



HAL
open science

Meritocracy: A widespread ideology due to school socialization?

Marie Duru-Bellat, Elise Tenret

► **To cite this version:**

Marie Duru-Bellat, Elise Tenret. Meritocracy: A widespread ideology due to school socialization?. 2010. hal-00972712

HAL Id: hal-00972712

<https://sciencespo.hal.science/hal-00972712>

Preprint submitted on 3 Apr 2014

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



SciencesPo.

OSC
CNRS

Meritocracy: A Widespread Ideology Due to School Socialization?

Marie Duru-Bellat et Elise Tenret

Notes & Documents

n° 2010-02 Juillet 2010

Résumé :

La recherche présentée dans ce papier se centre sur la perception de la méritocratie et sur l'adhésion à la méritocratie scolaire. En la matière, on explore précisément l'influence de l'éducation à la fois au niveau micro (individuel) et au niveau macro (pays), dans la mesure où l'éducation, selon Bourdieu et Passeron (1970) est censée affecter l'adhésion aux idéologies dominantes. Cependant, ces chercheurs n'en apportent pas de preuve empirique. De plus, l'influence de l'éducation n'est pas univoque, car elle peut avoir des effets contradictoires sur la justification des inégalités sociales (Baer et Lambert 1982), et aussi parce que ces effets peuvent être différents selon le niveau d'analyse (individus ou pays). Des données comparatives tirées du module Inégalités sociales de l'enquête ISSP III (1999) ont été étudiées, et des analyses multiniveaux ont été réalisées. Il s'avère qu'au niveau individuel, l'éducation renforce effectivement l'adhésion à la méritocratie scolaire mais a un effet plus incertain sur la perception de la méritocratie réelle (d'une juste allocation des positions sociales). Au niveau macro, certains patterns nationaux sont mis en évidence concernant la méritocratie perçue et souhaitée. On perçoit d'autant plus la société comme méritocratique que l'éducation est développée dans le pays, et on y adhère d'autant plus que les rendements moyens des diplômes y sont élevés. Au-delà des caractéristiques des systèmes éducatifs, on observe que d'autres caractéristiques économiques et sociales sont susceptibles d'affecter les représentations, telles que l'âge ou le sexe au niveau individuel ou l'ampleur des inégalités de revenus ou le niveau moyen de la richesse nationale au niveau pays..

Pour citer ce document :

Duru-Bellat, Marie et Elise Tenret (2010). « Meritocracy: a Widespread Ideology Due to School Socialization? », Notes & Documents, 2010-02, Paris, OSC, Sciences Po/CNRS.

Pour une version électronique de ce document de travail et des autres numéros des Notes & Documents de l'OSC, voir le site web de l'OSC : http://osc.sciences-po.fr/publication/pub_n&d.htm

Abstract:

The following research focuses on the perception of meritocracy and the support for an education-based meritocracy among individuals. The impact of education at both micro- (individual) and macro- (country) level has been closely investigated through this study, as education is supposed to influence the support for dominant ideologies since Bourdieu and Passeron (1970). However, these researchers propose no empirical evidence for their theory. Moreover, the influence of education is not straightforward, as education may have contradictory effects on the justification of social inequalities (Baer and Lambert 1982), and the impact of education may be different at the individual level or at the country level. Comparative data from ISSP Social Inequality III (1999) survey were examined. Multilevel analysis has been conducted on these data. It has been proved that, at the individual level, education is effective in strengthening the support for education-based meritocracy but it has a more uncertain impact on the perception of social positions as deserved. At the macro level, some national patterns also have an impact on perceived and preferred meritocracy. Perceived meritocracy proves to be correlated with the expansion of the educational system, while the support for education-based meritocracy is correlated with the average returns to education in a country. Beyond educational characteristics, our results show that other economic and social variables can affect representations, such as gender and age at the individual level, or the amount of social disparity and the average level of national wealth at the country level.

Readers wishing to cite this document are asked to use the following form of words:

Duru-Bellat, Marie et Elise Tenret (2010). « Meritocracy: a Widespread Ideology Due to School Socialization? », Notes & Documents, 2010-02, Paris, OSC, Sciences Po/CNRS.

For an on-line version of this working paper and others in the series, please visit the OSC website at: http://osc.sciences-po.fr/publication/pub_n&d.htm

1. Introduction

There have long been debates about the role of schooling in modern societies, starting with the work of Durkheim (1858-1917) in the late nineteenth century. Durkheim underlined that education plays an important role in the socialization of children: it gives to a multitude of separate individuals the unity a nation requires. It does so by enabling children to internalize the social values and the social norms that contribute to the functioning of society. Durkheim has been criticized for overstating the case for a set of society-wide values. Critics from the “conflict tradition” (Bowles and Gintis 1977) in sociology point out that in a society marked by major social inequalities, the education system should support the society by providing an ideological justification. French sociologists Bourdieu and Passeron (1970) underline that schools play two roles: a technical one, i.e. sorting and channeling pupils in different social positions, and an ideological one, i.e. making pupils share common values and convincing them that the sorting process is fair and consequently that prevalent social inequalities are themselves fair. In this two-fold process, fair means deserved. That is because merit is the key principle of democratic and liberal societies. Since individuals are equal in principle, social inequalities may be justified only if they derive –through open competition– from individual qualities (talents, efforts), since the impact of inherited properties, such as social origin or gender, is ruled out. So achievement prevails over ascription, as Parsons (1951) claims.

Today, the reference to merit would be all the more important because the inequalities requiring justification are increasing and job competition is increasingly harsh (OECD, 2008). The issue of meritocracy is two-fold. First, it has an objective side, the question being whether social positions are actually distributed according to academic achievement, since academic achievement is considered an indicator of individual merit in what is supposed to be an “education-based meritocracy” (Goldthorpe, 2003). Social researchers working on social reproduction and mobility have focused mainly, until recently, on the objective side of meritocracy (or actual meritocracy), regularly assessing the strength of the link between individuals' academic achievement and social position. We will not deal with this issue here.

The issue of meritocracy also has a subjective side, which has been largely neglected. Still, it is a very important issue, since in order for meritocracy to operate as a legitimizing belief, it must be internalized, that is people must be convinced that the whole process of reproduction –and the crucial part it gives to the diplomas achieved through merit– is fair. More specifically, do pupils learn at school that they deserve the grades and diplomas they get, and, later on in life, that it is fair if the best educated get the best social positions? This paper focuses on this issue, which is a crucial dimension of the function of schooling. Examining this issue involves two steps regarding the way that the internalization of meritocracy may be approached, which is not straightforward. The first step is to observe how people actually *perceive* the social inequalities surrounding them: are they considered the result of justified merit and so justified?, i.e. what we may call *perceived meritocracy*. The second step is to explore whether meritocracy is internalized as a principle of justice: do people maintain that merit should be rewarded in life?, i.e. what we may call *valued or desired meritocracy*.

These questions may be raised at two levels. First, at the individual level: because schooling is supposed to convince pupils that education-based meritocracy is a fair process, some variations are to be expected based on the person's characteristics, especially his or her level of education. Second, at the country level: is meritocracy equally prevalent no matter what "quantity" of education is delivered or the way in which it is organized (How long do pupils attend a common-core curriculum? How important are social sciences in the curriculum?). At that level, one may expect some aggregation effects resulting from the relationships existing at the micro-level. For instance, if we observe at the micro level that the more individuals are educated, the more they support meritocracy, we may expect that the larger the percentage of educated persons in a country, the greater the support of education-based meritocracy. However, much research shows that there may be some discrepancy between the individual/micro and the country/macro levels, in accordance with the so-called ecological fallacy. That means that the level of education may have a different impact at the individual level than it does at the country level, when looking at average figures. For instance, within a country, the best educated generally have better political participation, while if countries are compared along the same lines, there is no systematic link between the average level of education and average civic behavior. The same discrepancy is observed in the relationship between education and health: it is positive at the individual level and non significant at the country level, with the best-educated countries not necessarily being the ones with the best mean level of health (Wilkinson 2007; see also Green et al. 2006).

Consequently, while education may help internalizing meritocracy at the individual level, the story may be different at the country level. This kind of discrepancy may be due to genuine macro effects: education is currently supposed to generate externalities, that is some effects for society as a whole, beyond pure individual effects. Some idiosyncrasies may also exist, resulting from the "national myths" that exist in every country, which often stress what is said to be a country's "uniqueness"; for instance, in the United States, the self-made man ideology may affect the way everybody explains the surrounding inequalities, in spite of individual characteristics and their aggregated effect at the country level.

