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Mannheim/Fields of study choices within school (02-03/12/05)

The role and theoretical relevance of study choices in explaining social inequalities of educational outcomes.

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The part played by choices young people and their parents make in the production of inequalities of schooling careers (or educational outcomes) is both a very well explored field of research and a very relevant one, from a theoretical perspective. **It's an established fact today that social inequalities in academic performance and social inequalities in educational choice account for equally large proportions in overall social inequalities of schooling career** (Jonsson and Erikson, Duru-Bellat and Mingat). **The theoretical model mobilized for explaining this importance of socially diversified choices is most often the rational model (or RAT- rational action theory)** : families share unequal resources, which influence their evaluation of the risks and benefits associated with the different tracks under comparison, and they also develop unequal aspirations, since the latter (and the perceived benefits of the different tracks) are relative to their place in the social structure. The aim pursued by parents go further than the immediate educational perspective to include a concern for social reproduction. The result is a self-selection process, which is socially diversified (that is educational choices are stamped by social origin over and above inequalities in academic attainment).

However, all that research has mainly concerned what we may call “vertical” choices, that is choices between clearly unequal paths (and one-off ones) : entering or not upper secondary or tertiary education or choosing a general track versus a professional one. The RAT model tends to deny the possibility and significance of what would be “horizontal” choices, genuine culturally-shaped ones, that would only result from personal tastes; Goldthorpe acknowledges (1996) that “propensities to depart from rationality operate randomly in many ways”, but (I stress) randomly, and consequently without forming patterned collective behaviour. However, it could be so if those choices express to some extent socially embedded preferences; that suggests of course different theoretical orientations (Bourdieu) or at least broadening the RAT perspective.

This issue should, in my point of view, be considered as opened. Anyhow, it conveys interesting theoretical implications and also some political ones. What I shall propose here is **to investigate whether some “horizontal choices” seem to exist in France today, that would not fit (or not fit entirely) with a RAT explanation.**

First, my answer will be “no” : horizontal choices are mostly vertical ones. On the other hand, I will suggest that some horizontal choices do exist (more difficult to explain on a RAT basis), even if they are limited to the top (or to the bottom) of the educational hierarchy, and/or more frequent in some populations. I will rely here on the large amount of research on subject

choices in France achieved in the last twenty years (and often in my team, the IREDU). I will stress not so much who makes each choice, more the consequences the choice made has on the subsequent schooling career (which may of course be anticipated by the most well informed parents).

I. The benefits of some apparently horizontal choices...

I.1 The choice of a foreign language

In France, like in many other European countries, social inequalities regarding access to education have been structured in the past through formal selection and access to different kinds of schools. Since the beginning of the sixties, the educational system has been progressively unified and today, pupils are subject to a common curriculum until the end of the compulsory level of secondary education (the French "collège"). However, social inequalities regarding schooling do not show any sign of sharp decline, and it seems nowadays sensible to say that they take more and more often the subtle form of subject choices.

Let's rely first on a study concerning the first choice pupils encounter when entering secondary school, that is the choice of the first foreign language, and focussing upon the consequences of this choice on attainment (Duru-Bellat and Mingat, 1998). In France, it is commonly assessed that German is a rather difficult language, compared with English, while languages such as Spanish or Italian would be the easier to learn for a French speaker. I will not investigate here this issue in itself (is it true or false ?), but rather the effect of these popular assumptions. **If we look at the average academic level of pupils (measured by standardized tests in French and mathematics) when they enter into the "college", according to the language chosen, the figures are the following : 111,4 for those studying German; 100,3 for those studying English; 99,2 for those studying Spanish. We know too, that if, on the whole, about 13% of the pupils learn German as a first foreign language, this is the case for about 26% of teachers' children, to be compared with 8% among unskilled workers' children** (for a precise description of this population, see Caillé, 1996)

If we turn to the **average level within classes**, we observe that for classes in which all the pupils learn German, the average score is 113,6, compared with 99,6 for classes in which all the pupils learn English. Actually, it is obvious that through foreign language, **some ability grouping** has been implemented (by headmasters, consciously or not is another question).

