

Expansion and social selectivity of higher education in France

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Ever since the Jules Ferry laws (1882), which made school compulsory for children aged 6-13, the French authorities have consistently supported and encouraged the widest possible access to education. The sharp rise in the number of higher education students from the late 1980s to the mid-1990s can be viewed as the culmination of this century-long expansion of education. In just over ten years, the proportion of young people graduating with a higher-education degree doubled, from 21% for the 1960-62 birth cohorts to 42% for the 1975-77 birth cohorts. But since the mid-1990s, the trend toward longer schooling has stalled; the percentage of young people reaching successive grades is stagnating not only for the grades now reached by nearly an entire birth cohort, such as ninth grade (*troisième*), but also for the *baccalauréat* (diploma at end of secondary school) and post-secondary studies (Esquieu, Poulet-Coulibando, 2002).

Higher education now extends its intake to groups that it once largely excluded: one-quarter of all children of blue-collar workers now graduate from higher education; fifteen years ago, the proportion was barely one in ten. And this, in itself, is an undeniable social advance. But the expansion of education does not mean that the gap in school attainment by social background decreased. Social disparities in educational attainment remain strong at all levels of the system (Duru-Bellat, Kieffer, 2000). Present in the earliest years of schooling, they steadily widen from one grade to the next. As a result, they peak in higher education: for the mid-1970s birth cohorts, the proportion of higher-education graduates is three times as high among children of managerial workers (77%) as among children of blue-collar workers (25%). The expansion of education, and of higher education in particular, makes the role of social ‘inheritance’ at school all the more significant. It was easy to find explanations for social selectivity in an education system where some social groups were virtually excluded from school beyond a certain grade. But in a system now largely open to disadvantaged groups, the persistence of strong disparities in student achievement by social background is becoming less acceptable.

Meanwhile, the erosion of the full-time payroll-employment model—a phenomenon from which the young are the first to suffer when entering the labor market—is reviving the issue of educational inequalities among students, particularly in higher education. Not only do higher-education degrees ensure more stable career starts (Lopez, 2004) but, in the past twenty years, with the school-to-work transition becoming ever more delicate and complex, their importance has increased (Givord, 2005). Amid the expansion of special forms of employment, only the most skilled persons seem to be spared—a situation that makes the possession of a high-level degree even more critical. The issue of social disadvantage in educational achievement is becoming, more than before, the issue of unequal opportunities in working careers.

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Given these circumstances, how has the social gap in school achievement evolved, particularly among students earning a Master's degree or higher? Is it as significant today as yesterday? In the past ten years or so, studies on relation between school attainment and social background have flourished; most have concluded that the influence of social origin on education attainment has decreased. Among social groups, proportions of children reaching successive grades—up to the highest—have rather converged over time. This is indeed the case at the start of sixth grade (*sixième*) and tenth grade (*seconde*) and for the *baccalauréat* (Duru-Bellat, Kieffer, 2000), but also at any given level of higher education (Selz, Vallet, 2006). More generally, the attainment distributions among children of different social backgrounds have also tended to converge in successive cohorts (Thélot, Vallet, 2000). Beyond this trend toward uniform schooling experiences, two findings of these studies raise initial questions about education policies. First, the studies conclude that the standardization of schooling experiences is a very relative notion. Impact of social background upon school achievement, while admittedly less significant, remains very high. Some authors accordingly stress the fact that severe differences between social groups remain (and not that they slightly diminished) (Goux, Maurin, 1997). These studies also show that the time when this decrease of background influence preceded the education reforms aimed at reducing educational inequalities—in particular the creation of the “single middle school” (*collège unique*) and the gradual phase-out of “channeling” (*orientation*) in seventh grade (*cinquième*). The equalization of schooling experiences was greater for the cohorts born between the late 1930s and early 1950s than for their successors, despite the fact that the latter were concerned by the reforms.

More basically, in a situation where the young stay in school longer and where the education supply has diversified, the standard measures of educational inequality, it is argued, have become inadequate. They are notably accused of failing to take account of the fact that social selection in educational paths has “merely shifted upward, if not increased,” or has become “less legible” and “more subtle” as it operates inside the system itself, between different courses of study, to quote T. Piketty (*Le Monde*, Feb. 21st, 2006). The first objection to studies that conclude that the relation between student performance and social background has weakened is thus that they fail to take into account that the expansion of education merely delayed the time when most of the educational selection—and of the related social selection—takes place. This scenario has been defended by M. Duru-Bellat and A. Kieffer for secondary school (2000). It is now said to concern higher education. The shift of social selection was facilitated by the major changes in French higher education in recent decades. The massification of higher education was accompanied by the introduction and the expansion of vocationally-oriented programs (*Instituts Universitaires de Technologie* [IUTs] and *Sections de Techniciens Supérieurs* [STSs]). Because their social intake has been wider than that of mainstream programs, they have contributed to the decrease of the odds of earning a higher-education degree. But as these programs were not initially designed to extend to B.A./M.A. level (*deuxième cycle*), the decrease observed at the B.A./M.A. level should be more modest than that of the pre-B.A. level (*premier cycle*). Moreover, with higher-education degrees becoming less distinctive, notably at pre-B.A. level, the children of advantaged social groups are said to have “fallen back” on longer programs, particularly Ph.D-level programs (*troisièmes cycles*), which offer more attractive returns in terms of pay and career. P. Merle (2002), for example, situates the dividing line in higher education at the B.A.+ level (*licence* and beyond). For Merle, the reducing gap in student achievement among social groups, described by C. Thélot and L.-A. Vallet (2000), is largely determined by their choice of attainment classification. By

dividing higher education into two levels—“*baccalauréat* +1 or 2 year(s)” and “*baccalauréat* +3 years or more”—Thélot and Vallet could not account for the “shift in this inequality above the ‘*baccalauréat* +3 years’ level.”

The second objection to studies which conclude that the influence of social origin on education has decreased is that the very nature of educational inequalities has changed as well: inequalities of a more qualitative nature concerning study programs have replaced—or have compounded—the quantitative inequality of access to a given education level. With regard to middle school, M. Duru-Bellat and A. Van Zanten observed that “inequality in middle-school attendance for the entire sixth-to-ninth-grade program (*premier cycle*) has been replaced by inequality of a more qualitative type concerning success (unequal probability of repeating a grade) and channeling” (1999). Similarly, in secondary school (*lycée*) and higher education, as a result of educational expansion, “the degree of distinctiveness of [a given] study program is becoming an issue with greater social implications, partly replacing the issue of length of studies” (Merle, 1996). This question is addressed in recent research by Van de Werfhorst and Luijkx (2006), who revisit the findings on reduction of the social gap in school attainment in the Netherlands (Shavit, Blossfeld, 1993). The two researchers empirically validate their hypothesis that the loosening of the link between social origin and school attainment is accompanied by the persistence or even a widening of social differences in the choices of areas of study. They refer to this as “Inequality Maintained through Horizontal Educational Choices.” In other words, general and vocational study programs are designed to preserve the isolation of social circles, and this can perpetuate social stratification even at levels now reached by almost the entire population. In France, this notion is relatively old, but weakly supported by empirical evidence. Back in 1986, A. Prost had this to say about secondary education: “The introduction of new programs, particularly in technical fields, through reforms that claimed to modernize the education system and contribute to technological and economic development, is said to have made it possible to steer a proportion of the rising flow of students from lower-income groups toward less prestigious sectors, thereby stabilizing their representation in the system’s dominant programs, i.e., those in the mainstream curriculum [*enseignement général*].” The creation of the vocationally-oriented IUT and STS programs lends itself to the same type of caveats regarding higher education. For example, P. Merle, in 1996, proposed a “differentiated-development model” according to which “the opening of the University to lower-income groups [does not imply] the renewal of the educational elite, whose social intake remains restricted.” Focusing on a specific aspect of the French higher-education system, the selective *grandes écoles*, V. Albouy and T. Wanecq (2003) show that, even at the Ph.D. level (*troisièmes cycles*), educational inequality among children from different social groups has evolved differently: whereas social disparities in graduating university have steadily decreased in the twentieth century, those in graduating the very selective *grandes écoles* have increased in the 1980s. It therefore seems worth taking up this approach and broadening it to the entire higher-education system, examining the change in inequality by degree specialty—which, moreover, often plays a decisive role in the school-to-work transition (Lopez, 2004).

This text follows in the footsteps of studies carried out in France on the link between social origin and educational experience. We shall explore the link at a finer level of detail, both in the vertical dimension of

higher education system (by distinguishing the three cycles of its qualifications¹ [pre-B.A., B.A./M.A., and Ph.D.]) and in its horizontal dimension by separating its different programs. The questions that we want to address are the following : to what extent has the rapid expansion of higher education been accompanied or not by a shift in inequality and/or an increase in educational inequality in its midst? Has the equalization of educational opportunities in higher education been identical at all levels? Has the social intake of higher-education programs changed? Our approach will be purely descriptive: we would like to enhance the somewhat monolithic description in terms of aggregated attainment level by an approach that takes greater account of the diversity of higher-education programs. The limits of such an approach are well known: it tells us nothing about the processes of educational inequality formation. In particular, it cannot distinguish between the role of self-selection by individuals (which is guided solely by different personal strategies and projects) and the role of choice constrained by students' educational attainment at the time of the channeling decision.

