it involves some level of explicit mobilization around the issues and stakes of the conflict. However, as dominant groups tend to prefer the status quo (in which they are dominant), and non-dominant groups tend to lack the resources to initiate conflict, this is often unlikely. This might result in a situation where a dominated group hold negative

attitudes towards the dominant group, but that the dominant group does not respond with negative attitudes towards the dominated group.

How does this relate to education-based groups? On the one hand, the centrality and visibility of education in society and everyday life makes it likely that people's educational position becomes a basis for group formation, whereby individuals would feel a certain similarity or solidarity with others with a similar level of education: they would *identify* with that group. This identification then affects (intergroup) attitudes among educational groups (Kuppens et al., 2018; Spruyt & Kuppens, 2014). Recent research indeed points towards these two facts. So far, research in Belgium, Denmark, The Netherlands, and the UK has shown that educational identification is substantial, especially among the higher educated, and that educational groups can have outspoken intergroup attitudes (e.g., Easterbrook, Kuppens, & Manstead, 2019; Kuppens et al., 2015, 2018; Stubager, 2009). Such education-based intergroup attitudes, expressed as solidarity with the ingroup and negative feelings towards the outgroup, point towards the existence of an educational conflict.

At the same time, educational inequalities are strongly institutionalized and often perceived as largely legitimate by *all* educational groups (Van Noord et al., 2019). This would allow dominant groups to *not* express negative feelings towards the subordinate group, as such blatant negative outgroup attitudes are not necessary to sustain the inequality. Moreover, the expression of negative attitudes potentially increases the salience of educational groups and makes a group-based response of social competition more likely (Branscombe et al., Tajfel & Turner, 1979). Indeed, dominant groups do not have anything to gain from open conflict, as this would increase the chances of social change (Jackman, 1994). Rather, dominant groups would maintain a 'paternalistic' stance that combines positive attitudes towards the subordinate group with negative attitudes towards policies or initiatives that would reduce (material) inequalities (Jackman, 1994). However, it is unlikely that these group-strategic matters would prevent higher educated individuals from expressing any negative affect towards the less educated or any positive affect towards their own group. Firstly, the (self-)esteem that one can derive from high status group membership depends partially on such positive and negative group affect. Additionally, education enjoys a strong legitimacy that might allow the higher educated to express relative positive affect towards the higher educated without the risk of engendering strong forms of conflict. In sum at least some intergroup bias is to be expected among the higher educated.

Turning to the other side of the educational continuum, the strong association between education and status implies that belonging to the 'less educated' is a negative stigmatized

identity. Moreover, educational inequalities are seen as relatively legitimate (Bettencourt et al., 2001; Ellemers, Wilke & Van Knippenberg, 1993). Meritocratic ideologies in educational systems extend their effects beyond educational institutions itself, and justify the stratification they help to produce (Batrach et al., 2022; Mijs, 2021; Van Noord et al., 2019). While sometimes lower status groups are capable of reframing their identity into a positive identity (such as ‘working class’, which stresses positive aspects of their class, or other, often, counter-cultural identities), this has not, or only limitedly, been the case for the less educated. Research on educational identification has indeed demonstrated that the less educated are less likely to identify with their educational group than the higher educated, for whom this identity is much more positive, and thus more attractive (Easterbrook, Kuppens, & Manstead, 2019; Kuppens et al., 2015). Indeed, this difference is most pronounced on (group) esteem aspects of social identity, implying that the less educated are aware of the lower status connected to the less educated label (Kuppens et al., 2015). As such, we do not expect *ingroup* bias for the less educated. However, we do expect less higher-educated bias for the less educated than for the higher educated.

The result is that educational groups have intergroup attitudes, with especially the higher educated holding negative feelings towards the less educated. In general, the higher one is educated, the more positive that person is likely to be about the higher educated as a group, and the more negative that person is likely to be about the less educated as a group. As such, we formulate our first hypothesis:

H1: Education is positively related to higher educated-bias.

As we argue that educational conflict is ultimately rooted in social identity processes (Tajfel & Turner, 1979; Turner et al., 1987), it is likely that the extent to which people prefer their own educational group over the other is moderated by the level of identification with one’s own educational group in such a way that educational differences are larger among people who identify with education. With the higher educated being the higher status group, it might be specifically the strongly identifying higher educated who are most inclined to express strong feelings towards their own educational group. As explained above, ‘less educated’ is a stigmatized identity, so the meaning or value of education-based identity for the less educated might be less clear. Because of this, less educated people, even when strongly identifying, might thus be less inclined than strongly identifying higher educated to express strong *ingroup* bias. This implies that the effect of identification is stronger for the higher educated than for the less educated. Thus we formulate the second hypothesis:

H2: Educational identification moderates the relationship of education with higher educated-bias, such that the effect of educational identification will be stronger for the higher educated than for the less educated.

As we argue that this conflict is not an *economic* conflict, but rather revolves around the social identity and status of educational groups, the relationships proposed in this research should be relatively independent from economic factors such as income. At the same time, education and income are empirically related so that it is possible that income strongly affects attitudes towards other educational groups. Nevertheless, we do expect that these relationships will remain significant and substantively interesting after controlling for both income and identification with people with a similar income level.

Hypothesis 3: The relationships in H1 and H2 are independent from subjective income and identification with income.

Political outcomes of educational conflict

Apart from the association between people's educational level and social status, educational credentials play an important formal or informal role as a gatekeeper in for instance labor markets, but also in politics where educational level is strongly related to representation (Bovens & Wille, 2017; Nie et al., 1996). It is thus not only the difference in social status that is relevant for understanding the potential outcomes of educational conflict, but also the lack of political representation of the less educated (Bovens & Wille, 2017; Schakel & Van der Pas, 2021). As almost all parliaments (worldwide) have an overrepresentation of higher educated people, the less educated are in this way less visible and powerful in political institutions. This lack of representation is not just clear in who represents, but also who is represented. Few, if any, political parties claim to have 'the less educated' as their primary constituency. Often, when political parties do in effect have mainly the less educated as their electorate, other terms are used that might signify the less educated (most notably 'the common people' in populist rhetoric, which partially designates less educated individuals; Spruyt, Keppens, & Van Droogenbroeck, 2016).² Hence, educational conflict revolves strongly around differences in participation and representation. Indeed, the less educated do not only report lower subjective

² But not exclusively the less educated, and also not all less educated, especially for radical-right wing populist, as ethnic minorities, immigrants, etc., are also overrepresented among the less educated.

social status, but also higher levels of feelings of misrecognition and social exclusion (Gidron & Hall, 2017; Van Noord et al., 2019, 2021).

