Educational policies and social inequality in well-being among young adults

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ABSTRACT
Inequalities in health and well-being are important contemporary public health issues. This article is the first to investigate the institutional causes of inequality in well-being among youth in a comparative perspective. Data from the European Social Survey are used to analyse how educational policies moderate the association between social background and well-being. Multilevel techniques are used to investigate cross-level interactions between social background and educational policies on life satisfaction. Four indicators of inclusive educational policies are analysed: age of tracking, costs of education, enrolment rates, and second-chance opportunities in the educational system. The results show that educational policies indeed moderate the association between social background and well-being: inequalities as measured by the father’s social class are smaller in countries where educational policies are more inclusive. Moreover, the analysis shows that the moderating impact of education policies is mediated by individual-level education, activity status, and income.

Introduction
Poor psychological well-being is among the most pressing public health issues of today, particularly among youth and young adults (Whiteford et al. 2015). The determinants of reduced well-being are variegated, and range from genetic predisposition to the social circumstances that shape individuals’ life experiences. Of these social circumstances, family and school are of primary importance in shaping the lives of youth. This article investigates both of these factors by asking how educational policies moderate the effects of family or social background on well-being among youth.

The rationale for focusing on the role of educational policies for well-being is that youth spend much of their time in educational institutions, and their life chances are heavily dependent on these institutions. Research also shows that there is a social gradient in well-being, and that an individual’s educational level is an important determinant of her well-being (Chevalier and Feinstein 2006; Reynolds and Ross 1998). However, the importance of educational policies for inequalities in well-being has not been previously investigated.
Because educational policies tend to vary to only a very small extent within European countries, their effects on well-being are difficult to investigate in single-country studies. Improved cross-country harmonised data have, however, opened up new opportunities for conducting comparative research on educational policies. European educational systems differ on several dimensions, and since education crucially shapes the life chances of youth, we would expect to find that these differences between systems also have an impact on well-being, and on inequalities in well-being, among youth. The present article seeks to contribute to our knowledge of the macro-level causes of well-being among youth in general, and of social inequalities in well-being in particular. Drawing on arguments from the capability approach and the literature on social mobility, we ask how the institutional distribution of educational opportunities moderates the association between social background and well-being across European countries.

Against the backdrop of growing social and economic inequality in high-income countries, and a parallel trend of cutbacks in redistributive social policies, research has examined how these factors at the societal level contribute to shaping population health and well-being (for example, Bergqvist, Åberg Yngwe, and Lundberg 2013; Wilkinson and Pickett 2009). The study extends this field by considering social groups which have thus far not been considered (youth, and inequalities among youth), as well as investigating previously unexplored areas of policy (educational policies). The study thus follows the recommendations of recent reviews of the research field, as it looks at the roles of specific social policies that are directly related to the focal groups (in this case, youth), as well as to the outcome of interest (inequalities in well-being) (Bergqvist, Åberg Yngwe, and Lundberg 2013; Brennenstuhl, Quesnel-Vallée, and McDonough 2012). Moreover, the article proposes a theoretical framework for investigating well-being inequalities among youth, by emphasising how policies affect social mobility and capabilities.

**Theory and previous research**

**The individual level: education and well-being**

There is ample evidence of a negative, and at least partially causal, association between educational level and well-being, including depressiveness and happiness and/or life satisfaction (Blanchflower and Oswald 2004; Gerdtham and Johannesson 2001; Chevalier and Feinstein 2006; Reynolds and Ross 1998). The most common explanations for these findings are that education affects well-being through two channels: by providing resources that are useful on the labour market; and by providing other kinds of intangible resources that can be used to enhance well-being. For youth who have not yet completed their education, a third, contextual mechanism must also be added: how potential educational opportunities or capabilities affects well-being.

The first mechanism (education as a labour-market resource) follows from the assumption that education is a key resource that individuals can draw upon to strengthen their position in the labour market, and is therefore a determinant of income, working conditions, and unemployment risks – all of which in turn are associated with well-being (for example, Chevalier and Feinstein 2006). The second mechanism relates to the fact that education is linked to a number of other resources that are of relevance for an individual’s well-being, such as physical health, cognitive and communicative skills, coping skills, a sense of personal
control, the availability of supportive social networks, and good family relations (for example, Ross and Mirowsky 1999, 2006; Cutler and Lleras-Muney 2006).

The third mechanism (capabilities) operates on the contextual level rather than on the individual level, and relates to research showing how social policies have externalities and can provide well-being benefits even to individuals who do not currently use them (for example, Carr and Chung 2014; Sjöberg 2010). Educational opportunity can thus be seen as a potential that need not be realised to contribute to well-being (Terzi 2014). An individual’s current state of well-being is shaped by her assessment of future prospects; if she feels that the society she lives in enables her to pursue what she regards as fundamental life goals, then this will likely have consequences for her well-being. Thus, this individual’s knowledge that she can if needed attain further education, or education within a different field, can provide comfort and scope for the future even if she is not currently enrolled in education.