To test the relationships at both levels and the possibility of discrepancies, one should rely on international comparisons. The first section introduces the theoretical framework and some hypotheses concerning the impact of schooling on representations, especially the valuing of meritocracy. Then, the data and methods for measuring and comparing the belief in meritocracy across countries are developed. The third section presents the main results, and some limitations are discussed in the fourth section.

2. The Belief in Meritocracy: Some Hypotheses

2.1. A universal need or the result of school influence?

Across the board, the ideological function of education may be put forward in a variety of perspectives. The internalization of meritocracy would have both a psychological function, and a societal function.

At the individual level, psychologists consider the internalization of meritocracy to be a universal need. The comforting effect that this belief holds for individuals has been emphasized by several

psychology theories, especially the “belief in a just world” theory. This approach aims to account for the fact that individuals overvalue merit and undervalue social factors in order to explain inequalities. The “belief in a just world” has an adaptive value (Dalbert 2001), because the conviction that “all people, including themselves, get what they deserve and deserve what they get” (Lerner 1980) enables individuals to become involved in long term objectives and to perceive their environment as predictable. Actually, that would be more a need– what Dalbert calls the “justice motive”– that a genuine belief.

At the social level, the “functional” nature of an ideology that postulates that everyone gets the position that he or she deserves is clear, whether one talks about dominant ideology, as sociologists do or “legitimizing myths”, as the psychologists Sidanius and Pratto (1999) prefer. It contributes to the legitimization of the social system and to social cohesion, because social inequalities appear then to be fair.

Moreover, social psychology considers that beyond this universal belief that causes people to think that everybody deserves more or less what he or she gets, the position people hold in the social structure does impact upon the way in which they explain their surrounding realities and the importance they give to merit. For example, Lorenzi-Cioldi (2009) stressed that in dominant groups, individuals more frequently explain their position by personal qualities and/or factors within their own control, while members of the dominated groups more often refer to factors not within their control such as luck or other external factors. On the other hand, existing sociological research on status perceptions (Alexander 1972; see also Wegener 1987) shows that the perception of the social system and especially its degree of fairness may be influenced by the position one achieves in the social structure. This expected relationship between level of education and support for meritocracy would be both the result of school socialization and also a rational attitude since the benefits most educated persons expect to draw are higher in a meritocratic society. Such results have also been found by economists like Piketty (2003). He shows that people with high income believe more strongly in efforts not inevitably to justify themselves but because their own experience has convinced them that effort is rewarded. So whether for self-interest considerations or rational reasons, individuals with higher levels of education or income generally support meritocratic beliefs more strongly.

However, and this is the core of this paper, the relationship between level of education achieved and meritocratic beliefs may also result from the influence of school itself. This was the thesis maintained by French sociologists Bourdieu and Passeron. In their famous book *La Reproduction* (1970), they suggested that school plays a legitimating function, and manages to “naturalize society” by diffusing “the conviction that school should be the principle for any economic and social hierarchy.” But these researchers propose no empirical evidence for this theory, nor do they give any details about the possible differentiating role that education may play on those beliefs. While they underline in some papers that the school system inculcates “an ideology of resignation, modesty and docility” in pupils attending the less-valued tracks in school, elsewhere they state that the “adhesion that the individuals grant to the school hierarchies (...) are never unlinked with the ranking which the school grants to them in its hierarchy.”

Actually, the educational level can have diverging or contradictory effects on the internalization of meritocracy. Following the interesting theoretical frame sketched by Canadian sociologists Baer and Lambert (1982), four hypotheses can be formulated. The first two are closely related to Bourdieu and

Passeron's thesis. According to the "socialization" hypothesis, educated people should value meritocracy more strongly because the more they succeed in school, the more they are imbued with dominant ideologies. In the "reproduction" hypothesis, education should not have a differentiating impact on representations because the school system as a whole transmits this ideology. However, the "instruction" hypothesis predicts that the level of education achieved has an opposite effect: the longer people attend school, the more they learn arguments to criticize the dominant ideology (meritocracy). We add that aspects in addition to than the length of the studies may matter, such as some previous (and achieved) selection, and the curricula themselves (especially the importance placed on social sciences, see Guimond 1998). The whole result may be that rather than being more strongly convinced that education-based meritocracy is fair, most educated people may be more conscious of social inequalities and the variety of factors that impact the position people get in life. Finally, and more uncertain as far as the internalization of meritocracy is concerned, individual support for meritocracy may be due to the benefits that people draw from their diploma on the job market: this last hypothesis is called the "investment" hypothesis. So, following Baer and Lambert, we are uncertain as to the global effect that education has on individuals' subjectivity: does education result in more compliance with or conversely more challenging of the present social inequalities? In that literature, it is not always clear whether researchers are talking about perception or explanation of the surrounding reality, on the one hand, or about the value judgment they make about reality in a general way, on the other hand.

2.2. Main hypotheses

With the first group of hypothesis, we will examine the individual level and verify whether the internalization of meritocracy proves to be universal or variable based on some individuals' characteristics. From the existing literature, our main hypothesis could be that both the perception and support of education-based meritocracy will be linked to individuals' level and type of education. In this respect, we can expect that individuals with high levels of education, all other characteristics being equal, perceive their society as more meritocratic, on the one hand, and on the other think more often that it should be so, i.e. they more strongly support education-based meritocracy. However, this positive relationship is not so obvious: following Baer and Lambert, we may as well expect that the more people are educated, the most conscious they become of social inequalities. Beyond other characteristics such as age or gender, subjective judgments such as the perceived fairness of one's salary may also play a role since macro-justice judgments often prove to be related to micro justice considerations (Forsé and Parodi 2010).

Next we will examine the country level with the second group of hypothesis, which suggest that many country characteristics may influence the perception of inequalities, such as the amount of economic disparity and the average level of national wealth. In particular, one could expect a stronger support for meritocracy when inequalities are large because the need to justify them is greater. However, the reverse could also be true, with inequalities being more criticized (notably considered as too large) the wider they are. Broad modernization theories also postulate that individuals' access to jobs is increasingly dependent on their level of skills (achievement prevails over ascription), and consequently, we may expect that the wealthiest societies may be truly more meritocratic and more prone to support it. There are, of course, many other societal characteristics that may impinge on judgments of fairness, such as religious orientation

and institutional regimes, but taking them into account would have required a much wider study, such as Noll and Roberts (2003) propose. Instead, here we remain focused on education-based issues.

Next we will take then into account some characteristics of the education delivered: beyond the average level of education (i.e. the “quantity”), we may expect that certain characteristics of its content (i.e. the “quality”), such as the importance of social science may matter.¹ Lastly, we will take into account the relationship between societies and school: we expect meritocratic beliefs be higher in countries in which diplomas bring higher rewards. It would be all the more important to support education-based meritocracy in a country where diplomas bring important benefits. From this perspective, diplomas would matter mainly because of what they concretely bring in life.

These issues remain relatively unexplored to date, except for the interesting research conducted by Kunovich and Slomczynski (2007). At a macro level (i.e. the country level), they found that the objective degree of meritocracy² is positively linked to what they call “meritocratic attitudes” (mixing perceived and valued meritocracy). Belonging to the former Communist bloc and national wealth are negatively correlated with this belief, while educational stock (i.e. the “quantity” of education delivered in the country) positively affects this attitude. At an individual level, opinions are influenced by gender, age, income and educational attainment. Being a woman, being older, having a high income or having a high level of education all increase support for meritocracy across countries. However, the authors did not focus on the belief in *education-based* meritocracy, and do not analyze specifically the impact of the characteristics of educational systems. Moreover, they did not make any distinction between perceived and valued meritocracy, which may blur the global trends they sketch. Last, they worked with 1992 ISSP data and many changes have occurred since 1992. Let us also note that their findings about the former Communist bloc suggest that there could be idiosyncrasies regarding the way people in a given country read and interpret prevalent inequalities. In other words, all these attitudes and their correlates are embedded in a historical and cultural context, as we explored ourselves in the French case (Duru-Bellat and Tenret 2009).

3. Data and Methods

The International Social Survey Programme (ISSP) is a cross-national survey program about different topics in social sciences. For the present article, data from the third wave of the ISSP Social Inequality survey were analyzed. The survey was conducted in 26 different countries in 1999, through oral and paper and pencil interviews with standardized questionnaires. Mostly rich, democratic and a priori meritocratic countries were interviewed.