To undertake an analysis of the changing opportunities for higher-education access, we need long-term series of homogeneous and relatively detailed data on educational attainment. The compilation of annual Labor-Force Surveys conducted between 1990 and 2002—the final collection before the switch to continuous Labor-Force Surveys²—yields a large sample that meets both requirements. While the Labor-Force Surveys allow a study of correlation between school achievement and social origin over the long run, and even the very long run (Thélot, Vallet, 2000), our analysis concentrates on the cohorts born in the 1950s and later. The aim is to place the higher-education explosion phase, which concerned the cohorts born in the 1960s and later, in a broader time frame while minimizing as far as possible the problems of time comparability of social origins.³ Our analysis is confined to persons at least 25 years old, an age at which the proportion of individuals still engaged in initial education and not having reached pre-B.A. level is negligible. Consequently, our last cohort observed was born in 1977. It entered higher education in the mid-1990s, at the very point when the share of young people enrolled in post-*baccalauréat* studies stopped rising. To analyze changes in pattern of educational inequalities, we need to look at completion rates of different school grades among different social groups. Traditionally, these are defined by the father's socio-occupational category. This segmentation largely overlaps other distinctions in terms of economic or cultural capital⁴. The social-origin indicator chosen for this study comprises seven social groups:

¹ Prior to Bologna process, French higher education system was divided into three cycles of qualification : the first include programs which were completed in two or three years (three years for most vocational programs is equivalent to two years in academic programs) ; the 2nd cycle of qualification included degrees which required one or two more years of education. The third cycle is including Ph D and graduate from the French *grandes écoles* (very selective and quite prestigious establishments, specialized on engineering or business management).

² If we had used the continuous Labor-Force Surveys, we could have extended the study to more recent cohorts, but the change of protocol was the occasion for a questionnaire redesign, notably in two areas. The first was the classification of higher-education degrees: the category of “*Certificat d’Aptitude Pédagogique, Certificat d’Études Normales*” teacher-training certificates—although still relevant for many people in older cohorts—was removed. The second was the degree subject: respondents are no longer asked to specify it for their current courses of study, and the subject classification is slightly different from the one used previously. These potential breaks in the series are all the more problematic because of the low overlap with annual Labor-Force Surveys.

³ Long-term studies highlight the atypical educational history of farmers' children, whose attainment has risen substantially (Thélot, Vallet, 2000). But such a finding cannot be assessed without making allowance for the deep transformation of the French agricultural world in the past century.

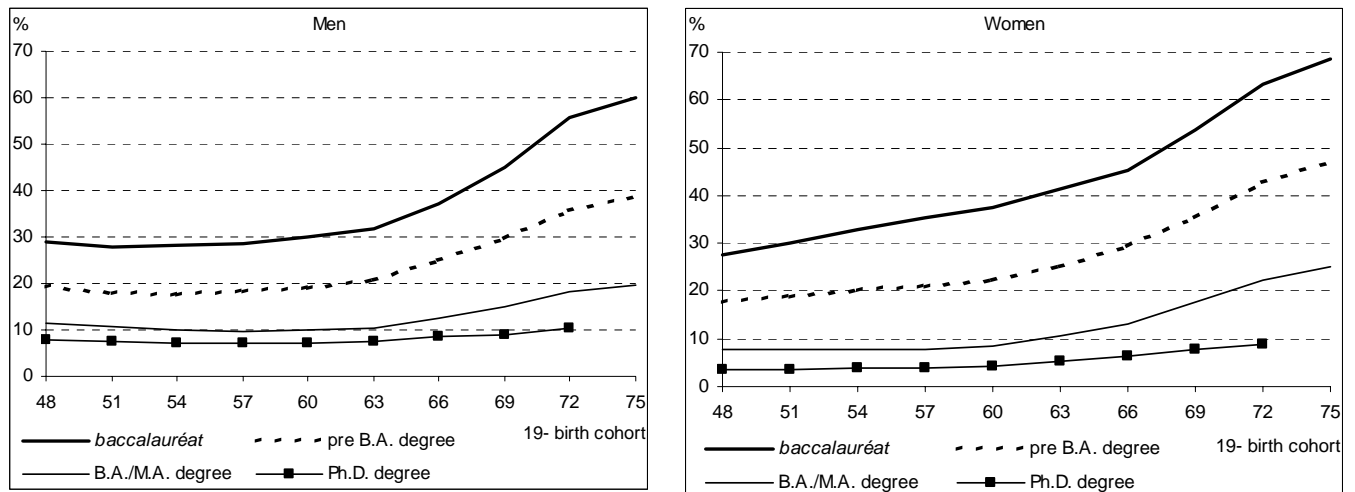
⁴ Thélot and Vallet (2000) exploit the Education and Occupational Skills surveys, which provide fuller coverage of respondents' social origins and cultural background. The authors show that their conclusions do not depend on their approach of social origin. However, they note that “cultural inequality at school has decreased significantly less than social inequality.” We may accordingly suppose that if social inequality increases, cultural inequality should increase as well, at least in the same proportions.

(1) teachers⁵; (2) managerial workers, professional workers, and business owners; (3) intermediate-level occupations; (4) artisans and retailers; (5) white-collar workers; (6) blue-collar workers; (7) farmers. Inter-group inequality is measured on the basis of the highest degree obtained. The reason is that the labor market assigns greater value to the degree—as a formal certification of the applicant’s skills—than to educational attainment *per se*. For example, students leaving university at the *Diplôme d’Études Universitaires Générales* (DEUG level: two years after the *baccalauréat*) without having actually obtained the degree enter the labor market in conditions resembling those of *baccalauréat* holders far more than those of other higher-education leavers (Thomas, 2003, Biscourp, 2006).

The first challenge to studies which find that the relation between students performance and their social background has softened is that the decrease would mainly concern the first level of high education qualifications and would be weaker for the most advanced degrees—a situation that restricts its impact. Two explanations can be provided. First, the spread of pre-B.A. higher-education degrees would have eroded their return on the labor market. Faced with this relative depreciation, students with adequate educational and financial resources would have aimed for B.A./M.A.- and Ph.D-level degrees. The second explanation is that equalization of opportunities in higher-education would owe much to the expansion of short and vocationally-oriented programs, more highly valued by children of less-advantaged groups. These programs were largely responsible for larger access of higher education to students of modest social origins; however, as they rarely led students to continue toward B.A./M.A.-level degrees, they also confined their graduates to pre-B.A. diplomas. These two factors would explain why reduction in the social gap in school attainment would be essentially true when measured at the pre-B.A. level, and far less when measured at post-B.A. levels. This is not incompatible with the fact that completion rates at B.A./M.A.-level or even Ph.D-level degrees are becoming more homogeneous among social origins (as measured by Selz and Vallet (2006)). But the reduction of the gap in completion rates of the second and third levels should be weaker than the one measured at the first level of higher education qualifications. The first empirical validation of the “democratization running out of steam” hypothesis therefore consists in comparing the extent of the reduction of social disparities in completion rates at several levels of the education system. The higher-education levels examined here are classified roughly according to the number of years of study required to obtain the degree. The first level (*premier cycle*) comprises DEUGs, and vocational degrees which usually require two or three years of education such as health-care and social-work diplomas, *certificat de fin d’études normales*, *Diplôme Universitaire de Technologie* (DUT), *Brevet de Technicien du Supérieur* (BTS). Higher education second level (*second cycle*) requires one or two additional years of formal education; it includes B.A.s (*licences*) and M.A.s (*maîtrises*). The third level (*troisième cycle*) comprises *Diplômes d’Études Approfondies* (DEAs), *Diplômes d’Études Supérieures Spécialisée* (DESSs), Ph.Ds (*doctorats*), and diplomas from *grandes écoles*. This classification by education level only partly overlaps the classification by educational institution attended (university, *grandes écoles*, *Sections de Techniciens Supérieurs* [STSS], etc.).

⁵ Teachers’ children, while forming a relatively small group, are separated owing to their atypical educational investment (Thélot, Vallet, 2000; Albouy, Wanecq, 2003).

Chart 1 - Educational attainment by gender



Interpretation : Among men born between 1948 and 1950, 29% have obtained the *baccalauréat*, 19% a diploma higher or equal to pre B.A. degree, 11% a diploma higher or equal to B.A./M.A. degree and 8% a Ph. D. degree.

Box 1: Logistic scale

The 1980s saw a lively debate on the appropriate measure of social disparities in educational achievement—a debate illustrated by a series of articles in *Revue Française de Sociologie*. There are two simple ways to measure the distance between two numbers: their ratio (or relative gap, on a multiplicative scale) and their difference (or absolute gap, on an additive scale). The debate on changes in educational inequality patterns was triggered by the fact that conclusions diverged according to the choice of disparity measure. Measured by the *difference* between the probabilities of earning a *baccalauréat*, the gap in completion rates between children of managerial workers and children of blue-collar workers diminished; measured by the *ratio* of probabilities, disparities tended to grow.