This view of education as a potential is in line with Amartya Sen’s capability approach: what matters from a welfare perspective is the choice set available to individuals, not merely the actual decisions made (Sen 2006). The basic idea is that the focus should be on what people are able to do should they want to, not solely on what they actually do, or on what they have. A narrow focus on realised outcomes neglects the intrinsic value of having the opportunity to choose and to actively make use of one’s free will. The reason why being able to do certain things has an intrinsic value, regardless of whether one actually decides to do them, is that this ability enhances agency and the control that people have over their lives. With greater scope to act and to decide comes a greater ability to plan one’s life in accordance with the life goals that one finds valuable (Sen 2006). In this sense, capabilities represent a contextual-level mechanism that is not reducible to individual-level education, but instead refers to the individual’s environment, and the opportunities provided in this environment. On a general level we might say that educational opportunities provide capabilities in that they increase individuals’ opportunities and their sense of control over their own lives, thereby enabling them to achieve fundamental goals in life – one of which is typically well-being.

Since capabilities refer to potential states and not actual outcomes, they are difficult to study empirically. However, emerging research provides evidence that capabilities (in the sense of an enlarged choice set) have positive effects on well-being (Graham and Nikolova 2015; Muffels and Headey 2013; Verme 2009; Veenhoven 2010). Evidence of a positive relationship between factors such as agency and perceived employability on the one hand and well-being on the other also support the notion that an individual’s assessment of her future potentials and opportunities affect her present well-being (for example, Green 2011).

**Hypotheses**

If education and educational opportunities shape well-being, then the distribution of educational opportunities across the youth population can be expected to influence the concomitant distribution of well-being. The following line of reasoning will thus primarily focus on how the structure of educational polices differentially affects the educational opportunities – and hence the well-being – of youth depending on their social background. In other words, the equality of educational opportunities across individuals is the key factor that moderates the association between social background and well-being. Inclusive policies
that provide opportunities for less advantaged youth should, by contributing to educational equality, also contribute to equality in levels of well-being. Moreover, it is likely that inclusive educational policies have a double equalising effect on well-being. Research indicates that youth from disadvantaged social backgrounds benefit relatively more from education in terms of well-being than youth from advantaged social backgrounds (Ross and Mirowsky 2006).

**Social mobility, educational policies, and well-being**

As youth are not yet established on the labour market, social status is analysed by looking at their parents’ class, and, by extension, at social mobility. The focus of much of the existing social mobility research has been on how education mediates the association between social background and adult social class: children from high social backgrounds typically attain higher educational levels, and thus reach higher social positions as adults, than their peers from lower social backgrounds (Beller and Hout 2006). The strength of the association between background and educational attainment, however, can be influenced by educational policies, and some policies offer more opportunities to disadvantaged youth. The following sections will be structured so that the differential effects of four types of educational policies on the life chances of youth depending on their social background are initially discussed, after which the implications of this for equality of well-being are drawn.

**Education system tracking**

Comparative educational research shows that the way by which pupils are sorted and grouped according to their academic performance (streaming) is important for the development of educational inequalities. The exact mechanisms involved are beyond the scope of this article, but studies show that this type of sorting increases inequalities by social background (Blossfeld et al. 2016). The degree of this differentiation, and the method through which the sorting is implemented, varies across countries, and most research shows that explicit, early and formal sorting of pupils into different classes or schools is among the strongest determinants of cross-country differences in the strength of the association between social background and educational attainment. Specifically, a lower age of selection into different school types reduces educational equality and enhances the importance of social background for educational attainment (Horn 2009; Woessman 2009; Braga, Checchi, and Meschi 2013). As the lower educational tracks are typically dead-end tracks that formally restrict a student’s opportunities to advance to higher educational levels, early tracking can have long-term consequences for educational opportunities.

Referring back to the discussion regarding how education affects well-being, we can expect that tracking influences the association between social background and well-being by making the benefits of attained education (including access to labour-market resources, as well as access to other kinds of resources such as coping skills) more dependent on social background. Tracking will, moreover, also influence well-being by affecting capabilities (i.e. the third mechanism discussed earlier). Since lower, dead-end tracks constrain an individual’s choice set and opportunities (for instance, do not provide access to higher education), and since youth from low social backgrounds are disproportionately channelled into lower tracks, tracking disproportionately reduces their capabilities.
Hypothesis 1. There is an interaction effect between tracking age and social background, such that a higher tracking age is positively associated with well-being among youth from low social backgrounds.