Political conflict often also entails differences in substantive political positions or different policy preferences. Such differences are present between educational groups (Stubager, 2009), and recent research has demonstrated that identification with educational level seems to align with a universalism-particularism cleavage (Bornschier et al., 2021). Indeed, it is possible that such substantive political differences are associated with educational conflict. However, we would argue that *educational* conflict has primarily its roots in the differences in resources, power, and status, and the associated differences in political representation (Bovens & Wille, 2017; Spruyt, 2014). As such, political outcomes of educational conflict would revolve primarily around the (attitudes towards the) institutions and procedures that make up the group-conflict.

Educational conflict is thus likely to be associated with attitudes that either signal approval of the status quo (expected on the higher educated side) or that articulate dissatisfaction with the status quo (expected more on the less educated side). Thus, those that favor the higher educated over the less educated would be more likely to be satisfied with the current functioning of democracy and display higher political trust. One might argue that the latter depends on awareness of how politics is functioning, and research has shown that higher educated people are less trusting in countries that are more corrupt (Hakhverdian & Mayne, 2012), indicating that the higher educated are better suited to take objective information (level of corruption in a country) into account than the less educated. However, our interest is not in whether the evaluations of the higher and less educated correspond to objective information, but rather, given the evaluations people have, how these relate to education-based affective attitudes.

It is important here that political satisfaction is not just related to an individual's educational level, but rather, and especially in the context of identity-based conflict, to their affective attitudes towards either the higher or less educated. Based on this, we can formulate the following hypotheses:³

H4: Higher educated-bias is positively related to political trust.

H5: Higher educated-bias is positively related to satisfaction with democracy.

³ In our pre-registration we also pre-registered the hypothesis that *ingroup* education bias is *positively* related to political interest. However, results did not confirm this hypothesis. For the motivation behind this hypothesis and the empirical results, see Appendix C in the Supplementary Material.

Thus, educational conflict and the affective polarization inherent to it is related to attitudes that signify dissatisfaction. Importantly, we do not wish to imply that these relations are causal. Rather, both affective feelings towards educational groups and lower dissatisfaction with democracy and political trust are thought to be expressions of the same (political) frustration experienced primarily by the less educated in a society dominated by the higher educated. Educational conflict may increase this dissatisfaction and vice versa. Here we focus on the correlation between the two, as this would establish that educational conflict is part of the political conflict marking Western societies today (Noordzij, Van der Waal, & De Koster, 2019; Spruyt, Keppens, & Van Droogenbroeck, 2016).

These relationships can be extended from general political dissatisfaction to populism. Seen from the ideational approach populism is a “*an ideology that considers society to be ultimately separated into two homogeneous and antagonistic groups, ‘the pure people’ versus ‘the corrupt elite’*” (Mudde, 2004: 543). As such, populist rhetoric is likely to find resonance among the less educated, who have a higher chance to feel excluded from society and its political processes (Gidron & Hall, 2019; Steiner, Schimpf, & Wuttke, 2022) and/or perceive the political and social dominance of the higher educated. Affective feelings towards the higher educated might thus be a basis that allows people to be politically mobilized on populism almost directly appeals to the *identity* aspect of education-based conflict (Spruyt, Keppens, & Van Droogenbroeck, 2016).

The implication of the aforementioned definition of populism is that populism never presents itself in a pure form to the people; that is the reason why some scholars call it a ‘thin’ ideology (Stanley, 2008). So by studying populist voting alone, one never knows whether one studied populism per se. Populist attitudes have the advantage that they can articulate populism's core elements in a 'pure form'. Previous research has shown that the relationship between populist attitudes and populist voting is complex and populist attitudes do not always lead to populist voting. For all these reasons, we study multiple outcomes related to populism and search for common patterns. While we do not attempt to propose a general framework of all forms in which populism can display itself, we distinguish between four guises of populism: (1) populist attitudes (Akkerman, Mudde, & Zaslove, 2014), (2) affective feelings towards populist party supporters (compared to mainstream party supporters), (3) identification with ‘the people’, and (4) populist voting.

The first is a common way of measuring populism among citizens (Castanho Silva et al., 2019) and the fourth is the expected behavioral expression of populism. The two other outcomes enable us to further unravel the identity element and the role of intergroup processes

behind support for populism. Affective attitudes towards populist party supporters entails charting the feelings that citizens might have towards political party supporters (over other more mainstream parties; Hartevelde, Mendoza, & Rooduijn, 2021). The identification with ‘the common people’, revolves around the extent to which people are actually sensitive to the people-centric appeals of populist rhetoric. Seen from a social identity perspective, the populist appeal to the less educated operates through its appeal to ‘the common people’. It is also this people-centrism element in populism (and the associated hope that when politicians would listen to ‘the people’ things would improve), that renders populism different from mere anti-establishment attitudes such as political cynicism. We expect that higher educated-bias is also negatively related to identification with ‘the common people’. Finding such a link would suggest that citizens understand ‘the common people’ to contain an education-based identity element. Hence, our further hypotheses are as follows:

H6a: Higher educated-bias is negatively related to populist attitudes

H6b: Higher educated-bias is negatively related to populist affect⁴

H6c: Higher educated-bias is negatively related to identification with ‘the common people, as a group’

H6d: Higher educated-bias is negatively related to populist voting intentions

Differences between countries

It is also likely that the level of educational conflict varies between countries. So far, research has demonstrated that the strength of the relationship between education and different indicators of status (e.g. subjective social status, feelings of misrecognition) varies between countries (Van Noord, 2019, 2021). However, more direct indicators of educational conflict have only been studied in a few countries. In this study we extend existing research to contexts where this has not yet been investigated. There are also good reasons to expect to find cross-national differences in this matter. To begin with, some countries can be seen as more ‘schooled’ than others, and in such societies the education system plays a more influential role in distributing status and opportunities, is more visible, and is seen as more separate from economic class inequality (e.g. education is experienced as a relatively more cultural or political form of inequality). Further, in some countries class remains the primary lens to understand politics,