The debate was settled when a consensus was reached to the effect that the suitable way to measure the distance between two probabilities was neither their difference, nor their ratio, but their log contrast (the debate does occasionally flare up again (Morel, 2003; Combessie, 2004)). The logistic scale involves an *additive* analysis not of the probability, as provided by the additive scale, but of a *non-linear transform of the probability*:

$$\ln \left(\frac{p}{1-p} \right)$$

The distance between two probabilities p_1 and p_2 is measured by the difference between their logistic transforms (or the natural logarithm of their odds ratio, i.e., log-odds ratio).

$$\ln \left(\frac{p_1}{1-p_1} \right) - \ln \left(\frac{p_2}{1-p_2} \right) = \ln \left(\frac{\frac{p_1}{1-p_1}}{\frac{p_2}{1-p_2}} \right)$$

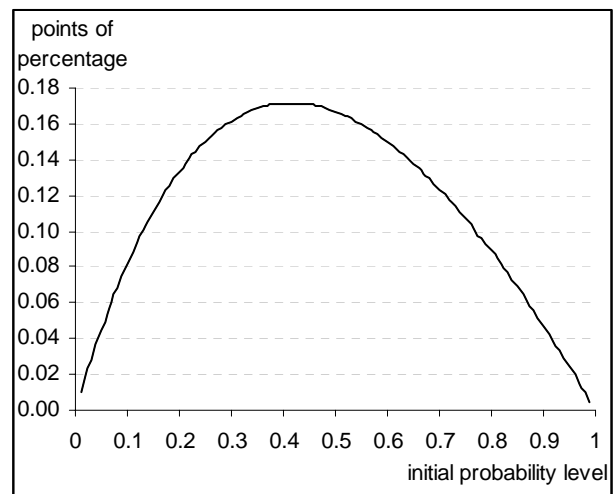
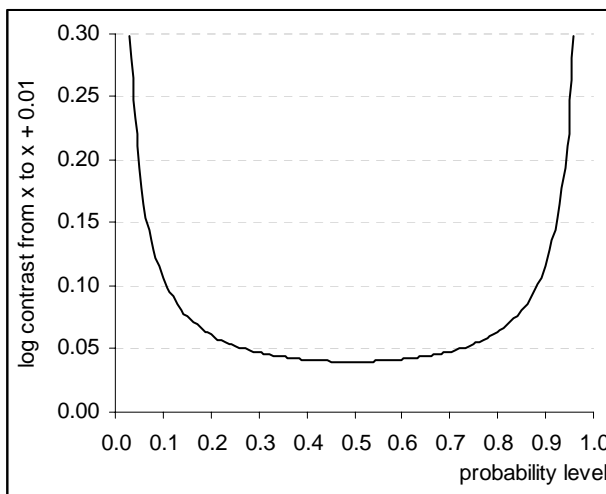
The logistic scale has the useful property of sizing the evolution of an event rate taking into account the initial value of the rate (the range a probability of 95% can increase is necessarily small). It is thus consistent with the intuitive notion that the measure of the distance between two probabilities is not independent of their level. It reflects the fact that it is “easier” to go from 40% to 45% than from 1% to 6% by assigning contrasts of 1.2 and 6.3 to these differences respectively (whereas the additive scale regards the distances as identical since $45-40=6-1=5$). Similarly, on this measure, it will be easier to move from 3% to 6% than from 45% to 90% (the respective contrasts

are 2.1 and 1), whereas, on the multiplicative scale, these differences are identical ($6/3=90/45=2$).

One way to represent this property of the logistic scale is to plot the curve linking the value of the corresponding log contrast to the 1-point variation of a given probability (Chart A). We can read the curve as indicating that a 1-point increase will result in a far greater log contrast for probabilities near 0 or 100 (meaning the 1-point increase will be “greater” for these values than for intermediate range value). Another way is to plot the “iso-contrast” curve. This consists in measuring, for each probability level, by how many points we need to increase the probability to ensure that its change (measured by the log contrast) will be constant. We note that for probability levels close to the outer bounds, the number of points of increase required is much smaller than for intermediate levels (Chart B).

Relationship between probability level and propensity using different measures

Chart A: Value of 1-point change in probability measured by log contrast Chart B: “iso-contrast” curve: increase needed (in points of percentage) for a log contrast equal to 2



Note: Chart A shows that an increase from 1% to 2% corresponds to a log contrast of 0.7, an increase from 10% to 11% to a contrast of 0.11, and an increase from 40% to 41% to a contrast of 0.04. Chart B shows that to obtain a measure of constant size of change (here, a log contrast of 2), we need, for example, to increase a 1% probability by 1 point, a 10% probability by 8.2 points, and a 30% probability by 16.2 points. When measured with the logistic scale, all these variations are of the same size.

Because of its non-linearity, the logistic scale is not transitive: we cannot use events at each transition to draw any conclusions on the entire set of educational experiences. The table below provides a numerical (and likely) example in which we observe an *increase* in inequality at the educational level $n-1$, an *increase* in inequality between levels $n-1$ and n , but an overall *decrease in inequality* at educational level n .

	P(n-1)		P(n / n-1)		P(n)	
	t ₀	t ₁	t ₀	t ₁	t ₀	t ₁
m ₁	61%	68%	45%	47%	27.5%	32%
m ₂	20%	25%	25%	25%	5%	6.3%
Odds ratio	6.3	< 6.4	2.5	< 2.7	7.2	> 7.0

This example illustrates the fact that it is useless to study how social selection from school grade $n-1$ to school grade n has evolved to draw a conclusion on the comparative extent inequalities among students in reaching school grade $n-1$ and n have decreased. The basic problem is that, to allow a comparison of probabilities varying across a wide

range, the logistic function measures the variations in these probabilities taking into account their initial level. Depending on whether we examine conditional or non-conditional probabilities, we will find ourselves in the additive or multiplicative zone of the logistic scale.

What do we know about the respective extent of the attenuation of social disadvantages measured at the entry point of higher education and then at its successive levels? Education researchers agree on one thing: if we confine the analysis to *baccalauréat* holders (i.e., secondary-school leavers), the (conditional) probabilities of graduating with a higher-education degree have become more disparate in social terms (Selz, Vallet, 2006). On the whole, therefore, social inequality in educational histories within higher education has increased. Does this mean that when measured among graduates from higher education, differences between social groups have less diminished than between high school graduates?

Not necessarily, for the measure now used to assess the distance between probabilities, i.e. the logistic scale (Box 1), being non-linear, is not transitive. If we observe the reduction of social disparities in completion rates at the educational level $n-1$, and an even stronger reduction of social disparities in educational paths between levels $n-1$ and n , we cannot legitimately conclude that the influence of social background has more decreased when measured with completion rates at school grade n than when measured at school grade $n-1$. Box 1 explains the reasons for this paradox and supplies a likely numerical example with two socioeconomic groups, and where completion rates at grade $n-1$ diverge, where, among graduates of level $n-1$, proportions of those completing grade n diverge, but, where, overall, probabilities of completing level n converge. Consequently, we cannot “slice up” educational experiences, as Mare recommended (1980, 1981). If we examine changes in inequality in each “slice” separately, we cannot deduce how inequality has changed in the entire education system. Applying this finding to the results for higher education, we can say that the influence of social background on educational paths inside higher education has increased (the contrasts between the conditional probabilities of earning a higher-education degree for *baccalauréat* holders), but we cannot draw any conclusions about the comparative change in social inequality at the *baccalauréat* or higher-education level. In particular, we cannot conclude that the social gap has more narrowed for secondary education than it did for higher education.

How, then, can we compare the extent of the decline of socioeconomic inequalities in reaching different grades of higher education, which we see as the means to validate the hypothesis of a steady upward shift in educational inequality? One option would be to directly compare the reduction of social gap at both grade levels, using a non-conditional approach. But the comparison is not straightforward; it is complicated by the fact that initial inequality can differ significantly from one level to the next. To overcome these difficulties, we propose a method that seeks to isolate, in the reduction of social gap produced at an education level n , the share generated by the reduction of social gap of earlier educational trajectory. For this, we assume that the probabilities of completing grade n among students who have completed grade $n-1$ have remained unchanged over time for each social origin. Concretely, to determine if the social gap narrowed more or less among high school graduates than among students with pre-BA graduate or more, we simulate the share of the tightening of the social gap among pre-B.A. graduates that is solely due to change in social selection in educational paths in primary and secondary education. This simulation allows us to return to nearly identical inequality structures and probability levels (between the simulated and actual situations). This legitimizes the comparison between the intensity parameters

of the two situations and enables us to draw conclusions. By comparing the simulated and actual situations, we can determine whether the social selection at pre-B.A. level has been declined more or less than that measured at the *baccalauréat*.

Box 2: Uniform-change model for relative odds

The study of educational inequality has long focused on comparing the educational experiences of children of managerial workers and of blue-collar workers. These two social groups are indeed emblematic of all types of social contrasts, notably economic (the rich versus the less rich) and cultural (families endowed or not with a cultural capital similar to that acquired at school). But above all, extending the analysis to more than two social groups complicates it considerably. When we add a single social origin to the analysis—for example, children of white-collar workers—we need to track not just one change in educational inequalities between social groups (differences in educational experiences of children of managerial workers and of blue-collar workers), but three (differences in educational experiences of (1) children of managerial workers versus those of blue-collar workers, (2) children of managerial workers versus those of white-collar workers, and (3) children of white-collar workers versus those of blue-collar workers). Moreover, there is no guarantee that these inequalities vary with the same intensity, nor even in the same direction. Over time, differences in attainment can narrow between certain groups and widen between others. The risk of divergent conclusions between the groups examined grows when we increase the number of groups. With seven social groups, we need to track the changes in 21 inequality indicators, each possessing its own dynamics.

Our modeling is designed to serve two purposes: to take better account of the complexity of social space (by examining seven social origins rather than two) while summarizing the changes between the different groups in a single, central scenario that is more intelligible.

At date t , the inequality in educational attainment between children from social groups m and m' is measured by the log contrast Δy_t :

$$\Delta y_t(m, m', d) = \log \left(\frac{p_{d/m}(t)}{1 - p_{d/m}(t)} \right) - \log \left(\frac{p_{d/m'}(t)}{1 - p_{d/m'}(t)} \right)$$

where $p_{d/m}(t)$ is the probability for a person of group m born in t of obtaining the degree d .

