Data needs and data availability for discrimination research in Europe

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About the author

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Summary

This paper explores the data availability relevant for researching discrimination against migrants and their descendants. The first section of the paper discusses concepts of discrimination and the causal relationship between discrimination and inequality (Section A). In a second step, the paper reviews past discrimination research and discusses a number of issues and challenges identified by existing research on discrimination (Section B). The review suggests that two types of patterns of discrimination need to be distinguished; (1) discrimination related to unequal conditions and (2) discrimination in the form of segregation or exclusion. Unequal conditions can be described as unequal rewards for the same efforts or as unequal price for the same good. Segregation or exclusion on the other hand refers to more than mere boundary drawing as it also includes the determination of who is in- or excluded. Before discussing the data needs and availability in those two different areas, Section C – titled ‘unspecified’ discrimination – deals with quantitative discrimination research that does not distinguish between these two areas. The next section on unequal conditions presents how discrimination itself is or can be used as an inferred explanatory variable and more in detail what the data requirements for estimating the determinants of wage rates are (Section D). The section on exclusion and segregation discusses action research on discrimination which is also known as discrimination or situation testing. In addition, the relationship between segregation and discrimination as well as the question about how segregation can be measured is presented. Section E deals with the data needs for measuring and explaining occupational segregation as well as the growing issue of overeducation. Section F concludes the study.
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A. Introduction

This paper differs from other thematic studies in the PROMINSTAT working papers in that it does not review datasets covered in the PROMINSTAT database or discussed in the PROMINSTAT country reports. There are several reasons for this.

1. The PROMINSTAT database covers only a very limited number of relevant datasets, mostly surveys on perceptions of the extent of discrimination and on experiences of discrimination by respondents such as the Eurobarometer surveys. They are referred to in the course of this paper because very interesting use has been made of them but it will become evident that state of the art discrimination research demands additional country-level variables to be added to Eurobarometer and other datasets. These additions are made by the researchers themselves and are not subsequently available to the public in the same way official datasets are. These enhanced datasets are not and cannot be covered by PROMINSTAT.

2. More broadly, specialised data for discrimination research are few and far between. Almost always are researchers forced to use data produced for other purposes such as employment research, education research, housing research etc or simply for administrative needs. PROMINSTAT probably contains descriptions of useful datasets but precisely pin-pointing them is beyond PROMINSTAT’s current search facilities.

3. The larger consequence is that the data may or may not contain all the necessary variables to isolate the purported influence of discrimination on the observed outcomes. Researchers and data owners have, however, become more adept at a) finding useful datasets, and b) merging data from different sources to create valuable new datasets. These are not covered by PROMINSTAT partly because of their private ownership and in large part because they are outside Europe. Using their example much of this paper is meant to demonstrate the demands current discrimination research has been placing on datasets.

4. Some datasets providing robust insights on the actual extent of discrimination, such as those resulting from discrimination testing, are by and large not covered in PROMINSTAT, partly reflecting their limited public availability.

Beyond immediate data issues the subject and also the data have been requiring increasingly ingenious test designs. The paper therefore also notes some of the novel statistical techniques that have found their way into discrimination research, although without going into any detail.

The first section of the paper discusses concepts of discrimination and the causal relationship between discrimination and inequality (Section A). In a second step, the paper reviews past discrimination research and discusses a number of issues and challenges identified by existing research on discrimination (Section B). The review suggests that two types of patterns discrimination need to be distinguished; (1) discrimination related to unequal conditions and (2) discrimination following from segregation or exclusion. Unequal conditions can be described as unequal rewards for the same efforts or as unequal price for the same good. Segregation or exclusion on the other hand refers to more than mere boundary drawing as it also includes the determination of who is in- or excluded. Before discussing the data needs and availability in those two different areas, Section C – titled ‘unspecified’ discrimination
– deals with quantitative discrimination research that does not distinguish between these two areas. The subsequent section on unequal conditions presents how discrimination itself is or can be used as an inferred explanatory variable and more in detail what the data requirements for estimating the determinants of wage rates are (Section D). The section on exclusion and segregation discusses action research on discrimination which is also known as discrimination or situation testing. In addition, the relationship between segregation and discrimination as well as the question about how segregation can be measured is presented. Section E deals with the data needs for measuring and explaining occupational segregation as well as the growing issue of overeducation. Section F concludes the study and provides a number of recommendations.

A particular European dimension has been lent to discrimination research by the European Council’s year 2000 directives, i.e. the Racial Equality Directive 2000/43/EC and the Employment Equality Directive 2000/78/EC and the subsequent widening of their purview to larger parts of the population. A certain ambivalence is, however, to be noted. One the one hand, data collection has clearly been intensified, not least through the creation of the European Union Monitoring Centre on Racism and Xenophobia (EUMC), now the EU Agency for Fundamental Rights (FRA). On the other hand, data are little use if not used to their full potential in analysis. In this respect capacities in the EU are obviously still too limited.

What is discrimination?
In all generality and without moral judgement, discrimination is defined “as an individual action affecting a particular person who is treated differently because he or she is thought to belong in a particular class of persons” (Banton 1994:8). This definition stresses that discrimination is an action, that action can only be executed by individuals, and that discrimination is based on de-individualising the other and can be detected in patterns of behaviour. It does not distinguish between discrimination in favour or against the other, as these are two sides of one coin, so, if necessary, that specification needs to be added. It implies that either the action itself could be observed or the action’s effects on or for the persons that are its object. Neither the effects nor the causes of the differential treatment are part of the definition. They need to be defined separately. So the definition leaves any scope for the causes of the individual action to reside in norms, institutions and structures, or in systems. The same goes for motivations, purposes, justifications etc in which actions may be wrapped and shrouded narratively.

One approach to making definitions is through classifications of the subject matter. The literature provides a large number of classifications of discrimination. Those that matter the most are legal and judicial distinctions of the kinds of discrimination that there can be. In current European law there is a distinction between direct and indirect discrimination, as in Council Directive 2000/43/EC, Article 2:

- direct discrimination shall be taken to occur where one person is treated less favourably than another is, has been or would be treated in a comparable situation on grounds of racial or ethnic origin;
- indirect discrimination shall be taken to occur where an apparently neutral provision, criterion or practice would put persons of a racial or ethnic origin at a particular disadvantage compared with other persons, unless that provision,
criterion or practice is objectively justified by a legitimate aim and the means of achieving that aim are appropriate and necessary.

In the descriptive research literature three-part distinctions of discrimination are more common. They usually extend the scope of indirect discrimination and divide it in two. The following example is taken from a paper on racist discrimination in housing and it should be noted that it describes discrimination not as three kinds of events but as three kinds of process:

1. First there is overt racial prejudice and discrimination by key individuals. Such person-to-person forms of racism may be described as ‘subjective racism’ or ‘individual racism’.

2. Secondly, there are policy and administrative processes in agencies, organisations and authorities, which have resulted in adverse treatment of black people compared to white people. Such processes are not explained by subjective racism amongst the staff of such institutions, but are frequently legitimated by stereotyping black. Evidence of racial inequalities linked to local institutional practices suggests the presence of ‘institutional racism’.

3. Finally, there are aspects of national and international processes that have an indirect but fundamental impact on black people’s situation, notably government policies, the structure and workings of markets, and the interactions between ‘race’ and other major lines of stratification, particularly class and gender. These processes may be described as manifesting ‘structural racism’, because they are institutionalised in the socio-economic structure rather than in local organisations (Ginsburg 1992:109).

This is not much more than a classification but its implications are far-reaching. It locates, as it were, discrimination in three layers of increasing opaqueness but it makes no suggestions as to its causes or origins. It helps to understand that individual action is not insular but grows out of and is responsible to a context too vast to be understood and much less to be considered in each or in any instance. In a sense this is frustrating as it removes the origin of action from the individual into an inaccessible and almost indescribable, fine-grained and all-encompassing multitude of relations. It almost inevitably invites the conclusion that in order to curb discrimination any approaches starting with the individual will fail. Trying to remove the causes will also fail because they are everywhere. So the only option is to add to the causes, namely to add clear and enforceable directions. In keeping a river from flooding neither persuasive talk with one foot in the water nor any attempts at plugging the sources will help but dams will, if they are high enough and maintained well.

The expression ‘institutional racism’ is being credited to the Black Power movement of the 1960s US (Carmichael/Hamilton 1969; Williams 1985; Ginsburg 1992:110). It came to public attention this side of the Atlantic mostly through the 1999 MacPherson Report concluding the Stephen Lawrence Inquiry (Wrench/Modood 2001:37-38; Wrench 2007:121) that blamed ‘institutional racism’ in the London police for failing to solve the murder of a black teenager. From a sociological point of view it may be a misnomer. As the description in point 2 above is really about the practices of organisations – as distinct from ‘institutions’, i.e. relatively stable bundles of rules governing a particular sphere of life – it should be replaced by ‘organisational racism’ but it is far too late now to change that. It may be easier to substitute a definition that justifies the use of ‘institutional’ in its name. This might not be all that different from
what has been described as ‘common sense racism’, viz.: “Common sense racism … has a widespread, perhaps predominant resonance among the […] people, which is far from prosecutable and operates at all levels of civil society and the state … which, to be blunt, puts white people first. In the end, the attitudes of individuals, as betrayed by the ideology of common-sense racism, nourish [organisational] and structural racism through political and bureaucratic processes” (Ginsburg 1992:110). Taken as a definition of ‘institutional racism’ in the sociological sense of the word ‘institution’ this form is placed squarely in the daily, unquestioned practices of people acting privately as well as officially, practices that need no direction from above (and may in fact resist it) thus producing both the organisational and the structural racism and being informed by it in turn. The expression “systemic discrimination” or “systemic disadvantage” (Pager/Shepherd 2008:197-200) has come into use to denote the pervasiveness of discrimination encompassing structural, institutional, organisational, and personal discrimination and their power to make discrimination common sense regardless of intention. This is now widely accepted as an accurate description of the true locus of discrimination, so much so that in the U.S., even some time ago, Kenneth Arrow could be bold enough to start a presentation by affirming that “Racial discrimination pervades every aspect of a society in which it is found” (Arrow 1998:91).

Expanding on an earlier three by two classification (Williams 2000) Wrench proposed a three by three classification of discrimination (2007:116-122; Peucker 2009:6-9). He only meant to cover employment discrimination but the applicability is probably wider. He distinguished three kinds of direct or intentional discrimination:

1. Rejection because a person bears certain sensory markers, most often visual or audible ones; a rejection that would occur even if it were costly (‘racist discrimination’).

2. Rejection because people bearing certain markers are thought to be higher risk in regard to certain undesirable behaviours that could, for instance, be costly (‘statistical discrimination’).

3. Rejection because people bearing certain markers are thought to be higher risk in regard to rejection by third persons, for instance by customers, which could again be costly (‘societal discrimination’).

Next Wrench distinguished three kinds of ‘structural discrimination’, so termed because “they cannot be reduced to any particular individual’s bias or actions” (Wrench 2007:116):

4. Seemingly neutral practices that inadvertently skew the outcomes, such as when new employees are recruited through the networks of existing ones or when there are height requirements or clothing restrictions that in practice exclude sections of the population from employment (‘indirect discrimination’).

5. Persisting consequences of past direct discrimination, as when inequality in access to schooling or employment in the parental generation has consequences for the likely educational or occupational outcomes of the children, although they are no longer being discriminated directly (‘past-in-present discrimination’).

6. Discrimination in one area may generate inequality in another, as when housing policies make employment more likely for some than for others (‘side-effect discrimination’).
His final three kinds of discrimination were meant to capture neglected but pervasive aspects of discrimination:

7. The exploitation in one area of a weakened position caused by discrimination in another area, as when workers can safely be exposed to poorer working conditions or be paid less because the authorities would be less likely to receive a complaint, the trade unions less likely to react, society less likely to see an injustice (‘opportunistic discrimination’).

8. Legal distinctions by citizenship or by duration of residence have often been serving the purpose of rationing goods – jobs, housing, etc – for some rather than others (‘legal discrimination’).

9. Discrimination can also reside in processes and procedures, i.e. in norms of behaviour in an organisation or in society in general, especially in informal ones. This seems to be the gist of Wrench’s somewhat laborious discussion of ‘institutional discrimination’.