⁴ The preregistered hypothesis is about attitudes towards the parties themselves, which is more appropriate for our goals than attitudes towards party supporters. However, in the questionnaire, except for a few countries, the thermometer items revolved around attitudes towards party supporters, hence the current formulation. See also the Methods-section and Table A1 in the Supplemental Material.

such as the UK – which is a highly schooled society, but where political rhetoric seems to revolve around class more than in other countries. Countries where these effects are likely to be stronger are The Netherlands, Belgium, and Denmark. In contrast, the relationship between education and social status has also been shown to be slightly stronger in countries with a *smaller* proportion of higher educated people (i.e., less schooled countries; Van Noord et al., 2019). Indeed, the literature on ‘schooled societies’ clearly argues that this development is a *worldwide* phenomenon with national variations (Baker, 2014; Kavadias et al., 2023; Schofer & Meyer, 2005). However, we formulated hypotheses that the effects that we study are larger in countries that are more schooled, primarily, Belgium, Denmark, and The Netherlands, than in countries that are less schooled (Greece, Hungary, Poland, Spain), with France and the UK taking a middle position:

Hypothesis 7: The relationships in H1 and H2 will be stronger in countries that are more schooled.

Data & methods

We test these preregistered hypotheses with data from nine different European countries: Belgium, Netherlands, France, United Kingdom, Spain, Greece, Hungary, and Denmark. These data were gathered between December 2021-January 2022 by IPSOS and Pollster Research Institute (Poland only). The questionnaires were administered online. The sample was aimed to be representative for all individuals in those countries of age 18 and older. Combined quotas for age, gender, education (except Poland, which used a separate quota for education), and a separate quota for region were used during data collection. The total sample contains 11,218 respondents, with around 1,200 respondents per country.

Main variables

Educational level was measured by asking people their highest attained diploma. Individuals who were still in education were coded as having attained that diploma. These categories were recoded to their appropriate category in the ISCED classification, and were then recoded into three categories (1-2 = less educated (1), 3-4 = middle educated (2), 5-8 = higher educated (3), corresponding to attained primary, secondary, and tertiary education).

Higher educated-bias is operationalized by calculating the difference between the thermometer rating item for higher educated minus the item for less educated. Hence, higher scores indicate a more favorable opinion of higher educated than of the less educated. This scale originally runs (theoretically) from -100 to 100, but is standardized to a standard deviation of

1. It is not centered on its mean, therefore positive values indicate more positive feelings towards the higher educated, and negative values reflect more positive feelings towards the less educated.

Educational identification was measured with a single item asking: “*I identify with ... People with a similar level of education to my own.*”, where higher levels indicate higher identification. This item has been shown to be a reliable and effective way to measure identification with different groups (Postmes, Haslam & Jans, 2013). This item was part of a battery asking about identification with multiple groups. One other item in that battery was identification with people with a similar income level to yourself (*income identification*).

Satisfaction with democracy was measured with a single item asking: “*Overall, how satisfied are you with the way democracy is working in [country]?*”.

Political trust was measured with three items asking to what extent the respondent trusts the following institutions: parliament, politicians, the legal system. We took the mean of these items as a measure for political trust.

As explained earlier, we measured populism in four different ways:

Populist attitudes are measured with the seven items from the Akkerman, Mudde & Zaslove (2014) scale. This is a commonly used scale and has been found to work reasonably well across different tests of statistical reliability and validity (Castanho Silva et al., 2019).

Identification with ‘the people’ is measured with a single item, similar to educational and income identification, asking to what extent the respondent identifies with ‘the common people, as a group’. For brevity, we also refer to this item as *people identification*.

Populist affect is measured by taking the thermometer rating items for populist parties (two per country) and subtracting the thermometer rating items for mainstream parties (two per country). Except for Denmark and Spain, these items ask evaluations of the *supporters* of these parties, rather than the parties themselves. For balance, each country sample was asked about a left- and a right-wing populist and mainstream party. For some countries this was not entirely possible due to an absence of left-wing populist parties (Denmark, Hungary, and the UK). Here either a non-populist party was chosen, but left-wing, or a populist party, but right-wing. For Poland only two items focused on political parties, namely, United Right and Civic Coalition. We treated the first one as populist and the second as mainstream. See Table A1 for more details on which parties were included in these questions per country.

Populist voting is measured with a single question about a hypothetical election occurring today (i.e., “*if there was an election today, for which party would you vote?*”). Parties were coded as populist or non-populist with the Popu-List classification (Rooduijn et al., 2019).

Control variables

Regarding the control variables, we included demographic characteristics: age, gender (male/female/non-binary), and ethnic minority status (i.e., whether the respondent describes themselves as being part of an ethnic minority in their country; 1 = yes, 0 = no). We also included household income and identification with income. These two were chosen specifically to chart to what extent the relationships of education with higher educated-bias can be explained by differences in material or economic position, or identification with people with a similar level of income. Household income was measured with a single question with five answer categories asking whether the respondent was able to live comfortably with their current level of household income. Higher levels indicate being able to live more comfortably. Income identification was measured together with educational identification: “*I identify with ... People with a similar level of income to my own.*”

Methods

To account for the structure of our data, with individuals nested in countries, we used linear regression with country fixed effects. These country fixed effects account for differences between countries, and hence, all relations that we model are relations *within* countries. As these relations are likely not similar across countries, the results presented below are the average effect across the nine countries in our data. We show and discuss differences in these relationships between countries at the end of the results section.

Further, all continuous variables were standardized by subtracting the mean and dividing the values by the standard deviation. Hence, all coefficients of the continuous variables are comparable and indicate the change in standard deviations in the dependent variable by a one standard deviation change in the independent variable.

Analyses and results

The analyses proceed as follows. First, we investigated to what extent people’s educational level is related to higher educated-bias. Additionally, we assessed whether this relation was moderated by the level of identification with one’s educational group. Secondly, we investigated whether this higher educated-bias was related to political trust and satisfaction with democracy. Thirdly, we extended these analyses towards the different indicators of populism. Lastly, we explored between-country differences in these relations.

