Moral intuitions about social inequalities and individual responsibility: A European comparison

(first draft, all comments welcome)

Romina Boarini, Geert Demuijnck, Christine Le Clainche & Jerome Wittwer¹ (correspondence: leclainche@bretagne.ens-cachan.fr)

1. INTRODUCTION: THE STRUCTURE OF THE QUESTIONNAIRE AND THE REALIZED TESTS

This paper examines individual opinions about the causes and consequences of social and economic inequalities. The questionnaire is composed, on the one hand, of simple questions where one asks to make a direct judgement of the fairness of some institutional arrangements and of different policies aiming at reducing inequalities and, on the other hand, of more complex scenarios which question the legitimacy of the redistributive solutions of various forms.

The scenarios² are structured in the following way: they tell a story about four people who, according to the issue at stake, either have the same problem of health, or have school problems, or do the same studies, etc. If, therefore, for each question the context is fixed in the same way for the four people, the individual situations differ according to the nature of the causes who underlie their more or less bad situation.

By the 'nature' of the causes we refer to the fact that the individual situations depend on variables are classified in two categories: variables of circumstances and

¹ Affiliations ; Le Clainche : ENS Cachan, Boarina : OECD, Demuijnck : Universite catholique de Lille, Wittwer : Universite de Paris-Dauphine.

² Dans la numérotation du questionnaire, les questions-scénarios vont de la question 2 à la question 10. La formulation des scénarios suit un certain nombre de travaux précédents dans ce domaine, notamment voir Schokkaert, Devoogt, 1998, Schokkaert, 1999 (pour un survey), Konow (2001), Boarini(2004), Demuijnck, Le Clainche (2004).

variables of choice or responsibility. The typology is connected to the normative debate on inequality. The relevance of this typology constitutes the principal subject of our investigation.

More particularly, we try to find out whether individual opinions are sensitive to the distinction between "circumstances" and "responsible choice", and if this distinction is similar over different contexts, i.e. for inequalities which touch the sphere of health, schooling, or family. Part of our questionnaire also treats discrimination on the basis of ethnic origin. However, in the latter case the questions are put in a more direct way.¹

In theory, variables of circumstances correspond to individual characteristics that are innate or induced by the environment ("handicaps" or "talents"), while the discretionary aspects of individual behaviour are the "variables of responsible choice". By this empirical examination we seek to identify what people regard as being innate, induced or consciously chosen.

In the scenarios suggested, the variables of 'circumstances' and 'responsibility' are typically twofold: either they improve or they worsen the individual situation, which implies four possible combinations. Thus, for example, in a given scenario (call it "X"), the first of the four protagonists will be subject to the joint positive influence of both variables of circumstances and variables of responsibility, the second will undergo the positive influence of the circumstances and the negative influence of the bad choices for which he obviously may be held responsible, etc.

The individual situations are specified by means of costs or payments that are typical for the given context. Inequalities between individuals are directly defined in terms of these costs. We ask the respondents to opt for the fairest one of the proposals to divide the costs, or, which comes down to the same, of a reimbursement scheme of these costs. As a consequence, people express an implicit opinion on the fair character of the initial costs. Among the possible

¹ Explain reason

redistributive solutions, the majority of the scenarios propose six possible schemes that specify each a theoretical viewpoint of the distributive justice debate. Firstly, we propose two principles of *equality*: the first (formal) one corresponding to equality of public contributions and the second (substantial) one, corresponding to equality of individual contributions.

One can qualify a principle as formally egalitarian insofar as it aims at an equal treatment of all citizens. This principle of equal treatment is essential in what is often dubbed as 'democratic egalitarianism'. This vision is opposed to the egalitarian theories which aim not only an equal treatment but also an equal outcome, i.e. equality or at least some equalization of the conditions of living. In this last case one speaks about substantial egalitarian principles. Our first principle is a principle of strict equal treatment: it consists in making the same amount available for each citizen in order to satisfy a particular need. The second one is substantial. It is egalitarian to the extent that it treats equals equally. Everyone must contribute in the same way, but those who have more important needs are dealt with proportionally to their needs. This conforms to the idea according to which those who are in an identical situation are treated equally (`vertical equity').

In these two cases, one focuses either on the contribution of the State or on that of the individuals, without taking into account any responsibility of the individuals for their situation.

We propose then two principles which are largely tested in the experimental literature: the axioms developed by Fleurbaey-Bossert (1995) which recommend (a) equality of the public contributions for people facing the same initial circumstances (i.e. principle of compensation); (b) equality of the individual contributions for people who are similarly responsible (called 'principle of natural

reward'). Finally, we propose two criteria combining the axioms of Fleurbaey-Bossert which respectively give more and less weight to the axiom (a).¹

Certain scenarios were not conceived on the scheme just presented (crossing of variables of responsibility and circumstance, with the six mentioned distributive solutions). Nevertheless, they test the attractiveness of the same normative conceptions. They will be the subject of a detailed description when we will discuss the results.

Statistical tests

One of the important purposes of our investigation is the study of individual opinions by country. We run our questionnaire in October 2005 in four European countries (France, Italy, Denmark and Sweden), with an identical set of respondents (in each country the sample consisted of 100 third or fourth year economics students). Our purpose was to find out whether individual ethical intuitions ethical are influenced by the membership of a particular culture, or if, on the contrary, the judgements on the fair or unfair character right of inequalities was not related to this membership. We notice the somewhat rudimentary character pf the investigation which consists in using the nationality of the interviewed as the "identifying cultural trait". This quite vague notion does not allow discriminating more finely, i.e. to make a distinction or a hierarchy among the various cultural determinants of the opinions regarding inequalities. These may be particular institutional practices, specific policies of equal opportunity, past experience, the norm system and collective values in general, etc. The interpretation of the comparison between countries seems a tricky matter, but we consider it nevertheless necessary to judge the general or relative relevance of the theories of distributive justice which we try to test here.

¹ En général, du fait du faible effectif se reportant sur l'une ou l'autre de ces deux modalités, nous les regroupons dans l'analyse statistique.

The second type of test which we carry out focuses on the framing effect: the formulation of the questions, sometimes a single detail, may have an influence on the expressed opinions. For some questions, sentences were added or marginally modified in order to create sub-samples.¹ A more general test of context dependency can be obtained through the comparison of the scenarios relating to different types of inequality.

Before we discuss the results, we should mention a serious limit of our investigation: the formalization on which it is based cannot capture the complexity of the social processes underlying the inequalities. However simplification and stylization of the problem at stake is required in this kind of empirical research in order to maximize comprehension by the respondents.

The results of the questionnaire are firstly commented on the basis of the descriptive statistics of the total sample. To start with, we present the individual opinions with respect to the four topics of the investigation: health, education, family and ethnic origin. We proceed then with a certain number of nonparametric tests of significant effects related to nationality on the one hand and to the framing of the questions on the other hand. We will finally extend this section by the presentation of a multiple correspondence analysis applied to some questions. This extension will enable us to synthesize the information contained in the individual answers, without making any assumption on the causal nature of the links between the variables considered. It will also enable us to connect the individual characteristics of the respondents with their opinions, making a similar assumption about possible relations of causality which underlie the correlation observed.

¹Le sous-échantillonage a été mis en place de manière aléatoire lors de la distribution du questionnaire aux étudiants. Le questionnaire était disponible en deux variantes, qui comprenaient des questions identiques pour tous et d'autres questions différentes entre la variante 1 et la variante 2. Chaque étudiant a reçu un exemplaire d'une seule de ces deux variantes.

2. DESCRIPTIVE ANALYSIS ; CONTEXTS AND NATIONALITY

2.1 Contextual analysis

2.1.1 Health

In general the respondents judged the factors which increase the risks of individual diseases as 'circumstances. This is expressed in the overwhelming willingness to support a solidarity system in favor of persons who are exposed to high risks, independently of the underlying causes of these risks. This is illustrates by the results of question 1, which proposes the possibility of imposing supplementary insurance costs for people who incur a higher risk. A large majority of people rejects the very idea of higher insurance contributions for persons with higher risks of becoming ill, even when this risk is related to unhealthy food habits, irregular health control or genetic antecedents.

Notable exceptions are smoking and the practice of dangerous sports: people are held responsible for increased risks caused to one of these causes. But even in these cases, opinions are not very categorical: in the case of smoking, the three proposals (no supplementary insurance cost, supplement of 10 % or supplement of 30 %) get about the same percentage of choice (with a slight relative majority for the severe increase). With respect to dangerous sports, the absolute majority of people reject an increased insurance bill, but 31 % of the people are in favour of a small increase.