**Costs of higher education**

One way to weaken the link between social background and educational attainment is by reducing the private costs of education. As stated by Breen and Jonsson (2007), the more important financial assets are for a family’s ability to purchase advantages such as education for their children, the lower will social mobility be. Research shows that financial support to students in the form of grants is positively associated with more educational mobility in Europe (Braga, Checchi, and Meschi 2013); and that in the United States, where tuition fees are high, family income affects the ability of students to access college (Lochner and Monge-Naranjo, 2011). Since parental class is a key determinant of household income, higher educational costs may be expected to diminish social mobility.

Larger inequalities in attained education should translate into larger inequalities in well-being through the first two mechanisms discussed earlier. Moreover, with regard to capabilities, higher educational costs disproportionately constrain the opportunities of students from low social backgrounds by constraining their access to education.

Hypothesis 2. There is an interaction effect between the costs of higher education and social background, such that lower costs are positively associated with well-being among youth from low social backgrounds.

**Educational enrolment**

A number of national and comparative studies show that educational expansion and higher enrolment indeed increase social mobility (Braga, Checchi, and Meschi 2013; Breen and Jonsson 2007; Breen 2010; Beller and Hout 2006; Shavit, Arum, and Gamoran 2007; however, see also Thompson and Simmons 2013), although the effects of expansion differ between countries and might interact with other policies, such as tuition fees (Breen 2010; Beller and Hout 2006). Our third hypothesis rests on the argument that high enrolment in higher education will disproportionately benefit students from lower social backgrounds, both because it increases their numbers relative to the numbers of students from higher social backgrounds, and because these students are more dependent on having formal educational credentials for their life chances (Breen 2010). Moreover, it can be hypothesised that enrolment operates through the third mechanism discussed previously (capabilities), because higher enrolment attenuates competition over a limited number of positions in higher education. Less competition makes the access criteria less strict, which in turn enhances opportunities to access education.

In addition, recent research has suggested that there is a ‘diminishing return to education’ in terms of well-being (Bracke, Pattyn, and von dem Knesebeck 2013; Chevalier and Feinstein 2006). For example, the benefits of moving from secondary to tertiary education are substantial, but the additional benefits of acquiring a postgraduate degree are less clear (Ross and Mirowsky 1999). Thus, even if higher enrolment partly postpones the point of
social selection to higher rungs on the educational ladder, it nevertheless has an equalising effect on well-being, as the ‘postponement’ is subject to diminishing returns in terms of well-being. This trend towards diminishing returns is amplified in contexts in which over-education is common (Bracke, Pattyn, and von dem Knesebeck 2013), and if higher enrolment levels contribute to over-education, we could assume that higher levels of enrolment reduce the differences in well-being between individuals with high and low levels of education. Thus, higher levels of enrolment will equalise well-being across social background by redistributing the well-being benefits of higher education to new entrants.

Hypothesis 3. There is an interaction effect between the level of enrolment in higher education and social background, such that a higher level of enrolment is positively associated with well-being among youth from low social backgrounds.

**Second-chance opportunities**

The fourth hypothesis relates to how access to higher education is regulated; that is, whether students can access higher education through various inclusive or alternative access routes. The existence of such alternative routes implies that pursuing higher education represents a second chance for students who failed to earn the upper secondary education qualifications that give direct access to higher education. Early tracking amplifies the importance of social background (for example, Woessman 2009), and the equivalent argument can be made with regard to access to higher education (SOU 2003). Closing access to higher education to students who lack sufficient secondary qualifications is functionally equivalent to introducing tracking at age 18 or 19 years. Since youth from lower social backgrounds are disproportionately represented among students with insufficient qualifications, the second chance provided by inclusive access routes disproportionately increases their educational opportunities (Eurydice 2012). A similar situation exists with regard to age: students from low social backgrounds are more likely to enter higher education at older ages, so educational policies that encourage alternative routes into higher education should have an equalising impact (SOU 2003). The importance of early educational choices in determining access to higher education are attenuated when alternative routes are available.

Thus, in line with the previous hypotheses, second-chance opportunities should benefit the well-being of youth from lower social backgrounds by making educational attainment less dependent on social background. Moreover, since the existence of alternative routes into higher education clearly increases opportunities among youth with insufficient secondary qualifications – among whom youth from lower social backgrounds are overrepresented – it can also be expected to operate through the third mechanism discussed earlier, capabilities.

Hypothesis 4. There is an interaction effect between second-chance opportunities and social background, such that the existence of more generous second-chance opportunities will be positively associated with well-being among youth from low social backgrounds.