The model we use was developed by Xie (1992). He regresses the following model on the log contrast:

$$\Delta y_t(m, m', d) = 2\beta_t(\psi_{md} - \psi_{m'd}) \text{ under the constraint } \beta_{t_0} = 1.$$

This constraint implies, in particular, that $\Delta y_{t_0}(m, m', d) = 2(\psi_{md} - \psi_{m'd})$ (1)

The log contrast $\Delta y_t(m, m', d)$ therefore depends on the difference $(\psi_{md} - \psi_{m'd})$, which expresses the strength of the link between social origin and educational attainment (according to (1), it is directly linked to the social contrasts in educational achievement at the initial date) and the parameter β_t , which expresses the link's intensity at date t .

The interesting property of this model is the special way in which social origin interferes with the time factor. When we look at the change in the log contrast between two dates t_1 and t_2 , we obtain:

$$\Delta y_{t_2}(m, m', d) - \Delta y_{t_1}(m, m', d) = 2\beta_{t_2}(\psi_{md} - \psi_{m'd}) - 2\beta_{t_1}(\psi_{md} - \psi_{m'd}) = 2(\beta_{t_2} - \beta_{t_1})(\psi_{md} - \psi_{m'd})$$

which, with (1), gives: $\Delta y_{t_2}(m, m', d) - \Delta y_{t_1}(m, m', d) = (\beta_{t_2} - \beta_{t_1})\Delta y_{t_0}(m, m', d)$

The change in educational inequality between groups m and m' thus depends on a time factor $(\beta_{t_2} - \beta_{t_1})$ that is identical regardless of which groups are compared. The change in total inequality is thus summed up by the time series of the β_t parameters alone.

Let us take three social groups (M_1, M_2, M_3) ranked by decreasing order of educational attainment (children from M_1 are higher achievers than those of M_2 , who, in turn, are higher achievers than those of M_3) and let us examine changes in differences in educational attainment patterns at three dates t_0, t_1, t_2 . We thus have:

$$\forall i < i', \Delta y_{t_1}(M_i, M_{i'}, j) - \Delta y_{t_0}(M_i, M_{i'}, j) = (\beta_{t_1} - 1)\Delta y_{t_0}(M_i, M_{i'}, j)$$

$$\forall i < i', \Delta y_{t_2}(M_i, M_{i'}, j) - \Delta y_{t_1}(M_i, M_{i'}, j) = (\beta_{t_2} - \beta_{t_1})\Delta y_{t_0}(M_i, M_{i'}, j)$$

Because of the characteristics of groups M_i and $M_{i'}$, we have $\Delta y_{t_0}(M_i, M_{i'}, j) > 0$.

The change in educational inequality among children with different social background from the initial date is therefore given by the comparison with 1 of the parameter β_t . In particular, $\beta_{t_1} > 1$ implies $\Delta y_{t_1}(M_i, M_{i'}, j) > \Delta y_{t_0}(M_i, M_{i'}, j)$, i.e., that educational-attainment inequality between these three groups has increased between dates t_0 and t_1 . Note that this change is not the known change for two given social groups, but results from the general trend of our three social groups examined in pairs. That is why this is called a model of *uniform* change in relative odds. However, there is nothing to stop inequality from moving in a different direction at date t_2 . We can very well have $\beta_{t_2} < \beta_{t_1}$, implying a downtrend in inequality between t_1 and t_2 .

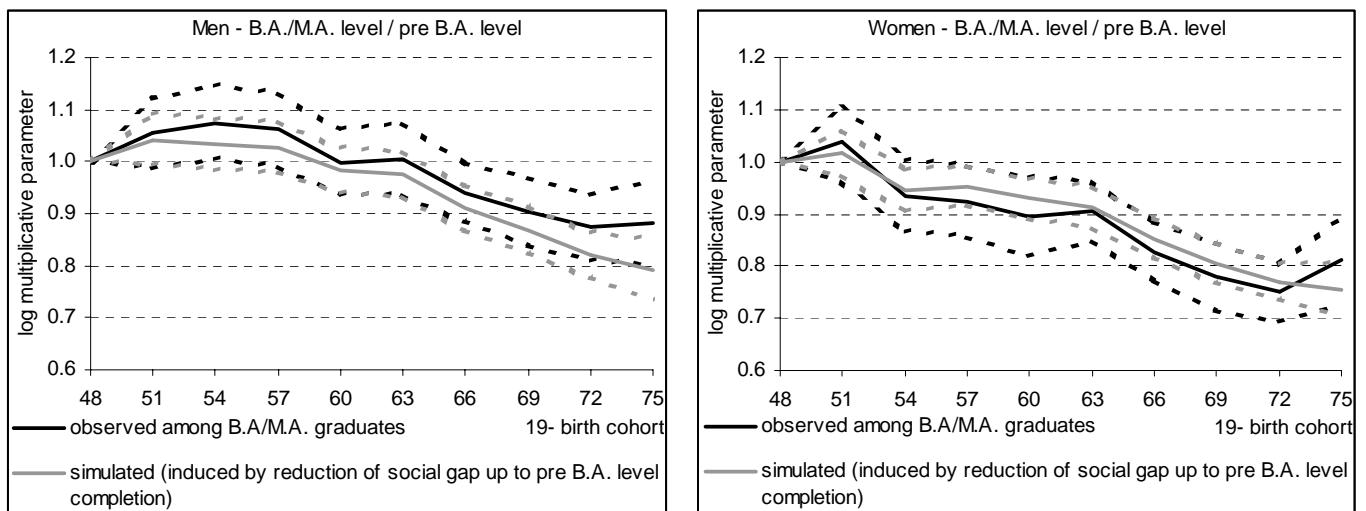
Despite its attractiveness, Xie's model is constraining. First, it assumes that, over the entire period, differences in educational attainment between two groups always follow the same direction (for example, that children of managerial workers are consistently more successful than children of white-collar workers). This property does, however, correspond to reality. Second, it is relevant if, for all pairs of social groups, inequality varies in the same direction between two dates. This tends to be the case, but not always.

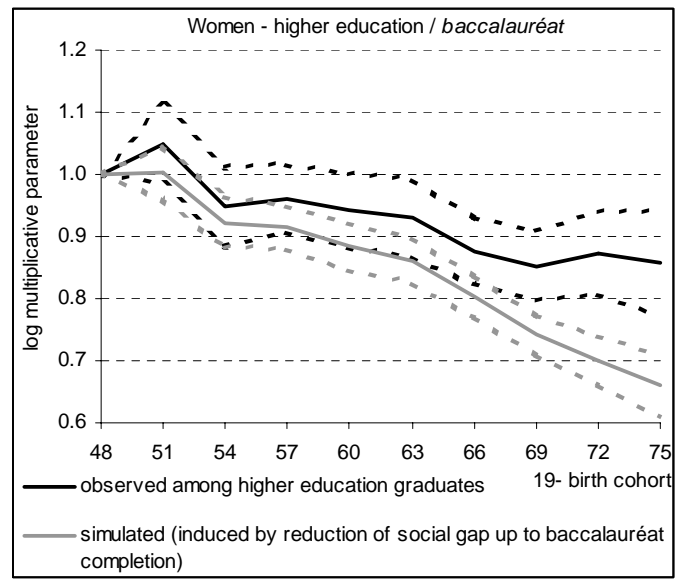
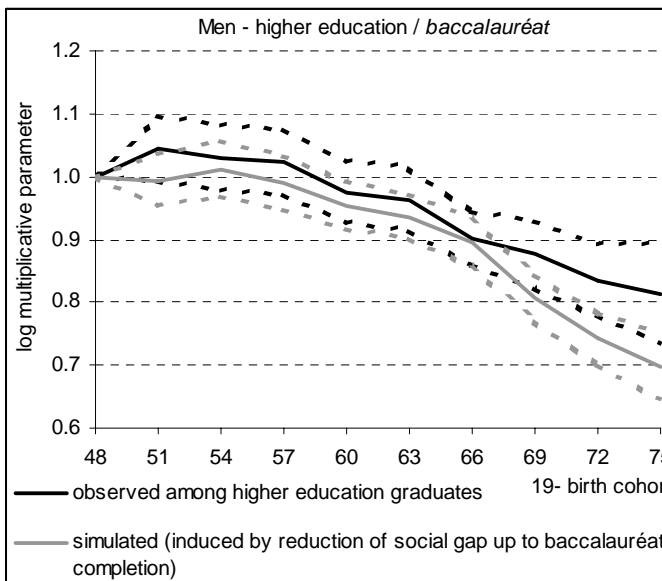
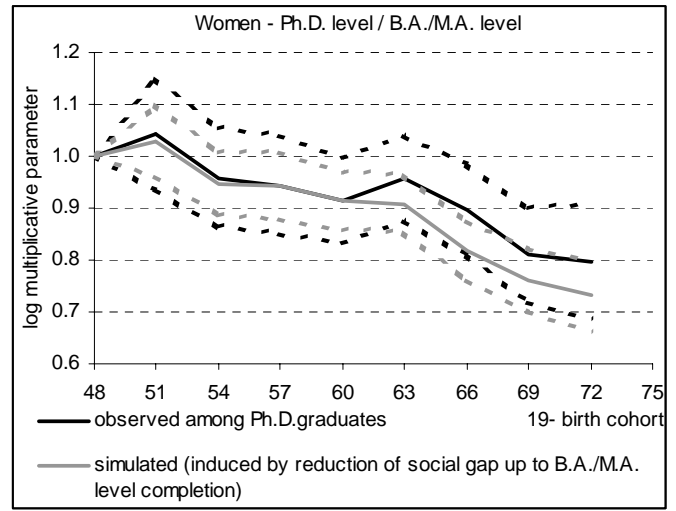
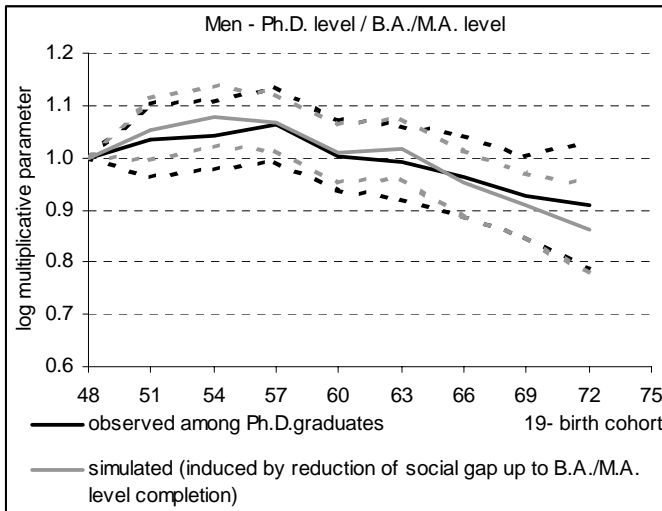
These results do not support the hypothesis that the decrease in social differences in educational achievement in higher education loses momentum as it moves from one level to the next. For men and women alike, the reduction of social gap has been identical at the pre-B.A., B.A./M.A., and Ph.D levels. The curves for the intensity association parameters are not significantly different. The expansion of vocationally-oriented programs in higher education has admittedly been a vector for access to higher education by children of less advantaged social groups. But, contrary to the conventional wisdom, those children have also had access via the university or university-level training institutes (*écoles*). And, in this case, a sufficient proportion of the children have