Do you think it is desirable to make someone pay a higher health insurance premium (or higher taxes if the health service is funded with tax money) if the likelihood of them being ill is greater for one of the following reasons? :

(tick the relevant box)

	This influe	should ence	not the	A increase	10% is	An ii to	ncrease o 30%	f up is
	premi	um at all		justifiable	•	justif	iable	
Family medical								
background								
Personal medical								
history								
Irregular medical care								
Behaviour which may ind	crease t	he risks :						
Poor nutrition								
Chain smoking								
Regular participation in dangerous sporting activities								

Que	stion 1a	Que	estion 1b :	
	Freq.	Pourcent.	Freq.	Pourcent.
No increase	317	85%	248	66%
10% increase	44	12%	97	26%
30% increase	12	3%	29	8%
	373	100%	374	100%
Que	stion 1c	:	Que	estion 1 d
	Freq.	Pourcent.	Freq.	Pourcent.
No increase	263	71%	232	62%
10% increase	78	21%	112	30%
30% increase	29	8%	31	8%
	370	100%	375	100%
Que	estion 1e	:	Q	uest 1 f
	Freq.	Pourcent.	Freq.	Pourcent.
No increase	96	26%	185	50%
10% increase	124	33%	115	31%
30% increase	153	41%	73	20%
	373	100%	373	100%

The following questions (2 to 4) show some interesting frame effects. These question illustrate how the amount and the precision of the given information influences significantly the answers. Question 2 tells the story of four people who suffer from asthma. Each combines the factors effort and circumstances in a different way. The solution which is most chosen (30%) is the one which equalizes public money expenses in favour of persons who face identical circumstances. About the same number of people choose solutions A, B, D and E, respectively 'equality of public money expenses', 'equality of personal financial contribution', 'equal welfare for people similarly responsible' and the combination of C and D., i.e. the solution which aims to combine both Fleurbaey-Bossert axioms. These percentages vary between 14 and 20 %.

Question 3 presents four women with respiratory problems. The structure of the costs to curs them is similar to the structure of the costs in the preceding question, and reveals the same combination of responsibility and circumstances. However, despite these similarities, the answers are slightly different. The answers are more concentrated on three options, and option D (combination of both Fleurbaey-Bossert axioms) is now the preferred option.

The following question is again structured according to the same costs of treatment. However, in this case – anaemia – a majority of people prefers to equalize the personal financial contribution to the payment of the cure, i.e. the most egalitarian option. A and C are often chosen as well here.

We remark a similarity here with the variant of question 1 in which the risks of disease were related to unhealthy food habits: in both cases, unhealthy food habits do not seem to be considered as 'responsibility' factors. Totally different is the case of smoking. Smokers are considered to be individually responsible for the consequences of their behaviour, although (social) circumstances which are at the origin of this behaviour are partially taken into account.

Adrian, Anthony, Paul and Patrick all suffer from asthma and have had to take drugs to control their condition for some years now. The cost of their treatment depends on two factors: 1) their physical reaction to the drugs, 2) diligently following the instructions. Adrian and Anthony can't use the standard, cheaper treatment because it doesn't work for them, while Paul and Patrick can use it. However, Adrian and Paul sometimes forget to take their medecine, while Anthony and Patrick never forget. If the patient doesn't take his medecine regularly, it takes longer to get the condition under control and so a larger dose is needed. Taking all this into consideration, at present the four men's medical costs are:

Adrian : 450, Anthony : 300, Paul : 250

Patrick : 200.

These four men all have the same income and pay the same amount of social insurance contributions and income tax combined. The national health service (funded with public money) has 800 per year to pay for the four men's treatment, which means that they will have to pay for some of it themselves. How do you think they should calculate each man's individual contribution? (Choose just one solution: A, B, C, D, E or F)

	Adrian		Anthony		Paul		Patrick	
	Cost : 450		Cost : 300		Cost : 250		Cost : 200	
	Paid	Paid by						
	by	the	by	the	by	the	by	the
	the	individual	the	individual	the	individual	the	individual
	State		State		State		State	
А	200	250	200	100	200	50	200	0
В	350	100	200	100	150	100	100	100
С	250	200	250	50	150	100	150	50
D	300	150	250	50	100	150	150	50
E	300	150	200	100	167	83	133	67
F	360	90	240	60	111	139	89	111

Lisa, Laura, Isabelle and Irene all have respiratory problems. Lisa and Laura have been smokers for the last 20 years while Isabelle and Irene have never smoked. Lisa and Irene work in a textile factory where most of their colleagues smoke during the breaks, while Laura and Isabelle are primary school teachers and work in a healthy environment. The cost of the treatment varies according to the gravity of the patient's condition and her exposure to tobacco smoke :

Lisa : 450,

Irene : 300,

Laura: 250

Isabelle : 200.

These four women all have the same income and pay the same amount of social insurance contributions and income tax combined. The national health service (funded with public money) has 800 per year to pay for the four women's treatment. This means that they will have to pay for some of it themselves. How do you think they should calculate each woman's individual contribution ? (Choose just one solution : A, B, C, D, E or F)

Lisa		Irene		Laura	l	Isabelle		
Cost : 450		Cost : 300		Cost : 250		Cost : 200		
Paid	Paid by							
by	the	by	the	by	the	by	the	
the	individual	the	individual	the	individual	the	individual	
State		State		State		State		

A	200	250	200	100	200	50	200	0
В	350	100	200	100	150	100	100	100
С	250	200	250	50	150	100	150	50
D	300	150	250	50	100	150	150	50
E	300	150	200	100	167	83	133	67
F	360	90	240	60	111	139	89	111

Claire and Caroline suffer from mild anaemia while Fanny and Frances suffer from a more serious form of the same complaint. Claire and Fanny eat meat, because they like it, while Caroline and Frances don't like meat and don't eat nearly as much as the two others (their parents didn't give them meat to eat when they were young and so they never developed a taste for it). Their food budget is the same, but their medical costs differ. Fanny and Frances have higher medical costs because of their more serious condition, but because Claire and Fanny eat a lot of meat, they don't need so much medicine and so the costs are lower. As a result Claire's treatment costs 200 per year, Caroline's 250, Fanny's 300 and Frances's 450. The national health service (funded with public money) has an annual budget of 800, how should they share out the costs? (Choose just one solution : A, B, C, D, E or F)

Frances		Fanny		Caroline		Claire		
Cost : 450		Cost : 300		Cost : 250		Cost : 200		
Paid	Paid by							
by	the	by	the	by	the	by	the	
the	individual	the	individual	the	individual	the	individual	
State		State		State		State		

Α	200	250	200	100	200	50	200	0
В	350	100	200	100	150	100	100	100
С	250	200	250	50	150	100	150	50
D	300	150	250	50	100	150	150	50
Е	300	150	200	100	167	83	133	67
F	360	90	240	60	111	139	89	111

Question 2		
:		
	Freq.	Pourcent.
А	73	20%
В	62	17%
с	113	31%
D	62	17%
E	48	13%
F	9	2%
Total	367	100%

Question 3		
:		
	Freq.	Pourcent.
А	64	17%
В	38	10%
С	115	31%
D	117	32%
E	25	7%
F	7	2%
Total	366	100%

Question 4		
:		
	Freq.	Pourcent.
А	66	18%



в	116	32%
С	82	22%
D	41	11%
E	46	13%
F	17	5%
Total	368	100%

The last two questions on health consider the case in which genetic endowments are the cause of social and economic inequalities. In 5 the focus is on a genetic predisposition to develop a relatively mild disease, the impact of which varies a lot in function of chosen behaviour (lifestyle, hygiene). In this situation the majority of the respondents (50%) chooses to equalize individual contributions, which implies that neither genetic endowment nor an unhealthy lifestyle are considered to be legitimate causes of inequality. However, one should notice that a not negligible percentage of individuals think that persons who have a higher risk to catch a disease should pay a higher contribution (solution B, 22% of the answers). Quite similarly, higher risks related to an unhealthy lifestyle should also lead, according to a part of the respondents, to a higher contribution to the health insurance system.

In scenario 6, the different genetic endowments are reflected in income differences, which are more of less important depending on whether or not the individuals had the opportunity to have a medical treatment. 42 % of the respondents opt for B, in which salaries are proportional to the *potential* performances, that is the performances that would be possible following the treatment. But the other solutions, salaries proportional to effective performances

and salaries proportional to potential performances without treatment are also quite often chosen (30 % and 27 %).