¹ Unfortunately, we had no information in the available data about the subjects and type of studies pursued by individuals.

² Measured using an index of dissimilarity between the observed allocation of people based on their diploma and level of income, compared with what would be a meritocratic allocation, with income corresponding strictly to the diploma possessed (see Kunovitch and Slomczynski 2007).

Some criticism has been made concerning the survey collection methodology. In some countries, the response rate was particularly low (e.g. 17% in France) due to the data collection method used (paper and pencil interview) and the absence of follow-up letters. Moreover, in surveys such as this, more educated persons and left-wing individuals are often overrepresented.

However, the response rates were higher in the other countries (more than 50% in most countries) and some articles showing the stability of justice principles across countries (see Forsé and Parodi 2010, for example) prove in a certain sense the reliability of this type of survey.

Comparative data from the 1999 ISSP Social Inequality III survey were examined. The analyzed sample consisted of 31,348 individuals from 26 countries³. Concerning the perception of meritocracy, we relied on the two following questions, which refer to both dimensions of meritocracy presented by Young (1958) in his book *The Rise of the Meritocracy*⁴: “Would you say that in your country, people are rewarded for their efforts?” and “Would you say that in your country, people are rewarded for their skills?” Five possible answers to the question were given: “Totally agree,” “Agree,” “Neither agree, neither disagree,” “Disagree” and “Totally disagree.” Since the answers to both questions were highly correlated in all countries, we decided to build a “perceived meritocracy scale” (Cronbach Alpha: 0.82), by adding up the answers given to these questions by interviewees.

The support for education-based meritocracy –preferred meritocracy– was tested using the following question: “In deciding how much money people ought to earn, how important **should be**, in your opinion, the number of years spent in education and training?” Six items were displayed for answering the question: “Essential,” “Very important,” “Fairly important,” “Not very important,” “Not important at all” and “Cannot choose.”⁵

Actually, this question was nested within the following set of questions: “In deciding how much money people ought to earn, how important should be, in your opinion:

- ... how much responsibility goes with the job?
- ... education and training?
- ... whether the job requires supervising others?
- ... what is needed to support a family?
- ... whether the person has children to support?
- ... how well the person does the job?
- ... how hard the person works at the job?”

³ Some countries were not included in the analysis because of missing values concerning some central variables for the analysis of meritocracy.

⁴ Let us remind that Young (1958) defines merit as “IQ + effort.”

⁵ It is obvious that this unique question can only imperfectly measure the support for education based meritocracy because salary is only a partial indicator of one’s social position. However, social position is often correlated with salary.

The second item (“education and training”) was used to measure the support for education-based meritocracy.

As independent macro social variables, some economic and educational patterns were taken into account in the countries:

- National wealth (Gross domestic product, per capita based on purchasing-power parity)
- Gini coefficient (as a social inequalities index)
- Average economic and employment returns on education⁶
- Share of students enrolled in tertiary education⁷
- Share of tertiary education students in social science and law⁸

As independent micro social variables, gender, age and, of course, educational attainment were kept. Educational attainment was measured through the “EDUCYRS” variable, which represents the years spent in formal education. Moreover, we have computed an indicator of individual return on education (what extra salary does an extra educational level produce?) and an indicator measuring the perception of the fairness of one’s own salary. The latter variable, created to measure the micro justice feeling, was built using the following question: “Would you say that you earn much less than you deserve (1), less than you deserve (2), what you deserve (3), more than you deserve (4) or much more than you deserve (5)?” A scale from 1 (interviewees considering they earn much less/more than they deserve) to 3 (interviewees considering they earn what they deserve) was then computed.

4. Findings

4.1. Perceived and preferred meritocracy: two independent and non-universal dimensions

4.1.1. A non-universal belief

Both perceived and preferred meritocracy appear to be less-universally shared values than expected based on sociological and psychological literature. In the whole ISSP sample, at the individual level, only 31.5% of interviewees agree or strongly agree with the statement that people in their country are rewarded for their efforts (38.7% for their skills), and 34.3% (and 36%, respectively) of interviewees do not agree or strongly disagree with these statements. The individuals do not unanimously value education either, even when support for education-based meritocracy is much larger: 15.8% of interviewees consider that education and

⁶ The average economic and employment returns of education was computed through OECD “Education at a glance” indicators: it assesses the relative specific advantage of tertiary graduates in terms of salary and employment rates.

⁷ Data from UNESCO Institute for Statistics

⁸ The share of social science students –only– in each country would have been a more interesting variable, but the existing indicators (from Unesco 2004) aggregate law students with social science students in tertiary education.

training is an essential criterion in determining how much a person ought to earn, while 39.3% believe it is important and 32.1% think it is fairly important. Only 10.5% of interviewees think that rewarding education is “not important” or “not important at all.” Therefore, there appears to be no sharp consensus either on the meritocratic nature of society (perceived meritocracy) or on the fairness of an education-based social structure (preferred meritocracy).

This absence of universality is also manifest within each country, even if both perceived and preferred meritocracy do vary across countries. Concerning perceived meritocracy, while less than 10% of Bulgarians, Slovaks and Russians do believe that people in their countries are rewarded for their efforts and skills, the percentage rises to more than 50% of interviewees in the United States, Australia and the Philippines. Some geographical patterns can be distinguished (see Figure 1): while the inhabitants of all the former Communist bloc countries have on average low scores on the perceived meritocracy scale, people from most liberal Anglo-Saxon countries such as the United States, Australia and Canada (except United Kingdom) consider more often that merits are rewarded in their own country. Western European countries lie in an intermediate situation, with some differences appearing between countries: on average, French people are rather critical toward the possibility of succeeding in life with one’s own efforts and skills (less than one third of the population do believe that efforts and skills are rewarded in their country), while more than 45% of West Germans⁹ share this point of view regarding their own country. These rather large differences between countries challenge the hypothesis of a universal belief in a just world, or at least of a universal perception of inequalities as deserved. Actually, individuals seem more skeptical toward the prevalence of meritocracy than expected, since in that case, figures should not vary according to the national context. The observed differences may partly relate to countries’ specificities (political, historical, cultural or ideological specificities, objective characteristics, etc.). Further analysis (see last part of the paper) shows that one-third of the total variance concerning perceived meritocracy is due to between-country differences.

Similarly, preferred meritocracy does vary across countries. Although valuing education-based meritocracy, as observed over the whole sample, seems to be the consensus in every country (more than half the population in each country thinks that diplomas should be rewarded), some differences can be observed between countries: while more than 60% of the population in United States, Portugal and Poland consider it essential or at least very important to take education into account when determining salary, less than 45% think the same in France, Sweden and Norway. In these countries, even 14-15% of the population believes that education should not be important when determining salary. However, compared with perceived meritocracy, between-country differences concerning preferred meritocracy prove smaller (they represent only 9.1% of the total variance, as observed in the last section), as if education-based meritocracy had become a strongly ingrained value in the richest countries of the Western world, which are over-represented in this sample.

⁹ West and East Germans have been distinguished in the ISSP survey.

Nevertheless, even if education-based meritocracy proves to be strongly supported, it should be underlined that when education is compared to other criteria, it seems to be one of the most undervalued criteria. In every country, education is mentioned as less important than other criteria such as “work quality,” “hard work” and “responsibility.” It is even mentioned as the least important (7th position) criterion in Latvia, France and Japan. This could mean that according to individuals, merit –in one’s professional life, at least– cannot be likened to education. The legitimating function of school is not powerful enough to make people consider that diplomas should, in a fair society, be the first determinant of professional hierarchy, compared to other components of merit (hard work, quality of work and responsibility).

4.1.2. Two independent dimensions

Over the whole sample, the degree to which individuals perceive social positions as deserved seems to be independent of their preference for an education-based meritocracy. The overall correlation between perceived and preferred meritocracy is very low (the Pearson coefficient value between both variables is 0.03 over the whole sample). It is not significant in half of the countries, and is significantly positive¹⁰ but rather low in the others (from 0.06 in Poland to 0.15 in Japan). When looking at the correlation between average values across countries, no correlation was found either. For example, Americans, more than other countries, value education as a criterion to be taken into account in professional life and perceive their society as meritocratic, while Bulgarians, on the contrary, also value education in professional life but do not perceive their society as meritocratic.