We have computed models (regression analysis) **explaining pupils' academic progress** during the two first years of "college", taking into account as explanatory variables the socio-economic characteristics of the pupil, his or her prior attainment level, but also the foreign language learnt. The models show that when the other characteristics of pupils are held

constant, studying German brings in itself an advantage (+2,4 points over pupils studying Spanish, +1,4 compared with pupils studying English). So, **learning German seems to have a slight positive impact on progress.**

We have estimated various models to explore the different mechanisms this better progress uncovers.

a) a little part of the advantage linked with learning German can be explained by the fact that those pupils are brought together in better classes, in which progress proves to be better : when the average level of the class is taken into account in the same models, this advantage decreases, but only slightly (respectively 2,1 and 1,0). We find here **the well known impact of attending a “good” class.**

b) **“labelling effects” concerning the class** (considered as a good one) or the “best teachers” allocated to such classes; that’s because pupils studying German progress more when they attend a class in which all the pupils do learn German than when mixed with other children.

c) **individual “labelling effects”** : teachers would know they are facing pupils with better ability to succeed, or, more difficult to assess, it would result from the specific motivations of those pupils' parents, or, still more difficult to assess, by cognitive effects linked to the study of German in itself... Here, the fact that the pupils learning English in a class bringing together pupils studying German and English still progress less than pupils learning German in these "mixed" classes confirms the importance of individual labelling effects.

The pupils will thus progress more or less according to both collective and individual labelling effects linked to the option made. Another point relevant here, is the impact of ability grouping within classes. Pupils progress all the more because they attend classes whose average level is high, the worst situation being to attend a both weak and homogeneous class. **One may thus expect that the cumulative effects associated with ability grouping produce exponential differences from the entry into "college" until the last year of the "lycée".** That is all the more true because pupils are asked to make other choices, at the "college" level (in the third year, they may choose to learn Latin or Greek, the same trends being observed concerning those subjects, as those concerning the choice of German); this process goes on when entering the "lycée" as we are going to see next.

So, we are not surprised to observe that pupils learning German do obtain more frequently the "baccalauréat" (exam to be passed at the end of the upper secondary school -the French lycée) than other pupils, again, certainly not because of German in itself, but because of the cumulative effects of the previously evoked factors. Let's turn now to the choices pupils have to make at the level of the "lycée".

I. 2. The choice of type of baccalauréat at the level of the "lycée" (higher secondary school).

Several studies have been achieved in IREDU, to investigate **the different and successive choices pupils have to make from their entry into the "lycée"**.

A first choice is to be made when entering into the first year of the "lycée" (the 2nd form), between a large variety of subjects, supposed not to close any routes in the subsequent years. Then, when entering into the second year (the 1st form), pupils choose a type of "baccalauréat" (literary, economic, scientific, or technological one), and another optional subject. In the last year of the "lycée", he or she chooses the combination of this "baccalauréat" (economic with maths or foreign languages for instance). **A first observation is that the different kinds of "baccalauréat" are strictly ranked according to the academic level of the pupils and to their socio-economic background.** First are the scientific "baccalauréat", with the youngest and most privileged pupils, followed by the economic one, then the literary and at last the technological ones, and still much behind the more recent professional ones. For instance, the percentage of clerks and manual workers (or unemployed)' children is about 36% in the scientific track, between 46 and 49% in the other general baccalauréat, about 61% in the technological ones and 70% in the professional baccalauréat.

The structure observed is of course linked with social inequalities in prior academic attainment, but it is generated also through subject choices in the two first years of the lycée. At the end of "college", pupils of same level of attainment but of different socio-economic background make different choices (more choosing of Latin and "technology of automatism" for the pupils from high SES¹, versus more choosing of a third foreign language or management for the pupils from low SES). The social mix of the different options may change according to the supply available in school or some fashions among pupils, but there exists always a social ranking; in a recent study of the French Ministry of Education (Defresne and Rosenwald, 2004), focused on options at the 2nd level, we observe that the percentage of disadvantaged pupils (whose father is a manual worker or unemployed; the mean being 28%) varies from 15-18 % when Latin or Greek has been chosen to 42-45% in some technological options (here medico-social sciences).