Higher educated-bias and identification

To analyze the extent to which education is related to higher educated-bias, we constructed two models. The first model included only education and control variables, the second also included a moderation by educational identification. In Model 1, education was significantly related to higher educated-bias, and higher educated people showed 0.646 standard deviations more pro-higher educated higher educated-bias than the less educated. In Model 2, there was a moderation between education and identification, such that identification is related to higher educated-bias only for higher educated respondents. For each standard deviation of identification, higher educated displayed 0.206 standard deviations more higher educated-bias. We illustrate this fully attenuated moderation effect in Figure 1. This clearly shows that the less educated both showed a *negative* higher educated-bias (i.e., positive bias towards the less educated, or, ingroup bias) and that this was not moderated by identification. The higher educated, on average, showed a *positive* higher educated-bias, though this was entirely dependent on educational identification. At low levels of identification, the higher educated did not express more warm feelings towards the higher educated than towards the less educated.

The relationships are also strongly independent from subjective income and income identification. Table B1 (in Appendix B in the Supplemental Material) lists similar models as in Table 1, but with subjective income, income identification, and the interaction between these two as control variables. These control variables affect higher educated-bias. Richer people show more higher educated-bias than poorer people. Though income identification decreases higher educated-bias, it strengthens the effect of income itself. Thus, while people who identify more strongly with their income level show less higher educated-bias than those who identify less, the differences between income levels are larger among those who identify more. However, these relationships do not really affect the relationships of education with higher educated-bias (and they are also smaller in size), showing that, in line with H3, the relationship of education is largely independent of income.⁵

[Table 1 about here]

⁵ Including income identification does strengthen the effect of educational identification for the less educated, which is now significant. The less educated are then estimated to show more negative higher educated-bias when they identify little with their educational group (compared to Model 2, Table 1) and significantly more higher educated-bias when they identify strongly (compared to identifying weakly). As such, in this model educational identification increases outgroup bias for the less educated. We also display this pattern in Figure B1 in Appendix B.

[Figure 1 about here]

Political trust and satisfaction with democracy

Next, we tested our hypotheses about whether this higher educated-bias was also related to political outcomes. We expected that higher educated-bias is positively related to both political trust and satisfaction with democracy. We list the results of the regression analyses in Table 2. Both Model 3 and Model 4 indicated that, in line with our preregistered expectations, higher educated-bias was positively related to political trust and satisfaction with democracy. One SD of higher educated-bias increased political trust by 0.085 and satisfaction with democracy by 0.068 standard deviations. While these effects are not large, they explain about half of the original coefficients of being higher educated compared to being less educated (original effects of higher education without higher educated-bias in the model: $b_{\text{political trust}} = 0.122$, $p < 0.001$; $b_{\text{satisfaction with democracy}} = 0.073$, $p = 0.004$). The relationship of being higher educated with satisfaction with democracy lost its significance when higher educated-bias was introduced to the model. Hence, in the context of the relationship of education with these outcomes, these effects are certainly meaningful.

[Table 2 about here]

Populism

We also expected that higher educated-bias is negatively related to populism. We distinguish between four indicators of populism: populist attitudes, populist voting, identification with ‘the people’, and populist affect. We list the results of the regression analyses with these indicators as dependent variables in Table 3. For all four indicators, we see that higher educated-bias significantly predicted these populist outcomes. Effect sizes (i.e., the change in outcome per SD of higher educated-bias) ranged from -0.091 to -0.150 for the continuous outcomes, and was -0.182 (log odds) for populist voting. These coefficients were slightly larger, especially for identification with ‘the common people’, than for political trust and satisfaction with democracy. Though here, education itself also remained robustly related to all of these outcomes and higher educated-bias did not explain the whole relationship of education with populism.

[Table 3 about here]

Differences between countries

With nine countries we did not have a large enough sample on the country-level to perform cross-level interactions. Instead, we list all country-specific coefficients to illustrate the differences across countries. We predicted that the relationships in Hypothesis 1 and 2 would be stronger in countries that are more schooled (Hypothesis 7). Table 4 lists all relevant coefficients for the comparison between less and higher educated. While we have not performed formal tests comparing the coefficients, the pattern shows that results are not in line with Hypothesis 7. Coefficients are generally not stronger in those countries that are more schooled (i.e., Belgium, Denmark, and The Netherlands). In general, the coefficients and patterns are relatively similar, with a pronounced main effect of education, an insignificant effect of educational identification for the less educated and significant effect of educational identification for the higher educated. The interaction effect (i.e., the difference in effect of educational identification between higher and less educated) does differ across countries. This effect is not significant in Denmark, Greece, and The Netherlands (though the latter is significant at the $p < 0.10$ level). It is strongest for Poland, partially due to a relatively strong negative effect of educational identification for the less educated.

[Table 4 about here]

We also explored the differences of the effect of higher educated-bias on the political outcomes across countries. We list these coefficients in Table 5. In general, we see that although not all coefficients were significant, the patterns were very similar across countries. Only two countries deviated quite strongly from the expected pattern: Spain and Poland. Though the coefficients pointed in the expected direction for Spain, they were generally, except for populist affect and people identification, too small to be significant. For Poland, political trust and satisfaction with democracy were significant, but pointed in the other direction than expected, thus only populist voting, populist affect, and people identification showed the hypothesized result. Further, differences in effects on populist affect could be caused by the difficulties selecting appropriate parties in some countries (see Methods). In general, the countries with the strongest effect sizes were The Netherlands, France, and the UK. The countries with the weakest effect sizes (or with coefficients in the other direction than expected) were Hungary, Poland, and Spain. On average, the more schooled countries tended to have stronger effect sizes. Only Greece had slightly larger effect sizes than Belgium and Denmark. Thus, there might be some indication that in the

societies that are more schooled (including UK and France) stronger relationships exist between higher educated-bias and political outcomes, but the differences between countries are more complex than this sole factor.