Finally, the mechanisms that underlie Hypotheses 1–4 will be explored further. The individual-level association between education and well-being arises because education provides resources (such as employment) which are in turn important determinants of well-being. Educational policies can affect inequalities in well-being by making educational
attainment less dependent on social background. In other words, these mechanisms (individual-level educational attainment and the resources attached to this) are mediators that link educational policies to social inequalities in well-being. If the reasoning behind Hypotheses 1–4 is correct, we would expect that the moderating effect of educational policies on the association between social background and well-being will be weaker once individual-level mediators such as educational attainment and the resources attached to this (e.g. employment and income) are controlled for. However, the argument regarding capabilities would suggest that educational policies should have a moderating impact over and above that which is mediated by individual-level factors. Thus, it is expected that the moderating impact of the policies is reduced, but does not disappear.

Hypothesis 5. The moderating impact of educational policies on well-being is mediated by individual-level education, income, and activity status, such that the interaction effect between educational policies and social background is weaker when these individual-level mediators are controlled for.

To sum up the reasoning: having a high level of education provides well-being benefits to individuals, as does having opportunities to pursue higher education. Educational policies differentially distribute educational resources and opportunities depending on an individual's social background, and this in turn moderates the association between the individual's social background and well-being.

Data and methods

The individual-level data are taken from the European Social Survey (ESS), a biennial survey of most European countries that has been carried out since 2002. ESS data have been chosen for three reasons. First, the ESS is designed to provide harmonised data on most European countries, which makes it suitable for cross-country comparative research. Second, the ESS is academically driven and offers data of very high quality (Kohler 2008), with participants drawn by random probability sampling from the population aged 15 years or older and all interviews conducted face to face. Effective achieved sample sizes of at least 1500 are required for all countries, and the average response rates are around 60%. Third, much of the previous comparative literature on social policies and health inequalities has used ESS data (Bergqvist, Åberg Yngwe, and Lundberg 2013). To enable subgroup analysis by social background and age, three waves (waves 4–6, or 2008–2012; data on parental social class are only available from round 4 onwards) of the ESS are pooled. With the analysis restricted to respondents aged 18–29 years, the resulting dataset has 14,875 observations with complete data on social background. A total of 25 countries with adequate data on most policies are included, enough for reliable estimates in multilevel models (Bryan and Jenkins 2015).

Dependent variable

Well-being is a broad and complex concept, with no universally agreed upon definition. A fundamental distinction is between objective and subjective well-being, where objective well-being refers to states that can be seen as desirable regardless of the individual’s own perception (e.g. physical health) while subjective well-being takes each individual and her own perception, evaluation, and experience as a point of reference (Diener, Schimmack,
This article studies subjective well-being, both since it has been the focus of most of the research previously discussed and since it more clearly fits the conceptual framework used, especially capabilities. Capabilities relate to (perceived) opportunities and potentials, not merely realised outcomes, and a central argument of this article is that perceived educational opportunities, in addition to attained education, increase well-being.

In survey research, subjective well-being is most commonly operationalised as life satisfaction (cognitive or evaluative well-being) or happiness (affective well-being) (Diener, Schimmack, and Helliwell 2009). Life satisfaction gives a global measure of well-being, and the validity of the measure is supported by its ability to reliably predict suicide, and to reflect differences in objective living conditions and significant life events (Diener, Inglehart, and Tay 2013). It is measured by the question ‘All things considered, how satisfied are you with your life as a whole nowadays?’, with answers ranging from zero (extremely dissatisfied) to 10 (extremely satisfied). Life satisfaction and happiness are highly correlated in ESS data (the correlation coefficient is 0.7), and the results are very similar when happiness is used as a dependent variable (see Table 4 in Supplementary data).

### Independent variables at the individual level

Since respondents tend to be more accurate when reporting their parents’ occupations than their parents educational level (Engzell and Jonsson 2015), social background is operationalised as social class background, although parental education has also been used as an indicator of social background in sensitivity analyses, with stable results (results are available on request).

Moreover, in social mobility research, social background is traditionally based on the father’s social position (Engzell and Jonsson 2015), an approach which is maintained in this article. First, there are more missing data on the mother’s than on the father’s occupation. Second, the father’s social position is traditionally the dominant one in the household. Third, the use of the father’s social position increases the cross-country comparability of results, as the employment levels of mothers vary greatly across European countries. Fourth, as measured in the ESS, the correspondence between occupation and education is more clear-cut for father’s class. Social class background in the ESS is measured by the following question: ‘Which of the descriptions on this card best describes the sort of work [your father] did when you were 14?’ There are nine possible responses to this question, ranging from ‘Professional and technical occupations’ to ‘Farm worker’. The four lowest categories (‘Skilled worker’, ‘Semi-skilled worker’, ‘Unskilled worker’, and ‘Farm worker’) indicate low social background.