Question 5

Matthew, Martine, John and Julie work for the same computer company. They have all taken medical tests to monitor their genetic tendency to develop minor illnesses like colds and flu. These tests show that Matthew and Martine are twice as likely to catch these illnesses as John and Julie, supposing that they all lead a healthy lifestyle (moderate use of alcohol and tobacco, regular sleep patterns, balanced diet and regular physical exercise). On the other hand, Matthew and John would be more susceptible to illness if they all adopted an unhealthy lifestyle. Based on the hypothesis that the probability of catching minor illnesses depends on genetic inheritance and behaviour and not on their environment, the probability of each worker being ill is as follows:

	Matthew	Martine	John	Julie
Risk with healthy lifestyle	1/2	1/2	1/4	1⁄4
Risk with unhealthy lifestyle	4/5	1/2	3/4	1⁄4

In reality, all of them except John have a healthy lifestyle. Supposing that the social insurance office (funded with public money) was perfectly informed of the risks but not of each person's actual behaviour. It has to decide how much each worker should contribute. Of the following solutions, which one seems fairest to you? (Choose just one solution : A, B, C or D)

	Matthew	Martine	John	Julie
A	10%	10%	10%	10%
В	13.5%	13.5%	7%	7%
С	14%	8%	13%	4%
D	14%	10%	10%	5%

Let's imagine that in the future it will be possible to improve our physical and intellectual potential using biological drugs or genetic therapy. Matthew, Martine, John and Julie all apply for promotion in their company. Before deciding who to employ the company makes them all take a test to reveal their memory skills, ability to concentrate etc. Matthew and Martine score twice as much as John and Julie. In addition we know that Matthew and John had taken biological drugs to increase their potential during their work experience placement in the USA in their final year at university. On the other hand, neither Martine nor Julie had ever taken these drugs as they were not available in their country. The real (in bold print) and potential scores on their tests are as follows supposing an arbitrary scale of 0 to 150

	Matthew	Martine	John	Julie
With drugs	100	120	50	60
Without drugs	80	100	30	50

The company decides to promote all four applicants and now needs to fix their salaries. The total sum available for the four salaries depends on the total scores and not anyone's individual score. It must not exceed 1000 (supposing, to simplify, that social security and tax contributions remain the same for everyone). Which of these salary plans do you think the company should choose ? (Choose one solution : A, B or C)

	Matthew	Martine	John	Julie
А	334	334	166	166
В	303	364	150	182
С	307	385	115	192

			Question	
			5:	
				Fre
			А	19
Question 6 :			В	8
	Freq.	Pourcent.	С	7
А	112	30%	D	2
В	158	42%	Total	37
С	102	27%		
Total	372	100%		

Question 5 :		
	Freq.	Pourcent.
А	195	52%
В	81	22%
с	76	20%
D	20	5%
Total	372	100%

To conclude, this set of question shows that the respondents are only to a very small extent luck egalitarians. They are obviously quite severe with smokers which implies, one, that smoking is not considered to be a circumstance, and, two, that people should not be compensated for stupid choices. However, the answers are not so categorical, which may imply at least one of these: either that people are not luck egalitarian or that they are not fully responsible for their smoking. A similar interpretation dilemma holds for the quite surprising observation that unhealthy food habits, although in this case it is quite clear that these bad habits are perceived as illegitimate causes of inequality. The clearest rejection of luck egalitarianism comes from the genetic endowment questions. In this case there is no way in which these differences can be considered as 'responsibility' factors. And yet, people are not overwhelmingly willing to compensate for weak internal resources. These quite limited findings are fully in line with what our study on disability reveals.

2.1.2 School and family

Questions 7 to 10 propose stories related to school performances, talent and social background. Questions 7 and 8 are formulated in the same way as questions 3 to 5 are with respect to health. In particular, four people face different costs of schooling which vary according to individual circumstances and according to school choices. In question 7, the variable of responsibility is expressed through individual ambitions, the protagonists of the scenario being differentiated on the basis of the prestige of the Institute of arts where they wish to study. The majority of the respondents choose solution A, which consist in equalizing the public contributions. This suggests that, on the one hand, people are considered to be responsible for their ambitions and, on the other hand, that the differences in talent - due to factors independent of the individual will - are not likely of compensation

either. The other answers are distributed more or less uniformly among the solutions B, C, D and E (12%).

Question 8 presents a more standard case where the variable of responsibility is directly expressed in the form of the effort provided by the individuals in their studies. As in the preceding scenarios, the costs of (possible) after school help depend on this effort as well as on individual talents. Compared to the preceding question, one notices that no answer obtains a vast majority and that the respondents are divided between all suggested solutions.

Question 9 is formulated in a slightly different way: the question focuses on potential inequalities related to different individual talents while no characterization is given in terms of responsibility. This question is useful to see whether the efficient use of the education budget conflicts with the egalitarian concern which would recommend helping the least talented. The generally selected criterion is A, which is a combination between the egalitarian criterion and the criterion of efficiency (53%); the criterion in favour of the least talented and which means less efficient investments is chosen by 28% of the respondents while the criterion which recommends the most efficient allowance is chosen by 19%.

The last question about the topic "school and family" treats the case of individuals having different talents and living in socially different families, some of them fostering ambitions, other not. The selected solution is that which redistributes slightly in favour of the worst off (36%). This suggests that neither the difference in taste for effort nor the unfavourable circumstances seem to be taken into account in the individual judgements. It should also be noticed that the solution in which redistribution is in favour of the more "deserving" and in which unfavourable individual circumstances are not taken into account (C and D) are chosen by one individual on five. The solution which does not recommend any redistribution (A) is also considered as legitimate by one individual on five.

It is more difficult to summarize the lesson to be drawn here than in the case of health since the opinions are more divided between the various options. However, ambitions are rather regarded as variables of responsibility and the most frequently selected solutions tend to express concern for efficiency, combined with a slight redistribution in favour of the least talented.

2.1.3 Positive discrimination and ethnic origin.

The first two questions about the topic of the inequalities related to ethnic origin are formulated in the context of the debate about positive discrimination. The two scenarios consider the situation where two candidates apply to enrol at the most prestigious high school of the city. Two alternatives are considered: in the first one, the two candidates have identical qualifications, in the other, one of both (the one of non immigration origin) is more qualified than the other. The comparison of these two alternatives allows a gradual test of the opinions about equal opportunity. In case of question 11 (two newly graduated engineers apply for the same job), the majority of the respondents (85%) is in favour of "equal opportunity" (in the sense of equal probability, which means the ethnic origin should not be compensated for), no matter if qualification are equal or different. Only 8% of the respondents choose the answer implying "positive discrimination", in which one gives more chances to the 'immigrant' to be hired. In question 12, the results are slightly different: the mainly selected criterion remains "equal opportunity", but the relative proportions of the other answers vary, compared to question 11, according to the used variant. When the two students are equally qualified, 91% answer in favour of "equal opportunity", 4% choose to give more chances to the student from immigrant origin. On the other hand, when the student from immigrant background has slightly inferior grades, only' 62% decides in favour of "the equal opportunity" while 22% answer that still more chances should be given to her.

Question 13 explores the opinions of the respondents regarding policies of social and ethnic integration (anti-ghetto policies): the question is about building new residences in a hypothetical city in order to equilibrate the `composition' of the ethnic groups of the different neighbourhoods. More people are in favour of this

policy rather than opposed to it, though the proportions are very close (respectively 55% and 45%).

The hypothetical scenario presented in question 14 is about a company, of which the economic performance depends directly on the mutual understanding and the integration in the firm of its employees (co-operation, team work, etc are of huge importance). We ask the respondents if they think that this company should take into account the ethnic origins of the employees when it is observed that immigrants are less well integrated (knowing the economic consequences that this implies). A little more than two individuals out of three answer that the company should take into account this fact, while one out of three defends equal opportunity. The following question starts from a similar situation: the ethnic origin of the employees proves to have harmful consequences. Also in this question, the majority of the respondents estimates that it is legitimate for employers to take the ethnic origin into account if it possible diminishes the company's results.

It is possible that answers to questions 11 and 12 - where the respondents declared themselves largely in favour of the equal opportunity are different compared to those given to questions 14 and 15 - where on the contrary a minority subscribes to the principle of equal opportunity because the first questions focus on the legitimacy of a public decision while the second are focused on a private decision, that of a company. It may be that the latter context of the question naturally leads the people to concentrate more on the efficiency rather than on fairness.

Finally question 16 drafts a case of "targeting" (or 'racial profiling'): one asks to the respondents whether it is legitimate that the police more often controls people from immigrant origin (compared to the others) when it is proven that these people are statistically more often criminals. This question thus tackles the problem of arbitration between efficiency and equity under a different angle compared to the situations considered previously. There is here a clear majority of people (69%) who answer that they are unfavourable to the targeted police practices. If this result is coherent with questions 11 and 12, it conflicts rather with the results from

scenarios 13 and 14. It may be that this difference is again related to the context, and in particular to the fact that question 16, like 11 and 12, relates to the behaviour of the public authorities: possibly, people rather associate in a more natural way equal opportunity with institutional decisions than with private practices. In addition, since the question is about a 'human rights' issue, this question is also more likely to cause a "politically correct" answer of the respondents.

2.1. 4. Inheritance tax

The last question of the questionnaire starts again from economic inequalities caused by family membership, and, closely related, and their intergenerational transmission.¹ The problem considered is that of the inheritance tax. The question is declined in several stages: initially one asks the individuals if they are "for" or "against" the total suppression of this tax. For those who are against the total suppression, we ask whether the existing parameters (threshold and scale) should be increased or decreased. It is astonishing to note that 62% of the respondents would like to suppress any death duty. Among the 38% of those which are favourable to its maintenance, there is a light preference not to increase the no-tax threshold of 100.000 euros and to increase the tax rate.

¹ Si logiquement cette question aurait du appartenir à la section « famille et éducation », nous avons fait un autre choix lors de la conception du questionnaire, du fait de la nature différente de celle-ci par rapport aux questions précédentes. En effet il s'agit de la seule question où l'hypothèse de scénario fictif est(partiellement) levée, puisqu'elle s'appuie sur la vraie législation française en matière d'héritage. On indique aux personnes interrogées que les éléments contextuels dans la question sont ceux d'un pays européen, en revanche on ne précise pas qu'il s'agit de la France car nous ne voulons pas introduire de biais qui pourrait affecter la validité des comparaisons internationales.