continued their studies beyond pre-B.A. level, then beyond B.A./M.A. level, to produce a comparable decrease in social differences at all three higher-education levels.

By contrast, our results show that the decrease of social disparities among higher education completion rates, at all levels of higher education qualification, has been less pronounced than the decrease of social disparities among secondary education completion rates. If social patterns in regard to undertaking post-*baccalauréat* studies had stayed unchanged since the 1948-50 birth cohort, the decrease of social disparities among higher education completion rates would have been significantly greater than actually observed. A possible explanation is that the widening access to the *baccalauréat* to students who previously did not reach it is partly due to the introduction of vocational *baccalauréats*. Their holders are less likely to continue their studies than holders of the “general” and “technology” *baccalauréats* (Esquieu, Poulet-Coulibando, 2002). Launched in 1985, the vocational *baccalauréat* expanded swiftly: it attracted 6.3% of candidates within five years of its inception, and more than double that percentage (13.6%) five years later. It has catered to the cohorts born in the late 1960s and after—the very ones for whom the decrease in association between social background and *baccalauréat* completion rates no longer seems to extend entirely into higher education. The creation of secondary- and higher-education programs aimed at a fast school-to-work transition does not seem to have had the same consequences in terms of social stratification of school.

Chart - Association parameter in log-multiplicative model on observed and simulated contingency tables





Interpretation: For each level, the solid black curve shows the change in the strength of association between social background and educational attainment actually observed. The solid gray curve plots the trend that would have been observed at level n if only the social selection up to level $n-1$ had taken place. The steeper the decline in the curve is, the greater the social gap reduction is. The 95% confidence intervals are shown by the dotted lines. Let us take the first chart top left, which compares the evolution of the odds of obtaining a pre-B.A. degree or higher versus obtaining a B.A./M.A. degree or higher. The gray curve shows the estimated change in the strength of association between social background and educational attainment at B.A./M.A. level if only the social selection up to pre-B.A. level had changed, with the selection between pre-B.A. and B.A./M.A. remaining constant. The fact that the two curves do not diverge significantly indicates a comparable convergence of probabilities between different social groups at the pre-B.A. and B.A./M.A. levels.

Scope of coverage: The scope varies from one chart to another. For each chart, it corresponds to the number of people who can be identified with certainty as having obtained or having failed to obtain a degree at least equal to the level considered.

The notion that, with the expansion of higher education, most of the diminution of socioeconomic inequalities in completion rates is due to the expansion of short and vocationally-oriented programs is often paired with the argument that their diffusion has eroded their labor-market value. Indeed, the “selection shift” scenario implies that the value of an education degree is not absolute but relative. In a situation where individuals’ capabilities are viewed as a private information item, unavailable—in particular—to potential employers, earning degrees are the means for the most capable persons to signal their capabilities. On this scenario, the goal of education is not to

raise people's productivity by augmenting their knowledge, but to rank them by their natural qualities, via a self-selection process (Arrow, 1973; Stiglitz, 1975). It is surely simplistic to contrast these two readings of the contribution of education. However, if a degree's value partly resides in the rank that it confers on graduates, the diffusion of higher-education degrees has inevitably entailed their partial devaluation, which we need to factor into the analysis of educational inequalities between children from different social backgrounds.

To take account of this devaluation of degrees over time, Thélot and Vallet (2000) examine changes in the attainment distribution for each social group over time, on the assumption that education degrees have lost value for cohorts born after 1953. They estimate devaluation by applying an arbitrary equivalence scale between degrees obtained by cohorts born before and after this dividing line. Their conclusion is unchanged: social selection in school has decreased, especially for older cohorts (born in the 1930s and 1940s). Goux and Maurin (1997) endorse this approach even more outspokenly by abandoning the concept of educational attainment for that of ranking. They accordingly choose as an indicator the ratio of the number of times that school respects the social hierarchy and the number of times that it reverses it. Comparing the status of the 1935-45 and 1959-68 birth cohorts, they find only a slight decline in inequality.

One way to take this devaluation explicitly into account when analyzing inequality is to measure unequal opportunities not for a given educational attainment, but at a constant selection level. Rather than looking at a particular degree, we focus on the educational attainment that ensures a given selection level, measured by the proportion of persons accessing this education level. Initially we set the selection level at 20%. In the 1963-65 birth cohort, the 20% with the highest educational attainment left the system with a degree at least equal to a pre-B.A. university diploma. In the 1975-77 birth cohort, which entered higher education at a time when it had become largely accessible, a graduate needed a degree at least equal to a B.A. or M.A. in order to rank among the top 20% for educational attainment. If the value of a degree is equated with the exit rank that it confers on education-system leavers, we therefore regard a B.A./M.A. or higher degree for the 1975-77 birth cohort as equivalent to a pre-B.A. diploma or higher degree for the cohort born twelve years earlier.

We have compared the educational disadvantage of working-class origins for these two cohorts. This disadvantage relative to other social groups is measured by odds ratios. The more the odds ratio differs from 1, the greater the disadvantage in terms of educational attainment for children of blue-collar workers. Chart 2 plots these measures of inequality at both dates: for the 1963-65 birth cohort on the x-axis; for the 1975-77 birth cohort on the y-axis. An unchanged inequality pattern would appear as an alignment on the bisector of points measuring the disadvantage of children of blue-collar workers compared with each of the other social groups. In reality, these points—particularly the one representing children of managerial workers—are situated below the bisector, indicating less inequality between children of blue-collar workers and other children for the 1975-77 birth cohort than for the 1963-65 birth cohort. For example, in the 1963-65 birth cohort, a son of managerial workers was 14.4 times as likely to be in the “most educated” group and a child of blue-collar workers to be in the “least educated” group than the opposite. In the 1975-77 birth cohort, the ratio fell to 11.5. This is the only net decrease in educational disadvantage for children of blue-collar workers between the two cohorts; compared with other social origins, the disadvantages decline very moderately, or even increase (*vis-à-vis* teachers’

children, for example). The decline in inequality at school for girls is more clear-cut. Educational-attainment differentials narrow vis-à-vis daughters of teachers, managerial workers, persons in intermediate occupations, the self-employed, and white-collar workers.

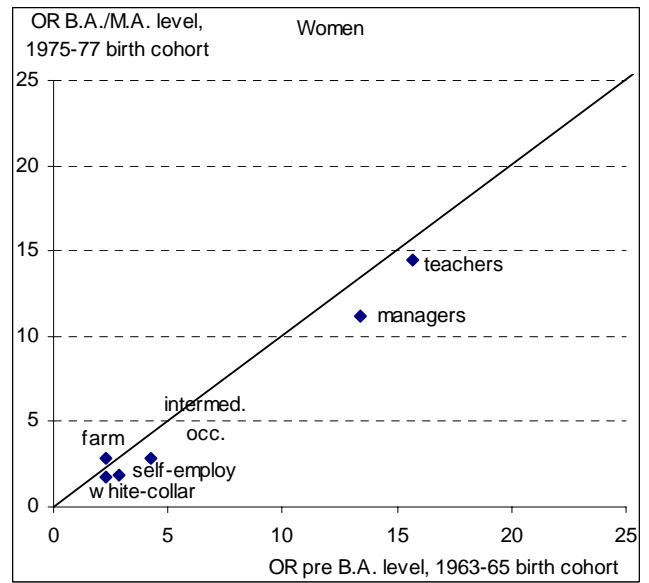
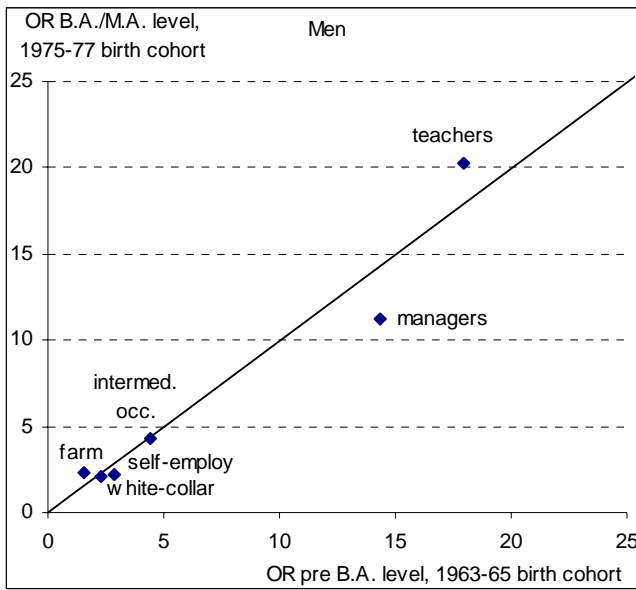
For sons and daughters alike, inequality between children of blue-collar workers and those of farmers widened. In both cohorts, farmers' children posted a greater success rate in higher education than children of blue-collar workers. The odds ratio in favor of farmers' sons of the 1963-65 birth cohort (relative to sons of blue-collar workers) is 1.9. In other words, if we pick two males at random in this cohort, one holding a degree that places him among the 20% most highly educated, the other not, it is 1.9 times more likely that the first will be a farmers' son than the opposite. The ratio is higher for the children of the 1975-77 cohort (2.2). This (classic) result is due to the change in the farmer's status over time. The group's internal recomposition—which involved the rise in the number of owners of medium- and large-sized holdings to the detriment of small holdings—has increased its economic and cultural capital (Barthez, 1993).