What is observed within the "lycée", is that **the successive choices pupils have to make are connected with each other, but not according to what would be a "pedagogical" logic, but rather to a "benefit-driven" one** : it is among pupils who have chosen to study Latin in the first year of the "lycée" (2nd form) that the percentage of choices for a scientific second year (1st form) is the highest; those pupils, having managed to enter into what is the most prestigious route, will often drop this subject which has become useless... We observe too that pupils having studied Latin in the 2nd form and having not succeeded in entering into a scientific 1st form, "prefer" entering an economic one rather than a literary one, which again

¹ Choosing Latin is associated with a bulk of pupils and families' characteristics (well educated parents, taste for reading and "high brow" cultural leisure), even if this choice proves quite an utilitarian one from an external point of view (see Cibois, 1996).

reveals a positional logic (since the economic "baccalauréat" is the "second best" choice), rather than a pedagogical one.

Another study (Jarousse and Labopin, 1999) allows **to assess precisely the consecutive steps leading to access a scientific 1st form and the subsequent social inequalities** (opposing service class children to manual workers' ones) :

- **half of the differences result from the inequalities in attainment from the entry in the lycée (at the beginning of the 2nd form);**
- **about 11,5% result from the inequalities in the level achieved at the end of 2nd form;**
- **and 35% from the differences in option choices;**
- **the specific effect of demand for a scientific 1st form is much weaker (3,3%).**

The option studied matters in two ways : first, some options are associated with better progress during the year (mostly Latin, then TSA), second, other things being equal, having studied them is associated to more frequent access to 1ère S. So if an important part of the social inequalities of access to the scientific track results from inequalities in academic attainment, another important part is specifically generated through options choices.

So, through which process do subject choices have some impact in France ? From the college level, pupils are frequently brought together within classes according to their subject choices (at every level), this results in a form of ability grouping, with, consequently, both better progress in "good" classes and less progress in "weak" classes. In the "lycée" level, some labelling effects appear again, probably both individual and collective, like in the first years of the college level. In our different studies, for instance, we observed better progressions among pupils studying Latin in the first year of the "lycée".

So, option choices do have an impact on the schooling career but not through what they allow pupils to learn or because they would deliver some specific value-added in training, but through the class they give access to, classes unequal as far as school mix or other resources (including labelling) are concerned, in other words, because they warrant access to some specific educational resources (that is a context more favourable to learning). Let's note that in that respect, subject choices pursuit the same objective as school choice (choosing pairs and the quality of pedagogical environment). But it's much more common in France where only about 30% of parents really choose their children's collège (about 10% a public one, 20% a private one).

Let's underline that these trends in the way subjects and types of "baccalauréat" are chosen reveal the pupils' utilitarian attitudes towards the different subjects (here, choosing Latin is efficient if you want to become a scientist, but only in that it leads you into the best classes...). It may hinder the development of projects on personal and pedagogical grounds,

since the different types of "baccalauréat" are ranked in hierarchy, where the most important criteria is one's academic level in mathematics, and more broadly one's academic level in general. If a pupil is academically good, he or she will be induced, whatever his or her preferences may be, to try and enter into a scientific route, and will be firmly advised to do so, because it seems to be the "normal" choice for good pupils. Making project plans can appear as a "double bind" : you must elaborate a project, listening to your preferences, but then, whatever your project may be, follow a scientific route if you are able to do so... And diversifying the ways of being excellent may appear as being delusive, as long as there is no equality concerning the esteem between subjects.