This quasi independence between social norms and the interpretation of reality justifies disentangling these two dimensions and their determinants more extensively than has been done previously in existing research. The heterogeneity of situations between countries also justifies taking a closer look at social determinants: which variables both at individual and collective levels can explain the way people perceive social positions as deserved? Which are the determinants of individual support for education-based meritocracy?

¹⁰ Except for Chile, where Pearson correlation coefficient is negative.

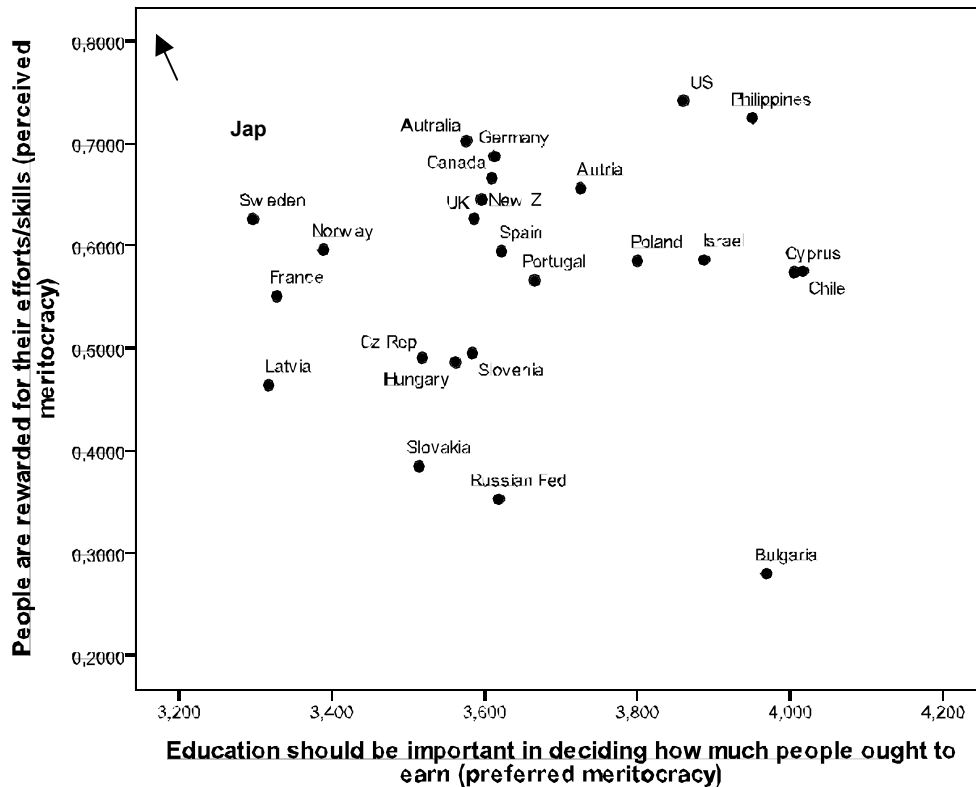


Figure 1 – Countries' positions on both dimensions: perceived meritocracy and preferred meritocracy

Source: ISSP Social Inequalities 1999 Dataset

4.2. A confirmed legitimating function of perceived meritocracy

Let us recall that the question at stake is the possible legitimating function of the internalization of meritocracy. Among other judgments people express concerning how things should/should not be in their own country, ISSP data give the percentage of individuals who assessed that the inequalities existing in their country are too large. An interesting negative and rather strong correlation is then visible: inequalities are increasingly considered too large as efforts and skills are considered to be not rewarded (in that sense, inequalities would be perceived as undeserved). This correlation is strong over the whole sample (the overall correlation coefficient is of 0.28), as well as within countries (this negative and significant relationship can be found in every country other than the Philippines) and also between countries. The coherence between the results at each observation level may indicate a pure composition effect: the relationships work in the same sense at the individual and at the country levels.

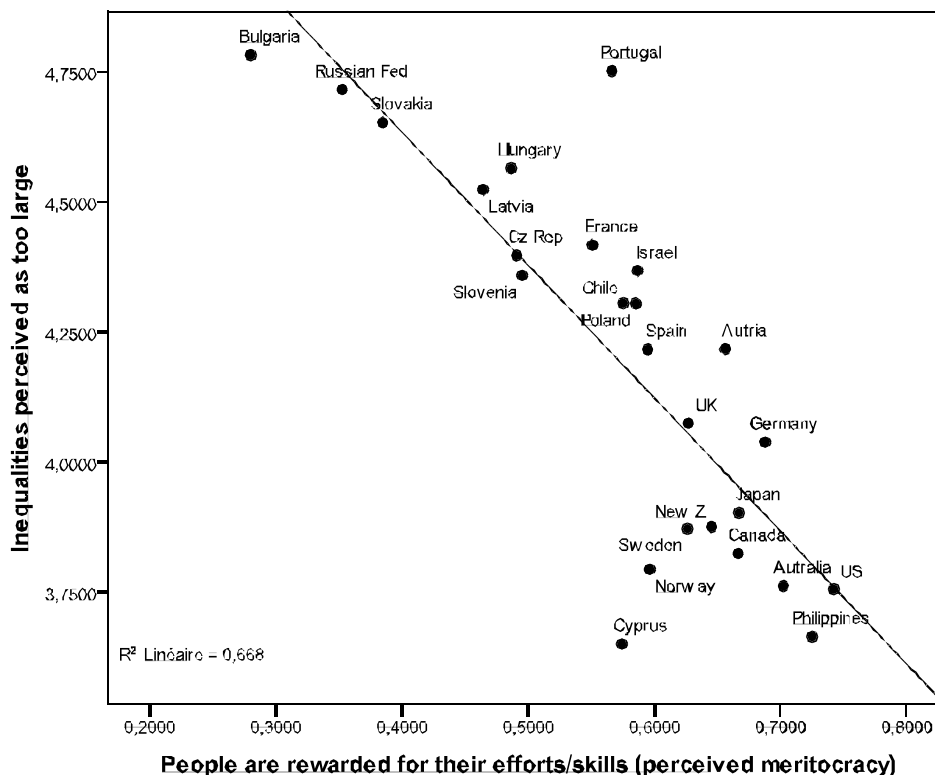


Figure 2 – Countries’ positions on both dimensions: “inequalities perceived as too large” and “perceived meritocracy”

Source: ISSP Social Inequalities 1999 Dataset

This relationship hints that the perception of inequalities as deserved may have a legitimating function, since when inequalities are perceived as deserved, they are less frequently perceived as too large¹¹. The perception of inequalities is then even more worth studying: which contextual and individual characteristics can explain these differences between and within countries?

4.3. Explaining the perceived and preferred meritocracy at the macro level

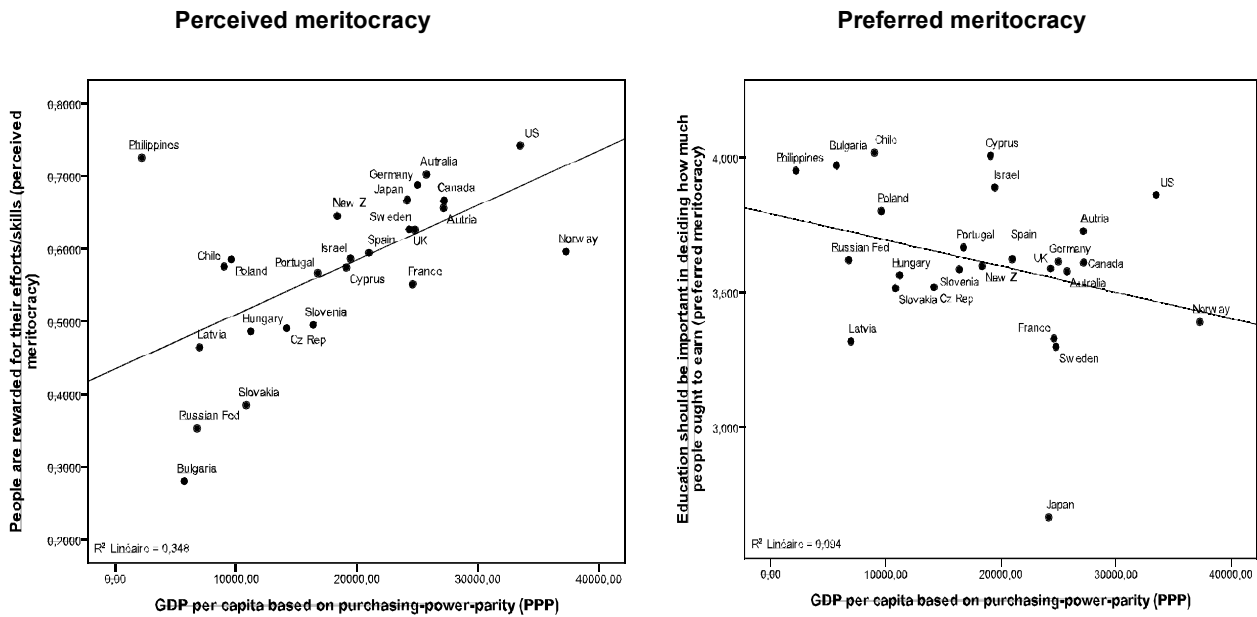
To better understand those relationships, a first step is to investigate some characteristics of the countries most or least prone to consider meritocracy as prevalent or desirable.