If we repeat the analysis by setting the selection level at 10%, we reach the same conclusions: social disparities in educational attainment tend to diminish rather than increase. Here, a member of the 1963-65 birth cohort needs a B.A./M.A. degree or higher to rank among the 10% most highly educated persons in that cohort. Ten years later, for the 1972-74 cohort, a Ph.D-level degree was required to join the top decile of graduates. Between these two cohorts, the odds that sons of blue-collar workers ranked among the 10% most highly educated converged (slightly) toward the odds of other children (except, again, farmers' children). Their disadvantage decreased more sharply than when we measured it at a less restrictive selection level. For girls from working-class families, the result is less explicit. The decrease in their educational disadvantage relative to daughters of managerial workers or teachers is on the same order of magnitude as the value recorded at the 20% level. But the odds against their being among the 10% most highly educated increase over time when measured against daughters of the self-employed, farmers, and persons in intermediate occupations.

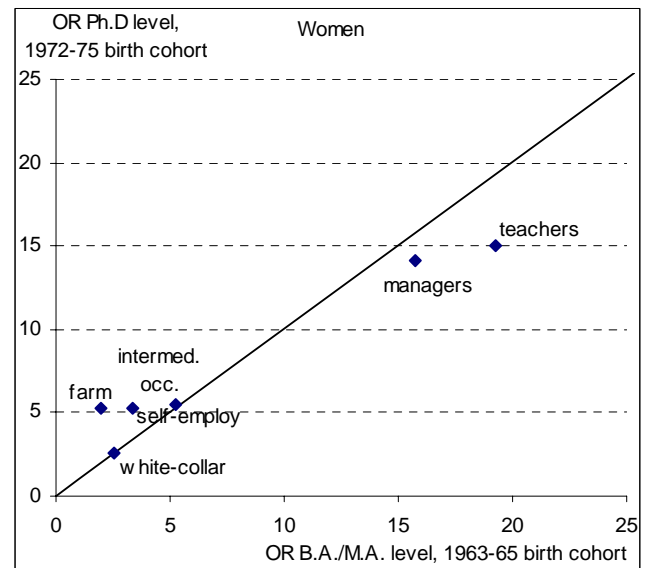
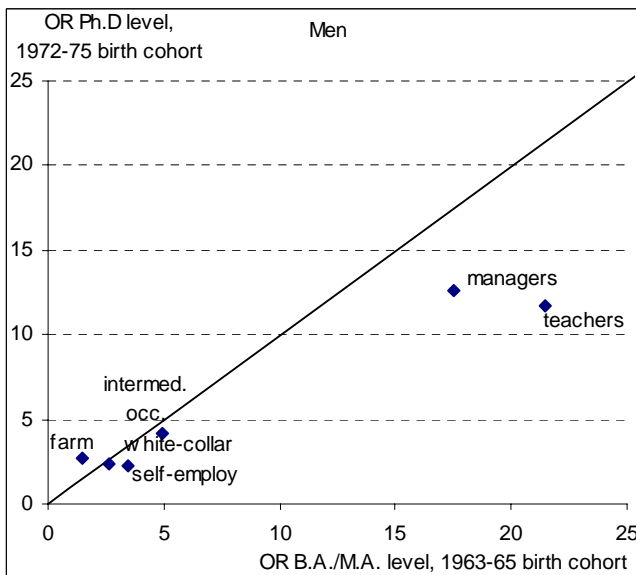
In the end, even taking the view that the value of a degree is measured solely by the relative status that it confers on its holder, we conclude that educational inequalities between children with different social background have slightly reduced over time. The odds of belonging to the most highly educated percentile consistently converge for the two emblematic and numerically significant groups: children of blue-collar workers and children of managerial workers.

Chart 3 - Comparison of social gap in educational certification for a constant selectivity level

a) Selection: being in the 20% most graduated



b) Selection: being in the 10% most graduated



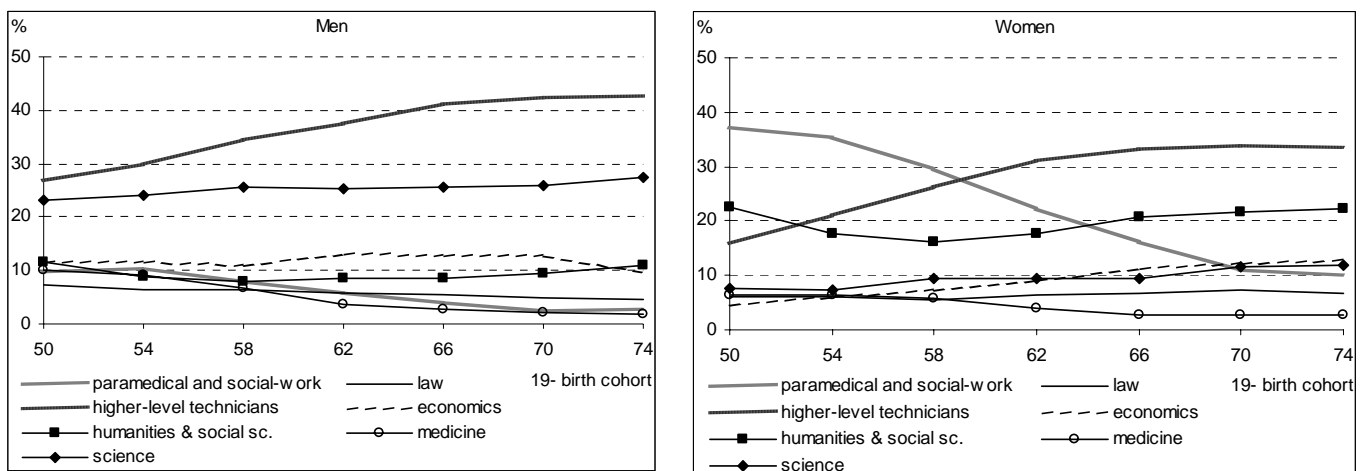
Interpretation: For the 1963-65 birth cohort, the odds ratio for obtaining a pre-B.A. level degree (*premier cycle*) or higher between sons of managerial workers and sons of blue-collar workers was 14.4. For the 1975-77 cohort, the odds ratio for obtaining an B.A./M.A. degree (*deuxième cycle*) or higher between the same two social origins was 11.3.

Historically, the periods of heavy education-system expansion have also witnessed a diversification of education supply. While it is not easy to determine whether it is the diversification of supply that creates education demand, or whether it is demand pressure that causes supply to adjust, the pattern is recurrent in the history of education. For example, the generalization of secondary education has coincided with a major diversification of its programs through the creation of technology-oriented and vocational *baccalauréats*. When this increase in education supply is accompanied by a political commitment not to differentiate study programs, the

diversification of curricula is achieved by offering optional courses. Higher education has not escaped this process. Its educational supply was diversified through two policies. The first was the creation of vocational training programs provided in universities (IUTs) and secondary schools (STSs). The Fouchet reform plan of 1963 (named after the then education minister) sought to adjust higher-education curricula to employment opportunities, at a time when baby-boomers were reaching higher-education age. Introduced in the 1960s, the programs producing “higher-level technicians” (*techniciens supérieurs*) expanded most sharply in the 1980s, in step with the overall growth of higher education: the number of students enrolled in these programs more than doubled in a decade. Even during the higher-education boom, these restricted-intake programs attracted a constant proportion of students. By contrast, training schools (*écoles supérieures professionnelles*) in the healthcare and social-work fields, which also practice selective intake, did not match the growth rate of the rest of the higher-education system. Moreover, a steadily rising number of future elementary-school teachers began to pass B.A.s before applying to teacher-training schools (*écoles normales*). This phenomenon—which gave applicants a level of training exceeding that of the *écoles normales* on their own—largely anticipated the establishment of the university-level institutes for training elementary-school teachers known as *Instituts Universitaires de Formation des Maîtres* (IUFMs) in 1991. All in all, the share of vocational training programs in the social, medical, and educational fields has steadily declined, falling from 30% for women of the 1958-61 birth cohort to 10% for women of the 1974-77 cohort.

In parallel with the diversification driven by the expansion of new “occupationally-oriented” programs, mainstream higher education, characterized by a highly theoretical content, also broadened its course offerings in order to adapt to labor-market demand and diversify employment opportunities for graduates—most notably by giving access to careers other than teaching. Traditional disciplines (law, medicine, humanities, and science) were supplemented by new ones—particularly management and engineering—previously taught in the *grandes écoles* and vocational institutes (*écoles supérieures professionnelles*). In the humanities and social science, new disciplines were introduced—university degrees in psychology and sociology were not created until the 1950s—and new degrees with specific vocational profiles were offered.