As individual-level control variables, age (expressed in number of years), co-habiting status, and gender are used. To test Hypothesis 5, three individual-level mediators are included: the respondent’s own educational attainment (in years of completed education), activity status, and perception of the household income (‘Living comfortably’ and ‘Coping on present income’ is the reference category). It should be emphasised that the mediating role of these variables is probably weaker among youth than among older people, as many young people may not have finished their education and are not yet established in the labour market. The country averages for individual-level variables are presented in Table 2 in Supplementary data.
Independent variables at the country level

Four indicators of educational policies are tested, with each corresponding to a separate dimension of educational institutions. Hypothesis 1 relates to the tracking age, and tracking is measured by the age of selection into different tracks with different curricula in secondary education (OECD 2013). In the tables, tracking is used as a continuous variable, ranging from age 10 to age 16 years; but the robustness of the indicator is also confirmed by analysing it as a dummy variable (results not shown). In line with the argument by Breen and Jonsson (2007), costs are operationalised as the share of total expenditure on higher education that comes from households. This gives a good summary measure of tuition fees and financial support for students. The data are from Eurydice (2012), an EU network with the task of monitoring and providing information about European higher education institutions, and refer to the year 2008.

Enrolment in higher education, the focus of Hypothesis 3, is operationalised as the share of the population aged 20–29 years who are enrolled in tertiary or other forms of post-secondary education. Data are from Eurostat, and refer to the mean values over the years 2006–2012 (Eurostat 2016). Second-chance education (Hypothesis 4), as measured by Eurydice (2014), is defined as the existence of routes that provide access to higher education for individuals who lack the secondary education credentials that are typically required for direct access to higher education. The target groups are individuals who either completed a vocational upper secondary programme or who left school before completing the upper secondary level. Youth from low social backgrounds are over-represented among both of these groups (Bol and Van de Werfhorst 2013). These types of entry routes may exist for all higher education institutions or programmes (defined here as generous second-chance opportunities), or for some institutions or programmes (intermediate second-chance opportunities), or they may not exist at all (no second-chance opportunities). Second-chance education is operationalised as a dummy variable for each category, with no second-chance opportunities serving as the reference category. Eurydice data refer to the years 2012/2013.

Country gross domestic product (GDP) per capita (based on data from Eurostat) is used as the control variable at the country level. To further corroborate the robustness of the results, the country Gini coefficient, the social protection expenditure as a percentage of the GDP, and the youth unemployment rate (all indicators taken from Eurostat) were also included as control variables on a one-by-one basis (not simultaneously, due to the small number of country level observations). Since the results proved robust to the inclusion of these variables, only GDP is included in Table 1. The country values for the policy variables and GDP are presented in Table 3 in Supplementary data.

Analytic strategy

Random intercept models, with individuals nested in countries, are estimated to test the hypotheses. Multilevel models are preferred since by separating the variation between the individual level and the country level, and by allowing the constant terms to vary between countries, they take the nested structure of the data into account (Rabe-Hesketh and Skrondal 2012). Multilevel models are also attractive because they allow for the estimation of cross-level interaction effects, which, in the context of this article, implies that the effect
Table 1. Multilevel linear models showing associations between social background and life satisfaction, and cross-level interactions between social background and education policies.

|                      | Model 1       | Model 2       | Model 3a      | Model 3b      | Model 4a      | Model 4b      | Model 5a      | Model 5b      | Model 6a      | Model 6b      |
|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Low social background| -0.258***     | -0.040        | -0.513***     | -0.235**      | -0.107*       | 0.068         | -0.460***     | -0.123        | -0.410***     | -0.131***     |
| Years of education   | 0.050***      | 0.050***      | 0.052***      | 0.051***      | 0.051***      | 0.053***      | 0.051***      | 0.053***      | 0.053***      |
| Difficult to cope on | -0.973***     | -0.968***     | -0.918***     | -0.974***     | -0.974***     | -0.958***     | -0.974***     | -0.974***     | -0.974***     |
| income               |               |               |               |               |               |               |               |               |               |
| Activity status (reference: other) | | | | | | | | | | |
| Employed             | 0.446***      | 0.441***      | 0.456***      | 0.455***      | 0.430***      |               |               |               |               |
| Student              | 0.630***      | 0.627***      | 0.630***      | 0.628***      | 0.630***      |               |               |               |               |
| Tracking age         |               |               |               |               |               |               |               |               |               |
| × Low social background |               |               |               |               |               |               |               |               |               |
| Household share of expenditure |               |               |               |               |               |               |               |               |               |
| × Low social background | -0.149        | -0.206        |               | -0.545***     | -0.380**      |               |               |               |               |
| Enrolment rate       |               |               |               |               |               |               |               |               |               |
| × Low social background |               |               |               |               |               |               |               |               |               |
| SCO (reference: none) |               |               |               |               |               |               |               |               |               |
| Generous             |               |               |               |               |               |               |               |               |               |
| × Low social background |               |               |               |               |               |               |               |               |               |
| Intermediate         |               |               |               |               |               |               |               |               |               |
| × Low social background |               |               |               |               |               |               |               |               |               |
| Intercept            | 7.332***      | 8.758***      | 7.869***      | 7.383***      | 8.169***      | 7.561***      | 7.595***      | 7.097***      | 7.936***      |
| Intra-class correlation | 0.0107        | 0.0071        | 0.035         | 0.061         | 0.040         | 0.041         | 0.028         | 0.055         | 0.033         |
| Akaike information criterion | 62,048        | 59,562        | 61,628        | 59,541        | 53,105        | 51,353        | 59,436        | 57,427        | 57,400        |
| N (individual level) | 14,875        | 14,640        | 14,875        | 14,640        | 12,813        | 12,611        | 14,875        | 14,640        | 13,751        |
| N (country level)    | 25            | 25            | 25            | 25            | 22            | 22            | 25            | 25            | 23            |