Nous avons testé auprès d'étudiants français le fait de savoir s'ils connaissaient ou non le régime de taxation de l'héritage en France. En effet la question posée proposait en fait d'évaluer le régime d'imposition français de l'héritage alors même qu'il n'était mentionné dans ce test que pour la moitié des étudiants qu'il s'agissait de la France. L'autre moitié des étudiants répondait en référence à un pays européen non précisé,. Le résultat du test a montré qu'il n'y avait pas de différence significative entres les réponses des deux groupes d'étudiants. Nous ignorons cependant si les étudiants (notamment le premier groupe) étaient au courant du système actuel français.

2.2. INTERNATIONAL COMPARISONS

The comparisons between countries show in about two questions out of three significant differences in the given answers.¹ Interestingly, the effect of nationality does not depend on the issue at stake, statistically significant differences occur at the same time in the sections "health", "school family" and "ethnic origins" of the questionnaire. We also note that the structure of the question does not seem to matter in this respect: cultural specificity appears as well in the simple questions as in the complex scenarios. Another general result is the similarity between the profiles of answers given by the Scandinavian countries (Sweden and Denmark) and between those relating to the two countries of "Southern Europe" (France and Italy). It appears however that the French results are closer to the Italian results, than the Swedish to the Danish results.

One can make the assumption that institutional specificities of the educational system or of the social protection system have an influence on individual judgements. Institutional arrangements in Sweden and Denmark have close similarities, being different from those of France and Italy. Let us note however that the immigration policies strongly differ between Denmark and Sweden, the latter country being until now more open to immigration than Denmark, a country that has adopted particularly restrictive immigration policies the last years. In addition; Sweden has developed a policy of positive discrimination in favour of the

¹ Le test du chi2 est mis oeuvre et l'hypothèse nulle retenue est que les distributions de réponses sont indépendantes de la nationalité de la personne interrogée. Dans 20 questions nous refusons cette hypothèse tandis que dans 8 seulement l'hypothèse est acceptée.

population of foreign (linguistic or ethnic) origin in particular with regard to schooling and access to housing.¹

The answers on some questions (q1a, q1e, q3, q4, q8, q11, q15 and q16) do not show any statistical difference between countries. Therefore, we do not add any comment to what we said before. The other questions deserve some comment on the observed differences.

A/ Health

When it is asked whether an increase of the insurance cost is justified by personal antecedents (q1b), it is noticed that the Danes are more strongly against such an increase than the average of the other countries. At the opposite, the French are more often in favour of an increase either of 10 or of 30% than the other countries. If an irregular medical follow-up is at the origin of a possible increase of the price of individual health insurance, the Scandinavian countries are massively against this increase (on average with more than 80%) while in France and Italy only one individual out of six adheres to this opinion. In the latter countries, more than 35% of the people is in favour of an increase of 10% (only a little more than 15% in the Scandinavian countries). Bad food habits are judged differently by the Italians and the Swedes. Bad food habits are not legitimate reasons to induce a higher insurance price for 70% and 59% of their respective respondent samples. The French are as more often as the others in favour of an increase of 10% while the Danes favour particularly an increase of 30%, if bad food habits are at the origin of higher costs.

Strong addiction to tobacco leads to extremely different opinions. The French are most willingly to 'punish' smokers by a higher insurance price, even increased by 30 %. The Danes are the most tolerant toward smokers and do not want to punish them severely, if they want to punish them at all.

¹ Ainsi les politiques d'accès au logement de certaines populations immigrées ont pu être critiquées en Suède au motif qu'étant fondées sur des allocations monétaires elles entraînaient dans certaines villes des effets pervers : les immigrées choisissant des logements exigus de manière à distribuer une partie des allocations perçues dans leur pays d'origine.

In scenario 2 (individuals suffering from asthma) the test of the chi2 is significant with a threshold of 5%, which means that the differences between nationalities exist but are weaker. We find that the Swedes are more favourable to the two principles of formal equality compared to the other countries, a little less favourable to the principle which equalizes the individual contributions for those which bear an identical responsibility. The French are less often in favour of equality of individual contributions, and much more often favourable to the equality of the public contributions for the individuals having the same initial circumstances. Once again the Danes express attitudes opposed to those of the French. They are more often in favour of equality of the public contributions for the public contributions for people facing the similar circumstances.

In scenario q5, individuals have genetic predispositions to develop diseases but the actual development of the disease is function of individual behaviour. Here the opinions between countries diverge clearly. The Italians are divided between the formal equality of the individual contributions and a principle of proportionality to the risk of illness – if people have a healthy life style. The French have partly similar opinions, but they are also favourable to the principle of proportionality of contributions to the risk of illness when people have an unhealthy way of living. The Danes are strongly in favours of the formal equality of the individual contributions (80%), the Swedes often approve this same principle (60%) but are also in favour of the two principles of proportionality.

In scenario 6 (individuals having certain genetic predispositions to develop diseases, but actual disease is a function of the possibility of a medical treatment) the Italians and the Swedes are mainly in favour of final payments proportional to the performances when there is a treatment, while the Danes favour more often to final payments proportionality to the effective performances. The French on the other hand are divided between these two opinions and final payments proportional to the performances without treatment.

B/ School-Family

In scenario 7 (four students in fine arts) a majority of Danes is in favour of the equality of the public contributions, while the Italians are more in often favourable to the equality of the public contributions for the people having lived in the same circumstances. The Swedes are more often than people of other countries in favour of equality of the individual contributions when the responsibility of the individuals is similar, and a little less in favour than the others of the formal equality of individual contributions. Finally the French are divided between the solutions suggested. In the scenario 9 the Danes are in favour of the principle which combines efficiency and redistributions for the least talented (80% against 50%), while the French less often subscribe this principle (43%). The latter are more often in favour of compensation of the least talented than the other countries. The Swedes show as a light tendency to subscribe this principle, while the Italians are both in favour of the principle of compensation and the one of efficiency.

In question 10, the French and the Danes are those which favour generally a redistribution towards the individuals who have less income. Among the Danes, however, like among the Swedes, one counts the greatest number of individuals who are against any form of redistribution. Italians and French reveal similar profiles of answers and are divided between different forms of redistribution rewarding merit.

C/Positive discrimination related to ethnicity

Unlike question 11 which focuses on a similar situation, question 12 reveals a nationality effect. If the Danes declare themselves more often than the others in favour of "equality of chances" (in the sense of equal probability, which implies that ethnic origin is not regarded as an unfavourable circumstance; 85% against 75 on average), the French are those who on average are more favourable to a principle of positive discrimination which would support immigrants.

The question 13 asks the respondents if they would agree with policies of socially mixed residences. The Swedes diverge clearly from the other countries. It is the only country, indeed, in which the majority is opposed to such a policy. This can undoubtedly be partly explained by the previously mentioned criticisms of the current housing policy in Sweden, which advantages immigrants.

Even if in all countries, more than one individual out of two thinks that companies should take account of the ethnic characteristics of the employees if those would have a negative impact on the productivity (question 14), the percentages somewhat vary from one country to another. In Sweden and Italy in particular this criterion is approved by 84% and 72%, against 53% and 65% in France and in Denmark. The existence of a country related effect to is proven only with the error margin of 10% for question 15. Here the Swedes again think more often than the other countries that the economic results of the company override the principles of equal opportunity. Finally "the country effect" arises massively in the question devoted to the inheritance tax. The only country in which the majority of the respondents is against the suppression of this taxation is Italy, while the number of people who are favourable to the suppression varies largely among countries (it is 84% in Sweden, 66% in Denmark and 51% in France)¹.

It seems that the formulation of the question has a certain influence on the expressed opinions. For example, the significant differences exist between the results of the two variants of question 8, where respectively it was said (or not) that the difference of the school investment of the pupils was related to the more or less regular follow-up of their parents. When this information is given, less people are favourable to 'equality of public contributions' and more people are in favour of 'equality of individual contributions'.

¹ Notons ici que le profil des étudiants explique peut être en partie ce résultat : les étudiants danois, français et suédois sont issus d'université ou de business schools enseignant l'économie et la gestion, tandis que l'université de italienne (Université de Pavie) d'où sont issus les étudiants italiens est plutôt une université de Sciences Humaines.

The answers to question 12 change according to the exact formulation of the question. Alternative 1 specifies that the two schoolgirls who want to enrol in the same middle school have slightly different results, while in alternative 2 this assumption is dropped. We notice that the principle of positive discrimination in favour of the immigrant student obtains more support in the first case than in the second, which, on the one hand, may seem astonishing (since the legitimacy of this principle is more difficult to justify in alternative 1) but which can be also interpreted, on the other hand, as expressing the willingness to help more the person who starts with a handicap (when the slightly weaker school results are are combined with being a member of an 'ethnic minority').