4.3.1. The impact of the national wealth

At the macro level, a country’s wealth positively affects average opinions on meritocracy, especially when looking at the effects on perceived meritocracy. This means that the richer a country is on average, the stronger individuals believe that people in their country are rewarded for meritocratic characteristics (efforts

¹¹ On the contrary, we found no significant correlation, either at the individual level or at the macro level, between preferred meritocracy and the perception of the inequalities as too large.

and skills). The GDP per capita explains 34.8% of the variance in average scores by countries, while the explanative power of the linear model for preferred meritocracy is lower, with less than 10% of variance in average scores being explained by the model. So the wealth of a country proves to be less correlated with the support for education-based meritocracy than with its perception. Many questions can be raised from this result, notably: are wealthier countries more unequal countries, thus leading individuals to justify more inequality? Is education more widespread in these countries, explaining a stronger belief in meritocracy? To answer these questions, a closer look at the effect of other macro variables is necessary.



Figures 3 and 4 – Countries’ positions on both dimensions: “GDP per capita” and perceived meritocracy (Figure 3, left)/preferred meritocracy (Figure 4, right).

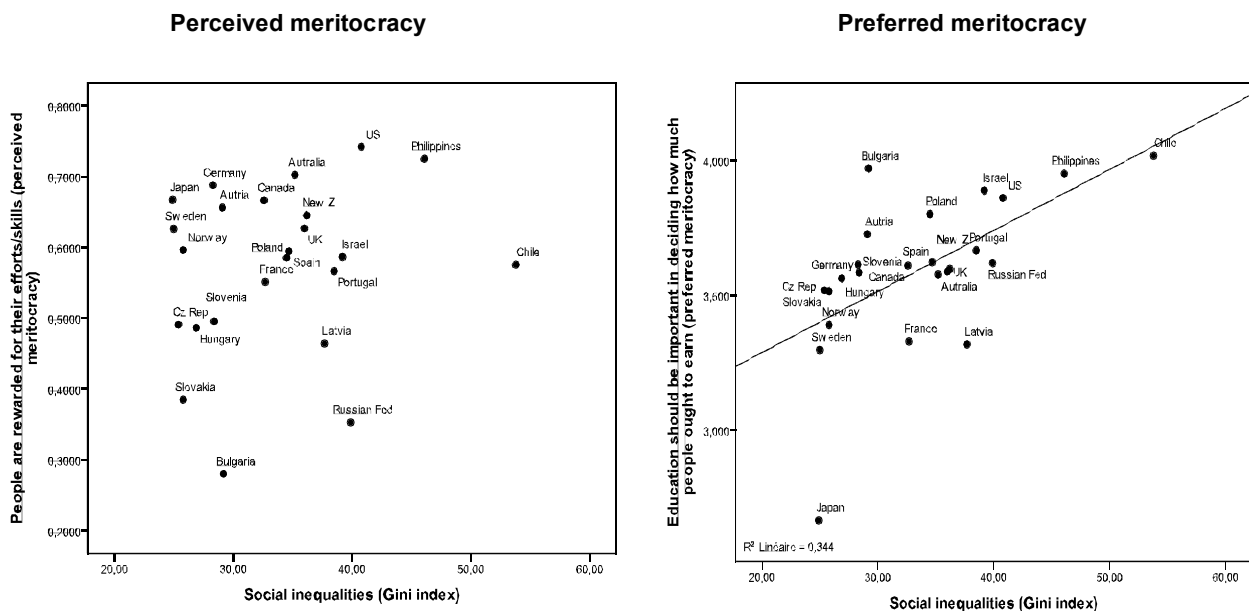
4.3.2. The impact of the degree of objective social inequality

As a macro social variable, the actual degree of social inequality has been investigated as a second possible determinant in the perception of the fact that people deserve what they get. However, the sign of the relationship between both variables remains rather uncertain. In other words, it is not straightforward to say in which direction the causality runs. While one may argue that the larger the social inequalities are, the more often people tend to denounce them, (they would be too large to be deserved in any manner), it would also be plausible to maintain the contrary that the more unequal the society, the more individuals often need to justify said inequality.

The graphs 5 and 6 show the countries’ positions in both the “degree of actual social inequality” (measured by Gini coefficient) and “efforts/skills perceived as rewarded” dimensions. The relationship is not strictly linear, but there appears to be a moderate positive correlation between the Gini coefficient and perceived meritocracy. In other words, the more a society is unequal, the more its members believe that people get what they deserve. The justification thesis seems to prevail in this case. However, this relationship is very weak and is essentially due to the fact that Eastern European countries are on one side and a variety of countries, including the United States, Chile and the Philippines, are on the other side. For

the bulk of Western European countries, there is no correlation, which suggests that perceiving efforts and skills as rewarded (and so social positions as deserved) may be relatively autonomous from reality. The weakness of this relationship may be due to the fact that people perceive more or less accurately either the amount of inequalities or the degree of actual meritocracy itself (see Osberg and Smeeding 2006; Chauvel 2003).

To come back to the justification thesis, it is reinforced, as the graphic below suggests, by the fact that there exists a positive and significant link between the support for education-based meritocracy (*preferred meritocracy*) in a country and the actual amount of income inequalities. Actually, in unequal countries, the need to justify social inequalities is stronger and in modern societies diplomas appear as the most fair and efficient way of doing so. There are no countries in which income inequalities are wide while support for education-based meritocracy is very weak.



Figures 5 and 6: Countries' positions on both dimensions: "actual degree of social inequality (Gini coefficient)" and perceived meritocracy (Figure 5, left)/preferred meritocracy (Figure 6, right)

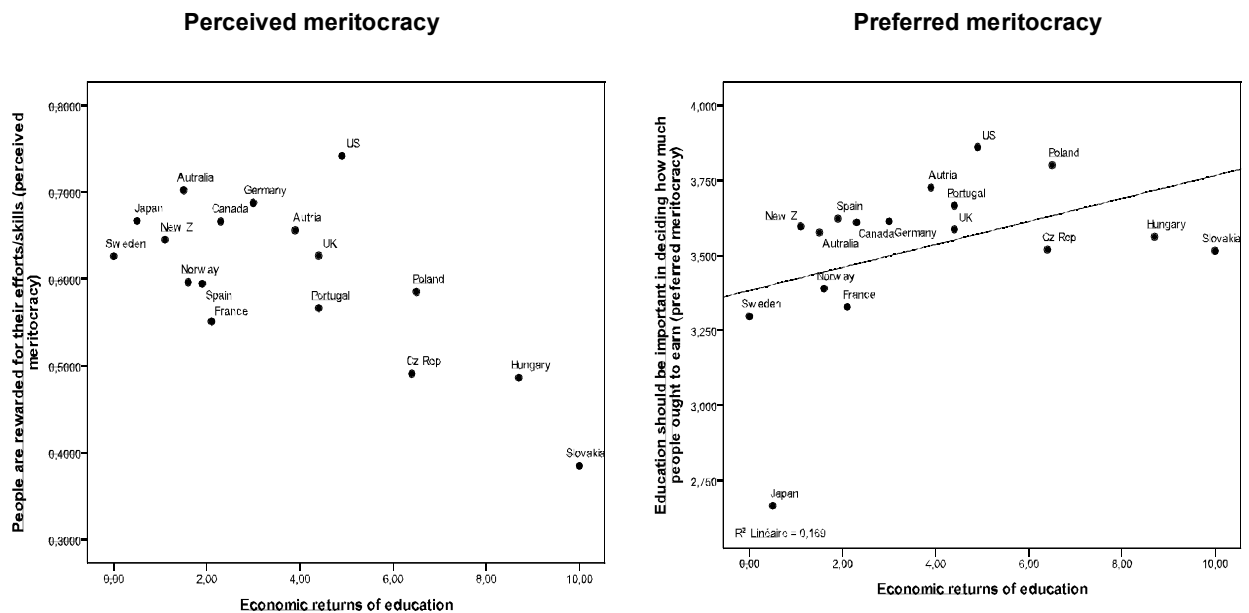
When comparing the effect of wealth with the effect of social inequality in a linear model (computed using the average score on the perceived meritocracy scale by country), it appears that both variables still have a positive and highly significant effect on perceived meritocracy. Moreover, GDP has a stronger effect on representations than social inequality, as can be seen from the standardized coefficients (Beta) in Model 4 (see Table 1).