Note: All models controlled for age, gender, and co-habiting status; Models 3a–6b controlled for GDP per capita. SCO, second-chance opportunities. Source: Individual-level data from the ESS. Data on GDP and enrolment rate from Eurostat, on household share of education expenditure and second-chance opportunities from Eurydice, and on tracking age from the OECD.

* p < 0.05
** p < 0.01
*** p < 0.001.
of individual social background on well-being varies depending on the value of the country educational policy variables.

Table 1 presents 10 models. The basic individual-level variables (social background, partnership status, gender, and age) are included in Model 1, and the individual-level mediators (educational attainment, activity status, and subjective income) of the association between social background and well-being are added in Model 2. Models 3a–6b introduce policy variables and cross-level interaction effects between policy variables and social background. Only basic individual-level variables are included in the models designated 'a', while individual-level mediators are added in the models designated 'b'. The former (Models 3a, 4a, 5a, and 6a) thus test Hypotheses 1–4, while the latter (Models 3b, 4b, 5b, and 6b) together test Hypothesis 5.

Sensitivity analyses

Several robustness tests have been performed. In addition to the procedures already mentioned (educational background as an indicator of social background, tracking age as a dummy variable, adding additional country-level controls), a random coefficient for social background has also been included in the models (i.e. random-slope models are used). This hardly changed the size of the cross-level interaction coefficients, but generally increased the standard errors, which made the results for the enrolment rate (Hypothesis 3) insignificant at the 5% level. Furthermore, the models have been tested for influential countries. Each country has been excluded on a one-by-one basis, and all models have been re-estimated without this country. The results were fully robust to this procedure (available upon request).

Moreover, all four education policy variables have been replaced with alternative indicators representing the same dimension of inclusiveness. For instance, the standard focus on formal tracking (Hypothesis 1) in comparative educational research has been criticised as neglecting the subtle sorting that takes place in officially untracked systems (Blossfeld et al. 2016). Tracking age was therefore replaced with an indicator that captures the complex and multidimensional nature of how education systems sort pupils in order to manage heterogeneity in ability (Dupriez, Dumay, and Vause 2008). With regard to Hypothesis 2, Eurostat data were replaced with enrolment data from the OECD, and OECD data on private expenditure on education were used in place of household share of education expenditure (Hypothesis 3). As an alternative indicator of second-chance opportunities (Hypothesis 4), a composite indicator of lifelong learning policies developed by the European Commission was used (Manca, Governatori, and Mascherini 2010). The results of the analyses with the alternative indicators are presented in Table 5 in Supplementary data. The alternative indicators had more missing values at the country level, but the results were substantially the same and in line with the hypotheses.

Results

Table 1 presents the results for life satisfaction. Model 1 shows that having a low social background is indeed associated with lower life satisfaction, whereas Model 2 shows that this association is fully mediated by the respondent’s own education, activity status, and income (the coefficient for low social background is reduced from −0.258 to −0.040).
Models 3a–6b test the hypotheses by looking at the cross-level interaction effects between social background and educational policies. The models designated ‘a’ show results before, and those designated ‘b’ after, inclusion of individual-level mediators. To facilitate interpretation of the interaction effects, the continuous variables (tracking age, household expenditure share, and enrolment rate) are rescaled, with the lowest observed value rescaled to equal zero and the highest value rescaled to equal one. This means that the interaction terms show the predicted difference in the average life satisfaction of individuals with a low or a high social background when the country-level variables are at their highest observed value, compared to when they are at their lowest observed value.