Question 15 was put in two very different forms, so that one cannot rigorously speak about "alternatives". Alternative 1 is about a package delivery company in which it is essential that the services are provided on time. Alternative 2 one is about a clothing store in a rich neighbourhood. In both cases, the employees from immigrant origin perform not so well (objectively, in alternative 1; subjectively, i.e according to the judgement of the customers, in alternative 2). In alternative 1 the clear majority of the individuals (65%) consider that the company has the right to take these weak performances into account in its future strategy of recruiting. The opinions change radically in the case of the variable 2 where 55% of the respondents estimate that this taking into account is not legitimate.

To summarize, it arises from the analysis of the international comparison that the Swedes are undoubtedly the least likely to validate the dichotomy "choice/circumstances" whatever the context while the French and the Italians seem rather favourable. However, this result varies according to the context. Thus in the context of health, the opinions appear more distinct than in the context of education: the Swedes and the Danes (except for the question of bad food habits for the latter) are clearly the most independent with respect to this dichotomy and undoubtedly are opposed to the application of criteria of responsibility. The Italians and the French appear to be willing to apply this distinction as a criterion.

With regard to education, the Italians and the French significantly appear more favourable than the Swedes to the redistribution to the least talented. The Danes are in an intermediate position.

With respect to inheritance tax, we observe a clear majority in favour of the suppression of the tax in Sweden, Denmark and to a lesser extent France. The Italian respondents are more favourable to its maintenance.¹ Finally being positive discrimination related to the ethnic origin, it is observed that the Danes do not consider ethnic origin as a factor that demands any compensation or specific policy. The Swedes are significantly unfavourable to policies of socially mixed neighbourhoods, and the French are favourable to positive discrimination. The Italians dissociate themselves from the French on this topic and appear in particular closer to the Swedes especially when the profitability of the companies is at stake.

3. A PERSPECTIVE BASED ON MULTIPLE CORREPONDANCE ANALYSIS

In this section, we describe the results resulting from three multiple correspondence analyses (MCA). We thus seek to analyze our results by confronting the answers to the scenarios with other more common questions. This allows studying the individuals' attitude towards redistribution. We also add the dimension of nationality in order to highlight, if possible, the existence of a cultural trait. The multidimensional analysis may give us indications on the link between the ethical choice of principles (in the context of the dichotomy "circumstances/choice"), the social and cultural factors, and the more common choice of redistributive principles as revealed for instance through the opinion about inheritance tax.² We also

¹ Notons que cecu reflète peut-être une fois encore les université de provenance.

² L'idée est de tester le type de principes éthiques retenus dans le cadre des scénarios où la dichotomie « choix/circonstances » prévaut. Toutefois, il est peu intéressant dans une analyse en composantes

introduced the political opinion questions: their position is quasi exactly the one of the opinions about inheritance tax: leftish opinions are close to opinions defending inheritance tax, the right relates closely to the defence of the suppression of inheritance tax. Note that in the framework of these multiple component analyses, diplomas of parents nor family size do appear as relevant data in the analysis.

We thus use the scenarios, two by two, in the dimensions health and education jointly with questions relating to nationality, with the preferences about redistribution (private or social health insurance, inheritance tax). We add, in the framework of these MCA, the answers to the questions about positive discrimination. Even if ethnic origin is "a factor" which does not raise theoretical difficulties (in the equality of opportunity debate), it can reflect particular beliefs of individuals which influence their ethical preferences about choice and circumstances or about the more common terms of solidarity policies. We saw in particular with the preceding section that the Danes did not seem to regard the ethnic origin as factor of unfavourable circumstances. We can thus check if the multiple correspondence analyses tend to confirm this result.

We carry out three analyses in multiple correspondence.

1 We look for a possible link between 'reward of effort' and 'ambition'. We also analyze this link in the light of different elements: the judgments of the respondents about the consequences of genetic differences which explain productive performances, the arbitration equality/efficiency in teaching, positive discrimination at the school and the opinion on inheritance tax. We mention moreover the national membership (introduced as an additional variable). We use

multiples d'étudier l'ensemble des questions scénarios « choix circonstances » dans la mesure où les réponses aux questions demeurent fortement corrélées entre elles. Nous préférons les confronter à d'autres questions plus usuelles relatives aux préférences pour la redistribution afin de repérer d'éventuels rapprochements entre elles.

the questions scenarios 7 and 8 on the one hand, as well as questions 6, 9, 13 and 17 on the other hand.

2. Secondly, we carry out a multiple correspondence analysis which should help us to understand how the dichotomy choice-circumstances is evaluated by respondents in the context of health, related to food tastes on the one hand and professional ambitions on the other hand. We add questions relating to the insurance health (differentiation of insurance cost according to the existence of personal medical antecedents or different genetic predispositions). We thus use questions 4 and 7 on the one hand and the questions 1et 5 on the other hand.

3 Finally, the third analysis focuses on the evaluation of the dichotomy "choicecircumstances" in the context of pathologies related to the tobacco addiction and to the reward of effort in the education system. We add as in the preceding analysis the questions relating to the cost health insurance, this time related to tobacco addiction and the insurance costs associated with the different genetic predispositions. We thus use questions 3 and 8 on the one hand and questions 1 and 5 on the other hand.

3.1. Reward of effort at school and ambition

The following graph allows to present the results of the first analysis in multiple components where the questions scenarios 7 and 8 are used, on the one hand, as well as questions 6, 9, 13 and 17 on the other hand. It shows how the judgements about the dichotomy circumstances/choice are organized in the context of education, taking into account reward of the school effort and ambition. We confront these judgements with those obtained on the consequences of genetic differences to explain the productive performances, the arbitration equality/effectiveness in teaching, positive discrimination at the school and the opinion about inheritance tax.



Reading of the graph (Coding of the variables):

SCENARIOS Distribution A of the questions scénarios= neutrality; distribution B of the scenarios=egality questions; distribution C and E of the questions scenarios =impartiality; distribution D and F of the scénarios=récompense questions. Question 7 (professional ambitions) =goût; Question 8 (reward of the effort, helps school) = effort;

** OTHER QUESTIONS Question 6 (use of biomédicaments to improve the productive efficiency) Q6_1 (répartitionA) =prod-effec Q6_2 (répartitionB) =prod-avect Q6_3 (C)=prod-sanst distribution; Question 9 (arbitration equality efficiency in teaching) Q9-1 (répartition1) =arbitrage-egality; Q9-2 (répartition2) =arbitrage-compensation Q9-3 (répartition3) = arbitration efficiency Question 13 Q13-1 (yes co-education) = Q13-2 school-co-education (not, co-education) = school-nmixité; Question 17 (inheritance tax) Q17-1 (favorable) = ntaxe-héritage tax Q17-2 (unfavourable) =ntaxe-héritage.

*** COUNTRY: Italie=I; France=F; Suède=S; Danemark=D

Dimension 1 of the graph opposes the favourable answers to contributions independently of circumstances and choices, to those proposing the reward of effort at school (choice) and the compensation of the unfavourable circumstances. It should be noted that the reward of the "cheap" tastes does not fit in this opposition. The ambitions are obviously not considered in the same way as the effort at school. On this first dimension elements which take into account individual situations are opposed to elements which do not.

Dimension 2 is very different since it opposes the "equality" factors to factors which represent efficiency and the liberty of action (or the absence of public intervention in enforcing socially mixed housing or inheritance tax (nmixit, ntaxe-heritage)).

This first multiple correspondence analysis tends to show, for the questions considered here, that the opposition between the two ethical principles formulated within the framework of axiomatic Bossert-Fleurbaey (principle of natural reward and principle of compensation) is of secondary importance compared to the oppositions between equality and efficiency-freedom on the one hand and unconditional and conditional (based on choices and circumstances) policies on the other hand.

With regard to the nationality, introduced as an additional variable, we observe that on axis 1, Sweden is opposed to Italy while France is in an intermediate situation. The positions on the graphs tend to confirm the results resulting from the descriptive statistics: the Swedes choose unconditional policies. The Danes deviate from the other countries. Their position on axis 2 in particular is fits quasi exactly in with the unfavourable answers to the maintenance of inheritance tax and to a policy of socially mixed housing. This was not specifically revealed by the descriptive statistics.

3.2 Food tastes and professional ambitions

Nous utilisons ainsi les questions 4 et 7 d'une part et les questions 1 et 5 d'autre part.

The multiple correspondence analysis allows to understand how the dichotomy choice-circumstances is evaluated by the individuals in the context of health consequences of particular food tastes and of consequences of the professional ambitions cultivated by the family. We add questions relating to the health

insurance (differentiation of premiums according to the existence of personal medical antecedents or different genetic predispositions). We thus use questions 4 and 7 on the one hand and the questions 1et 5 on the other hand.