4.3.3. Which is the impact of the actual degree of meritocracy?

At first sight, the actual degree of meritocracy (assessed by the economic returns on diplomas) is negatively correlated to the perception of social positions as deserved. However, this significant correlation seems to be essentially due to the results from Eastern European countries, where interviewees are especially critical toward social inequality and education is very strongly rewarded in professional life (arguably because of

the recent expansion of higher education). In fact, the negative correlation disappears without these countries. This absence of correlation between the actual strength of the relationship between education and jobs/salary, on the one hand, and perceived meritocracy, on the other, may be due to the fact that other objective factors may be in play, such as corruption. In a country where corruption is widespread, no matter what the link might be between education and jobs, people may accurately say that people in their country are not rewarded for their efforts and skills.

Another point is that *preferred meritocracy* seems to be more strongly correlated to the actual degree of meritocracy (assessed by the average economic returns on diplomas): the more diplomas are rewarded in economic life on average, the more people support education-based meritocracy. This relationship may run the other way round: in a country where education is considered to be a legitimate criterion in the allocation of jobs, education will bring higher objective returns on the job market, as individuals and policy makers implement policies and strategies along those lines.

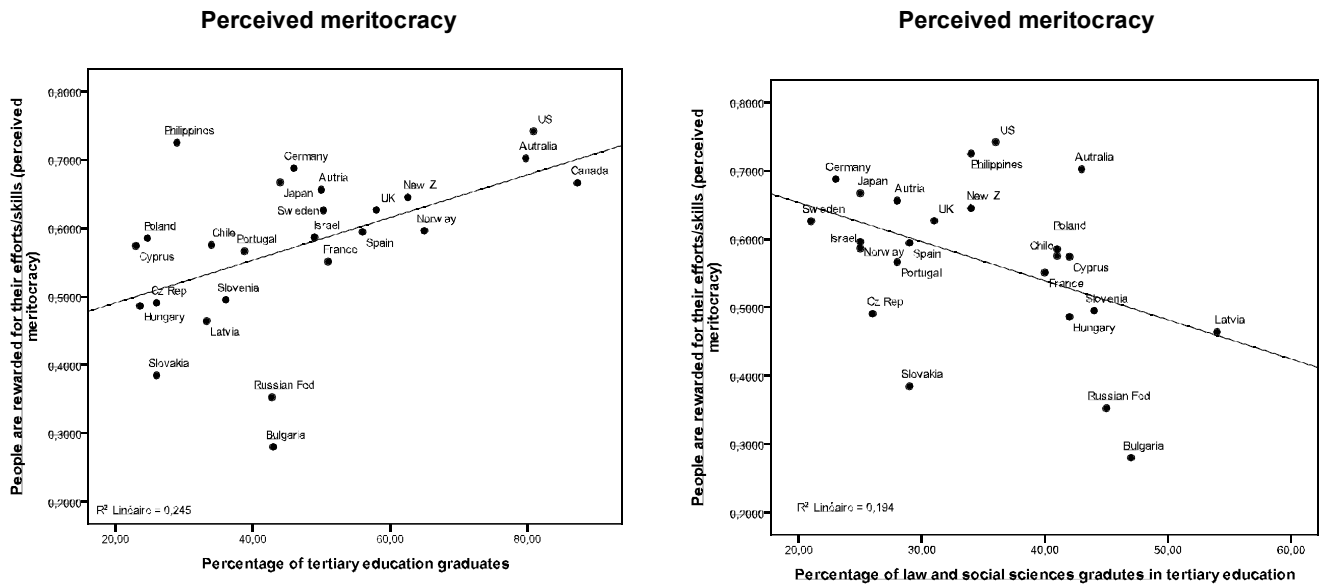


Figures 7 and 8: Countries' positions on both dimensions: economic returns on education and perceived meritocracy (Figure 7, left)/preferred meritocracy (Figure 8, right)

Since the social characteristics of the countries available here do not always prove to be strongly linked to the degree to which inequalities are considered to be deserved, we turned to some characteristics of the education systems, following our hypothesis. The effect of educational variables on collective values may be stronger than socioeconomic indicators such as GDP or social inequality, as education may reflect the ideology of a nation. In fact, the collective investment in education, the organization of schooling, and the kind of subjects taught are expected both to represent and affect a collective attitude towards meritocracy.

4.3.4. A positive impact of tertiary education development and a negative impact of tertiary education students in social science on the perceptions of meritocracy

As predicted by the socialization hypothesis (at the micro level, which may generate a composition effect at the macro level), there is a positive relationship between the development of tertiary education and the justification of the existing social positions: the larger the share of tertiary education students in a country, the more often individuals perceive social positions as deserved. By contrast, the share of tertiary education students has no significant impact on the support for education-based meritocracy (preferred meritocracy).



Figures 9 and 10: Countries' positions on both dimensions: perceived meritocracy and share of tertiary education students (figure 9 - left)/share of law and social science graduates in tertiary education (figure 10 - right)

As expected, the contents of education also affect the perceptions of meritocracy. The higher the share of students studying social science and law in a country, the more individuals seem to criticize social inequality. The correlation ceases to be significant when Eastern European countries are removed from the sample. However, in those countries in which the social sciences are particularly studied, the previous correlation holds. Moreover, the share of social science and law students has no effect on the support for education-based meritocracy. Tracking at the secondary level was also tested as a possible source of variation but no evidence was found that it may affect perceived and preferred meritocracy.

Both tertiary education and social science education have a significant impact on perceived meritocracy, even when they are simultaneously introduced in a regression model computed using average values from each country (see Table 1, Model 1). Their effect is also maintained when the Gini coefficient is introduced, as in Model 2. However, Model 3 reveals that educational effects are captured by economic wealth: educational variables are no longer significant when GDP per capita is added in a multiple regression model. This absence of significant effect could also be due to the small number of countries (23) in the regression.

Table 1 – “People are rewarded for their efforts/skills”: linear regression model on the perceived meritocracy scale average score by country (Beta: standardized coefficient)

	Model 1		Model 2		Model 3		Model 4	
	Bêta	Sig.	Bêta	Sig.	Bêta	Sig.	Bêta	Sig.
Intercept				***		+		ns
<i>Percentage of tertiary education graduates</i>	,409	*	,402	*	-,069	ns		
<i>Percentage of law and social sciences graduates in tertiary education</i>	-,364	+	-,514	**	-,301	ns		
<i>Social inequality (Gini index)</i>			,355	+	,526	*	,438	*
<i>GDP per capita based on purchasing-power-parity (PPP)</i>					,644	+	,736	***
Fit (R-sq)	R-sq: 0,36		R-sq: 0,50		R-sq: 0,58			

However, it is important to underline that all the correlations observed at the macro level should not be used to infer relationships at the micro level. The differences observed when comparing the countries' average scores may cover both aggregation effects (due to individuals' beliefs or the behaviors of their population) and specific (idiosyncratic) effects related to some macro characteristics of the countries (their wealth, history, values, etc.). We will turn now to this level.

4.4. Explaining the perceived and preferred meritocracy at the micro level

The linear regressions computed within each country on the perceived meritocracy scale show that in nine countries (out of 25), education (controlled for age and gender) has a significant and positive impact on representations. In those countries, more educated individuals believe more often than other individuals that merit is rewarded in life. Some countries make an exception: in Chile, New Zealand, Israel, Sweden and the Philippines, the impact of education at an individual level is negative. In the remaining countries, education has no significant impact. This non-systematic impact of the individual level of education suggests that beside the level of knowledge or skills that a certain level of education certifies, the organization or climate of the educational system may also have an impact on representations.