[Table 5 about here]

General discussion

Against the background of growing concerns about the consequences of the existing ‘diploma democracy’, educational polarization and impact of populist forces, this paper aimed to investigate how educational conflict is related to evaluations of the current political status quo, and whether and how this might be related to political dissatisfaction and populist preferences and attitudes. From the perspective of education-based identities, it is likely that due to the strong relation between education and social status, the position people take in this educational conflict (dominant or subordinate position) is related to evaluations of the current political status quo. It is not just that the less educated are likely to experience and perceive exclusion from important political and social processes (Bovens & Wille, 2017), it is also likely that the extent to which this is the case is related to their attitudes towards their own group and towards the higher educated. The reason for this is that educational differences in politics are embedded in a much broader web of educational differences in social life. In this way, we argue, educational conflict and education-based affective attitudes are important for understanding current political conflicts over democracy and political institutions. Specifically, our (preregistered) expectations were that those who show higher educated-bias (i.e., express more positive feelings towards the higher educated compared to the less educated) express more satisfaction with democracy and political trust, and are less likely to hold populist attitudes, vote for populist parties, identify with ‘the people’, and express more positive affective feelings towards populist parties over mainstream parties. Our analyses support these expectations, and though differences between countries exist, this was almost entirely the case for seven out of nine countries we investigated. Below we discuss these findings further.

As populism is often defined as a thin-ideology that pits the ‘good people’ against a ‘corrupt elite’ it is important to understand to whom ‘the people’ appeals. Our findings are relevant for such investigations. In line with earlier research that showed the relevance of educational identities for both populism (Spruyt, Keppens, & Van Droogenbroeck, 2016) and the libertarian-authoritarian cleavage in which populist parties take a pronounced position (Stubager, 2009), we show that affective attitudes towards educational groups are related to

multiple expressions of populism. Especially the relationship with identification with ‘the people’ indicates that the people-centrism of populism is related to education-based distinctions in society. Thus, although education does not always play a very explicit role in populist rhetoric, the implicit message that the ‘common people’ is more inclusive of the less educated rather than the higher educated is likely to find resonance among those who have more polarized affective attitudes towards educational groups – specifically those with more negative views of the higher educated compared to the less educated. This also implies that populism might not just be driven by evaluations of the political system, but also of those demographic groups that are overrepresented in the political system and, as such, might be held responsible for the political dissatisfaction other groups experience. In this way, public support for populism turns out to be much more grounded in a specific group conflict, than has been assumed so far. Indeed, although the literature on populism has always been aware of such relationship – Paul Taggart (2002: 72), for example, described populism as ‘*a reaction of the ruled to its rulers*’ and Bovens and Wille (2017) explicitly link populism to educational conflict – so far political scientists have shown little empirical support for that relationship.

These relationships also shed light on education-based identities and the relevance of these for political processes. Both the relevance of education as a basis for intergroup attitudes and identities and the relevance of education for political conflict has found increasing attention in social scientific literature (Bovens & Wille, 2017; Piketty, 2020; Kuppens et al., 2018). This study shows how affective relations around educational groups are relevant for understanding political conflict. Our research is not able to demonstrate the causality of these relations, and these are potentially complicated. It is possible that educational conflict itself (i.e., the extent to which people are invested in education-based identities and the conflict over status between education-based groups) *leads* people to be more or less trusting of politics. Being invested in such a conflict makes it likely that people assess the extent of being represented by the extent to which their educational group is represented. As such, educational conflict would polarize political satisfaction between the higher (who would feel more represented) and the less educated (who would feel less represented), leading to more and less political satisfaction, respectively. On the other hand, the reverse is also possible, that those who are dissatisfied with politics start to interpret their dissatisfaction as revolving around the relative status of educational groups, which would increase their negative attitudes towards the higher educated who they would see as responsible for their political dissatisfaction. This is an important discussion, since it revolves partially around the extent to which political rhetoric shapes individuals’ understanding of their societal position. Earlier research has already indicated that

populist rhetoric might not only follow existing disaffection, but may also drive this (Rooduijn, Van der Brug, & De Lange, 2016). Further, this discussion is also connected to concerns voiced about a ‘diploma democracy’ (Bovens & Wille, 2017; Sandel, 2021). It is clear that the higher educated are overrepresented in politics and this might have created fertile ground for affective polarization between educational groups. However, in this research, we only establish the empirical relationship between such education-based affective attitudes and political dissatisfaction. We take an agnostic position on what this relationship constitutes, though it is clear that it is not unlikely that these relationships contain causal elements.

Our results were relatively consistent across countries. For the educational differences in higher educated-bias, all countries showed similar education effects, and two countries did not have a significant moderation by educational identification (Denmark and Greece). For the political outcomes seven out of nine countries largely showed the predicted pattern, with four countries showing the predicted result for each outcome. Two countries were significantly different: Spain and Poland. It is difficult to point exactly to the reasons why Denmark and Greece showed no moderation effect and Spain and Poland showed strongly different results for the political outcomes. Our initial preregistration specified that in countries that are less ‘schooled’ the predicted relations might be significantly weaker. This pattern was not as visible as we had specified, though. This was partially due to us specifying only Belgium, Denmark, and The Netherlands as clear schooled societies – while treating UK and France either as a more middle category or as more complex due to the enduring relevance of ‘class’ in the UK. The differences between countries in the role of educational identification did not mirror differences in the centrality of education (schooled societies). The found relationships between higher educated-bias and the political outcomes were strongest in The Netherlands, UK, and France, and the weakest (absent or in reverse) in Spain and Poland. Hence, those countries that are more schooled do show stronger relations for the political outcomes. Due to the fact that we only have nine countries in our sample, and no longitudinal data, it is difficult to draw any strong conclusions. Perhaps differences were relatively minimal due to the fact that the higher educated are also dominant in political institutions outside of the more typical most-schooled societies. On the other hand, the results for the political outcomes were more in line with differences in level of schooling. As such, these results do mirror the pattern of ‘polarity reversal’ identified by Kitschelt and Rehm (2022), who demonstrated that the ‘separation’ of income and education effects on political voting behavior increased with the transition from industrial to knowledge societies. To some extent, this transition is similar to the transition to schooled societies (Baker, 2014; Meyer, 1977; Schofer & Meyer, 2005). Further research

should bring more clarity to this issue, but the transition to knowledge or schooled societies is likely to be relevant here, since both revolve around education taking a more central and independent role in stratification and inequalities.