This way of operating accounts for some share of the stability of social inequalities towards education, which could have been mitigated due to the dramatic increase in the rate of access to the "baccalauréat" level (about 68% today, compared with 26% in 1980 and 10% in 1960). The fact that more and more pupils obtain a baccalaureate gives more and more importance to the kind of "baccalauréat" you obtain, and consequently to the distinctive component of families' strategies. Choosing the right subject, and, more and more often, the right school, requires up to date information about the informal operating of the system. In no official booklet will you find that an efficient way to get a scientific "baccalauréat" is to choose Latin in the first year of the "lycée", or that studying Italian at this level is a quite risky choice in this respect. As Bourdieu and Passeron said (1970), for cultural goods in general, the choice of a subject presupposes "possessing of the cultural code required for decoding the objects displayed".

P.Merle (2002) uses the expression of “segregative democratisation” to resume the fact that if more and more pupils have access to the baccalauréat (this diploma is spreading and so democratised), in the meantime, the different options remains as socially diversified as before, and even a bit more (the “technological” baccalauréat are more and more popular). And the most privileged pupils strive to have access to a scientific one since with it, in France, you can choose whatever route you want into higher education.

The choices for a track at the tertiary level result from the speciality of the baccalauréat one possess, but not entirely : here again, a process of self-selection is observed. Even when they possess a scientific baccalauréat, pupils from working class “choose” less often the selective track leading to the elite schools (for boys : about 50% of service class children, compared to about 20% for manual workers' ones; for girls, the respective figures are 30% and 9%); the same trend is observed for the faculty of medicine. The final result is that in the most prestigious elite schools, the service class children represent about 80% of the student body (compared with about 33% in the universities, and about 15% in the whole population aged 20-24).

And let's note that with a diploma from an elite school in engineering, your may become a professional in finance... Actually, those diploma give access to all the top jobs (and also the

top political positions). In France (as Müller and Shavit have shown), vertical ranking through diploma prove more important than a correspondence between a given qualification and jobs. In other words, **as the relationships between education and training are relatively loose, the most important thing for youngsters is to get the best rank in the file for jobs. So every qualitative differentiation turns out in a “quantitative” one, and that’s why it’s difficult to observe truly horizontal choices.** And as education has been expanding dramatically in the last twenty years, differentiation in the educational curriculum occurs more often through the more subtle form of subject choices, and it’s the way through which social inequalities in educational outcomes are maintained.

Whatever the official texts may advocate (diversify the kinds of excellence is a recurrent slogan), people implement strategies and the aggregation of their choices define the effective value or meaning of every subject or type of course. And this value is one-dimensional, since the aim is to get the best ranking in the queue for selective routes into higher education or in the queue for jobs. It is certainly difficult to oppose this search for a distinctive credential (which would amount to mitigating this credentialism which, in France, is quite a social norm).

II. The limits of the RAT model...

However, it would be simplistic to confine strictly every educational choice to a rational decision. **First, we all know perfectly well that our models never explain 100% of the variance.** In an old study led with Alain Mingat (1979, 1988), we tried to assess precisely the extent to which pupils leaving the lycée make rational choices when entering into the university... Starting from empirical data about the obvious risks (of failure) of students entering the different tracks (with given characteristics), and also about the economic returns of each of those tracks, we estimated for each student what would be the best choice, that is the choice maximising the trade-off return/risk; then, we compared this theoretical choice with the one actually made by the study. What we observe is that, all across the board, the RAT model is operating : we can predict on this basis the choice that will be made, more accurately than on a random basis (42,5% of actual choices are conform to the “best” one). But this model predicts the students’ behaviour better for some of them than for other ones, better for students from advantaged social background than for less advantaged ones, better for students having a scientific baccalauréat than for others, better for boys than for girls...²

So, if the rational model is certainly relevant, it may prove more or less pervasive. And at that level, some truly horizontal choices may exist (medicine versus engineering, foreign language versus literature...).

² In some cases, students can opt for tracks whose value on the job-market is low, and « choose » to allow less time to their study to preserve a certain return : as Jarousse (1988) says, “working less to earn more”).