Peucker (2009) renamed the first one ‘resentment-based discrimination’ and regrouped the first three plus the seventh under the heading ‘interpersonal or direct discrimination’ and the other five under ‘structural discrimination’. He also added a third ‘dimension’ naming it ‘experienced discrimination’ or also ‘subjective discrimination’, although his discussion makes clear the issue is the degree to which discrimination is being perceived by the victims who may or may not notice it and the degree to which discrimination is being imagined or claimed by non-victims (Peucker 2009:9-10). Unlike the other two this third ‘dimension’ does not group further kinds of discrimination but is said to be cross-cutting. It urges, as it were, to focus not only on the perpetrators of each of the nine kinds of discrimination but also on the victims whether real or claimed, and not only on the discrimination and its causes but also its effects.

There has been some debate on whether there is a need to distinguish between discrimination and racism. It is fraught with unspoken apprehensions. Peucker’s wish to replace ‘racist discrimination’ with ‘resentment-based discrimination’ can be viewed as an attempt to broaden the concept but it probably also stems from the unease instilled in non-English speakers, and especially in German-speakers, by the word ‘race’ or any of its derivatives ever since the use made of it by the Nazis. In the debate there is also some indulgence in starting with words and looking for meanings for them, generally a tiring and fruitless exercise. We always need to start with defined meanings before we go on to naming them with one or two Latin or Greek words, and we need to ask the honest question whether minor alterations to a defined meaning are really anything more than self-differentiation in a contest for publicity.

Incitement to racial hatred is outlawed in a number of countries but not racism as such. Both actions and beliefs can be racist so that “in practice, the difference between the terms prejudice, discrimination and racism is often difficult to discern. In everyday usage, the term racist is often used to describe a prejudiced attitude or an action that is discriminatory … [and] to signal the speaker’s unambiguous condemnation of the belief or practice in question. In more analytical contexts, racism and associated terms are often taken to be practices and beliefs consistent with a system of racial oppression …” (Quillian 2006:301).
From these attempts at classification can be gained a sense of the complexity of the topic. It consists in beliefs, norms, and expectations being the subject along with the conscious and unconscious actions and behaviours of individuals, organisations, and communities, and also including situations, states of affairs and processes of change.

**Legal prohibitions**

The United Nations Charter (1945) proclaimed in article 55 that the UN will promote Human Rights and Fundamental Freedoms for all “without distinction as to race, sex, language or religion”. In 1948, by way of the Universal Declaration of Human Rights “colour, political or other opinion, national or social origin, property, birth or other status” were explicitly added but only as examples implying the list could be extended (Banton 1994:2). At this time, “discrimination” was not yet part of the UN’s legal language but this was about to change. In 1949, the UN Subcommission on Prevention of Discrimination and Protection of Minorities reported on “The Main Types and Causes of Discrimination” (Heckmann 1992:126). The report is not a legal text but explores the needs and options for entering discrimination into UN legal language. By 1958, when the ILO (International Labour Organisation, a UN agency) adopted its Discrimination (Employment and Occupation) Convention No. 111, the word had become legally usable. In it, discrimination was defined as “any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin” (ILO 1958; Banton 1994:7). These UN lists are neither alphabetical nor historical or by prevalence but neither are they random. Number 111 today is one of the ILO’s eight core conventions and one of its most widely ratified (ILO 2007).

In Europe national legislation against discrimination was first introduced, in 1965, in Great Britain but covered ‘race’ only (Zegers de Beijl 1991). The inclusion of “national extraction”, as in ILO Convention 111, has usually been understood to be applicable only to persons holding the country’s citizenship, i.e. as a protection of the naturalised and of national minorities. There are few instances in which citizenship is included in the list of distinctions not to be discriminated. In EU directives it was consciously left out. In fact, there are legal rules both at EU and at national level prescribing employer discrimination against job seekers not covered by the long-stay directive (2003/109/EC). In employment decisions they have to give preference to workers that are EU citizens, citizens of an EFTA country, or covered by the long-stay directive.

Other than the criteria which must not influence actions proclamations and the law must also specify the fields of action in which the prohibition is to apply. “The main protected fields are those of the administration of justice, employment, education, housing, and the provision of goods, facilities and services” (Banton 1994:8). For instance, according to Council Directive 2000/43 discrimination on grounds of racial or ethnic origin, religion or belief, age or sexual orientation is outlawed in the context of:

1. access to employment, self-employment or an occupation, including selection criteria and recruitment;
2. access to all types of vocational training and guidance, including practical work experience;
3. employment and working conditions, including dismissals and pay; and
4. membership of or involvement in trade unions and other workers’ organisations, employers’ associations and professional bodies (Eurostat Unit A-2 2007).

The British 1976 Race Relations Act covered employment, training and education, housing, and the provision of goods, facilities, services and planning (Wrench/Modood 2001:42).

The legal prohibitions declare some of the discrimination as punishable but leave most of it untouched. There is no law against the strong tendency of US voters to elect the taller candidate for president nor is there any prohibition against favouring good looks in wage or employment decisions (Hamermesh/Biddle 1994; Sik/Simonovits 2007; Rosar/Klein 2009). Having given many examples of discrimination, lawful or not, and afterwards going on to further examples, Banton (1994:3) concluded that “discrimination is a general feature of social life”, adding that the “family, the ethnic group and the state are all based on discrimination.” This was not meant to indict any of them but to make a statement of fact and to highlight the unavoidability and undeniability of discrimination. This is in tune with Allport’s (1954:17-28; Fiske 2005a) emphasis that categorisation is a basic and necessary part of human information processing. Its effect is to reduce complexity. All categorisations are simplifications. If categories were merely descriptive and readily adaptable to additional information, and if categorisations were tentative and always awaiting revision, there would be no danger and no harm in them. At the same time, they would lose their usefulness which lies in making a very rapid, if rough, assessment of others as friendly or hostile and of their competence in executing friendly or hostile acts (Fiske 2005a). If error in assessment were merely random and could be in either direction, there would be no issue. The problem of discrimination arises where categorisations of humans become systematically wrong, and where the test of reality is suspended in favour of traditionalised categorisations. This is what the law in recent decades has been meaning to act against.

**The link between inequality and discrimination**

The further purpose of this review is to highlight a number of items for research with an emphasis on data availability, an integral part of the thorny measurement issue.

From a judicial point of view the illegality of discrimination does not necessarily lead to an increased need for data or for improved ways of analysing the data but in practice it has because courts formally or informally have tended to take evidence beyond the single case into account in assessing the credibility of either side of the affair and also in attempting to determine how forcefully they should step in. The other important data need arose from trying to prove to lawmakers they needed to take action not merely to curb the excesses but to protect broad swaths of the population. A third, and important motivation, mostly in the US, has been academic competition over finding ways to actually prove the existence of discrimination reliably and with a minimum of effort and cost, to measure its impact, and to understand its causes.

Usually the starting point of discrimination research is some kind of observed or expected inequality. A quick overview of some essential differences in, for instance, the chances of employment can be gotten from the OECD (2008a:147-149). The question is if this or other differences in outcome can be attributed to differences in endowments or if discrimination needs to be invoked as an additional explanatory
variable. However, if unequal endowments led to equal outcomes this would likewise constitute discrimination. In practice it may not often be the case for the purpose of discrimination, even if unconscious, is to create inequality, to perpetuate and to justify it. Only in a situation where a poorer majority wanted to reduce the gap between itself and a richer minority would a situation of discrimination contributing to equality be likely. Such situations may, for instance, arise in processes of decolonisation.

Inequality must never be confounded with discrimination. They stand in a relationship of cause and effect. The strength of this relationship is not a given and must be investigated every time. Importantly the relationship is unlikely to be one-way.

- “... discrimination is one possible cause of inequality or disadvantage; only if other possibilities have been eliminated may it be identified as the prime cause” (Banton 1994:5).

- “The effect of discrimination may be to create or increase inequalities between classes of persons, but the existence of such inequalities may also make discrimination more frequent” (Banton 1994:8).

Discrimination can never be seen in the outcomes themselves but ever only in the relation of outcomes to inputs. When this relation varies significantly we suppose that somebody’s conscious or unconscious behaviour has interfered to bring about the difference. The grave disadvantage is that so far we are only able to observe either the behaviour or the outcomes. Connecting them causally keeps requiring a leap of faith, though plausibility may speak for making it. Nonetheless we need to be aware that the link is merely supposed rather than actually observed. There could always be unobserved influences other than – observed or unobserved – discriminatory practices that might be able to account for the observed difference in the relation between inputs and outcome.

B. Some items on the research agenda

Psychology
Discrimination’s “intellectual career started in the late 1940s in the United States when sociologists like R. M. MacIver (1948) taught the post-war generation to distinguish between discrimination as a form of behaviour and prejudice as an attitude. Either one could lead to the other, but a prejudiced person did not necessarily or always discriminate and discrimination was not necessarily the result of prejudice” (Banton 1994:6-7) because conformity to social norms is an overriding concern for all and could work in either direction (Merton 1949; Heckmann 1992:125-129). As if they had been forgotten, these basic truths have recently been restated in the literature (Pager/Shepherd 2008:182; Quillian 2006:301) underpinned with new data: “Although the level of self-reported prejudice declined significantly over the decade [from 1989 to 1999], the extent of discrimination did not change (Pager/Shepherd 2008:184 fn 1 referring to Dovidio/Gaertner 2000). One might go a step further and suppose that expressed prejudice is rhetorically drawn on after the fact as a justification for discriminatory behaviour in a bid to restore congruence between beliefs and actions, i.e. to reduce cognitive dissonance (Festinger 1957; Arrow 1973:26), especially also if the action was ordered by superiors and may have to be repeated (Festinger/Carlsmith 1959).
Good intentions are no protection from discriminating because as action is separate from attitudes so it is from intentions. Most discrimination is quite unconscious and its contradicting of intentions will go unnoticed. "The individuals responsible might be quite unaware that they were applying discriminatory criteria to the cases with which they had to deal" (Banton 1994:5). Indeed, as good intentions presuppose an awareness of the danger of discriminating they may come together with heightened awareness of markers triggering it. This may raise the frequency of discriminatory acts and have no other "positive" effect than to alter the tone in which they are performed. By the same token people’s “actions can spring from grounds of which they are unaware or are unwilling to acknowledge. … The grounds of an action are therefore something more than the reasons the person himself or herself would offer as an explanation” (Banton 1994:6). Finding out about people’s intentions and how they argue them is therefore not likely to be informative of how they have behaved or will behave. More likely, past behaviour will predict future behaviour, if for no other reason than to justify past by current behaviour.

Do we have to expect that the hierarchy of who discriminates against whom is unchanging, and that the only change concerns the techniques of discriminating (Massey 2005)? There are two attempts at being more optimistic. Psychologists, at least since Allport (1954), have been trying to find the pathways by which to modify human behaviour and human production of prejudice. Sociologists, on the other hand, have been describing how parts of populations stopped being regarded as separate and different, i.e. disappeared in the population that had previously discriminated against them. The psychological approach relies on conscious intervention. This limits the capacity to apply it, partly because of a dearth of credible personnel and of finance, and partly because of limited accessibility of the population thought to be in need of intervention. The process described by sociologists has been involving much conscious intervention of legislators and the judiciary, often in response to large amounts of unpaid civic activity and a little bit of research from a variety of disciplines. Neither approach is costless, but decreased discrimination may have contributed massively to economic growth and may thus have (more than) paid for itself. Clearly, though, distinction and discrimination go hand in hand, but it is of extreme importance not to conflate distinction with distinctiveness. We are all distinctive. Distinction, however, is never individual but always categorical, and the categories are not given by nature. They emerge neither from a (natural) psychological process of those making the distinction nor from any (natural) features of those being distinguished but from a social process. This will be returned to below.

There has been much effort to discover ways of influencing human action short of outlawing it. It has focused on attitudes, on the behavioural response to markers observed on others, and on the written and unwritten rules and norms governing individual behaviour.

- The attitudes, the observations, and the behaviour could all be conscious or unconscious. The approach via attitudes or morals works with information dissemination and simulated experience. Within business organisations it appears to have little positive and sometimes negative effects as when participants become (more) aware of (additional) markers to discriminate against (Kalev et al 2006; Taylor et al 1997). In settings specifically dedicated to (social) learning or therapy, such as kindergartens, schools, or youth groups well prepared and orchestrated experiences of mutual dependence and joint achievement often produce positive results. Less reliably mere contact may also be successful and
has recently become a stronger consideration for research (Stürmer 2008; Pettigrew/Tropp 2006).