Reading of the graph (Coding of the variables):

*QUESTIONS SCENARIOS Distribution A of the questions scénarios= neutrality; distribution B of the scenarios=egality questions; distribution C and E of the questions scenarios =impartiality; distribution D and F of the scénarios=récompense questions. Question 4 (food tastes, weakens) = tradition; Question 7 (professional ambitions) =goût;

** OTHER QUESTIONS Question 1 (premiums of insurance): absence of prime=zéro extra premium of 10%=dix extra premium of 30% =tren Question 5 (predispositions genetics) distribution A (mutualisation) =mutual distribution B (premium proportional to the risk) =actua distribution C and D (between mutualisation and actualization) =mixed

*** COUNTRY: Italie=1; France=2; Suède=3; Danemark=4 Reading of the graph (Coding of the variable):

Dimension 1 opposes, like previously, the "neutrality" factors of the "choicecircumstances" questions to the "impartiality" factors and to "rewards" factors in the question about the food tastes. The "rewards" for the question about the ambitions (taste-recomp) is orthogonal with this dimension which shows again that the ambitions are considered in a very different way than other choices. Dimension 2 opposes "equality" factors of the "choice-circumstances questions" to the "neutrality" and "impartiality" elements. This marks the opposition between the people who are favourable to egalitarian policies (in terms of results) and those who are not. As for the "rewards", which indicate a preference in favour of a conditional equalization (conditional on 'choices') of the results, the analysis shows that ambitions (taste-recomp) is very close to the "equality" elements: to compensate for poor ambitions does not mean the same thing as to compensate effort at school. The compensation of ambitions seems, from the point of view of the opinions, being closely related to egalitarian principles.

It is noted, surprisingly, that the element which reflects a insurance costs based on real genetic risks (actua) is close to the "impartiality" elements which suppose compensations related to different characteristics. This tends to indicate that the genetic predispositions are considered as characteristics which do not demand a specific compensation. On the other hand, the element which represents the mutualisation of the risks (mutual) is located as expected on the side of the "neutrality" elements.

Concerning the extra insurance premiums, one observes without surprise that the absence of extra premium (zero) is near the "neutrality" variables whereas the method reflecting the highest extra premium (tren) is rather on the side of the "rewards" variables associated with the question about anaemia: it is necessary to penalize the culinary tastes that are harmful to health.

It is noted finally that nationalities spread out rather clearly on the first dimension. The Swedes favour rather unconditional policies (independent of the dichotomy" choice/circumstances") and are opposed to the Italians and to the French selecting more conditional policies (with the characteristics or the choices of the individuals). The Danes are located in the middle of these two positions.

3.3 Health consequences related to the tobacco addiction and reward of effort at school

The third analysis focuses on the evaluation of the dichotomy "choicecircumstances" in the context of pathologies related to the tobacco addiction and of the reward of the school effort. We add as in the preceding analysis the questions relating to the premiums of insurance health related this time to the tobacco addiction and the existence of premiums associated with different genetic predispositions. We thus use questions 3 and 8 on the one hand and questions 1 and 5 on the other hand.



Reading of the graph (Coding of the variables):

*SCENARIOS Distribution A of the questions scénarios= neutrality; distribution B of the scenarios=egality questions; distribution C and E of the questions scenarios =impartiality; distribution D and F of the scénarios=récompense questions. Question 3 (lung cancer, nicotinism) =tabagism; ; Question 8 (reward of the effort, helps school) = effort;

** OTHER QUESTIONS Question 1 (premiums of insurance): absence of prime=zéro extra premium of 10%=dix extra premium of 30% =tren Question 5 (predispositions genetics) distribution A (mutualisation) =mutual distribution B (premium proportional to the risk) =actua distribution C and D (between mutualisation and actualization) =mixed

*** COUNTRY: 1= Italy; 2=France; 3=Sweden; 4= Denmark

The graph shows the very clear superposition of the various variables of the "choice-circumstances" questions: to make the effort not to smoke or to make school efforts seem to be judged similarly. It is also noted that the mapping of the graph is largely explained by the opposition "equality"/"reward" in dimension 1. On this dimension one finds as awaited the maximum extra premium (tren) on the "side" of the "reward" and the absence of extra premium (zero) on the "side" of "the equality". Like in the preceding graph, French and Italian are opposed to the Swedes, the latter being more favourable to equality and the absence of extra premium.

The other dimension opposes the "impartiality" and "neutrality" variables on one side to the variables of "rewards" and "equality" on the other. Thus, the answers which do not take choice into account ("impartiality" and "neutrality") are opposed to other answers. This organization of the mapping is, from this point of view, rather different from the preceding one. Indeed, in the preceding graph, "impartiality" and "neutrality" were opposed more strongly, even if they were joined in opposition to the "equality" variables. The context of the "choice-circumstances" scheme obviously plays an important part in the geography of the answers.

En ce qui concerne la nationalité, on observe le même échelonnement que précédemment : les Suédois sont favorables à la mutualisation des risques et à l'absence de surprime. Ils sélectionnent des politiques indépendantes de la dichotomie choix/circonstances, à l'inverse des Italiens et des Français, très proches. Les Danois se situent dans une position intermédiaire, cependant plus proche des Français et des Italiens dans ce contexte précis.

This time the variable which reflects a premium which is taking account of the real genetic risk (actua) is, more logically, close to the variables of "rewards". This shows an important difference in the correlation between the variables of questions 3 and 4 and the question about the insurance premiums differentiated according to variable genetic predispositions. Here the context is important too: the choice-

circumstance scheme cannot sufficiently account for all the information contained in our data. This time, the variable which gives an account of a mutualisation of the risks (mutual) is located on dimension 1 on the side of "equality".

With regard to nationality, we observe the same spreading out as previously: the Swedes are favourable to the mutualisation of the risks and the absence of extra premium. They select policies independent of the dichotomy choice/circumstances, contrary to the Italians and the French. The Danes are located in an intermediate position, however nearer to the French and Italians in this precise context.

4. CONCLUSION

In this paper, we have tried to find out to which extent people are likely to validate the 'choice/circumstances' dichotomy as a legitimate basis for redistributive policies in different contexts (especially health and education) and to which extent they are in favour of positive discrimination of people of immigrant origin.

It is shown that the criterion of the strict responsibility (as represented by the principle of natural reward in the Bossert-Fleurbaey framework) is not validated. On the other hand, holding individuals responsible for their behaviour is approved in the context of health in particular by the French and the Italians, and not by the Swedes and the Danes (except for bad food habits). In general, it is rather the distinction between unconditional policies and policies that are conditional on circumstances and choices which seems to matter: the Swedes being clearly unfavourable to conditionality and more often opting for efficiency criteria. The French and the Italians favour on the other hand conditional policies, with more redistribution towards the least talented, while the Danes often are located in an intermediate position. Let us note in addition that the ambitions tend to be

considered by the individuals as variables of responsibility and as not variables of circumstances.

From the point of view of health, the question of the genetic predispositions and their productive impact demands a particular comment: The multiple correspondence analyses show that the questions about treatments which mitigate unfavourable genetic predispositions, in a productive context, are not mapped clearly on the expected axes. The descriptive statistics show in addition that the impact that such predispositions can have on health and/or the productive efficiency can legitimate a specific redistribution, although large minorities of the population seem opposed to such redistribution, in particular when individual behaviour does not take these predispositions into account. These results, somewhat ambiguous, would deserve further research because the genetic factor is clearly an unfavourable circumstance which can limit severely someone's opportunities and require greater efforts from poorly endowed categories of individuals.

We also note that, in the context of production, individuals are not willing to sacrifice the principle of efficiency. With regard to the policies of positive discrimination, the French are definitely favourable, unlike the Swedes and the Danes. When the impact on the profitability of the companies is important, the Italians join the Scandinavians.

Annexes :

Questionnaire (7-17)

Charles, Emma, Emmanuel & Damien are all art students in a country in which there are two different types of art schools(both funded with public money). Both types deliver an art teacher diploma, but it is a well-known fact that many of the most famous artists formerly studied at the more prestigious type of art school. Charles & Emma really want to have their own studio and earn their living from the sale of their art work, after studying at a prestigious art school. Emmanuel & Damian are quite happy to become art teachers ADD!and decide to go to a less prestigious school. Emma & Emmanuel are more talented than Charles & Damian who will have to study for longer to reach the same standard; the art school course for Charles & Emma costs more to run than the course at the art department of the local college that Emmanuel & Damian attend.

The education costs are as follows :

Charles : 450 Damian : 300 Emma : 250 Emmanuel : 200.

The State does not have enough money to pay all their education costs. How should it share out the money available ? (Choose just one solution, which seems the fairest to you)

	Charles Cost : 450		DamianEmmaEmmanueCost : 300Cost : 250Cost : 200		Emma Cost : 250		nuel 200	
	Paid by the State	Paid by the individual	Paid by the State	Paid by the individual	Paid by the State	Paid by the individual	Paid by the State	Paid by the individual
А	200	250	200	100	200	50	200	0

В	350	100	200	100	150	100	100	100
С	250	200	250	50	150	100	150	50
D	300	150	250	50	100	150	150	50
Е	300	150	200	100	167	83	133	67
F	360	90	240	60	111	139	89	111

Ray, Ralph, Peter and Paul all go to the same school and are weak students. Ray and Paul are, however, slightly better than Ralph and Peter. The school sets up a system of individual coaching to help the boys improve their results (delete ! : we suppose here that this is not a standard requirement in our hypothetical country). Ray and Peter work hard and do their homework while Ralph and Paul spend more time on extra-curricular activities. Access to the coaching sessions is determined by the pupils' original marks and by the effort they make. The cost of the coaching sessions is divided between the four boys with regard to the number of hours needed before they can catch the rest of the class.