The analysis of the differences in choices between boys and girls is very interesting in this respect³. First, the obsession to rank oneself in the file for the best tracks is more widespread upon boys. For instance, at the end of the 2nd form, when a pupil is both academically good and a boy, he will generally choose a scientific track; only girls will choose another track even if they are academically good. And both teachers and parents will more often let them do so, compared with the pressure they exert on boys when they don't choose that track. So girls seem more free to express their preferences, as if for them it was less important... This is not peculiar to France. J.Jonsson (1999) finds for Sweden that with similar "ability profiles", boys and girls make different choices (the "relative advantages" in sex-typical subjects only explains about 10-30% of the sex effect on educational choices).

We have studied how pupils themselves justify those differences through interviews (Duru-Bellat, 1995), and so make their decision in real life (and not deducing their ways of reasoning from observed behaviours as it is currently made in a RAT perspective)...

It clearly appears that goals and aspirations are not simply utilitarian; they may appear as "benefit-driven", but the benefits taken in account are broadly defined. Some pupils (most numerous among girls) don't define expected benefits exclusively or even primarily in terms of monetary rewards. Girls more frequently evoke their academic tastes; they also describe their future life with a variety of criteria : not only the salary or prestige of the profession aimed at but also the time it will let for other dimensions of life. **They often express what we have called a "compromise choice", between what they would have dreamt of and what seems reasonable when those other aspects of life are taken into account.** Here, we refer of course to children and family, perceived by girls as an obvious and unquestionable constraints. So, if they may seem less ambitious than boys, that's because they anticipate that even if they work hard to get very scarce and prestigious diploma, they will not be as free as boys to make the most of them.

And actually, facts confirm this view; we know for instance that among students leaving the most prestigious elite school, the career and the salary remain stamped not so much by gender but by the matrimonial situation, women being handicapped and men boosted, by being married and having children⁴. We also know that it is not sufficient for young girls to choose a sex-atypical field of study to cancel their disadvantage on the labour market.

³ We should recall here that those choices combine with slight differences in academic attainment (with more boys than girls in the highest level of achievement in scientific matter, the reverse being observed in French, which have some impact upon teachers' tracking decisions). Jonsson (1999) clearly shows the impact of this "comparative advantage" in Sweden, even if it is far from explaining the majority of sex differences. A bulk of research sheds light on the way those inequalities of attainment are produced within school (for a synthesis, see for instance Duru-Bellat, 2004).

⁴ Here, beyond those anticipations, the level of self-confidence (the ability girls believe they possess) plays also a great part. Even if marks are objective signals of competences, they are interpreted by pupils, and a bulk of research shows that girls undervalue their level of competence in scientific sex-typed subjects.

Of course, **the RAT being very encompassing theory, one may consider that girls rationally take into account the anticipation of their future life, both professional and personnel, with the specific constraints they entail for them.** So it would be rational to prove less ambitious, to choose less demanding but also less rewarding tracks, to make sex-typical choices (to choose longer but more general studies is not so stupid since in France the length of the study is often more relevant than their speciality as far as tertiary jobs are concerned⁵). **But we can't discard all reference to preferences and life-plans, resulting from sexually oriented socialization.** More broadly, we can't discard the fact that children may prefer not climbing up the educational ladder (and later the hierarchy of professions), because they have built different criteria of what a good life is, because they imagine some life-plans in which economic consideration and the reward structure of the different professions is only one element. It is obvious that parents don't pass only material resources to their children; they also endow them with values and preferences.

This is a wide issue, often dismissed, at least in France (where we tend to claim that if some people have distinct preferences, here if they don't give so much value to education or at least to the most prestigious routes, that express necessarily an alienation). So if manual workers' children or girls access less often to elite schools, that is necessarily because they met some obstacles, but there is no doubt that they would have dreamt about that...

All that have obvious consequences on what we consider, here and now, as inequalities. If we take preferences as given (as RAT does), it amounts to consider them as identical for everybody group; and so, if educational outcomes are different, that result from unequal obstacles individuals did meet or from inaccurate information. Of course, it is convenient to discard this issue of preferences, since it is a difficult one...⁶ Anyway, the question remains open to what extent we could consider as equivalent unequal access and inequality.