As we investigate the relationship between education and higher educated-bias and then the relationship between higher educated-bias and political outcomes, are we investigating a mediation path? The patterns do show that higher educated-bias is not just related to education and to political outcomes, but also that the effect of higher educated-bias explains a large part (~50%) of the original effect parameter of education on the political outcomes. The data we use are cross-sectional and this prevents us from making any causal claims. It is possible that the education effect on political dissatisfaction is due to affective attitudes towards educational groups. Likewise, it is also possible the effect runs in the other direction where the less educated are more likely to be dissatisfied (for other reasons) and then relate this dissatisfaction to educational groups. In this way, the higher educated would perhaps be seen as responsible for their political dissatisfaction, engendering strong affective feelings towards educational groups (and vice versa for the higher educated). In any case, the fact that affective feelings are related to these political attitudes implies that they cannot be seen as separate from these education-based affective attitudes.

This research investigates the role that education-based affective attitudes, or higher educated-bias, plays in current political trends. We found that this factor is related to multiple indicators of political dissatisfaction (political trust and satisfaction with democracy) and different expressions of populism (populist attitudes, identification with ‘the people’, populist affect, and populist voting). We thus establish that education-based identity is intimately involved in the attitudes and behaviors towards political institutions through the affective attitudes educational groups have towards each other. The connection between the relative evaluations of educational groups and political (dis)satisfaction provides indicative evidence that indeed, people hold the higher educated as responsible for the political status quo.

Conflict of Interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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Tables and Figures

Table 1: Results of regression analyses with higher educated-bias as dependent variable.

	Model 1	Model 2
	Higher educated-bias	Higher educated-bias
Intercept	-0.502*** (0.036)	-0.484*** (0.036)
Less educated (ref.)		
Middle educated	0.259*** (0.025)	0.258*** (0.025)
Higher educated	0.646*** (0.026)	0.611*** (0.026)
Age	-0.016+ (0.009)	-0.014 (0.009)
Male (ref.)		
Female	0.019 (0.018)	0.019 (0.018)
Non-binary	0.137 (0.188)	0.117 (0.186)
Ethnic minority	-0.011 (0.035)	-0.018 (0.034)
Educational identification		0.021 (0.019)
Middle educated * Educational identification		0.023 (0.023)
Higher educated * Educational identification		0.206*** (0.024)
Country fixed effects	Yes	Yes
N	11201	11201
Adjusted R ²	0.089	0.108

Note: + p<0.010, * p<0.050, ** p<0.010, *** p<0.001, standard errors in brackets.

Table 2: Results of regression analyses with higher educated-bias as independent variable and political trust and satisfaction with democracy as dependent variables

	Model 3	Model 4
	Political trust	Satisfaction with democracy
Intercept	-0.036 (0.033)	-0.110** (0.034)
Higher educated-bias	0.085*** (0.009)	0.068*** (0.009)
Less educated (ref.)		
Middle educated	-0.003 (0.024)	0.003 (0.025)
Higher educated	0.071** (0.026)	0.032 (0.026)
Age	0.078*** (0.009)	0.055*** (0.009)
Male (ref.)		
Female	0.023 (0.017)	0.040* (0.017)
Non-binary	-0.273 (0.182)	-0.143 (0.183)
Household income	0.183*** (0.009)	0.190*** (0.009)
Ethnic minority	-0.037 (0.033)	-0.032 (0.034)
Country fixed effects	Yes	Yes
N	11201	11201
Adjusted R ²	0.181	0.167

Note: + p<0.010, * p<0.050, ** p<0.010, *** p<0.001, standard errors in brackets.

Table 3: Results of regression analyses with higher educated-bias as independent variable and the populism indicators as dependent variables

	Model 5	Model 6	Model 7	Model 8
	Populist attitudes	Populist vote	People identification	Populist affect
Intercept	0.033 (0.034)	-1.282*** (0.108)	0.136*** (0.035)	0.209*** (0.036)
Higher educated-bias	-0.091*** (0.009)	-0.182*** (0.028)	-0.150*** (0.010)	-0.109*** (0.010)
Less educated (ref.)				
Middle educated	0.044+ (0.025)	-0.325*** (0.073)	0.031 (0.026)	-0.026 (0.026)
Higher educated	-0.073** (0.027)	-0.672*** (0.079)	-0.060* (0.027)	-0.176*** (0.028)
Age	0.036*** (0.009)	-0.147*** (0.027)	-0.020* (0.009)	-0.054*** (0.009)
Male (ref.)				
Female	0.054** (0.018)	0.155** (0.053)	-0.028 (0.018)	0.040* (0.018)
Non-binary	0.201 (0.187)	-0.157 (0.596)	-0.504** (0.191)	0.122 (0.194)
Household income	-0.163*** (0.009)	-0.104*** (0.028)	-0.046*** (0.010)	-0.084*** (0.010)
Ethnic minority	0.016 (0.035)	-0.113 (0.109)	0.026 (0.035)	0.051 (0.036)
Country fixed effects	Yes	Yes	Yes	Yes
N	11201	8442	11201	11201
Adjusted R ²	0.127		0.098	0.062
Nagelkerke R ²		0.193		

Note: + p<0.010, * p<0.050, ** p<0.010, *** p<0.001, standard errors in brackets. For linear models we report adjusted R²; for logistic models we report Nagelkerke R².

Table 4: Summary of the main coefficients of analyses on Hypotheses 1 and 2 across countries (H7). Dependent variable is higher educated-bias.

	Higher educated (vs. less educated)	Educational identification		
		Less educated	Higher educated	Difference
Belgium	0.612*** (0.073)	0.055 (0.054)	0.237*** (0.042)	0.183** (0.069)
Denmark	0.631*** (0.078)	0.040 (0.066)	0.088* (0.036)	0.048 (0.075)
Netherlands	0.651*** (0.076)	0.076 (0.058)	0.206*** (0.046)	0.130+ (0.074)
France	0.521*** (0.115)	-0.051 (0.093)	0.226*** (0.034)	0.277** (0.099)
UK	0.537*** (0.069)	0.063 (0.053)	0.261*** (0.038)	0.199** (0.065)
Greece	0.433** (0.138)	0.099 (0.136)	0.253*** (0.059)	0.154 (0.147)
Hungary	0.619*** (0.081)	-0.038 (0.056)	0.197** (0.063)	0.234** (0.084)
Poland	0.781*** (0.064)	-0.081+ (0.043)	0.279*** (0.048)	0.359*** (0.064)
Spain	0.547*** (0.078)	0.032 (0.059)	0.301*** (0.059)	0.269** (0.084)