- Behavioural training meets some of the same problems as it depends on making explicit the behaviour and the markers triggering it. Not improbably the result could be to buttress the behaviour and the choice of markers with conscious explanations of why this is necessary or desirable. This would be particularly likely if it were factually beyond individual power to decide on behaviour as when people are part of an organisation, a club, or a community.

- As attitudes justify behaviour rather than predicting it and as behaviour and norms adjust to each other, altering the explicit, i.e. written down, spoken about, and, above all, enforced, norms of an organisation or a polity tends to be the best way of curbing discrimination (Taylor et al 1997; Marshall 1974). The setting of norms and their enforcement implies putting somebody in charge. In business organisations this has proved key to enhancing the number of female and minority managers, and also of the effectiveness of measures of attitude and behaviour change (Kalev et al 2006).

Allport (1954, 1958) laid out the field on which to study prejudice for everybody ever since. He emphasized the impact of legislation and jurisprudence on behaviour. His dependent variable was ‘prejudice’ but he made a distinction between the normality of prejudgement and the actual issue, i.e. preferential thinking. Categorising, indeed, is one thing, but then preferring one category over another or one over all others is another. Allport – and practically everybody since – left it at that simple dichotomous preference. Had he lived in, say, Brazil, with its intricate hierarchy of shades of complexion, or in India, with its intricate caste hierarchies, he might have been more inclined to see there is more to it than “in” and “out”. In fact, any metaphor suggesting population categories are all on the same level, side by side, is bound to be wrong because any distinction made by humans seems in practice to come in levels of a hierarchy. Given the more globalised migration that ensued all societies increasingly resemble Brazil. This is not to diminish Allport’s achievement in the least.

After legislation, to which he dedicated an entire chapter, Allport hypothesised six further influences on the likeliness of discriminatory behaviour:

- Formal educational methods
- Contact and acquaintance programs
- Group retraining methods
- Mass media
- Exhortation

Out of these, contact was the one he paid the most attention to, and the contact hypothesis has been an established piece of social science ever since. Current wisdom remains that “Given unexamined biases that are unconscious and indirect, change is a challenge, resisting frontal assault. Similarly, given blatant biases rooted in perceived threat to group interest and core values, direct confrontation will likely fail again. Instead, more nuanced means do work. / Education can help. Economic opportunity can help. Moreover, for decades, social psychologists have studied constructive intergroup contact, increasing mutual appreciation (Pettigrew 1998a): (a)
equal status within the immediate setting, (b) shared goals, (c) cooperation in pursuit of these goals, (d) authorities’ support. Under these conditions, contact provides a basis for (e) intergroup friendship. Genuine intergroup friendships demonstrably do reduce stereotyping, prejudice, and discrimination of whatever sort” (Fiske 2005b:66; see also Pettigrew/Tropp 2000; Semyonov/Glikman 2009).

The first empirical proof of the correlation between the amount of formal education individuals had received and their tolerance of ways other than their own was probably provided by Stouffer (1955; Quillian 1995:595) and has since then been replicated unfailingly (see, for instance, Rink et al 2009).

Since the late 1980s, new techniques have been employed in social psychology to measure “implicit attitude”, “implicit bias”, “implicit prejudice”, or “implicit racism” (the expressions are all interchangeable) where “implicit” means the subjects are unaware of the beliefs they hold or the reactions their body shows. Measurement in all instances is computerized and taken in a screen-based experiment. The most widespread is the Implicit Association Test (IAT), introduced in 1998, with hundreds of published research papers and a website offering versions of the test to take (http://projectimplicit.net). Such websites have been created for several countries. If the test data were collected in a central database an interesting dataset would be available for researching the determinants of IAT results over time and between societies. The IAT’s validity remains debated, of course. Its results have been found to correlate poorly with those of other tests, and Patricia Devine, an early practitioner in the field of implicit prejudice, has been suggesting it may actually function more like a test at school, i.e. measuring knowledge of widely held stereotypes rather than the stereotypes routinely exercised by the subject (Quillian 2006:314-317). … “there is evidence that implicit prejudice can be reduced with concerted introspection and positive exposure to the target group. Emphasizing salient positive exemplar members of minority groups, focusing on counter-stereotypic imagery, and training in stereotype awareness have been found to reduce the extent of implicit bias measured using priming or the IAT” (Quillian 2006:318).

Sociology

Allport (1954, 1958) in his influential book was concerned with prejudice against Jews and against blacks. He did not also describe how at the same time the prejudice against the East and South European immigrants of the late 19th and early 20th century was on the wane and how they and their children were becoming exempted from discriminatory practices. There was a boundary shift going on whereby a part of the population hitherto vigorously excluded found itself included in the ‘majority’ or ‘mainstream’ category (Roediger 2005; Alba/Nee 1997). Barth (1969) posited it is the boundary that matters, not any actual difference between what is on either side of it. The boundary is not constituted by difference but the difference by the boundary. Difference is emphasized in order to justify having drawn a boundary and fortifying it. Discrimination should then be regarded as a process of boundary maintenance where maintenance encloses both the visibility of the dividing line and the verbal justification for it. Maintenance work can be costly, too. In this conception the disappearance of discrimination is part of the disappearance of a boundary or at least of the boundary defences. The important point is that in the case of the East and South Europeans an unintended remedy must have been at work rather than any of Allport’s intended ones. Nobody went around educating people to disregard
the boundary. Something else happened, without plan and without premeditation. This something has metaphorically been conceived of as ‘boundary crossing’, ‘boundary blurring’, and ‘boundary shift’ (Alba/Nee 1997; Alba 2005, 2008). Among the three blurring is, perhaps, what comes closest to a weakening and disappearance. In contrast, crossing leaves the boundary as is except to prove its permeability. Nor does shifting, i.e. relocating, the boundary remove it except to prove its mobility including a potential to become all-encompassing and thus to disappear (in the ‘long run’).

In Barth’s original conception the boundaries were drawn around an economic niche in a bid to monopolise its use or extract a rent from other users. Such niches could be territorial, though in human history they have for the largest part been occupational with, for instance, men occupying one and women another, or spirituality monopolised by a few, etc. The occupational niches, as much as they might also be ‘functionally differentiated’, never sit side by side but always hierarchically on top of each other. Boundaries now demarcate castes, classes, layers (strata), or milieus, and boundary crossing is now a vertical movement. The twist is that arriving in a class, layer, or milieu is not quite enough. One also needs to be received there and recognized in the full philosophical sense of the word, i.e. as equal (Honneth 2003). This is done by including the new arrivals in class-, layer-, or milieu-specific forms of sociability, and by accepting and inviting them into personal relationships of all kinds of intensity, in other words, by forming community with them. This is the process that has been identified as blurring boundaries on the one hand and shifting them on the other. While the crossing is vertical, the blurring and shifting is horizontal within the class, layer, or milieu. The crossing is a process of social mobility, and there could be strong, discriminatory resistance against allowing it in order to avoid having to accept hitherto inferior parts of the population as equals. Anybody rising into a class, layer, or milieu has a claim to inclusion into the community and thereby to recognition.

Hypothetically there can be a number of reasons for attempting to block social mobility. Upward mobility also has repercussions. It cannot be attained without occupational mobility, but the vacated positions do not normally disappear. They need to be re-staffed. Since the upward mobility is not usually complemented by equal numbers of downwardly mobile (of working age), the replacements can only be immigrants. If immigration is to be blocked at all cost, the occupational ascent of the lowly employed or their offspring must also be blocked. Discrimination in access to education and training and in adequate occupational employment of the acquired occupation is the only means of achieving the end. A further reason for preventing mobility could be a fear of revenge by the new equals for having been held back for decades or generations. This will normally be unfounded because the new members of the class, layer or milieu will be seeking recognition in community rather than conflict, but if the apprehension were sufficiently large to postpone the inclusion unduly conflict might indeed be the alternative road to recognition.

These digressions aside, the blurring and shifting of boundaries within a class, layer, or milieu obviously presupposes the crossing of the boundary into it (unless, of course, the hierarchical structure of society could be done away with). They are not alternatives but complements usually succeeding each other in time, and taking quite a bit of time.
Boundaries are separations and obstacles. They divide space, be it a physical space or a social one. Contrary to the continuous space allowing smooth adaptation presupposed by much of economics sociologists often conceive of space as discontinuous and thus fraught with points of resistance. Adaptations are therefore neither smooth nor all of them simultaneous.

It was said, for instance, that “The [U.S.] Civil Rights Act was aimed at improving the status of African Americans in the United States, but it was far from uniform in its influence. After 1980, it seems to have led to no new improvements. Women have benefited more continuously. We clearly need to develop theories and models that examine the similarities and differences in these two trajectories” (Tomaskovic-Devey 2006:586). Here the law is identified as a driving force and the lack of simultaneity of subsequent social change is made the problem. Alba (2008) saw demographic change rather than the law in the driver’s seat, but the same temporal patterns of decline in occupational segregation between the sexes and between Hispanics, whites, and blacks do not seem to conform well with this hypothesis either.

- To identify a driving force, be it demographics or the law, is one thing, to deduce from its continuously exerted pressure that adaptive processes will also be continuous is quite another. It could be but it will not usually be. It is highly desirable that we learn to understand and measure the resistances, their timing, and their causes.

- If there is power in numbers, women have far more power than (other) minorities. In the U.S. the surge in ‘black power’, on the other hand, did not continue after 1970. In European countries, the children and, perhaps, grandchildren of the post-war labour migrants are also not numerically decisive.

- Contrary to women migration-related minorities are also not usually distributed throughout the population but fairly concentrated in urban areas, especially the larger urban areas, where, in addition, they tend to be concentrated in the poorer parts of town.

- Women, perhaps because of the larger number and the pervasive distribution but probably also for other reasons, have been able to develop a capacity to speak for themselves in the political process (and in research) which has not as much been the case for ‘racial’ or migration-related minorities. As a result there is more direction to the women’s fight, and individual acts of resistance can be fit into a puzzle rather than seeming ‘chaotic’, arbitrary, and perhaps wilful, thus making sense also for those experiencing the resistance.

- The patterns observed in the U.S. are more suggestive, perhaps, of power or threat and perhaps network connectedness (including the circular cumulative effect to be expected from Granovetter’s (1973) finding on the importance of weak ties among the better educated for mobility into good jobs).

One conclusion emerging from this discussion is that the power held by individual members of a population category is important. Whether consciously or not, one needs to be in the position to discriminate. To discriminate is a show of power. Most power in society is not personal but arises from one’s position in the social hierarchy. Only by connecting discrimination with power can there be any effect other than self-destruction. At the same time it is evident from the literature that power is hard to operationalise in measurable variables. This is one reason, though perhaps not the only one, for its neglect.
A second conclusion is that the literature on the effects of numerical strength (Quillian 1995; Semyonov et al 2006) must be looked at and developed. But likewise the evolving tactics of betterment within populations lacking numerical strength must be theorized more completely, and the theories must be tested empirically. At all times the difference between the two separate processes of vertical social mobility and recognition within the class, layer, or milieu of arrival must be kept in mind. Their timing may differ by as much as a generation. If numbers and distribution are of importance we also need to ask what happens when a new immigration starts, for instance in order to fill the low-skill occupations avoided by the socially mobile children of earlier immigrants. Potentially depending on many parameters it could either result in an instant boundary shift in order to include (incorporate, desegregate) the upwardly mobile in the majority, or in a slow and fitful process of doing so, or in an instant strengthening of the exclusion (segregation) and perhaps a ‘segmented assimilation’ (Portes/Zhou 1993; Zhou 1997; Portes et al 2005; Silberman et al 2007) of the new arrivals to the children of the earlier immigrants. The new arrivals largely being between 18 and 38 would in large part be the same age as the children of the earlier immigrants. This might ease ‘assimilation’.

**Economics**

There have been several attempts at finding a place for discrimination in economic theory (Banton 1994:13-15; King 1990:108-128). The baseline is that in economics “the notion of discrimination involves the additional concept that personal characteristics of the worker unrelated to productivity are also valued on the market” (Arrow 1973:3). This “additionality” is also the basic problem for the concept in economics. Four attempts shall be sketched ever so briefly:

1. **taste**: the affordability of satisfying a taste not to associate or be associated with select categories of persons, although their employment would be equally or more productive than that of current employees or of alternative new hires (Becker 1957),

2. **risk**: the difficulty or costliness of gaining accurate information about an individual or the impossibility of doing so instantly (Phelps 1972; Arrow 1972a, 1972b, 1973; Spence 1973; Aigner/Cain 1977),

3. **power**: the collective power of population categories, for instance women, blacks, Muslims, the disabled, etc, influences the bargaining position of individuals (Marshall 1974),

4. **profit**: the profitability of discriminating (Roemer 1979; Banton 1991).