Ralph : 450, Peter : 300,

Paul: 250

Ray : 200.

What criteria would you use to determine how much money the State (or whatever public authority) should contribute to these individual coaching sessions (the budget is insufficient to meet all the costs), knowing that the boys' parents all have the same income? (Choose just one solution)

	Ralph Cost : 4	450	Peter Cost : 3	300	Paul Cost : 2	250	Ray Cost : 2	200
	Paid by the State	Paid by the individual	Paid by the State	Paid by the individual	Paid by the State	Paid by the individual	Paid by the State	Paid by the individual
А	200	250	200	100	200	50	200	0
В	350	100	200	100	150	100	100	100
С	250	200	250	50	150	100	150	50
D	300	150	250	50	100	150	150	50
Е	300	150	200	100	167	83	133	67
F	360	90	240	60	111	139	89	111

Question 9

The Ministry of Education has an additional budget of 180 to improve Peter, John and James's educational standard. It is possible to measure their progress using certain tests. Each child's performance improves proportionally to his abilities and to the money invested in him by the Ministry of Education. Peter, whose intelligence is above average, improves more quickly than John, who is about average, and much more quickly than James who is below average.

The three tales below indicate possible schemes for dividing the budget, charting the pupils' progress in each case. In the society they live in, salaries earned are usually related to the person's individual educational performance.

Which way of sharing out the budget seems fairest to you ? (choose just one solution)

SCHEME 1	Peter	John	James	Total
Investment	60	60	60	180
Performance	120	60	40	220

SCHEME 2	Peter	John	James	Total
Investment	30	60	90	180
Performance	60	60	60	180

SCHEME 3	Peter	John	James	Total
Investment	90	45	45	180
Performances	180	45	30	255

Charles's parents are business lawyers and they persuade him to study law at university. His results are rather mediocre and his parents pay for him to have extra coaching and then pay for him to go to law school in Cambridge where he specialises in business law. His parents take him on in their practice where he quickly becomes a partner.

Kevin's parents are primary school teachers. Not knowing what to do after his A'levels (secondary school), he registers for a law degree and does quite well. He really enjoys legal work and does a work placement in practice specialising in business law where he is so impressive that they offer him a job. Ten years later he becomes a partner.

Alexander is a carpenter's son. His father works as an employee in a big firm. His mother is a cleaning lady. Although he is quite bright he doesn't do very well at school because he doesn't like studying and so decides to stop early. He is a good artist however and earns his living selling his art work at street markets and fairs.

Max's parents are both art teachers. They communicate their love of art to him and encourage him to develop his talents in this area. He is quite a good pupil at school. He goes to art school but fails his diploma.. He becomes a professional artist but only just scrapes a living by selling his art work.

Their respective monthly incomes are:

Charles 450 Kevin 450 Alexander 90

Max 90

Imagine that you could divide the total sum of their four incomes in a different way (ignoring the practical feasibility of this). Which of the following solutions seems fairest (or the least unfair)? The average income in their country is 130 per month.

	Charles	Kevin	Alexander	Max
А	450	450	90	90
В	430	430	90	130
С	430	470	90	90
D	420	440	90	130
Е	430	430	110	110

Question 11

Julian and Sunil have both just obtained a good engineering degree. They were part of the same year group and got the same class degree. They have similar personalities, they are both extravert, eloquent and hardworking. They also have similar tastes and apply for the same job in a certain firm. Both candidates are called to interview by the personnel department and both interview well.

Among graduates in engineering who are persons of immigrant descent, like Sunil, only 3 out of every 10, on average, find a job in the year that follows their graduation. Among engineering graduates who are not of immigrant descent, like Julian, 7 out of 10, on average, find a job in the year that follows their graduation.

The company is well aware of these statistics.

Do you think that the State should oblige companies to accept any of the following options (ignoring the difficulties involved in applying any regulations) ?

- a) Give equal opportunities to both candidates.
- b) Give Sunil a higher opportunity to be hired (! delete: which would mean in practice, employing ethnic minority candidates more frequently than equally qualified majority candidates when both apply for the same job).
- c) ADD! Give Julian a higher opportunity to be hired.
- d) . Employ Sunil
- e) Employ Julian.

Veronica and Jaswinda are both in Year 11 at school and are equally hardworking. They both want to go to the same secondary school, which is the best college in the town where they live. Veronica's results are better than Jaswinda's (Veronica usually gets As, while Jaswinda averages a B+). Neither girl lives in the catchment area (that is the part of the town in which students have the right to go to this particular college, situated in their neighbourhood). In the college in question, 3 out of ten students are persons of immigration descent and seven out of ten are not of immigration descent. Jaswinda comes from the first group while Veronica from the second.

The college in question is aware of these statistics and is free to choose its own pupils, once it has considered the applications of those who live in the catchment area. This year the school has just one extra place.

Do you think that the State should oblige the college to take any of the following

options (ignoring the practical difficulties involved)?

a) Give equal opportunities to both candidates.

b) Give Veronica a higher opportunity to be taken (delete ! : which would mean taking a higher percentage of majority candidates).

c) Give Jaswinda a higher opportunity to be taken.

b) Take Jaswinda.

d) Take Veronica.

In a town of this hypothetical country, most of the population are descended from local families. 10% of the population are of immigration descent.

This is reflected in local schools and workplaces where 10% of pupils, 10% of administrative workers, 10% of the police etc. are of immigration descent.

In the region as a whole the proportion is different, in particular in the three towns next to this town, where persons of immigration descent represent 30% of the population.

The regional council decide to adopt an integration policy intended to make the different ethnic groups mix more. For example, there is a plan to build more council flats in this town and, by reserving three flats in each block for families of immigrant descent, they hope to make the percentage of persons of immigration descent in each part of the region more balanced – leading to an average of 25% in each town.

Do you think this policy is fair?

Yes

Non

In the following questions (14, 15, 16) we ask you to indicate which factors do you think that a firm should take into account in its human resources policy (hiring, promotion, dismissals of employees) :

Question 14

Consider the following situation. The company *ALFA* employs a majority a people from local families, many of whom have relatives who have worked for them in the past for several generations. The work is of such a type and is organised in such a way that a good team spirit and sense of cooperation is essential for productivity. In the past, the company has employed some persons of immigration descent, but they didn't seem to integrate properly and this led to a decrease in productivity.

Do you think that the State should encourage companies to :

- 1. Employ the people they think will fit in best with their company atmosphere and work ethic regardless of their ethnic origin.
- 2. Adopt an equal opportunities policy even if this leads to a decrease in their turnover.

Consider the following situation. The company *Beta* specialises in delivering very important legal documents rapidly. The very nature of their works means that the documents must arrive at their destination within two hours of the time noted on the contract. If the documents arrive late, the company does not charge for their delivery. After a works inspection, it was noted that some workers systematically delivered the documents 15 minutes late. Most of these workers are of immigration descent.

Do you think the State should encourage companies to :

- 1. Take the inspection results into consideration, which could lead to fewer workers of immigration descent being employed.
- 2. Adopt an equal opportunities policy even if this leads to a decrease in turnover.

Statistics complied after a police enquiry show that out of every ten members of immigration descent who are stopped by the police, 4 will end up being arrested or fined (reasons for the arrest include possession of illegal drugs, invalid residence permits etc.)

The same statistics show that only one out of ten people from people who are not of immigration descent are arrested after being stopped by the police.

When you see these statistics, do you think that :

- a) It is fair for the police to stop people of immigration descent more frequently than those who are not of immigration descent.
- b) It is fairer for the police to stop the same percentage of people of immigration descent as those who are not of immigration descent.

Note: in the following question we introduce the EU currency (i.e. the Euro=€)

Question 17

In a hypothetical country¹ nowadays an only child who inherits from his parents pays inheritance tax ("death duties") if the inheritance is worth 100 000€ or more. Where the inheritance is over that figure the percentage paid in death duties varies from 5% if the total is up to 7600€ over the maximum to 40% if the total is over 1 700 000€. It is estimated that one person in six pays death duties on what they inherit from their parents (it should be noticed that, in our hypothetical country, gifts made to a child during the parents' lifetime are tax free up to a total of 30 000€ per child and per parent in any ten year period).

Do you think that (Answer this question Yes or No).:

Death duties should be abolished

Yes No

If you answered 'Yes', you have finished this question.

If you answered 'No', should death duties be modified? (answer each question Yes or No)

- 1. The 100 000€ limit for an only child should be lowered
 - Yes No

¹ The monetary units used in this scenario are Euros (remember that 1 Euro= ...crowns): think about a new hypothetical country which is different than those considered until now. The new hypothetical country looks like a European one.