Hypothesis 1 (Model 3a) is supported in that the interaction term between having a low social background and tracking age is significant and positive. Since the main effect of tracking is close to zero, it appears that, in causal terms, youth from high social backgrounds are not affected by the tracking age (their levels of life satisfaction are equivalent in countries with high and low tracking age), while youth from lower social backgrounds have significantly higher life satisfaction when the tracking age is high. The coefficient of 0.370 is larger than the original association between social background and life satisfaction (0.258, in Model 1), certainly not a trivial effect. Another way to express the magnitude of the moderating effect is that the predicted difference in life satisfaction depending on social background is more than half a scale point (−0.513 when the tracking age is at its lowest observed value, but almost negligible (−0.143 (−0.513 + 0.370 = −0.143)) when it is at its highest value. In line with Hypothesis 2, youth with low social backgrounds have relatively (compared to youth from high social backgrounds) higher life satisfaction when the household’s share of education expenditure is low (Model 4a). Hypothesis 3 is also supported, with higher enrolment being significantly associated with relatively higher life satisfaction among youth with low social background (Model 5a). The interaction terms in Models 4a and 5a are the largest of those presented in Table 1, around half a scale point. Regarding Hypothesis 4 (Model 6a), the interaction terms between social background and generous, and to a lesser extent also intermediate, second-chance opportunities are positive and significant.

Models 3b–6b, those designated ‘b’, test to what extent the hypothesised associations are mediated by the respondent’s own education, activity status, and income. We can see that, in line with Hypothesis 5, the sizes of all of the interaction terms are substantially reduced, and are typically cut by between one-third and two-thirds (the exception is the interaction term with intermediate second-chance opportunities, which is hardly mediated). Further analysis (results not shown) demonstrates that the three mediators each contribute approximately equally to this reduction. The main effects of the policy variables are not affected in any systematic way by the individual-level mediators.

In order to make the results interpretable, and to facilitate comparisons across countries, country dummies have been used instead of the policy indicators in the models (results in Table 6 in Supplementary data). The results show that, for instance, Hungary and Bulgaria exhibit particularly large inequalities in well-being. Hungary is a highly tracked country with poor second-chance opportunities, even though the private costs of education are also low, while Bulgaria is characterised by very high costs of education, relatively early tracking, low enrolment, and poor second-chance opportunities. Among wealthier countries, Germany and Great Britain also exhibit fairly large inequalities. Germany is an early tracking country par excellence, has an average enrolment rate, and has poor second-chance
opportunities. Great Britain has fairly large inequalities despite a high tracking age, but it simultaneously practices more subtle and informal forms of sorting of pupils (Blossfeld et al. 2016) and has very high costs of education and low enrolment. At the other end, Slovenia and Denmark are examples of low-inequality countries. Slovenia tracks pupils at age 14 years, has poor second-chance opportunities, but has among the highest enrolment rates in the sample and lower than average private costs of education. Denmark is among the most inclusive countries concerning all policies: it tracks pupils late, has a high enrolment rate, has low private costs of education, and has generous second-chance opportunities. An interesting case is Italy, where youth from lower social backgrounds have higher well-being than their more advantaged peers, despite the fact that education policies in Italy are relatively non-inclusive.

**Conclusions**

This article has studied whether educational polices moderate the relationship between social background and well-being. Five hypotheses derived from social mobility and capability theory were tested, each of which asserted that specific dimensions of inclusive educational polices – higher tracking age, lower costs of education, higher levels of enrolment, and the availability of second-chance education – make well-being among youth less dependent on social background. Moreover, it was argued that policy effects would be mediated by individual-level education, activity status, and income (Hypothesis 5).

Overall, the multilevel analyses bear out the hypotheses. Hypotheses 1–4 were all corroborated with both life satisfaction and happiness as outcomes, and the results proved to be the most robust to the sensitivity tests performed. The underlying theoretical reasoning is also largely borne out by the analysis in the sense that a large share of the association between educational polices and social background was accounted for by the hypothesised individual-level mediators (Hypothesis 5). The interaction terms were typically reduced by half when the mediators were included in the models. Still, some interaction terms remained significant even after the inclusion of individual-level mediators. This probably reflects some unobserved factors, since given the limited degrees of freedom available at the country level not all of the potentially relevant factors can be controlled for simultaneously, but it might also reflect how inclusive educational polices are associated with higher well-being also among people who do not use them directly (the capability argument). Simply having the opportunity to pursue higher education can confer well-being advantages, particularly for youth from low social backgrounds. As noted previously, the capability argument is difficult to test empirically, and given the lack of adequate data it must remain a hypothetical mechanism in this article.

Concerning the strength of the associations, the analysis shows that most cross-level interaction terms were similar to or larger than the original association between social background and well-being, which indicates that the moderating role of the policies is not trivial. It should also be emphasised that although the outcome measure can range between 0 and 10, most of the observed values are concentrated in a narrower range, between 6 or 7 and 10.