Chart 4 - Repartition of higher education graduates by field of study

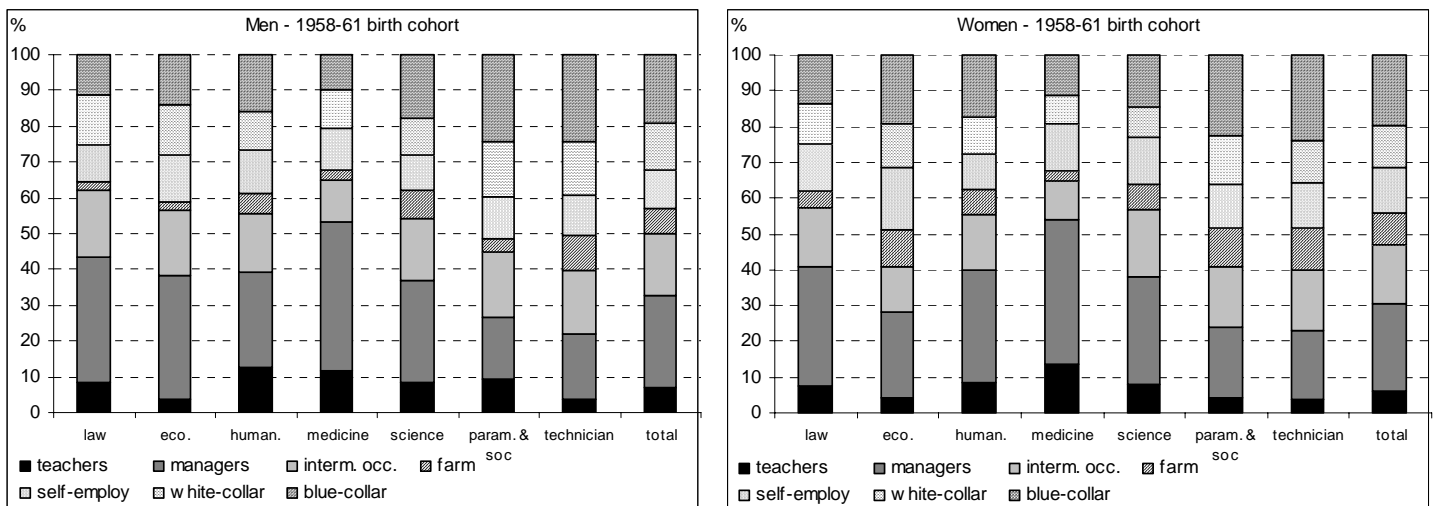


Scope of coverage: higher-education graduates.

The change in education supply—but also, certainly, the change in demand—caused a shift in the distribution of higher-education degrees, in particular among young women graduated from higher education. A steadily rising percentage of female higher-education graduates have degrees in the humanities and social sciences: 22% of young women in the 1974-77 birth cohort have been trained in these fields, versus 16% for the 1958-61 cohort. Meanwhile, in the 1980s, the expansion in managerial jobs (administration, sales/marketing, and production) led to an increase in the number of degrees in newly-created disciplines such as management and “economic and social administration” (*administration économique et sociale*: AES). The share of these programs in total higher education rose sharply from 7% for the 1958-61 cohort to 13% for the 1974-77 cohort. For young men, the shifts were more modest. Humanities and science expanded slightly faster than total higher education, while law studies recorded a mild decline. The proportion of medical students—both male and female—dropped after the introduction of strict quotas on the number of medical graduates in 1971.

The lengthening of higher-education studies therefore took place amid a differentiation of curricula within the higher-education system itself: diversification of certifications (creation of new degrees), revamping of teaching methods (university lecture courses are now complemented by courses given to smaller groups of students benefiting from a greater faculty presence and closer interaction with the workplace), opening of new disciplines, but also an unquestionable differentiation of institutions. Universities have become more specialized thanks to the establishment of new university centers in the Paris region and urban areas elsewhere in France: university facilities now exist in 200 cities compared with 40 in 1968.

Chart 5 - Repartition by social background of graduates in each higher education programs for the 1958-61 birth cohort



Scope of coverage: higher-education graduates born between 1958 and 1961.

Higher-education programs form a diverse and relatively hierarchic system. They distinguish themselves not only by the characteristics of their intake (social and educational origins), but also by the careers they offer and the unequal value of their degrees in the labor market. University graduates in the humanities and social sciences suffer from higher unemployment and greater job instability, and are less likely to hold managerial positions than

graduates in other disciplines (Giret, Molinari-Perrier, Moullet, 2006). Thanks to degree quotas, medical studies ensure well-paid jobs for their graduates. Short, vocationally-oriented programs are atypical in that they offer their graduates good career prospects—but still mainly for “higher-level technician” positions, not managerial jobs (Giret, Moullet, Thomas, 2003, Biscourp, 2006).

This ranking partly overlaps a social polarization of higher-education programs. For example, law studies are extremely polarized in social terms, and medical studies even more so. In the 1958-61 birth cohort, children of managerial workers and teachers represented more than half of all medical graduates, versus barely a third of all higher-education graduates. Conversely, “higher-level technician” training for young men and vocational programs in healthcare, social work, and education attract the largest share of students from less advantaged backgrounds. In the 1958-61 cohort, 44% of sons of blue-collar workers graduated from higher education with a technician diploma, compared with 23% for sons of managerial workers; among young women, the respective proportions are 35% versus 23% for healthcare and social-work degrees. By comparison with other mainstream programs, the fields with the greatest social mix are science and literature.

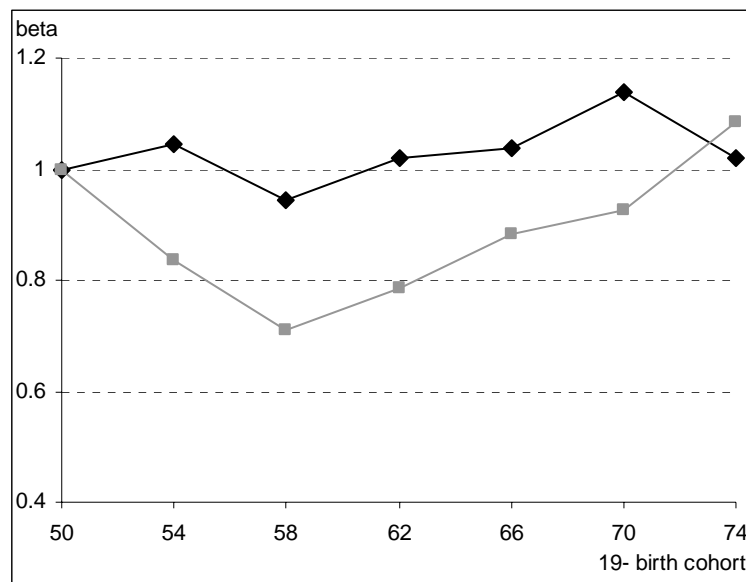
Amid this expanding education supply, and with higher-education degrees steadily losing their status as distinctive career assets, the field in which students are graduated may be more and more important for future professional opportunities. Indeed, the social inequality of educational attainment is compounded by inequality in the channeling of students in the higher-education system itself. By reducing social inequality in education to differences in educational attainment alone, we may therefore understate educational inequality between children with different social origin, since the education histories of children differ not only in the highest grade they complete but also in the field of the degree they earn. Thus, while inequality in educational attainment has been reduced, new inequalities of a more qualitative nature—concerning ‘curriculum choice’—may have become more important. Antoine Prost identified such a pattern in the secondary school system of the Orléans education district (1986). He showed that the apparent decrease of the influence of social background on earning a *baccalauréat* (for 1960s birth cohorts) masked growing disparities in secondary-school curriculum choice, and that, in the end, inequalities in earning the most prestigious *baccalauréat*—the “C” series (science and mathematics)—had rather increased. Our goal, therefore, is to determine if the expansion of higher education, which has benefited all social groups, particularly the more modest ones, has increased social differences in curriculum choice. This would validate the hypothesis that the reduction in educational-attainment inequality was accompanied by an increase in inequality (or disparities) in curriculum choice. In other words, we are trying to find out whether the hidden share of inequality—i.e., “horizontal” inequality—is growing.

We compare the change in the social polarization of education programs in a period of weak higher-education expansion (1950s birth cohorts) with the change at the time of a new higher-education opening (cohorts born in the 1960s and later). We seek to establish whether the possible exacerbation (or attenuation) of social polarization in certain higher-education programs can be interpreted as a set of socially differentiated strategies in response to the opening of higher education. For this purpose, we study the change in the link between study program and social origin, for the entire population of higher-education graduates irrespective of the degree

obtained.⁶ We summarize this link and its change by a log-multiplicative model (Box 2). We have defined seven distinct programs by cross-tabulating two sets of criteria: vocationally-oriented versus “generalist” (mainstream) curricula; field of study. The first two programs consist of short vocationally-oriented curricula: (1) “higher-level technician” training (essentially IUTs and BTSs), and (2) paramedical and social-work schools and *écoles normales*. The common denominator of these programs is their focus on the acquisition of occupational skills. Their intake is numerically restricted and applicants are selected on their record or through an entrance exam. The five other programs are defined on the basis of similarities in subject matter. They comprise disciplines taught at university or in specialized institutes such as business schools and engineering schools. Within this “mainstream studies” field, we have distinguished the following aggregated disciplines: humanities and social sciences (languages, literature, psychology, history, etc.); science (mathematics, life sciences, physics, chemistry, etc.); law; economics, and management; medicine (including pharmacy, dentistry, and veterinary medicine).