Age and gender have a more uniform (although not always significant) impact on perceived meritocracy: older persons and men believe more often that people in their own country are rewarded for their merits. This result confirms Lorenzi-Cioldi (2009)'s theory that people in dominant position in society, such as men, often tend to explain existing inequalities by internal characteristics (based on self-interest or rational action theories).

However, this impact of individual variables (education, gender and age) on perceived meritocracy proves rather low: together, these three variables never explain more than 5% of the variance in each country, as shown in the R-square column (see Appendix). The low R-square values may be due to some contradictory effects of education on representations. In fact, both the level of education and the educational content can affect the representations of meritocracy. As previously noted, we expect that students in social sciences may be more critical of social inequalities and believe less in meritocracy than other students (Guimond 1998). This effect of educational content, which cannot be tested at the individual level in this survey, may blur the impact of the level of education. More generally, a high level of education

may increase consciousness of inequality, following the instruction hypothesis (as was found in France, see Duru-Bellat and Tenret 2009).

Some other explanatory variables were tested. While the actual individual returns on education have no significant influence on perceived meritocracy, the individual perceived fairness of one's own salary, which is usually referred to as micro-justice judgments¹², has a significant and positive impact on representations. In each country, the more strongly individuals believe that their own salary is fair, the more often they believe that people in their country are rewarded for their merits, resulting in a positive correlation between individual and collective feelings of justice. This may also mean that the level of education is less important than the way in which people perceive the return on their own degree, thus confirming in some way the investment hypothesis.

As the justice feeling at the micro level is significantly correlated with one's level of education¹³ and income class¹⁴, education would have an indirect impact on representations: highly educated people have a higher probability of feeling satisfied with their salary, as do wealthier people, thus making them believe that society as a whole is fair. This illustrates the importance of distinguishing the actual situation from the way it is perceived.

Concerning *preferred meritocracy*, within each country, education has a rather positive impact, even after controlling for sex and age (this impact is significant in 14 countries, and negative only in Germany). The longer individuals go to school, the more often they believe that education should be important in deciding how much money people ought to earn. Age and sex have a significant impact in most countries: women and elderly people value diplomas more than men and young people. The gender effect can be easily explained: women generally get a lower return on their degree, and consequently think that the impact of degree should be greater. It is less straightforward to explain the attitude of older people, who more often perceive social positions as deserved and wish a better reward for education in professional life.

When the countries are introduced as explanatory variables (with the other variables analyzed here) in a general model, the differences between them are still significant on both perceived and preferred meritocracy. This could mean that in addition to individual characteristics, collective variables do affect the perception of meritocracy and its support. Consequently, some multilevel modeling must be implemented to disentangle these individual and collective effects.

4.5. A multilevel approach

Previous results clearly show that both micro- and macro-level analyses prove unable to grasp the complexity of attitudes toward meritocracy. A multilevel approach allows those levels to be articulated. From

¹² Forsé and Parodi, 2010.

¹³ Pearson correlation coefficient over the whole sample, at an individual level: 0.112, $p < 0.001$

¹⁴ Pearson correlation: 0.118, $p < 0.001$

a technical standpoint, a multilevel analysis is all the more justified to correct the country level effects from a possible over-estimation due to intra-class correlation (see Singer 1998)

4.5.1. Individual and contextual effects of education on perceived meritocracy

Multilevel modeling confirms the specific impact of the country level on the perception of inequalities. The amount of social inequality (Gini index) has a positive impact on representations, like the share of students enrolled in tertiary education, while the share of students enrolled in social science studies diminishes the probability that an individual will believe that merit is rewarded in life. When introduced in Model C, all three variables explain 43.2% of the between-country variance. GDP has also a positive impact on representations, even more so than the impact of the amount of social inequality.

Table 2 – Multilevel regressions on the perceived meritocracy scale¹⁵

Parameters	Model A (empty model)	Model B (individual variables)	Model C (all variables)	Model D (all variables)
Fixed effects				
Intercept	0.5675 (0.026)***	0.5678 (0.026)	0.5709 (0.020)***	0.5670 (0.017)***
Individual-level variables				
Years of education		-0.0012 (0.001)	-0.0012 (0.001)	
Age		0.0008 (0.001)***	0.0076 (0.001)***	0.0069 (0.001)***
Sex		-0.007 (0.002)***	-0.0072 (0.001)***	-0.0051 (0.001)***
Perceived fairness of earnings				0.0304 (0.001)***
Country-level variables				
Gini			0.0501 (0.027)+	0.0591 (0.018)**
Tertiary education			0.0459 (0.020)*	
Social science			-0.0606 (0.021)**	-0.0389 (0.021)+
GDP per capita				0.0600 (0.020)**
Random effects				
Within-country variance	0.0319	0.0318	0.0317	0.0310
Between-country variance	0.0148	0.0148	0.0084	0.0064
% of within-country var. explained		0.30%	0.60%	2.82%
% of between-country var. explained			43.20%	56.76%
N (countries)	22	22	22	22
N (individuals)	24,655	24,655	24,655	23,436

***p<0.001, **p<0.01, *p<0.05, +p<0.10

Source: ISSP Social Inequality 1999 Dataset

¹⁵ Regression realized without Chile, all variables have been standardized over the whole sample (weighted analysis).

At the same time, the absence of a systematic impact of education at the individual level has been confirmed, which may be explained by the divergent impact education has across countries. All three individual variables introduced into the analysis (age, sex and years of education) explain a very small amount of the within-country variance, as observed earlier in this paper. This percentage of within-country variance explained increases when other individual variables such as the perceived fairness of salary are taken into account (see Model D).

The way individuals perceive meritocracy is one dimension of the internalization of meritocracy: do they believe that social inequalities are deserved? A second dimension concerns their approval of this justice model, especially in its educational version: do individuals believe that education-based meritocracy is a fair model of justice?

4.5.2. Individual and contextual effects of education on preferred meritocracy

Again, concerning preferred meritocracy, the multilevel regression confirms the previous results: at the individual level, education has a positive impact, while at a macro social level, the importance of the percentage of between variance explained confirms the role of the countries' characteristics (they explain 40.8% of the between countries variance in Model C). Individuals living in countries with a large amount of social inequality tend to more strongly support education-based meritocracy, just like the inhabitants of countries where education offers more opportunities for jobs and a larger salary. GDP was not significant in this model.

Table 3 – Multilevel logistic regression on preferred meritocracy

Parameters	Model A (empty model)	Model B (individual variables)	Model C (all variables)
Fixed effects			
Constant 1		-1.9246 (0.158)***	-1.9488 (0.115)***
Constant 2		0.07932 (0.158)	0.0555 (0.114)
Constant 3		2.2242 (0.159)**	2.2005 (0.115)***
Constant 4		4.5822 (0.170)***	4.5584 (0.129)***
Individual-level variables			
Years of education		0.1486 (0.018)***	0.1486 (0.018)***
Age		0.1733 (0.014)***	0.1733 (0.014)***
Sex		0.1765 (0.013)***	0.1764 (0.013)***
Country-level variables			
Gini			0.4400 (0.133)**
Economic and employment returns on education			0.3248 (0.119)**
Share of soc. science and law students in tertiary education			-0.1429 (0.143)
Random effects			
Within-country variance	0.7282	0.7166	0.7166
Between-country variance	0.0733	0.0733	0.0434

% of within-country variance explained		1.60%	1.60%
% of between-country variance explained		0%	40.80%
N (countries)	16	16	16
N (individuals)	18,457	18,457	18,457

***p<0.001, **p<0.01, *p<0.05, +p<0.10

Source: ISSP Social Inequality 1999 Dataset¹⁶

5. Discussion

Those results elucidate that it is necessary to distinguish between the micro and macro effects of education on perceived and preferred meritocracy: in some cases, some coherence exists between these two levels, due certainly to aggregation effects, but such is not always the case, which is why further investigation of the idiosyncratic phenomena is required.

At the macro level, we have shown that opinions of education-based meritocracy vary across countries, depending on various organizational aspects of education and macro social characteristics. These differences may also occur for less materialistic reasons, such as historical background and the countries' ideological context.