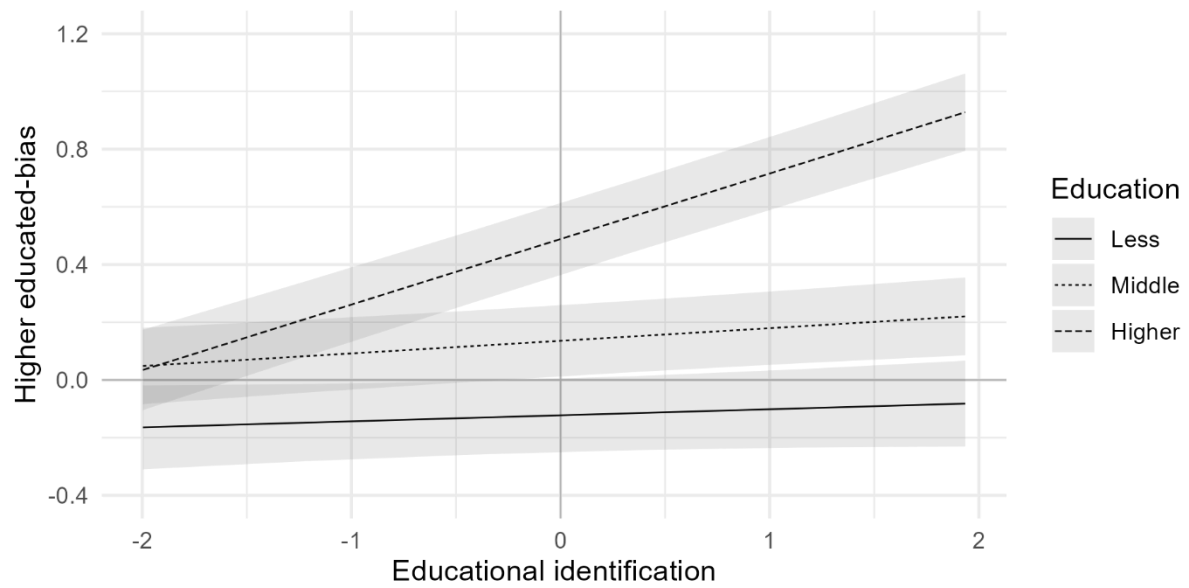
Note: + $p < 0.010$, * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$, standard errors in brackets. The first column describes the education main effect (similar to Model 1) and tests Hypothesis 1 across countries. The other columns describe the interaction effect (similar to Model 2) and tests Hypothesis 2 across countries. The second column refers to the effect of educational identification for the less educated, the second column for the higher educated. The third column is the interaction effect (the difference between less and higher educated in the effect of educational identification). The countries are sorted in three sections with the more schooled countries in a higher section. Within each section countries are sorted alphabetically.

Table 5: Summary of the coefficient of higher educated-bias with all political outcomes across countries.

	Political trust	Satisfaction with democracy	Populist vote	Populist attitudes	Populist affect	People identification
Belgium	0.101*** (0.031)	0.129*** (0.029)	-0.061 (0.105)	-0.157*** (0.031)	-0.108*** (0.031)	-0.134*** (0.032)
Denmark	0.122*** (0.031)	0.077** (0.029)	-0.069 (0.088)	-0.055+ (0.033)	0.030 (0.042)	-0.178*** (0.029)
Netherlands	0.178*** (0.027)	0.133*** (0.026)	-0.206* (0.083)	-0.238*** (0.035)	-0.194*** (0.027)	-0.172*** (0.029)
France	0.131*** (0.029)	0.150*** (0.028)	-0.317*** (0.094)	-0.115*** (0.033)	-0.164*** (0.028)	-0.155*** (0.031)
UK	0.135*** (0.026)	0.097*** (0.026)	-0.443* (0.212)	-0.131*** (0.027)	-0.063* (0.028)	-0.171*** (0.030)
Greece	0.104*** (0.026)	0.101*** (0.026)	-0.178* (0.076)	-0.114*** (0.026)	-0.125*** (0.026)	-0.177*** (0.027)
Hungary	0.098** (0.031)	0.102** (0.031)	-0.015 (0.071)	-0.082** (0.026)	-0.025 (0.034)	-0.117*** (0.027)
Poland	-0.049* (0.024)	-0.117*** (0.027)	-0.414*** (0.080)	0.028 (0.021)	-0.214*** (0.026)	-0.132*** (0.027)
Spain	0.015 (0.025)	0.019 (0.026)	-0.061 (0.074)	-0.018 (0.027)	-0.043* (0.020)	-0.125*** (0.029)

Note: + $p < 0.010$, * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$, standard errors in brackets. Coefficients for populist vote are log-odds, other coefficients are standardized effect sizes. The countries are sorted in three sections with the more schooled countries in a higher section. Within each section countries are sorted alphabetically.

Figure 1: Graphical illustration of the relationship between educational level and higher educated-bias, across educational identification.



Note: Shaded areas denote 95% confidence interval. Higher values of higher educated-bias indicates warmer/more favorable feelings towards the higher educated than towards the less educated. Negative values indicate warmer/more favorable feelings towards the less educated. Figure based on Model 2, Table 1.

Supplemental material

Appendix A

Table A1: (Supporters of) parties included in the populist affect variable

Country	Mainstream parties		Populist parties	
Belgium (French speaking)	Parti Socialiste	Mouvement Réformateur (MR)	Parti du Travail de Belgique (PTB)	Chez Nous
Belgium (Dutch speaking)	Vooruit (sp.a)	Open VLD	PVDA	Vlaams Belang
Denmark	Socialdemokratiet	Venstre	Nye Borgerlige	
France	Parti Socialiste (PS)	Les Républicains (LR)	La France Insoumise (LFI)	Rassemblement National (RN)
Greece	Movement for change (KIN.AA)	New Democracy (Νέα Δημοκρατία)	Greek Solution (Ελληνική Λύση)	SYRIZA (ΣΥ.ΡΙΖ.Α.)
	DK (Demokratikus Koalíció)	Párbeszéd		
Hungary	Koalíció)	Magyarországért	Fidesz	Jobbik
Netherlands	PvdA	VVD	SP	PVV
	Civic coalition (Koalicja Obywatelska)	United Right (Zjednoczona Prawica)		
Poland	PSOE (Partido socialista obrero español)	PP (Partido Popular)	UP (Unidas Podemos)	VOX
Spain				
UK	Labour party	Conservative party	UKIP (UK Independence Party)	

Note: In Denmark, Hungary, and the UK there was no populist left party. Instead either a left-wing non-populist party was chosen (Denmark and the UK) or a right-wing populist party (Hungary). In the case of Denmark and the UK these parties were excluded, and only the rating of the right-wing populist party was chosen. In Hungary both populist parties were included. In Poland only two parties were included in the thermometer scale. For every country the ratings towards mainstream and populist parties were subtracted from each other, so that the populist affect scores describe more positive affect towards populist parties. Except for Denmark, Spain, and Poland these questions ask about ratings of the supporters of these parties, rather than the parties themselves.