As Gambetta (1987) suggests, we should probably mix up different kinds of explanation when studying choices : some of them would be rationally based, some would be shaped by constraints or preferences.

And let's note that even what appears as constraints at a given time may have been chosen; for instance, at the end of the 2nd form, girls have a lower academic level in mathematics, which acts as a constraint as far as access to a scientific track is concerned; but this lower

⁵ It may even be that in some historical circumstances, those sex-typical choices have protected women to a certain extent from unemployment resulting from the decline of industrial jobs. In that case, some apparently puzzling facts would not be so surprising (for instance the fact that in Sweden, inequalities between men and women have been mitigated, but education segregation in choices between girls and boys remain important (Jonsson, 1999)).

⁶ The question is how are preferences generated, and mostly why are there stamped by systematic social differences. Studying subject choices can't discard the role of individual tastes and preferences (if those are distributed at random, they can be considered as given); what is more at stake is how to interpret socially shaped ones.

level has appeared only during this year : when entering the 2nd form, girls were as good as boys; so they seem to have “chosen” to invest less in scientific subjects from that year, probably because they anticipate they won’t follow this track. Anyway, from a methodological point of view, it certainly requires that we combine both external and statistical methods with more qualitative ones (interviews).

Conclusions

All that research has many and various political consequences.

One may imagine ways of mitigating those inequalities in choices through different channels. At an institutional level : one could try not to bring together pupils in classes according to their subjects (it is presently made for first foreign language in France and consequently, the number of pupils choosing German has dropped...); one can also try to link more strongly the type of "baccalauréat" and the open routes in higher education. In Portugal for instance, it seems that choosing a scientific route in secondary school hinders studying arts or law in higher education.

At the level of pupils themselves, one should first recall that inequalities of choices complement inequalities of attainment, which are not only primary (and less important) effects. Second, one could help working class children and girls to enter into more strategic thinking, relying upon a more accurate information concerning the buying power of the different tracks.

But one may stress that those inequalities of choices also result from inequalities embedded in society in general. It is deceitful to let girls think that it would be sufficient for them to make choices similar to those boys make to cancel the handicap they will encounter in the job market. It is equally deceitful to think that school can itself create the prestige of some tracks independently of the quality of the jobs the pupils leaving those tracks obtain. The value of the different options in the educational system does not result from a pure decision made within school.

On another side, it’s clear that **actors do take into account, when making a choice, factors which are not chosen, which are constraints for themselves. So within schools and may be also among sociologists themselves, the stress put on choices may appear quite ideological, giving back to the pupils themselves the responsibility of their school career and neglecting all the undergone factors.** So, in France for instance, girls would be responsible, because of their inadequate choices, of their difficulties in getting a job...

Another question is who profits from the development of differentiation, of choices (of a school, of subjects...) ? Certainly, and as Croxford says (1994), "the maintenance of differentiation in the curriculum is powered by forces beyond the control of the educational

system". A large amount of research in education shows the strength of "demand for differentiation", from well-educated parents looking for relative advantage in the educational market (see for instance how these parents behave when faced with "detracking", cf. Wells and Oakes, 1996). French data clearly bear Ball's thesis that "choice and the market provide a way for the middle-classes to reassert their reproduction advantages in education, which had been threatened by the increasing social democratic de-differentiation of the schools"... But it is certainly impossible and undesirable to cancel or postpone always further any choice. We may even consider that in a context of expanding educational systems, horizontal differentiation is more and more relevant, because it results from this need for distinction less and less achieved through the diploma obtained (since diploma are more and more largely distributed).

The question becomes then how we can organize educational choice in such way as it does not reinforce social or gender inequality, which is quite a challenge as far as inequalities are maintained in the broader society. One may even underline that it is more important to act at that latter level, educational choices will adapt then.

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