Our results also go to prove that education, at the individual level, is effective in strengthening the belief that educational merit should be rewarded in life. The effects of individuals' level of education on judgments on social reality are more uncertain. When interviewees are asked to assess whether merits are rewarded in life, their level of education has no clear effect, while their judgment of the fairness of their own salary proves more strongly correlated with their perceptions. In this case, objective social characteristics have a more moderate impact than the individuals' judgments on it. Therefore, education –or the social position achieved thanks to education– has a more direct effect on the abstract way of supporting educational verdicts (that is what education is for, after all!) while it has no clear single effect on how people actually perceive their society. That is because perception is affected both by values and reality itself.

Of course, this study has a certain number of limitations. First, it should be discussed whether questions with predetermined propositions are truly relevant for understanding justice beliefs, since justice judgments are particularly difficult to comprehend (see for instance Dubet 2006).

As a second limit, the countries participating to the ISSP program are mostly rich and developed. The results could differ sensibly with developing countries, for example, where education remains a priority. However, this homogeneity also assures that comparable cases are represented in this research

¹⁶ All variables have been standardized over the whole sample. Weighted analysis. Between and within variances have been estimated in a simple logistic model (not multinomial).

It should be stressed that the observed impact of education (especially at the macro level) does not necessarily imply that education does in fact have a causal and direct impact on representations. Many hidden variables could in fact affect individual opinions, as education could simply be an indicator of a country's ideological orientations. The results should then be interpreted with care. That is all the more true because it is very difficult to establish causal links from aggregated and non-longitudinal data. International surveys, despite their great interest in research, still are unable to investigate thoroughly the true ideological impact of education.

APPENDIX

Linear regression coefficients on the perceived meritocracy scale in each country

Country	Intercept	Age (in years)	Sig.	Sex (ref: men)	Sig.	Years of education	Significa nce	N	R ²
<i>Australia</i>	0.65	0.001	**	-0.007	ns	0.002	ns	1310	0.007
<i>Germany</i>	0.68	0.001	***	-0.045	***	0.001	*	1293	0.042
<i>United Kingdom</i>	0.64	0.000	ns	-0.007	ns	0.000	ns	754	0.001
<i>United States</i>	0.7	0.001	*	-0.043	***	0.006	***	1169	0.036
<i>Austria</i>	0.65	0.001	*	-0.031	*	0.001	ns	905	0.017
<i>Hungary</i>	0.48	0.001	*	-0.026	**	0.001	ns	1167	0.012
<i>Norway</i>	0.66	0.000	ns	-0.015	ns	-0.002	ns	1073	0.004
<i>Sweden</i>	0.58	0.001	*	-0.001	ns	-0.001	*	999	0.012
<i>Czech Republic</i>	0.51	0.000	ns	-0.005	ns	-0.001	ns	1682	0.001
<i>Slovenia</i>	0.51	0.000	ns	-0.019	+	0.000	*	933	0.005
<i>Poland</i>	0.6	0.000	ns	-0.010	ns	0.000	*	933	0.001
<i>Bulgaria</i>	0.26	0.001	**	-0.015	ns	0.001	+	1042	0.010
<i>Russia</i>	0.38	0.000	+	-0.006	ns	0.000	**	1584	0.002
<i>New Zealand</i>	0.69	0.000	ns	-0.019	+	-0.001	*	1025	0.005
<i>Canada</i>	0.7	0.000	ns	-0.035	**	0.001	ns	844	0.012
<i>Philippines</i>	0.76	-0.001	ns	0.011	ns	-0.004	*	1179	0.005
<i>Israel</i>	0.74	0.000	ns	-0.014	ns	-0.009	***	1168	0.027
<i>Japan</i>	0.55	0.002	***	-0.003	ns	0.001	ns	1229	0.030
<i>Spain</i>	0.55	0.001	*	0.004	ns	0.000	ns	1082	0.005
<i>Latvia</i>	0.47	0.000	ns	0.001	ns	0.001	ns	1047	0.010
<i>France</i>	0.41	0.002	***	-0.033	***	0.005	***	1724	0.048
<i>Cyprus</i>	0.56	0.000	ns	-0.004	ns	0.000	ns	981	0.003
<i>Portugal</i>	0.56	0.000	+	-0.010	ns	0.001	**	1117	0.009
<i>Chile</i>	0.53	0.002	*	-0.014	ns	-0.001	***	1431	0.023
<i>Slovakia</i>	0.38	0.000	ns	0.002	ns	0.000	+	1018	0

Source: ISSP 1999 Social inequality Dataset.

REFERENCES

- Alexander, Norman C. 1972. "Status perceptions". *American Sociological Review* 37: 767-773.
- Baer, Douglas E., and Ronald D. Lambert. 1982. "Education and support for dominant ideology". *Canadian Review of Sociology and Anthropology* 19: 173-195.
- Bourdieu, Pierre, and Jean-Claude Passeron. 1970. *La reproduction. Éléments pour une théorie du système d'enseignement*. Paris: Éditions de Minuit.
- Bowles, Samuel, and Herbert Gintis. 1977. *Schooling in Capitalist America*. New York: Basic Books.
- Chauvel, Louis. 2003. "Inégalité, conscience et système de classes sociales : les contradictions de l'objectivité et de la subjectivité". *Comprendre* 4: 129-152.
- Dalbert, Claudia. 2001. *The Justice Motive as a Personal Ressource*. Kluwer Academic.
- Dubet, François. 2006. *Injustices. L'expérience des inégalités au travail*. Paris: Seuil.
- Duru-Bellat, Marie, and Elise Tenret. 2009. "L'emprise de la méritocratie scolaire: quelle légitimité ?". *Revue française de sociologie* 50(2): 229-258.
- Forsé, Michel, and Maxime Parodi. 2010. *Une théorie empirique de la justice sociale*. Paris: Hermann.
- Goldthorpe, John. 2003. "The myth of education-based meritocracy". *New Economy* 10(4): 234-239.
- Green, Andy, John Preston, and Jan Gemen Janmaat. 2006. *Education, Equality and Social Cohesion*. London: Palgrave.
- Guimond, Serge. 1998. "L'enseignement supérieur et la diffusion des croyances concernant la cause des inégalités intergroupes", p. 185-207 in Jean-Léon. Beauvois, Robert-Vincent Joule et Jean-Marc Monteil (eds). *Perspectives cognitives et conduites sociales*. Lausanne: Delachaux et Niestlé.
- Kunovich, Sheri, and Kazimierz M. Slomczynski. 2007. "Systems of distribution and a sense of equity: A multilevel analysis of meritocratic attitudes in post industrial societies". *European Sociological Review* 23(5): 649-663.
- Lerner, Melvin J. 1980. *The Belief in a Just World: A Fundamental Delusion*. New York: Plenum Press.
- Lorenzi-Cioldi, Fabio. 2009. *Dominants, dominés. Les identités des groupes collection et agrégat*. Grenoble, PUG.
- Noll, Heinz-Herbert, and Lance W. Roberts. 2003. "The legitimacy of inequality on both sides of the Atlantic. A comparative analysis of attitudes in Canada and Germany". *The Tocqueville Review* 24(2): 153-189.
- Osberg, Lars, and Timothy Smeeding. 2006. "'Fair' inequality? Attitudes toward pay differentials: The United States in comparative perspective". *American Sociological Review* 71: 450-473.
- OECD (Organization for Economic Cooperation and Development). 2008. *Growing Unequal? Income Distribution and Poverty in OECD Countries*. Paris: OECD.
- Parsons, Talcott. 1951. *The Social System*. New York: Free Press.
- Piketty, Thomas. 2003. "Attitudes vis-à-vis des inégalités de revenu en France : existerait-il un consensus ?". *Comprendre* 4:209-242.
- Sidanius, James, and Felicia Pratto. 1999. *Social Dominance: An Intergroup Theory of Social Hierarchy and Oppression*. New York: Cambridge University Press.

Singer, Judith D. 1998. "Using SAS PROC MIXED to fit multilevel models, hierarchical models, and individual growth models". *Journal of Educational and Behavioral Statistics* 24(4): 323-355.

Wegener, Bernd. 1987. "The illusion of distributive justice". *European Sociological Review* 3(1): 1-13.

Wilkinson, Richard. 2007. *The Impact of Inequality: How to Make Sick Societies Healthier*. London: Routledge.

Young, Michael. 1958. *The Rise of the Meritocracy*. Baltimore, MD: Penguin Books.