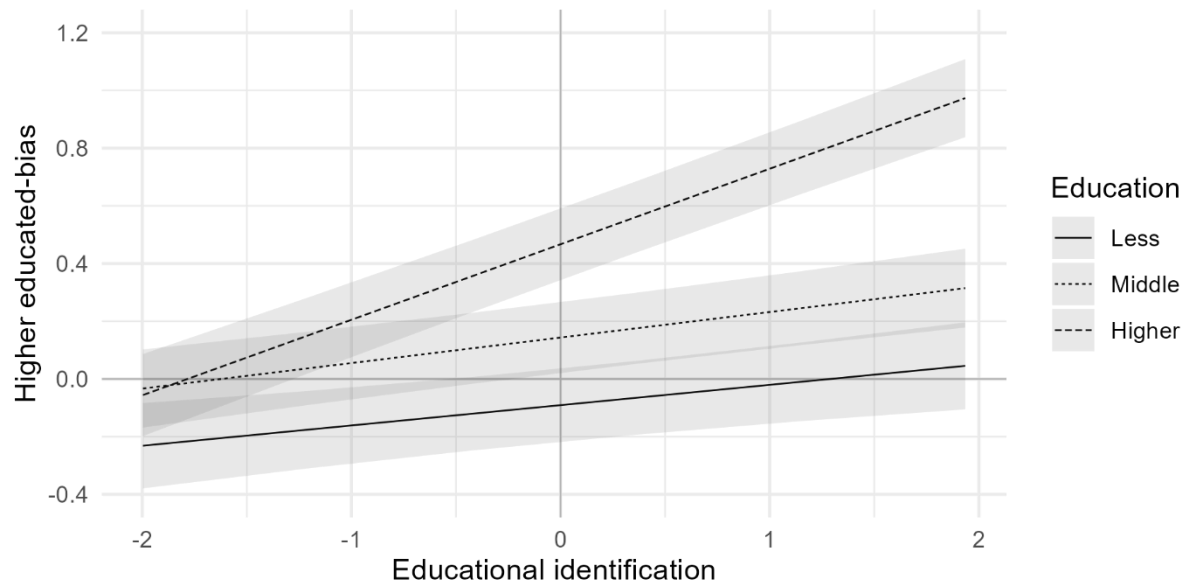
Appendix B: controlling for differences in income and income identification

Table B1: Results of regression analyses with higher educated-bias as dependent variable, including income and income identification controls.

	Model 1	Model 2
	Higher educated-bias	Higher educated-bias
Intercept	-0.271*** (0.034)	-0.256*** (0.034)
Less educated (ref.)		
Middle educated	0.240*** (0.025)	0.234*** (0.025)
Higher educated	0.605*** (0.026)	0.558*** (0.026)
Age	-0.019* (0.009)	-0.018* (0.009)
Male (ref.)		
Female	0.005 (0.018)	0.007 (0.018)
Non-binary	0.170 (0.187)	0.114 (0.185)
Ethnic minority	-0.006 (0.034)	-0.009 (0.034)
Subjective household income	0.081*** (0.009)	0.073*** (0.009)
Income identification	0.014 (0.009)	-0.074*** (0.011)
Subjective household income * Income identification	0.030*** (0.008)	0.017* (0.008)
Educational identification		0.070*** (0.021)
Middle educated * Educational identification		0.018 (0.023)
Higher educated * Educational identification		0.191*** (0.024)
Country fixed effects	Yes	Yes
N	11201	11201
Adjusted R ²	0.096	0.117

Note: + p<0.010, * p<0.050, ** p<0.010, *** p<0.001, standard errors in brackets.

Figure B1: Graphical illustration of the relationship between educational level and higher educated-bias, across educational identification, including income and income identification controls.



Note: Shaded areas denote 95% confidence interval. Higher values of higher educated-bias indicates warmer/more favorable feelings towards the higher educated than towards the less educated. Negative values indicate warmer/more favorable feelings towards the less educated. Figure based on Model 2, Table B1.

Appendix C: Is political interest predicted by ingroup education bias?

In the preregistration we specified an additional hypothesis where *ingroup education bias* (i.e., the preference for one's own educational group, over the other educational group) predicts political interest. The rationale behind this hypothesis was that educational conflict could increase the stakes of political decision-making in the eyes of educational groups. This would then increase political interest, as interest might depend on political conflict, political polarization, etc. To test this hypothesis we thus regress political interest on *ingroup* education bias, rather than higher educated-bias, as for the less educated engagement with educational conflict would not be measured by outgroup bias, but by ingroup bias. This measure is calculated in a similar way as higher educated-bias for the higher educated, but for the less educated it is reversed such that higher scores indicate a stronger preference for the less educated. The results of this regression (including control variables) are displayed in Table C1. The results are not in line with the hypothesis, as ingroup education bias does not predict political interest.

Table C1: Results of regression analyses with political interest as dependent variable.

	Model 1
	Political interest
Intercept	-0.814*** (0.042)
Ingroup education bias	0.004 (0.012)
Less educated (ref.)	
Higher educated	0.472*** (0.027)
Age	0.164*** (0.012)
Male (ref.)	
Female	0.403*** (0.023)
Non-binary	0.436 (0.279)
Ethnic minority	0.049*** (0.012)
Subjective household income	-0.053 (0.045)
Country fixed effects	Yes
N	6459
Adjusted R ²	0.142

Note: + p<0.010, * p<0.050, ** p<0.010, *** p<0.001, standard errors in brackets.