Although novel in both its theoretical and empirical scope – the role of educational policies for opportunities and thereby well-being among youth has not been considered
before – much previous research has investigated the interrelationships between societal inequality, policies, and (inequalities in) well-being (Bergqvist, Åberg Yngwe, and Lundberg 2013; Brennenstuhl, Quesnel-Vallée, and McDonough 2012; Wilkinson and Pickett 2009). While a complete review of this literature is beyond the scope of this study, two points can be highlighted. First, the results are broadly in line with research showing that egalitarian societies and policies are beneficial for health and well-being, especially for vulnerable groups (see Pickett and Wilkinson 2015). Second, the study demonstrates the utility of focusing on specific actual policies that are directly related to the focal groups, rather than broad welfare regimes or geographical clusters, in cross-country comparative well-being research (Brennenstuhl, Quesnel-Vallée, and McDonough 2012). Previous studies on inequalities in well-being among adolescents and youth have not found any patterns across different welfare regime clusters (Richter et al. 2012), but the current study suggests that this might be because welfare regimes are too broad to capture the specific pathways that are of relevance for this specific group.

Limitations of the current study must be mentioned. While the sample of 25 is not a small number of countries in the context of multilevel studies, the few degrees of freedom at the country level nevertheless did not allow us to control simultaneously for all of the potential confounding factors at the country level. Although the results proved to be robust for the inclusion of the country-level GDP, the Gini coefficient, and the levels of social expenditure and youth unemployment, we cannot rule out that other unobserved factors account for some of the observed associations. For instance, some studies show that cultural values are important for cross-country differences in well-being among children (Kasser 2011; see also Montt and Borgonovi 2017). This study took a more institutional approach by focusing on policies, but policies always interact with a broader socio-cultural context. Analysing effects of policy changes within countries would greatly increase the number on the policy level, but this was not a feasible alternative given the absence of variation within countries across time in the policy variables. Related to this, the cross-sectional data make causal inferences ill advised. In this sense, the article should be seen as a first step to explore the role of educational policies for (inequalities in) well-being, not as providing proof of causal effects.

Moreover, the study could only take a selective view on youth well-being. The assumption was that higher education, and more opportunities to access education, will improve well-being, and that youth from low social backgrounds are more dependent on inclusive policies for their educational opportunities. Well-being is of course affected by much more than attained education and educational opportunities, aspects which fall outside the scope of this study. Specifically, the study could not take the stress generated directly from schoolwork into account. School-related stress is among the most important determinants of poor well-being among youth, and there might be trade-offs between academic outcomes and pupils’ well-being (Montt and Borgonovii 2017). It is possible that inclusive educational policies can have negative effects on well-being, or inequalities in well-being, by increasing the pressure faced by pupils from lower social backgrounds. For instance, low-performing and socially disadvantaged pupils face relatively lower demands in tracked systems, which might be beneficial for their well-being, at least in the short term. Related to this, the education policy indicators might not capture the full multidimensionality and complexity of educational inclusiveness. In large-number comparative studies, it is difficult to ascertain
that nominal measures have identical substantive meaning in all countries, a point that, as discussed, has been made with regard to tracking (Blossfeld et al. 2016; see also Lannelli 2013). The study attempted to deal with this by investigating several dimensions of education system inclusiveness, as well as alternative indicators of the same dimensions in sensitivity analyses.

Strengths of the study should be highlighted as well. Perhaps most importantly, the results proved to be quite resilient across a number of robustness checks, and they are not sensitive to different operationalisations of social background or to the inclusion of other country-level control variables, and the results were not sensitive to the removal of influential countries. The overall consistency of the results for two different indicators (including happiness) of well-being, and for alternative indicators of education system inclusiveness, strengthens the validity of the findings. Moreover, the theoretically well-grounded link relating country-level educational policies to individual-level outcomes is largely supported by the way the mediators reduce the size of interaction terms. These findings make the argument and the proposed mechanisms more credible and transparent.

This study is the first to investigate the role of educational policies for inequalities in well-being among youth. It adds important contributions to the growing research field studying how social policies shape (inequalities in) health and well-being. In this context, the results demonstrate the value of studying the role of specific social policies that are directly related to the focal groups (in this case, youth), as well as to the outcome of interest (inequalities in well-being) (for example, Bergqvist, Åberg Yngwe, and Lundberg 2013). Moreover, the study adds to the literature on external well-being benefits of social policies; that is, research showing how social policies have externalities and can provide well-being benefits also to individuals who do not currently use them (for example, Carr and Chung 2014; Sjöberg 2010).

Disclosure statement
No potential conflict of interest was reported by the author.

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