Below I will look at each of these in turn and also at how they have been received in the sociological literature.

In the econometric literature some effort has been made to determine which of the first two may be at work (Black 1995:309-311; OECD 2008a:151-152) while the latter two have so far remained a case mostly for non-economists and for economists somewhat removed from the mainstream of the profession. Kenneth Arrow, in his characteristically cogent, clear, and compact style, drew the lesson from 40 years of discrimination theorizing centred on ‘taste’ and ‘risk’ in U.S. economics. It is instructive to briefly review his argument. He identified two topics: segregation and wage setting. Segregation is not a term much used in Europe. Here ‘exclusion’ has been taking its place. Arrow held that in the U.S. the main issue was segregation:
“black and white wages for the same job very frequently differed but little. Discrimination mainly took the form of limiting the range of jobs in which blacks were hired at all. The form which racial discrimination took was the same as in residential segregation. It was not that blacks were charged higher rents for the same residence but that they were excluded from certain (most) areas” (Arrow 1998:93). He then, perhaps debatably, characterised economics as the science trying to describe and understand the rational action of individuals in markets. The task at hand is to fit the empirically given discrimination into this framework. This, he said, had been attempted without notable success: “To summarize, we have clear evidence that blacks were in the past excluded from a significant range of good jobs and from the purchase of housing and restaurant services. We have very strong evidence that these practices persist in some important measure. … Let us ask whether a market-based model can broadly satisfy the[se] empirical constraints … On the usual interpretation, it cannot” (Arrow 1998:93-94).

1. Taste
The first of these market-based models harked back to the turn of the century but was formalised for current purposes at mid-century. Although much ink had been spent on it, Arrow squeezed its description into just two sentences: “Most analysts, following Becker (1957), add to the usual list of commodities [that might be exchanged between black and white] some special disutility which whites attach to contact with blacks, taste-based discrimination. Many variations are possible; dislike by employers, dislike by white workers or by foremen, or whatever …” (Arrow 1998:94). Arrow here avoids the word ‘taste’ that has been emblematic to Becker’s attempt at placing discrimination in economics. The ‘distaste’ for minority interaction or even minority presence (Black 1995) should probably be translated as ‘distrust’ (Lee 2000). In a nutshell, and at the risk of doing harm to it, Arrow’s argument was, that among the many variations of the Beckerian treatment of discrimination there were none in which competition would not theoretically wipe out discrimination as soon as there was any variation in discrimination between employers or foremen or workers, whichever was being cast as the discriminators, and yet discrimination persists. Either the taste theory was wrong or employers were not “simple profit-maximizers”. If theorizing in the Beckerian vein continued, employers might be maximizing anything and everything so that there was no theory anymore as nothing was being explained. Ray Marshall (1974), for instance had employers maximising profit and ‘status’, and likewise white workers income and ‘status’, where ‘status’ appears to mean that they were able to ‘prove’ the inferiority of blacks. If employers (or others) are status-maximizers, this would be no different from having a ‘taste’: they pay for enjoying the ‘status’, and they pay in the exact same currency and the exact same amount. You might say, they have a taste for status.

More importantly, there was the danger of tautology, that ‘discrimination’ was being explained by ‘making a difference’ (Arrow 1998:94-95). Between the theory being wrong in its structure and employers not maximising Arrow saw a third road and tried it: the theory was fixated on the wrong actor. Not only could discriminating employers not survive in the model, but “A further objection to the hypothesis that racial wage differentials arise from employer discrimination is that large corporations hire a major fraction of the labor force. Attributing taste to impersonal entities is a hypothesis of dubious usefulness. It is hardly in the stockholders’ interests to discriminate under the postulated condition, and competition in the capital market should be effective in eliminating discrimination. Finally, the hypothesis of employer discrimination does not
at all explain segregation by occupation” (Arrow 1998:95). Given that occupational segregation was the main empirical form of discrimination, the last point declared the practical irrelevance of the Beckerian approach. Consequently, agency in discrimination would have to be found elsewhere, not in the profit maximising actions of employers. Another theoretical framework than the market would be required (see also Bergmann 2005:48f).

In a final sigh of exasperation Arrow, referring to discrimination testing by Ayres (2005; Ayres/Siegelman 1995; Pager/Shepherd 2008:191-192) in car dealerships, by Yinger (1998; Pager/Shepherd 2008:186-189) and others in housing, and by Ladd (1998; see Pager/Shepherd 2008:189-191) and others in access to credit, asked, “what can market-based theories make of discrimination against black consumers? Sellers of houses and mortgages have refused to sell to black customers and still refuse to some extent. It is hard to think of any market-based explanation for refusal to sell. Sellers of automobiles sell to black customers only at higher prices. Why does not competition prevent this discrimination, according to well-known arguments?” (Arrow 1998:95f).

Commentators sometimes complained Becker’s model was not applicable to gender discrimination but this is a highly superficial misunderstanding. That men would have a taste for contact with women for other reasons than economic exchange is one thing. It does not at the same time mean they think it is a good idea to contract with women about their capacity to work or about their capacity to make something happen in a company they direct.

2. Risk

Next Arrow briefly examined a second theory set in the rational action and market framework: “rational choice theory implies that beliefs contradicted by experience will not survive. In the present context, this has given rise to the theory of statistical discrimination. Suppose blacks and whites do in fact differ in productivity, at least on the average. This is in turn due to some cause, perhaps quality of education, perhaps cultural differences; but the cause is not itself observable. Then the experience of employers over time will cause them to use the observable characteristic, race, as a surrogate for the unobservable characteristics which in fact cause the productivity differences (Phelps, 1972; Arrow, 1972a, b, 1973; for a more recent version, see Lundberg and Startz, 1997)” (Arrow 1998:96; Marshall 1974:855).

Satisfying though this may at first sound, it was in reality no better than taste-based theory: “If there are a number of observable variables, such as quantity of education, then the hypothesis of statistical discrimination implies that an estimate of wages based on these observables will be significantly improved by adding race as a predictor. But this is the same conclusion as arrived at by [the] hypothesis of market-based discrimination based on taste” (Arrow 1998:96). We are back to the previous tautology because ‘race’ and ‘discrimination’ remain interchangeable. We estimate the impact of ‘race’ and, falsely, claim to have estimated the impact of ‘discrimination’. It is partly for this reason that Barbara Bergmann likes to put the word theory between inverted commas when referring to Beckerian treatments of discrimination (Bergmann 2005:48) and why she chose to ignore ‘statistical’ discrimination altogether. Arrow, however, perhaps cognizant of Pierre Bayle’s advice 300 years ago to erect the strongest possible version of a theory with all its defences before knocking it over, at this point maintains faith to the paradigm and proceeds as if employers were actually right in discriminating on the basis of believed
population averages, and as if the only thing that needed explaining was the existence of the difference in averages: “Of course, it is not very satisfactory to postulate that the unobserved determinants of performance just happen to be correlated with race.” For an explanation to replace the mere postulate he picked up on “The hypothesis that statistical perceptions change behavior as well as reflect it” (Arrow 1998:96f). Consequently, a vicious cycle for those being discriminated can be hypothesised that is at the same time a self-fulfilling prophecy for the discriminators: “To prepare to work requires investment by the worker. Not all of this investment is observable; it may require changes of habits and attitudes towards work, and diligence in school and home tasks, to give some examples. If the employer is going to judge by race, then there is no reward for these investments. They will not be acquired, and then the statistical judgments will be confirmed” (Arrow 1998:96f). This, however, is one more version of the ‘poverty trap’ (Bauer 1965) and leaves unanswered the question how come there are so many nonetheless who do make the investment and do get into adequate positions alongside those that make the investment and get no reward and those not making the investment. This proposal could hardly be the final word on the making of the difference in averages on unobservables relevant for performance in employment.

In the debate on whether or not the beliefs on which statistical discrimination was being based were accurate reflections of reality, or even had a chance to be such, Arrow took an unambiguous position: “The discussion of statistical discrimination so far assumes that the employers or creditors use all the information available throughout the economy. … But of course this is not so. Each employer has a very limited range of experience, and so prior beliefs can remain relatively undisturbed. Indeed, to the extent that discrimination takes the form of segregation, then there will in fact be little experimentation to find out abilities” (Arrow 1998:97). Furthermore, the “prior beliefs” are, of course, in large part not empirical, not information gained from observation of the market, but stories told by other people and the media, selectively heard and selectively remembered. In other words, given limited human capacity to absorb and process and especially to verify information, coupled with resistance against falsification, there isn’t a ghost of a chance employers could be accurately informed of how well skin colour really indicated the productivity of a job applicant. One would need to add also the time lag. Even if employers’ beliefs were correct, their experience would always unavoidably be dated, while the hiring decision needed to be taken today. Finally, and very basically indeed, can there, after Adam Smith’s exposition of the division of labour in the first chapter of his Wealth of Nations (1776), be any empirical or even theoretical meaning to “individual productivity” and especially to the idea that it would be determined importantly by the characteristics of the individual rather than those of the organisation (and the society) within which the individual is being placed? There can be no doubt about the answer: no. If so, ‘statistical discrimination’ is very unlikely to be anything more than an excuse. Indeed, why would discrimination in hiring make excusable economic sense, as proposed in the “strong version” of the ‘statistical discrimination’ hypothesis, when it does not in other situations?

Although considerable evidence has been published to indicate that the ‘statistical discrimination’ hypothesis may function as a satisfactory description of what is going on in the hiring decision, direct tests are exceedingly rare. One considerable hurdle is operationalising the hypothesis, the second one are the data to perform the test. Don Tomaskovic-Devey and Sheryl Skaggs took them both. In doing so they turned the
long-running debate about the accuracy of employer precepts into a distinction between two versions of the statistical discrimination hypothesis: “The strong version of the statistical discrimination hypothesis ... assumes that these average group differences in productivity actually exist. A weak version of this model ... assumes that beliefs and stereotypes about productivity are more important than actual productivity” (Tomaskovic-Devey/Skaggs 1999:424). In a literature review they find the evidence to be “more consistent with the weak version of statistical discrimination theory in which employers act as if women and minorities were less productive but actually have no accurate information as to average group productivity .... England (1992) refers to this as error discrimination, in which employers mistakenly underestimate group average productivity and make hiring decisions based on stereotypes about group productivity (Tomaskovic-Devey/Skaggs 1999:426).

They converted the strong version into two hypotheses (Tomaskovic-Devey/Skaggs 1999:426-428) and tested them with data on 304 North Carolina employees and their companies. “In the strong version of the statistical discrimination account, productivity is expected to be lower in establishments with large female or minority workforces. Because it is assumed that employers are making efficient screening decisions, profits should not be affected but total labor costs should drop, reflecting the lower average productivity of female and minority labor forces. If women and minorities are, in the aggregate, less productive than men and Whites, we should find that total productivity is lower in establishments with higher proportions of female and minority workers. In addition, this lower productivity should be reflected in lower total wage costs in such establishments but no change in profit levels” (Tomaskovic-Devey/Skaggs 1999:427). From this follow hypotheses 1 and 2 below.

From a varied literature they sourced two alternative hypotheses. The first one was "that when labor markets undervalue women and minorities, employers capture the resulting surplus value. If the employer exploitation account is correct, then the race and gender composition of the firm should have no effect on aggregate productivity but should influence the division of productivity between profits and wages. As percentage of Blacks and percentage of women in the workforce go up, profits should rise and aggregate labor costs fall ...” (Tomaskovic-Devey/Skaggs 1999:427-428). From this argument follows hypothesis 3 below.

Finally Max Weber’s concept of ‘social closure’ (Weber 1980:23f) was invoked: “A second alternative approach to the statistical discrimination account argues that stereotyping of women and minorities in conjunction with attempts by advantaged (typically White male) workers to monopolize desirable positions creates observed gender and ethnic labor market inequalities .... In this approach, it is social closure from desirable positions within the firm that keeps the wages of women and minorities low. If the key discriminatory process is the social closure of women and minorities from desirable positions, then there should be no effect on aggregate wages, profits, or productivity as percentage of Black and percentage of women in the firm increase, but White and male earnings should rise” (Tomaskovic-Devey/Skaggs 1999:428). This possibility is encapsulated in hypothesis 4.