For young men, the degree of social differentiation in program choice has remained stable. For young women, social differences decreased in the 1950s birth cohorts, then increased in the cohorts born in the 1960s and later. However, these changes, while significant, are moderate, and the degree of social differentiation in program choice, despite its increase for the 1960s cohorts, has merely returned to its initial level. This pattern is consistent with the assumption that the population of students who entered higher education in the 1980s—or at least the female students—underwent a “fractional distillation” (A. Prost, 1986).

Chart 6 - Change in the association between study program (seven-category classification) and social background for higher-education graduates



Source: Labor-Force Surveys, 1996-2002.

Note: Black curve = young men, grey curve = young women. A decreasing parameter indicates a weaker social polarization of the program.

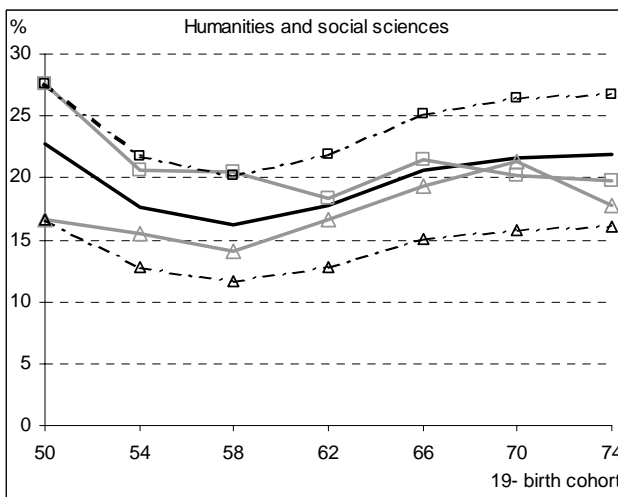
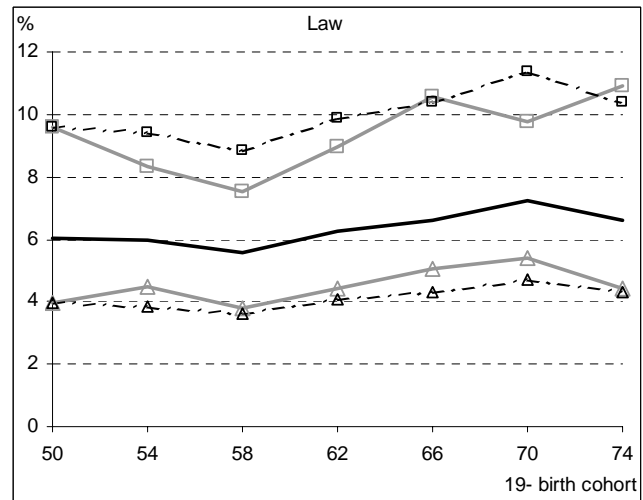
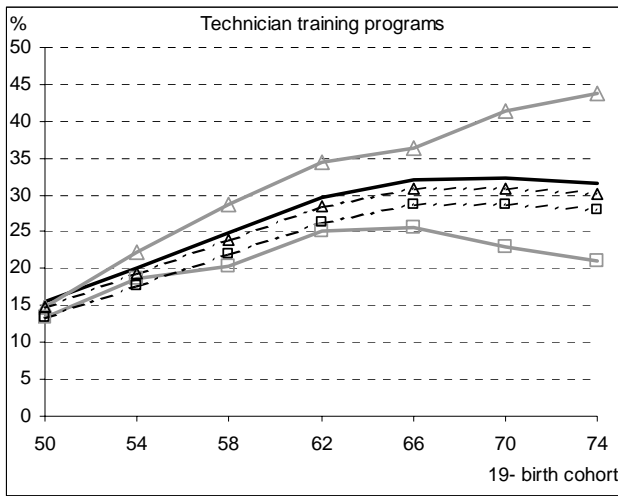
Scope of coverage: higher-education graduates.

⁶ We therefore assume that each future graduate is enrolled in the program corresponding to his or her final degree.

A more detailed analysis, program by program, confirms that there has been little overall change in the link between social origin and degree specialization over time. Equalization of opportunities has equally concerned all fields of higher education. It has been more pronounced for economics and management programs, for which probabilities of completion by social origin have more rapidly converged between the 1962-65 and 1974-77 cohorts. Recall that, for young men, the share of “higher technician” degrees increased until the 1966-69 cohort and remained stable thereafter. In keeping with conventional wisdom, children from social groups most distant from academic culture have accessed higher education through these programs, which are more technical and more oriented toward the acquisition of occupational skills. Less expectedly, however, the intake of these programs has not become “proletarian.” Even children of more advantaged social groups have been attracted to these programs, with the result that their social gradient has remained constant.

For young women, by contrast, the older pattern of study choices has tended to reassert itself with the diffusion of higher education. Generally speaking, the programs whose social intake was initially polarized most sharply in one direction or another have become even more so. This is notably the case for “higher technician” studies. For young women of modest social origin, higher-education access was increasingly ensured by “higher technician” studies, mostly in the tertiary sector. From the 1960 cohort onward, the daughters of managerial workers or teachers—who previously chose such programs with ever greater frequency as well—turned away from them in favor of mainstream curricula. Among daughters of blue-collar workers, the share of these degrees rose from 35% for the 1962-65 birth cohort to 45% for the 1974-77 cohort; among daughters of managerial workers, the proportion fell from 25% to nearly 20%. It should be noted that training schools in the social-work and medical sectors and teacher-training schools (*écoles normales*)—whose intake also tends to be from less-advantaged groups—have not experienced such a trend: their social polarization has remained roughly constant. But the share of students graduated in these programs among students graduated from higher education has decreased over time. Law and medicine, whose social intake is sharply defined, have become more socially polarized. For cohorts born in the early 1960s and later, the proportion of students choosing law as their higher-education specialty has grown faster among daughters of managerial workers than among those of blue-collar workers. Likewise, the percentage of medical students from well-to-do families has increased since the 1966-69 cohort. In contrast, humanities programs, with more students from disadvantage groups, have preserved a very homogeneous social intake.

Chart 7 - Change in odds of obtaining degrees in selected programs (conditional on being higher-education graduates) for daughters of managerial workers and of blue-collar workers



Caption:

Thick gray curves: female graduates of program as percentage of female higher-education graduates who are daughters of blue-collar workers (triangles) or managerial workers (squares).

Thick black curves: female graduates of program as percentage of total female higher-education graduates.

Dotted curves: notional percentage of female graduates of program, i.e., percentage that would have been observed with a constant social polarization in the programs, for daughters of blue-collar workers (triangles) and managerial workers (squares).

Curves with triangles: female higher-education graduates who are daughters of blue-collar workers.

Curves with squares: female higher-education graduates who are daughters of managerial workers.

Scope of coverage: Female higher-education graduates born in France.

Note: The notional odds are specified to maintain constant the odds ratio between a given social origin and the whole female graduates.

Interpretation: 15% of female higher-education graduates in the 1950-53 birth cohort who were daughters of blue-collar workers obtained a “higher technician” degree. If social contrasts had remained constant, the proportion for the 1974-77 cohort would have been 28%; the actual figure is 44%.

The program-by-program analysis thus provides support for the differentiated-growth hypothesis, at least for young women. The phase of rapid higher-education growth, which involved the 1958-77 birth cohorts, has gone hand in hand with a greater social polarization of individual higher-education programs: the most “upper-middle-class” programs have become even more so; the same is true of programs with the most “modest” social intake. Before this expansion phase, when the number of higher-education graduates was growing moderately, the social polarization of higher-education programs tended to remain stable or even diminish. While concurrence does not suffice to prove causality, the facts are consistent with the hypothesis of increasing horizontal inequality. This conclusion is, however, largely challenged by the fact that we do not find the same rise in social disparities in

program choices among young men. Yet higher-education growth involved young men at least as much as young women, and it is hard to understand why the “bourgeoisification” of the female intake in very heavily coed programs—such as law—does not apply to the male intake as well.

This conditional analysis offers partial evidence of a widening of social differences in program “choice” during the expansionary phase of French higher education. However, this does not necessarily mean that the diminution of social gap in completing higher education will be overstated if we disregard the inequality of program choices in our analysis. In the first part of the article, we showed that if we used non-linear measures of educational inequality, we could not legitimately frame the analysis in transitive terms. To determine if the decrease of educational inequalities of accessing to higher education is still confirmed when horizontal inequality is factored in, we study the complete degree-distribution structures for each social group, by cross-tabulating degree levels and study programs.

We then summarize the change in the distance between each social group’s degree structures by taking into account—via a uniform-change model of relative odds—the discipline or program in which the degree was obtained. Our conclusion remains that inequalities in pre-BA or higher graduation rates between children of different social classes have decreased. The fact of not taking into account a share of educational inequality by conducting the customary analysis in terms of educational attainment alone does not alter our findings on the change in the higher-education social mix. The change in the parameter that summarizes the degree of social selectivity in education (the intensity parameter) is very similar whether or not we include study programs in the analysis. This is due to the fact that, overall, the main feature of the change in higher-education inequality is the convergence, over time, of the various social groups’ odds of not being higher-education graduates.

On reading our results, we believe that the decreasing influence of social background on completion of higher education is a robust conclusion; in particular, it is robust to the introduction of a more detailed classification of degrees. Even if the range of proportions of higher education graduates from different social backgrounds is smaller, strong differences remain. When we specify constant selectivity and so emphasize the distinctive value of each degree, we find that the most striking feature is the persistence of inequality and not its mild decrease—despite the fact that our period of study witnessed major changes in each social group’s probability of access. And even if we restrict the analysis to a given degree level, the decline in educational inequalities between children of different social origins is slight.

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