2. The 100 000€ limit for an only child should be raised

Yes No

- The highest band, at present 40%, should be lowered Yes No
- 4. The highest band, at present 40%, should be raised

Yes No

Results (6-17)

Question 6		
	Freq.	Pourcent.
А	112	30%
В	158	42%
С	102	27%
Total	372	100%

Question 8		
	Freq.	Pourcent.
А	79	21%
В	100	27%
С	88	24%
D	57	15%
E	43	12%
F	5	1%
Total	372	100%

Question 10		
	Freq.	Pourcent.
А	82	22%
В	14	4%
С	71	19%
D	74	20%
E	134	36%
Total	375	100%

Question 12		
	Freq.	Pourcent.
A	279	76%
В	49	13%
С	16	4%
D	7	2%
E	18	5%
Total	369	100%

Question 7		
	Freq.	Pourcent.
А	125	34%
В	66	18%
С	63	17%
D	55	15%
E	52	14%
F	7	2%
Total	368	100%

Question 9		
	Freq.	Pourcent.
А	198	53%
В	104	28%
С	72	19%
D	1	0%
Total	375	100%

Question ⁻	11	
	Freq.	Pourcent.
А	309	84%
В	30	8%
С	12	3%
D	11	3%
E	7	2%
Total	369	100%

Question 13		
	Freq.	Pourcent.
oui	209	56%
non	167	44%
Total	376	100%

Question 14 :		
	Freq.	Pourcent.
А	258	68%
В	119	32%
Total	377	100%

Question 16 :		
	Freq.	Pourcent.
A	115	31%
В	261	69%
Total	376	100%

Question 17b :		
	Freq.	Pourcent.
А	54	15%
В	64	18%
С	233	66%
Total	351	100%

Question 17	7d :	
	Freq.	Pourcent.
А	67	19%
В	56	16%
С	236	66%
Total	359	100%

Question 15 :						
	Freq.	Pourcent.				
Α	209	55%				
В	168	45%				
Total	377	100%				

Question 17	'a :	
	Freq.	Pourcent.
А	232	62%
В	140	38%
Total	372	100%

Question 17c :					
	Freq.	Pourcent.			
A	32	9%			
В	79	23%			
С	235	68%			
Total	346	100%			

Question 17e :					
	Freq.	Pourcent.			
Α	25	7%			
В	80	23%			
С	236	69%			
Total	341	100%			

Résultats par pays

Question 1a						
	Italie	France		Danemark		Suède
Pas de						
majoration 10% de	88%	77%		89%		87%
majoration	10%	17%		10%		10%
maioration	2%	6%		1%		3%
Total	100%	100%		100%		100%
Question 2b	10070	10070		10070		10070
	alie	France	Da	nemark	S	iède
Pas de	and	Trance	Du	lineman	0	
majoration	63%	5	7%		79%	67%
majoration	28%	b 2	9%		17%	29%
maioration	9%	5 1	4%		4%	3%
Total	100%	10	0%		100%	100%
Question 1c ·	1007		0 /0		10070	10070
	Italie	France		Danemark		Suède
Pas de	nano	Trance		Danoman		Oucue
majoration	59%	63%		82%		82%
majoration	29%	27%		13%		15%
maioration	12%	10%		5%		3%
Total	100%	100%		100%		100%
Question 1d :						
	Italie	France		Danemark		Suède
Pas de						
majoration	70%	63%		57%		58%
10% de						
majoration	22%	35%		29%		33%
30% de						
majoration	9%	2%		14%		9%
Total	100%	100%		100%		100%
Question 1e :						
	Italie	France		Danemark		Suède
Pas de						
majoration 10% de	28%	16%		34%		26%
majoration 30% de	30%	36%		34%		33%
majoration	42%	47%		33%		42%
Total	100%	100%		100%		100%

Question 1f :				
	Italie	France	Danemark	Suède
Pas de				
majoration	47%	47%	55%	49%
majoration	30%	30%	26%	37%
maioration	23%	22%	19%	13%
Total	100%	100%	100%	100%
Total	10070	10070	10070	10070
Question 2 :				
	Italie	France	Danemark	Suède
А	18%	18%	20%	23%
В	16%	7%	26%	18%
Ċ	29%	40%	25%	29%
D	16%	19%	12%	21%
E	15%	16%	15%	6%
F	4%	0%	2%	3%
Total	100%	100%	100%	100%
1 otdi	10070	10070	10070	10070
Question 3 :				
	Italie	France	Danemark	Suède
А	15%	15%	18%	22%
В	8%	10%	18%	5%
С	37%	32%	24%	32%
D	32%	34%	27%	34%
Е	5%	6%	10%	6%
F	2%	2%	2%	1%
Total	100%	100%	100%	100%
Question 4 :				
	Italie	France	Danemark	Suède
A	14%	16%	22%	19%
В	29%	28%	35%	35%
С	26%	27%	20%	16%
D	11%	10%	11%	13%
E	14%	13%	12%	10%
F	5%	5%	1%	7%
Total	100%	100%	100%	100%
- ··				
Question 5 :	la a l'	F uero de	Densel	0
	Italle	France	Danemark	Suede
A	35%	35%	81%	60%
В	41%	24%	5%	16%
C	17%	36%	9%	19%
D	6%	5%	5%	5%
Total	100%	100%	100%	100%

Question 6 :				
	Italie	France	Danemark	Suède
А	21%	23%	45%	31%
В	55%	41%	28%	46%
Ċ	24%	35%	27%	22%
Total	100%	100%	100%	100%
Total	10076	10078	10078	10078
Question 7 :				
	Italie	France	Danemark	Suède
Α	27%	32%	44%	33%
В	15%	21%	21%	14%
С	26%	14%	9%	19%
D	19%	11%	12%	18%
F	11%	15%	14%	16%
F	1%	6%	0%	0%
Total	100%	100%	100%	100%
Total	10078	10078	10078	10070
Question 8 :				
lt	talie Fi	rance Da	inemark	Suède
A	22%	23%		18% 22%
В	21%	26%		38% 23%
С	29%	21%		20% 24%
D	17%	17%		10% 17%
F	10%	11%		14% 11%
F	1%	1%		0% 3%
r Total	100%	100%	1	0.0% 10.0%
i otai	10070	10070	·	100/0
Question 9 :				
	Italie	France	Danemark	Suède
Α	47%	43%	70%	52%
В	26%	39%	14%	31%
С	26%	18%	16%	17%
D	1%	0%	0%	0%
Total	100%	100%	100%	100%
Question 10 :		_		
	Italie	France	Danemark	Suède
A	4%	13%	37%	33%
В	4%	5%	1%	4%
С	24%	23%	15%	13%
D	33%	18%	6%	22%
E	34%	40%	41%	27%
Total	100%	100%	100%	100%
Question 11 :		_		0.1
	Italie	France	Danemark	Suede
A	83%	82%	86%	84%
В	10%	10%	9%	4%
С	3%	4%	3%	2%
D	1%	2%	1%	8%
E	3%	2%	1%	1%
Total	100%	100%	100%	100%

Question 12	:			
	Italie	France	Danemark	Suède
Δ	79%	65%	85%	73%
B	110/	21%	0%	10%
D	11/0	21/0	5 /0	12/0
C	4%	6%	2%	4%
D	1%	3%	3%	0%
E	4%	4%	1%	10%
Total	100%	100%	100%	100%
<u>E</u>				
Question 13	:			
	Italie	France	Danemark	Suède
oui	58%	61%	62%	41%
non	42%	30%	38%	50%
Total	4270	1000/	30%	100%
Total	100%	100%	100%	100%
Outotion 14				
Question 14	la la	F	Development	0
	nane	France	Danemark	Suede
A	/2%	53%	66%	84%
В	28%	47%	34%	16%
Total	100%	100%	100%	100%
Question 15	:			
	Italie	France	Danemark	Suède
A	55%	52%	49%	67%
В	45%	48%	51%	33%
Total	100%	100%	100%	100%
Question 16	:			
	Italie	France	Danemark	Suède
Δ	31%	29%	.37%	25%
P	60%	710/	620/	75%
Tatal	100%	1009/	100%	100%
TOLAI	100%	100%	100%	100%
Outpation 17	·			
Question 17	a:	Franco	Danomark	Suède
	100/	FIGILUE		
A	49%	D1%	%00	84%
В	51%	49%	34%	16%
Total	100%	100%	100%	100%
				
Question 17	/b:	-	D	
.	Italie	France	Danemark	Suède
A	2/%	19%	13%	3%
В	22%	26%	15%	10%
С	51%	56%	72%	86%
Total	100%	100%	100%	100%
Question 17	7c :			
	Italie	France	Danemark	Suède
A	8%	20%	6%	3%
В	40%	20%	21%	11%
С	52%	60%	74%	85%
Total	100%	100%	100%	100%

-

Question	17d ·			
Question	17 u .	_		
	Italie	France	Danemark	Suède
A	27%	24%	11%	12%
В	24%	19%	17%	3%
С	49%	57%	72%	84%
Total	100%	100%	100%	100%
Question	17e :			
	Italie	France	Danemark	Suède
Α	10%	12%	7%	1%
В	37%	27%	18%	13%
С	53%	61%	75%	86%
Total	100%	100%	100%	100%