Hypothesis 1: As the percentage of minority and female workers in the firm labor force increases, aggregate productivity should decrease. They found that it does not (Tomaskovic-Devey/Skaggs 1999:434).
Hypothesis 2: As the percentage of minority and female workers in the firm labor force increases, aggregate labor costs should decrease. They found that it does not (Tomaskovic-Devey/Skaggs 1999:434).

Hypothesis 3: As the percentage of minority and female workers in the firm labor force increases, aggregate profitability should also increase. They found that it does not, although not unambiguously (Tomaskovic-Devey/Skaggs 1999:437).

Hypothesis 4: As the percentage of minority and female workers in the firm labor force increases, total productivity, labor costs and profits will be unaffected. This is found to be congruent with the regression results (Tomaskovic-Devey/Skaggs 1999:437, 439).

The dataset they used to test the four hypotheses was created from two surveys, one a random sample of private sector employees in North Carolina in 1989, the other a survey of the establishments in which these same employees worked. For the test the following individual level variables were necessary: gender, ‘race’, education, employer tenure, labour market experience, and at establishment level value added, total wages and benefits, profits, total capital investment, capital debt yes/no, total employment, percent female employees, percent black employees, percent part-time, a measure of concentration of sales in the industry, a measure of how strongly price competition was being felt by management, and percent purchases from the largest supplier (Tomaskovic-Devey/Skaggs 1999:431f).

The “findings shed considerable doubt on the statistical discrimination and employer exploitation accounts of gender and racial wage inequality but are strongly consistent with a model of job segregation through stereotyping and social closure by advantaged employees” (Tomaskovic-Devey/Skaggs 1999:439), i.e. with hypothesis 4. How do the “advantaged employees”, i.e. white male workers, achieve this?

- If recruitment through the current workforce is the most prevalent method of search by both employees and employers the current workforce gains substantial power in influencing who is hired for which openings (Tomaskovic-Devey/Skaggs 1999:440).

- Even if new hires bring skills to the job the firm-specifics can only be learned on the job (Tomaskovic-Devey/Skaggs 1999:440). The charge of investing into employee skills selectively is frequently raised against employers: “It has often been observed that gender and race/ethnic wage inequality is lowest early in the career and increases with age …. Part of the explanation for this increased disparity across careers is that many employers make smaller investments in the skill training of minorities and women” (Tomaskovic-Devey/Skaggs 1999:425). While there may be empirical grounds for doing so, employers are not the only players in this field. White male coworkers might also be less forthcoming with useful information, if the new colleagues are either female or black (Bergmann 2002; Athey et al 2000), and employers might have little or no control of the skills transfer.

- As a result management might come to believe female or Black workers were less trainable or had their mind on something else, i.e. were less committed to the job and the company. Against this might be held that the research shows productivity is unconnected with the workforce composition and that management might be aware of this. Chances are they are not because unlike the researchers they do not have the comparison with other companies.
Even if management had the data to show that colour and sex made no difference to productivity, they might not use them. It has been known for a long time that owning the data to disprove a prejudice is no protection at all from firmly believing it, even if the data and the belief diverge grossly. Richard LaPiere (1936) researched a case where the manager of the Merchant’s Association, a high official of the County Hospital, judges, prosecuting attorneys, and members of the District Attorney’s staff, though not the police, the director of the State Labour Bureau, the County Welfare Bureau’s case workers all firmly believed a local immigrant population present for about 50 years to contravene all standards of good behaviour, although by their own data this was patently untrue. Employers should not be expected to be any different from government officials or hospital managers. The same could also, for instance, go for teachers and their beliefs about students and their parents.

Importantly, to the employers it does not really matter. Profits in the sample of firms were unaffected by such practices, as was the total wage bill. So management faced little pressure either from the market, from creditors, owners, or peers to behave differently (Tomaskovic-Devey/Skaggs 1999:441).

At the same time employers may feel strong pressures from the current workforce, or at least from organised parts of it, to keep discriminating on the basis of gender and race in job assignment (Tomaskovic-Devey/Skaggs 1999:441).

Contrary to neoclassical expectations the balance sheet does not appear to exert pressure to reduce discrimination, and a self-recruiting workforce might forever exert pressure to maintain the status quo. At the same time there is nothing in the company’s daily experience to contradict the ‘good experience’ with the existing occupational segregation. In this way it could continue indefinitely. Personal relations rule over the market.

This is precisely Arrow’s diagnosis (1998:94). His third road, announced above, was also to propose the consequences of “social interactions and networks” (Arrow 1998:97) as an explanation for continued discrimination, especially the latter given the difficulties in operationalising the former. “The network concept of labor allocation differs considerably from a market. It is indeed very easy to say how social segregation can give rise to labor market segregation through network referrals. Discrimination no longer has any cost to the discriminator; indeed, it has social rewards. Profit maximization is overcome by the values inherent in the maintenance of the network or other social interaction” (Arrow 1998:98).

“The main point is that personal interactions occur throughout this process [of filling jobs by referrals], and therefore there is plenty of room for discriminatory beliefs and preferences to play a role which would be much less likely in a market subject to competitive pressures. The network model seems most appropriate for the labor market, and perhaps less so for the housing, automobile, and credit markets. But in all of these, each transaction is a social event. The transactors bring to it a whole set of social attitudes which would be irrelevant in the market model” (Arrow 1998:98). If so, the task at hand is to define these “social attitudes” with a precision learned from Max Weber, to learn to measure their frequency and strength, and to estimate the extent of their influence. Care must be taken from the start not to take the word ‘attitude’ too literally. Not long ago the word ‘soul’ would have stood in its place. We are in reality talking about behaviours. Only gradually are we learning to look inside
the body while it is alive and active and to see the biological chains of events leading up to the observable reactions.

3. Power

Marshall (1974:866-869), in his conception of discrimination, kept paying lip service to profit-maximisation in a market framework but was really concerned to describe the political process in which employers, a white labour aristocracy, a black proletariat, their trade unions, government agencies, and others were involved against a backdrop of supply and demand in the labour market. Discrimination in employment was here the result of a rigged market which was in turn the result of bargaining processes, i.e. politics, outside and on the sidelines of the market favouring, of course, the politically dominant part of the population, i.e. white males. The operation of the market was therefore secondary to political processes from which the discriminatory structure of the market originated. Employers did not gain but neither did they lose, and even if they did, they were unlikely to be able to change the arrangement unless they got drastically into economic trouble. The power of the white male workers was restricted mainly to crafts where they were able to monopolise the access to the skills. It did not extend to important industrial manufacturing, like car or steel making, where production was much more machine driven. Textiles, on the other hand, protected by tariffs (until the Multi-Fibre Agreement was discontinued in 2005), for long remained a “white man’s industry”.

Where does power come from? Marshall suggested there was a bargaining process going on in the labour market in which individual workers and employers were supported or held back by the position ‘their’ community had attained in a much larger bargain: “there may be no way for an employer to determine the productivity of an individual worker, especially when adding a black worker to a group of whites [in the 1970 U.S. South]. He must calculate the costs to him of reactions of the whites as well as the gain from hiring a qualified black. This often will become a bargaining problem between groups of blacks and their supporters (the black community, government agencies, etc.), white workers and their organizations, and employers. The power relations will determine whether or not blacks get hired” (Marshall 1974:863; King 1990:122).

Numbers are also important, Marshall argued that “Within the institutional framework (including laws and prevailing race relations in the larger society), black power to gain access to jobs ordinarily will be determined by their ability to inflict losses on (or convey profits to) employers and their control of supplies of labour qualified to satisfy the employer's demand if whites boycott or strike to protest the hiring of blacks” (Marshall 1974:863).

Echoing the ‘statistical discrimination hypothesis’ Marshall also suggested that actual group averages mattered for the power an individual member of the group could expect to command in the individual bargaining situation over getting employed or not: “Employers are motivated by net profits resulting from the racial employment bargain. Black or white workers’ power will therefore not come from the marginal productivities of individual workers but from the productivities of groups of workers. Moreover, the effect of change on the net productivity of work groups will determine the extent to which employers are likely to make new racial rules” (Marshall 1974:863).

The individual's bargaining outcome was also influenced by how much power the government brought to bear on the collective and the individual participants in the
labour market and by the power collective consumer sentiment could exert: “Employers will also be influenced by such external pressures as government, general employment conditions and the nature of product markets. Product markets are important in bargaining situations because they influence the employer’s vulnerability to consumer pressures – generally consumer-oriented companies are more vulnerable to prevailing racial attitudes (negative or positive) than those whose main output is producers’ goods” (Marshall 1974:863).

Finally, there was one more collective agent in the bargaining process with an agenda of its own and driven by determinants distinct from those of the other collective participants: “No model of employment discrimination would be complete if it ignored the influence of unions, ... A union’s racial practices are determined mainly by the influence of race on the union’s control mechanisms ...” (Marshall 1974:863).

The driving force for most if not all of these direct and indirect participants in the ceaseless bargaining process making up the labour market was status, i.e. the attempt to maintain superiority where it existed or to gain superiority where it did not by proving the other’s inferiority. Marshall did not add, but he might have, that proving the other’s inferiority individually was not much use if the signs of the inferiority could not be seen and read by everybody else. The status gaining process was therefore not individual but made sense only collectively as between white and black, male and female, old and young, or any other easily deciphered categories. Where the signs of status were not so easy to see they could be added. A union badge or a uniform might serve for some, a KKK hood for others. That these are U.S. examples will only serve to highlight the longer history, depth, and breadth this literature has in the U.S., and perhaps also the greater urgency it has or had following slavery and the Civil War. In Europe the sense of urgency might also have been greater, had a larger part of the Nazi’s victims still been alive and living in Europe or if Nazi rule in the past had also lasted centuries and had been overturned by civil war.

4. Profit

Not many nowadays seem to consider profit a motive for discrimination by employers as it runs counter to anything written in the Beckerian tradition. Banton (1994:15) is among the few who did but limited the argument to special cases. One special case was imperfect competition in the labour market. If the rules for one category of the population are different from other categories this opens up opportunities for profit. The rules could be set legislatively or by association. Banton used the example of early 20th century South Africa where employers formed a Native Recruiting Company as a monopsony for hiring black workers which had the effect of taking all bargaining power away from black workers, since there was only one organisation they could contract with. His other special case was similar. If one category was barred from forming trade unions or joining them, this gave employers the opportunity to pay them lower wages or to save on their employment in other ways. Again the barrier could be legal but would not necessarily have to be.

In the economics literature a distinction has been made between economic profits, i.e. accruing from some kind of innovation of product, process, or organisation, and political profits accruing from the use of influence, power, or violence to rig a market. The political profits, since the 1960s and following the work of James Buchanan, have been termed ‘rents’. Both of Banton’s special cases concern rent-seeking rather than economic profit-making. Rent-seeking must be regarded as an ever-present human inclination that only smart legislation and uncompromising enforcement can
check and perhaps only as far as curbing the excesses. Rents from discrimination could be appropriated not only by employers but especially by workers, if they succeeded in restricting the access of others to particular occupations or to the labour market as a whole (Marshall 1974:853): “Any measure that excludes competition from a new source of labour is likely to benefit existing employees but is unlikely to benefit employers” (Banton 1994:15). This has, of course, very frequently been the strategy of incumbent workers and their trade unions in all sorts of places and occupations. Nationalism, racism, and sexism are the most important ideologies for the purpose.

Conclusion
The refusal to sell, puzzling to Arrow (1998), appears not to have elicited a great many attempts at explaining it. The observation of intended or actual refusal to sell (LaPiere 1934; Wax 1948; Allport 1958:18), of antagonistic behaviour towards customers (Lee 2000), or of bargaining harder and extracting a larger price (Ayres/Siegelman 1995; Ayres 2005) goes back a long time and is pervasive, at least in the U.S. In Europe such research appears to be missing altogether. The behaviour would certainly seem less puzzling in the framework Marshall (1974) or Elias (Elias/Scotson 1965) proposed where there is an evident ‘obligation to hurt outsiders’ and therefore to extract as much as possible from them or to exclude them entirely, a behaviour reminiscent also of Banfield’s (1958) “amoral familialism”. Behavioural experiments have since been showing that participants are perfectly ready to incur costs in order to punish other participants they believe to be misbehaving, i.e. not to be contributing their fair share to community welfare and to reasonable equality (Fehr/Gintis 2007), and neurally experience this act of revenge in a way very similar to eating chocolate. Believed outgroup membership is misbehaviour by definition. Education would be another goods market in which to expect the same behaviour. Knowingly or unknowingly teachers will be very likely not to ‘sell’ equivalent amounts of support, development, and skill to students they perceive as unequally deserving or (whose parents they) experience as less able to insist on desert. Different jobs also offer differential opportunities for skill and network acquisition and are therefore also likely to be allocated in a similar pattern.

‘Segregation’, ‘exclusion’, ‘boundary’ are all code for one and the same behaviour. There are causal reasons for this behaviour, which we poorly understand, while the verbal justifications for it are easy to describe. It is important not to confuse the one with the other.

An important point not to miss is that segregation or exclusion would matter little, if it were not hierarchical in outcome. Only the hierarchisation makes a difference to life-chances. To better one’s own life-chances against those of others is also the purpose of the behaviour. This will continue as long as the world’s resources appear finite and life-chances a zero-sum game in which the one can only gain at the expense of others. And of course only as long as effectively all means are allowed in the struggle and no holds barred.

Not surprisingly, therefore, Douglas Massey (2005:148) saw fit to warn “that the nature of discrimination may itself be a moving target, with the forms and patterns of discrimination shifting over time and across domains.” The cause, he suggested, is that “whenever one social group derives systematic benefit from an institutionalised system of subordination, its members can be expected to resist efforts to dismantle
the system despite its injustice. Instead, as old forms of discrimination are curtailed, new mechanisms will be invented” (Massey 2005:150). Consequently, this should “encourage us to continue to update and refine our measures to allow for an adequate accounting of contemporary forms” of discrimination (Pager/Shepherd 2008:186). In other words, research needs to be repeated at intervals, concepts need to be challenged, data sources developed, and methods adapted. This can only be done at adequate pace if there is a sufficient pool of researchers at work in a reasonably competitive environment that, in Europe, does not end at national borders. The development of the European Research Area has been focused on developing cooperation across member states but it also needs to work on removing the barriers that make – this is an arbitrary example – research done with Swedish data appear as of little interest to anybody outside Sweden. It is one of the fabulous strengths of U.S. research that a study using data from South Carolina will be quoted from Boston to Los Angeles and not just in South Carolina. It is the curse of applied research to produce results of only parochial interest as long as competition on concepts, data and methods is not Europe-wide. It could probably only become so, if the academic labour market also became Europe-wide. Currently, organisation languages, teaching languages, and university recruitment policies do not support this.

The agenda set out by this partial review consists in essentially two broad items for study: firstly, unequal conditions, i.e. unequal reward for the same effort or unequal price for the same good, and, secondly, segregation or exclusion. The latter is somewhat more than mere boundary drawing for it also includes the determination of who will be on which side of a boundary. Although they will be treated separately, the second is merely a further instance of the former, i.e. unequal status for the same effort. The remainder of this paper will focus on explicating the data needs for up-to-date research on these two issues by a variety of methods. Since the two forms are not always specified, i.e., both, disadvantaging and exclusionary behaviour may be covered but it is not clear if respondents thought of them both, some of the literature will be dealt with in a separate section on ‘unspecified’ discrimination.

C. Unspecified discrimination

Reported incidents of discrimination
All EU countries are obliged to have an infrastructure in place enabling the population to lodge discrimination complaints. Some of this is described in PROMINSTAT. The EU Fundamental Rights Agency’s RAXEN network draws on the patchwork of public and NGO administrative data.

Complaints are assessed against the provisions of the law. Proving individual cases is very different from measuring the prevalence of discrimination.

Influences on the likeliness of complaints can be modelled when establishment level data are available (Hirsh/Kmec 2009).

The highly functional record keeping by the US Equal Employment Opportunity Commission (EEOC) enabled researchers to “examine how characteristics of the workplace and institutional environment affect variation in the incidence of discrimination claims and their verification by EEOC investigators” over decades (Pager/Shepherd 2008:185). It also enabled them to assess the effectiveness of
various measures being taken against discrimination (Kalev et al 2006). In order to achieve anything similar in Europe, national law would need to be replaced by EU law and complaints bodies across Europe would need to be owned by the European Commission rather than by national governments or NGOs.

**Perceptions of discrimination**
A quick and dirty way of directly measuring discrimination is to ask respondents if they experienced or witnessed it. In reality such questions can at best be a very rough guide to the incidence of discrimination. They depend on perceptions to accord with actual reality, and there are severe doubts about human ability in this matter. At a minimum, “because events may be misperceived or overlooked, perceptions of discrimination may over- or underestimate the actual incidence of discrimination” (Pager/Shepherd 2008:183). People being discriminated are often not aware this is happening or the relevant memory is not being triggered by the word ‘discrimination’ because this is not the label they themselves have put on somebody else’s behaviour (Quillian 2006:303). Selective perception is a well-known problem, but memory is also selective, or worse, it is synthetic, i.e. produced on the spot to fit the current situation, as psychological research has been tending to show (Wuketits 2007:107-108). Courts are nowadays being urged to rely more on other evidence and less on witnesses because the inaccuracy of their stories is endemic. In other words, rather than actually observing discrimination people are being asked if they observed it or believe others to have observed it. This sort of interview strategy is widely accepted practice but it could amount to asking about rumours of discrimination or, if worst came to worst, to starting them. Careful attention needs to be paid to wording the questions and to testing their validity and their impact on respondents, a challenge especially for semi-structured interviews. If these necessary precautions are observed opinion surveys on perceptions of discrimination can still be valuable, though not really for the purpose of measuring discrimination. Correlations have, for instance, been discovered between perceived high levels of discrimination and negative health outcomes such as depression and anxiety (Kessler et al 1990). Believed high levels of discrimination may also either motivate reduced effort and poorer performance in education and in the labour market (Pager/Shepherd 2008:183) or serve as an excuse for them. Whatever its importance, though, actual discrimination is one thing, the impression that there is discrimination is wholly another. Measuring the one can never be a substitute for the other.

In Eurobarometer 72.1 (European Commission 2009), for instance, six grounds of discrimination were offered: disability, ethnic origin, sexual orientation, religion or belief, age, and gender. All six were asked in each of four questions:

- **QE1.1:** For each of the following types of discrimination, could you please tell me whether, in your opinion, it is very widespread, fairly widespread, fairly rare or very rare?
- **QE2.1:** If you compare the situation with 5 years ago, would you say that the following types of discrimination are more common or less common?
- **QE3:** In the past 12 months, have you personally felt discriminated against or harassed on the basis of one or more of the following grounds?
- **QE4:** In the past 12 months, have you witnessed someone being discriminated against or harassed on the basis of one or more of the following grounds?
In spite of these questions having been asked several times, since the mid-1990s, there appears to be little or no European analytic research into the determinants of perceived levels of discrimination.

EU-MIDIS, the victimisation survey carried out among select minorities in all 27 EU capitals and some other cities in spring 2008 on behalf of the EU Fundamental Rights Agency, also is an important source of simultaneous information on perceptions of discrimination and actual social position (FRA 2009a, 2009b). Its data, too, have been little analysed so far.

Readiness to discriminate
A variety of approaches have been used to research discriminatory attitudes and attitudes on discrimination. It would be wrong, however, to suppose a close link between attitude and behaviour, and if there were, the direction of causation would still need to be sorted out. The US General Social Survey used to contain this question: "Do you think Negroes should have as good a chance as white people to get any kind of job, or do you think white people should have the first chance at any kind of job?" In 1945, 45% of white respondents answered yes, by 1972 97% did. The question was then dropped because of the nearly unanimous response (Quillian 2006:309-310). Actual practice in the labour market did not seem to reflect this opinion then or now. In part this could be due to the question itself. Respondents might answer "yes" but attach an unspoken condition, of which they may not even be aware, like "if they were different (from the prejudice) / twice as good / half as expensive etc", as is suggested by in-depth interviews with employers where they tend to be fairly frank about the reservations they hold (Kirschenman/Neckerman 1991). The other part is that "we must keep in mind that racial attitudes are not always predictive of corresponding behaviour (LaPiere 1934; Allport 1954; Pager/Quillian 2005). Indeed, Moss & Tilly (2001:151) report the puzzling finding that "businesses where a plurality of managers complained about black motivation are more likely to hire black men" (Pager/Shepherd 2008:183).

Two studies have set a benchmark for investigating the readiness to discriminate, both using European data and applying highly similar methods to them, but neither of them conducted at a European institution. The first one was undertaken by a then PhD student at Harvard. He applied multilevel regression to Eurobarometer 30, taken in 1988, estimating the influence of both individual level and country level variables on a) an individual level index of ‘racial’ prejudice, and b) an individual level index of anti-immigrant prejudice (Quillian 1995). The two indices were constructed from seven Eurobarometer questions on how problematic and how numerous minorities or immigrants were perceived to be by principal component analysis. Then they were regressed on sex, age, education, kind of occupation, recent change in the household’s economic situation, an ‘alienation’ index constructed from five questions on how included respondents felt in political, economic and social participation, life satisfaction, relative income, presence of “other races” or of immigrants in the neighbourhood and at work, and on two country level variables, i.e. the population share of non-EU12 immigrants (presumably by citizenship), and GDP per capita. Also included was an interaction term between the two country level variables and interaction between these three variables and several of the individual level variables. The country level variables, of course, were not included in the Eurobarometer dataset but had to be added. Since 2002, there have been a few
European studies using a similar approach (Scheepers et al 2002; Gijsberts et al 2004) but they are easily outnumbered by further studies from abroad (Evans/Need 2002; Kunovich 2004; Semyonov et al 2004). The study by Scheepers et al (2002) used Eurobarometer 47.1, taken in 1997, and added ‘perceived ethnic threat’ to Quillian’s model. From five items in the survey they constructed a variable ‘ethnic exclusionism’ and regressed it on a number of individual- and country-level variables. The individual-level variables included education, social position (eight classes), income, large city, sex, age, faith (none, Christian, non-Christian), perceived risk of unemployment, expected change in the personal situation, perceived change in the personal situation over the past five years, political orientation, further a variable constructed from four materialism/post-materialism items, and ‘perceived ethnic threat’. The latter was constructed from six survey items on the consequences respondents attributed to the presence of minority populations in their country. Country level variables included the labour force rate of unemployment, its change over a five year period, the share of non-EU citizens in the population, the average number of asylum applications over a three-year period, and the change in the number of asylum applications over a five year period. Average scores on ‘ethnic exclusionism’ were found to vary substantially between the then 15 EU member countries with Belgium, Germany, Austria, and Denmark scoring particularly high and Spain, Ireland, and Finland low. Of the country-level influences only the share of non-EU citizens became statistically significant at conventional levels. The other country-level variables do not vary enough between EU15 member countries to make a dent.

The second benchmark study (Semyonov et al 2006), conducted at Tel Aviv University, for the first time investigated changes of anti-foreigner sentiment over time and their determinants in the erstwhile EU12 countries. It used Eurobarometers 30 (1988), 41.1 (1994), 47.1 (1997), and 53 (2000). By means of “factor analysis” – principal component analysis, actually – an index was constructed from four questions concerning impact of foreigners on the welfare system, impact of foreigners on unemployment, impact of foreigners on delinquency and violence, and attitudes toward the size of the foreign population in the country. This index was regressed on the survey year, on seven individual characteristics, i.e. gender, age, marital status, education, household position in the income distribution, left-right political orientation, and unemployment status, and on four country characteristics as they pertained at each of the four survey times, i.e. size of the non-EU population, GDP per capita, share of the right-wing vote, and being a new immigration country. The year was also included in the regression. The effect of the country-level variables on anti-foreigner sentiment was mixed but sufficient to make clear that they need to be included, especially the size of the non-EU population, and the size of the right-wing vote. Wilkes et al (2007) reanalysed the same data in the same way but argued that voting right-wing did not mean the same everywhere in Europe as parties of the extreme right varied in ideology. They differentiated between ‘classic racist’ and ‘cultural racist’ and found a significant effect on anti-foreigner sentiment only for the ‘cultural racist’ right-wing vote. In reaction, Semyonov et al (2007) showed that ‘classic racist’ support was nearly the same in all the 12 EU countries included in the analysis. Thus the ‘cultural racist’ variable in the analysis by Wilkes et al had merely picked up the effects of the original overall right-wing vote variable. It should be noted that this fruitful academic exchange about the best ways of modelling the rise in anti-foreigner sentiment in the EU was conducted between Tel Aviv and Vancouver, not within Europe. A similar study with Canadian data (Wilkes et al 2008) had substantially different results from those obtained for EU member countries.
As country level variables proved to be influential in both studies, as did time, multi-level regression is now clearly the state of the art. They are sensitive, though, to the choice of countries and the choice of variable and there is not always enough variance between countries to find an impact. Eurobarometer surveys have thus been shown to be valuable for identifying influences associated with the readiness to discriminate but must be supplemented with appropriate country level information.

All studies in this field, but Semyonov’s much more than Quillian’s, make clear that extreme care must be taken in interpreting the direction of cause and effect. Having placed one variable in the dependent slot and the others in the independent ones does not mean that reality also behaves this way. For instance, perceived group size could be a cause of anti-foreigner sentiment, but sentiment could just as easily be the cause of inflated or deflated perceptions of group size. Structural equation models will therefore likely be the next step to take.

Eurobarometer 47.1 (1997) also contained a direct question on how racist respondents considered themselves to be. Out of context it may sound crass but – starting from question 49 – the questionnaire rather carefully led up to question 68: “Do you think that you are not at all a racist or do you think that you are very racist?” The answers were on a scale from 1 (not at all racist) to 10 (very racist). 9 percent of the EU population 15 years and older gave themselves at least 7 points. The then 15 member countries ranged between 22 percent and 2 percent of the population giving themselves at least 7 points (European Commission 1997).

If the concern is with discrimination in the labour market, the focus tends to be on employers and their decision-making which is not necessarily the best approach (Tomaskovic-Devey/Skaggs 1999; Marshall 1974). A number of US studies investigated the reasoning given for statistical discrimination using in-depth interviews, usually presenting the material in a narrative manner (Kirschenman/Neckerman 1991; Moss/Tilly 2001; Pager/Quillian 2005). The best-known of these was conducted in the Chicago area and was based on a net sample of 185 interviews representative of the industry and size mix of establishments in the area (Kirschenman/Neckerman 1991). In Europe similar material has been arising as a by-product of situation tests (see below) but was not usually analysed systematically. Its use remained illustrative in nature and arbitrary in the choice of the quotations.

D. Unequal conditions

Discrimination as an inferred explanatory variable
In the US, much less in Europe, there have been considerable efforts to measure the impact discrimination may be exerting on results in various spheres of life. The basic structure of such investigations is to measure an outcome or output or results variable, and to view discrimination as an unmeasured input skewing the output for one population category but not for the other. Respondents are, for instance, asked about their situation in the labour market and at the same time also about all the conceivable explanatory variables for their situation in the labour market. Then regression analysis is used to detect if the explanatory variables are indeed able to explain the observed situation. In other words, discrimination is viewed as altering the relationship between input and output in different directions or to different degrees for different parts of the population. The difference in results for the population...
categories is estimated either by including the categories as dummy variables or, with some techniques, as nominally scaled factors, or by running separate analyses for each category and comparing the results (if permissible). For the explained part of the variance techniques were developed to distinguish between the impact of differences in inputs and differences in the relationship between inputs and output (Blinder 1973; Oaxaca 1973; Jones 1983; Oaxaca/Ransom 1999; Bevelander/Nielsen 2001). The attribution of all or part of the unexplained residual to discrimination is often not explicit. For good reason authors have been shying away from outright putting the ‘discrimination’ label on the residual. Instead they have tended to call attention to its existence and size thus implying that something is at work in the labour market or the housing market not captured by the available explanatory variables and leaving it to the reader to think of discrimination. Since it is true that “of course, these residual estimates cannot control for all relevant factors, such as motivation, effort, access to useful social networks, and other factors that may produce disparities in the absence of direct discrimination” (Pager/Shepherd 2008:187), “… statistical decomposition is better viewed as a method to assess how much of a racial gap can be accounted for by measured factors rather than as a method to measure discrimination per se” (Quillian 2006:303). The same conclusion was reached by the OECD: “… even in the most detailed analyses that include the influence of usually unobservable characteristics such as personal traits, expectations and motivation – observable exogenous explanatory factors typically leave unexplained at least one quarter of gender or ethnic gaps” (OECD 2008a:149) in employment or wages. “Moreover, it is not obvious that observable factors that are typically assumed exogenous – such as motivation and expectations – are determined independently from labour market equilibrium. For example, if discriminatory practices or other factors lower women’s wages relative to men’s, they are likely to influence the decisions couples make as to who will drop out of the labour force to care for children, whose career will determine the location of the family, etc. To some extent the same argument can apply to educational decisions and choice of field of study” (OECD 2008a:149).

Consequently considerable care is called for in specifying the model, in checking the data and in interpreting the results.

Establishing past causality is tricky even under the most benign circumstances but predicting that lines of causation will remain relevant after their existence has become known and after this knowledge has begun to inform political action requires a leap of faith. Referring to Lieberson (1985:191-192), Massey (2005) warned of this fallacy through an example. If we find by regression analysis or in some other way that wages depend to some important degree on education, and if the government then decides to invest in the schooling of educationally disadvantaged parts of the population, who would be bold enough to predict that employers will not quickly start to distinguish along other criteria than education and steer equally educated workers of one colour or sex or whatever into the same less remunerative jobs as before? Changing the level of education would then not have altered the jobs minority workers are employed in, it would merely have broken the statistical link between education and jobs and replaced it with another. There is a far reaching consequence to be drawn from the insight that worker characteristics such as education may not in fact be as determinative of the jobs (or housing or their children’s schools and grades) they end up in as the decision making of their opposites. The consequence concerns research strategy and data requirements, and it had in fact been drawn
before Lieberson when Baron & Bielby (1980) famously urged “bringing the firms back in”, i.e. into inequality research. “Their instruction, however, was underwhelming in its influence, precisely because so much social and economic data were and still are collected from individuals with little or no regard for organizational context. Quantitative data collection at the organizational level remains relatively rare, and almost none of it is longitudinal” (Tomaskovic-Devey et al 2006:569). If this is true of the US, it is even more true of the EU.

Regression is not the only way, at least in sociology. “Important patterns can also be detected through detailed and systematic case studies of individual firms, which often provide a richer array of indicators with which to assess patterns of discrimination (e.g., Castilla 2008; Petersen/Saporta 2004; Fernandez/Friedrichs 2007)” (Pager/Shepherd 2008:184). In economics, too, there was a (brief) revival of firm level case studies (Feldstein 2000), though apparently not (yet) in regard of inequality and its causes.

**Data requirements for estimating the determinants of wage rates**

Sex, age and schooling have long been standard for any explanation of wage differences. In the 1990s the minimum requirements for an adequate model of wage outcomes were raised considerably. Early in the decade, the long standing criticism that years of education was not a sufficient measure of education was repeated with increasing impatience: “… regression studies typically use years of education as a control variable in explaining wage discrimination. But this is an extremely crude control, ignoring as it does differences in educational quality and performance between workers with the same numbers of years of education” (Heckman/Siegelman 1993:193). The same applies if, as is sometimes done in Europe, completed types of school are used instead of years of schooling. In the U.S., lacking any information on school grades and subjects taken, reliance on tests administered to the sample of the National Longitudinal Study of Youth (NLSY), a panel begun in 1979, and the female sample’s children (CNLSY) has become dominant. Simultaneously some studies no longer controlled for schooling: “… we follow a practice suggested by Neal and Johnson (1996) and do not adjust for the effects of racial and economic differences in schooling, occupational choice, or work experience on wages. Racial and ethnic differences in these factors may reflect responses to labour market discrimination and should not be controlled for in regressions that estimate the ‘full effect’ of race on wages through all channels since doing so may spuriously reduce estimated wage gaps by introducing a proxy for discrimination into the control variables” (Carneiro et al 2006:3). There are pros and cons to this because, contrary to intuition, “including schooling in a wage regression raises the estimated wage gaps and produces more evidence of racial disparity. Gaps when schooling is fixed and not fixed are both of interest and answer different questions” (Carneiro et al 2006:3, 25-28).

The NLSY provides time-series data of individual wage careers and thus an opportunity to investigate how much in the course of employment with one employer explanatory power shifts from variables that are easy to observe (education, sex, skin colour) to those that are harder to observe (ability). This would provide fairly clear evidence of so-called ‘statistical discrimination’ in the employment decision and of employers learning of their employees’ true ability over time. Age, sex, education, skin colour (black/white), a measure of cognitive skill, age at the time of taking the
cognitive skills test, actual experience (the number of weeks in which the person worked more than 30 hours divided by 50), potential experience (age minus years of schooling minus six), father’s education, a sibling’s wage, received company training in the previous year (yes/no) were all entered into the wage regression (Altonji/Pierret 2001). A more refined model taking into account the possibility that lower level jobs may provide little opportunity for employer learning does not appear to have been tested yet. If it performed well, it would “show that statistical discrimination influences initial employment rates, wage levels and job type, and that employers’ initial estimate of productivity influences wage growth even in an environment in which access to training is not an issue” (Altonji 2005). In other words, discrimination at the point of the employment decision might channel job seekers with equal abilities into different job levels depending on some easy to observe variable, and once they are in a lower level job nobody ever discovers their (initially) greater abilities and higher potential. So segregation at the point of hiring results in differential occupational mobility and in wage differences.

In the NLSY cognitive skill was measured using the Armed Forces Qualification Test (AFQT), i.e. word knowledge, paragraph comprehension, mathematical knowledge, and arithmetic reasoning. There has been some debate about bias in the AFQT results. If the test battery measured not strictly skill but also exposure to the typical experiences of the (white) middle-class the results would be both class- and ‘racially’ biased. If school quality differed by ‘race’, then the cognitive potentials of children and youth would not be equally realized and the AFQT would capture the result of this discrimination. Likewise, if due to a skewed housing market one ‘racial’ category had to live in more disadvantaged neighbourhoods, this discrimination would result in poorer AFQT scores, partly by feeding into educational opportunities. Having to live in more disadvantaged neighbourhoods could also be a result of lower incomes due to discrimination in the labour market. Finally, the circumstances of the test might invite stereotype threat (Steele/Aronson 1995) which would also bias scores. There tends to be evidence for and assertions against these suspicions (Maume et al 1996; Neal/Johnson 1996; Carneiro et al 2006). Indeed, if discrimination were as pervasive as suggested by the notion of systemic discrimination, then the predictability of wages from the AFQT would not surprise. It would simply be an effect of discrimination influencing the ability to perform in the AFQT and in the wage contest to the same extent (Carneiro et al 2006:19 fn 54).

Regional differences in the US may be mentioned in the text of an article but are often not entered into the regression (Carneiro et al 2006:1). When doing so, Cancio et al (1996) and their critics (Farkas/Vicknair 1996) found that living in the South accounted for 18 to 20 percent of the male black-white wage gap in the age group 26-33, in 1991, while having grown up in the South mattered little. They also kept schooling and work experience in the model and entered mother’s education, rural/urban, health limitation, number of children, and having a pre-school child. With NLSY data for 1991 adjusted R-square was 0.274 without cognitive skill and 0.295 with cognitive skill added to the model (Farkas/Vicknair 1996:558). There does seem to be a case, therefore, for including a control for place of residence. In Europe, no doubt, one would also have to include a variable capturing changes in place of residence after the completion of one’s education, especially if across national boundaries.

Regional differences along with the rural/urban contrast provide for one little shred of structure being entered into the model. This should not be expected to be sufficient,
and the not unusual but still meagre R-square of 0.3 may be testimony to the expectation being correct. The pay gap between occupations with large and small shares of female employees remains largely unexplained, even in sophisticated models accounting not only for the influence of job characteristics, working hours, experience, education, and marital status, but also for unobserved differences between survey respondents and for the probability of being employed (England et al 1988). There is evidence that the allocation to different occupations within the same establishment accounts for a large part of male black-white and Hispanic-white wage differences in the US (Hellerstein/Neumark 2008:459). However, the explanatory power of these models is also modest. There is yet a long way to go in the effort to explain wage rates and why they are not evening out within and between establishments.

Concerning ‘racial’, ethnic, or immigrant wage discrimination much can still be learned from the far more extensive research on wage discrimination by sex, including also the use of company data and alumni databases. “In a recent study of Michigan Law School graduates, Wood, Corcoran, and Courant (1993) find that after 15 years of experience female graduates earn about 13.2% less than comparably qualified male graduates even after controlling for differences in the characteristics of the lawyers’ practices. Importantly, this study not only controls for the quality of legal education – all graduated from the Michigan Law School – but also has extensive controls for performance in law school, experience, interruptions in careers, and type of practice. Laband and Lentz (1993) argue women do not appear to suffer from wage discrimination in the legal profession, although they claim to find evidence that women are discriminated against on several ‘intangible margins.’ Laband and Lentz’s controls for career interruptions, however, are not as accurate as those of Wood, Corcoran, and Courant. Moreover, Laband and Lentz’s sample of female lawyers has considerably less experience (an average of 5.21 years) than Wood, Corcoran, and Courant’s 15 years, and Wood, Corcoran, and Courant report that there appear to be no statistically significant differences in earnings of male and female lawyers at the time of entry into the labor market” (Black 1995:318). These US findings tally with those from the alumni database of an Austrian business school. In a longitudinal study Strunk & Hermann (2009; Strunk 2005) found earnings of female and male graduates to be very similar during the first three years of their careers and to diverge sharply thereafter regardless of career disruptions or not (see also Tomaskovic-Devey/Skaggs 1999:425).

E. Exclusion or segregation

Action research, field experiments: Auditing or situation testing
Since the mid-1960s it has become reasonably common to test markets for how fairly they work. PROMINSTAT does not cover the datasets produced in this way one reason being that none of them are available publicly. Nonetheless we will give a very brief review of this line of research in order to assess the potential it holds relative to surveys and also in order to point up some concerns that would need to be addressed in order to make results comparable with surveys or with the regression-based research that will be looked at in the next section.

Testers respond to true job advertisements or housing offers or otherwise they sample employers or housing brokers with inquiries about openings. Testers are
matched and trained to appear alike but differ on a cue marking the one as minority, the other as majority. Their inquiries come at a short interval. Samples for a single location have varied between a few dozen and several hundred. Quota sampling for particular kinds of jobs or industries has been common.

In Europe, situation testing originated in Britain in the mid-1960s and has been applied widely since then, predominantly in employment, in housing and in access to nightclubs (Gächter 2008; OECD 2008a:152-155). The micro-data from these tests have never become available for re-analysis, and in many instances they are now probably lost. In these three areas there are also numerous instances of private tests not documented in the literature and tests conducted by media (FRA 2010:50, 52; FRA 2009c:38f; FRA 2008:50). Many of the studies of discrimination against young job seekers from immigrant families were carried out upon invitation from its member countries under the auspices of the International Labour Office (Bovenkerk 1992, 1999; Zegers de Beijl 1999; Allasino et al 2004; Cediey/Foroni 2007; Attström 2007). Correspondence testing has been also been used to test discrimination against the children of immigrants in access to employment (Fibbi et al 2003), partly in more upscale labour markets (Bovenkerk et al 1995). All of the ILO and related testing has used a slight accent or name as the marker distinguishing testers. Testing in Britain has also used skin colour. Other tests have used disability, gender, sexual orientation, or age.

In the US, “the audit method has been most extensively applied to housing markets” (Quillian 2006:304, 306-307; Pager/Shepherd 2008:188-189) while “a smaller but growing literature has examined employment” (Quillian 2006:305, 308; Pager/Shepherd 2008:187-188). In housing, “research using telephone audits further points to a gender and class dimension of racial discrimination in which black women and/or blacks who speak in a manner associated with lower-class upbringing suffer greater discrimination than black men and/or those signalling a middle-class upbringing (Massey/Lundy 2001; Purnell et al 1999)” (Pager/Shepherd 2008:189). Testing the credit market attracted unusual attention from critics (Pager/Shepherd 2008:189-191). Car purchases have also been tested (Pager/Shepherd 2008:191) as has the availability of taxi service. In the US usually it was the black/white difference that got tested but sometimes a third category was included, for instance Hispanic or felon (Pager et al 2009). The female/male dichotomy has also been prominent, and age has also been tested.

This is the only part of discrimination research in which the US academic literature regularly (or ever) makes reference to European research. Nonetheless, except for a couple of brief encounters the research communities have remained separate. However, the bulk of activity and the edge of innovation have shifted to the US, and accordingly the 1990s heyday of references to European practice is over and is indeed being forgotten.

Testing is often carried out by correspondence as that avoids the need for testers and can be done, if need be, by a single person in an office. It also allows considerable flexibility in the kinds of jobs and markers that are being tested, and, most of all, it guarantees reliable delivery of always the same prompts in the same order and the same strength (for a good example see Weichselbaumer 2004). It is, in fact, much closer to a lab situation than in-person testing. Recent correspondence tests of employment chances were conducted in Germany (Kaas/Manger 2010), Australia (Booth et al 2010), and the Netherlands (Andriessen et al 2010). Important
advances include computerised correspondence testing which permits for larger and statistically better samples (Lahey/Beasley 2007).

Another important innovation is the development of tests conducted entirely over the phone in the U.S. (Massey/Lundy 2001; Purnell et al 1999).

By now there is enormous experience in testing which has also shown its unanticipated flexibility. Broadly speaking there is agreement that it is the one method of actually observing discrimination in the act.

- “As research-methods textbooks describe, the ability to control potentially confounding influences through experimental control and randomized assignment makes experiments the best method for assessing causality. For the same reason, audit studies often are the best method for measuring incident rates of discrimination. The experimental design allows factors other than race that influence the outcome to be either held constant across the audit pair or balanced out among treatment groups by random assignment. When performed well, audits produce a clean estimate of the incidence of racial discrimination for the outcome examined” (Quillian 2006:303).

- “Although experimental methods are appealing in their ability to isolate causal effects, they nevertheless suffer from some important limitations. Critiques of the audit methodology have focused on questions of internal validity (e.g., experimenter effects, the problems of effective tester matching), generalizability (e.g., the use of overqualified testers, the limited sampling frames for the selection of firms to be audited), and the ethics of audit research. In addition, audit studies are often costly and difficult to implement and can only be used for selective decision points (e.g., hiring decisions but not training, promotion, termination, etc.)” (Pager/Shepherd 2008:185; Quillian 2006:304).

- Given that in the US, between 1970 and 1997, “employment discrimination claims have shifted from an emphasis on hiring discrimination to an overwhelming emphasis on wrongful termination” and also “away from an emphasis on racial discrimination toward a greater emphasis on gender and disability discrimination” ( Pager/Shepherd 2008:186) audit studies must either have been highly effective in bringing about these shifts or are becoming increasingly irrelevant to the realities of discrimination in the US labour market.

The sophistication of data analysis has been varying a great deal, both in the US and in Europe, from the very simple measures used in ILO testing to the complex modelling in some of the literature (for instance Bertrand/Mullainathan 2003, 2004 or the work of Pascale Petit (Duguet/Petit 2005), amongst others).

There has been a notable shortage of comparative testing. Comparisons over time have been made by authors of survey articles but those actually conducting the testing studies have tended to avoid them. Repetitions of studies, even if by the same researchers, have tended to be ad hoc rather than planned beforehand. Comparison between different locations has been even rarer. There are few testing studies performed simultaneously by the same researchers in more than one location. ILO testing studies in Europe were usually performed in more than one city in the same country but often consecutively rather than simultaneously. The ILO, in particular, has been careful not to make explicit comparisons, likely not just for methodological but also for political reasons. Valid comparisons would necessitate more complete data collection within the testing process as well as on the economic
and social circumstances prevailing at the time in the place in order to control statistically for influences on the results. This issue has so far not even been tackled theoretically but the solution will be similar to developments, since 1995, in analysing opinion data reported on above.

The chief drawback of experimental methods of any kind, be it in the field or in the lab, is that they will ever only be able to show what happens in interaction but not how much of an effect this has on inequality. To prove that chances of success in any one interaction are unequal is no proof that they are causally linked to the outcomes observable in the labour, the housing or any other market. To work on the reduction of discriminatory actions is a worthy end in itself but any causal effect on outcomes needs to be proven in some other way.

Enhanced administrative data
The Swedish Public Employment Service (AMS) has been maintaining an online database of job searchers called “My CV”. Either from home or at the employment office job searchers enter information on their education, labour market experience, other skills, and the requirements they have for the job into a series of forms. They are also asked to write a short personal letter. Only if all forms have been completed, does the information become accessible on the internet. Employers can log into the system, search for suitable workers, and contact them via an email within the system. Jonas Lagerström used these data for a study on how much the number of contacts received from employers and the probability of getting hired are influenced by the provenance of the job seeker’s name (Erikson/Lagerström 2007; see also Edin/Lagerström 2006 and Erikson/Lagerström 2006 for similar work using data from an earlier version of the online database). For the purpose he did, however, enhance them in two ways. First, all job searchers logging on in December 2004 were asked to fill in a questionnaire on a voluntary basis about their current employment status, their accumulated employment experience, how much of this was in the occupations they were looking for, whether they were registered with the Employment Service, and in which of six categories they expected an employer would place their name, which 18,167 did, and, secondly, the information from the online database and the questionnaire was matched with the Employment Service’s information on subsequent hirings. 18 percent of the participants had a name not traditionally Swedish, out of which 6 percent had another Nordic name, 0.3 percent an African, 2 percent an Arabic, 1 percent an Asian, and 9 percent another name. The major advantage of this approach is precise control over the information accessible to employers when they decide to contact a job seeker. As it turned out, after controlling for all other information, all names not traditionally Swedish were a disadvantage, but especially names in the Arabic and in the Other category, followed by Asian, and by African. For the latter two the number of cases was insufficient to produce statistical significance at conventional levels. A non-Swedish Nordic name was only a very slight disadvantage.

Segregation and discrimination
Although Arrow (1998) was convinced that job segregation was the key issue, not unequal wages in comparable jobs, ten years later the issue had still not received due attention in the U.S., much less in the EU: “In contrast to the vast literature on wage differences, much less is known about the extent (and sources) of segregation
in the labor market – that is the extent to which members of different groups tend to work with coworkers who are more like themselves than would be predicted by random allocation of workers to establishments” (Hellerstein/Neumark 2008:459).

For a long time segregation was understood to refer to living in separate places. This is no longer the case. While spatial separation remains an important research issue, the systematic employment in particular kinds of jobs is an equally important kind of segregation. There is a rich U.S. and a not so rich EU literature on occupational segregation. It covers, first of all, sex segregation, secondly ‘racial’ segregation, and thirdly immigrant segregation. Immigrant segregation the U.S. today is hardly a research issue at all, partly for lack of suitable data. There is, for instance, “almost no literature on Hispanic-white occupational segregation” (Tomaskovic-Devey 2006:566), and there appears to be none at all on Asian-white occupational segregation, but it is a more or less regular feature of the EU and UN literature, though under a different heading. Here it appears as ‘concentration’ of migrant workers and immigrants in particular industries, and the explanation tends to be in terms of good jobs and bad jobs with the non-migrants having a choice between them while the migrants don’t (Böhning 1995). In terms of systematic and methodologically advanced analysis sex segregation between and within occupations has probably fared better in the EU, too, not only in the U.S.

There are two key issues in segregation research. One is measurement. Below the briefest of sketches of the measurement issues will be provided. The other is explaining the observed segregation. It is only in the explanations that discrimination can appear.

**Measuring segregation**

The measurement of occupational segregation has become a fairly competitive academic niche. The competition concerns the measure to use, the methods of measuring, and by implication the completeness of the dataset to have access to. At times it also concerns the definition of segregation.

One of the conceptual issues only now being clarified is whether segregation research starts from inequality and whether it matters if it does not. The original intent was to measure the degree of separateness of parts of the population. The measures used for the purpose used to include primarily the dissimilarity index (D) and the Gini coefficient (Duncan/Duncan 1955). Since both these measures are not independent of the number and size of categories across which a population could be distributed, there has been much activity, especially since the mid-1990s, in proposing alternatives (Grusky/Charles 1998; Watts 2005; Hellerstein/Neumark 2008) or to introduce control variables into models that are apt to neutralise the unwanted effects (Tomaskovic-Devey et al 2006:567). Also since the mid-1990s, the insight gained wide currency that a purely random allocation of workers to jobs would not be totally desegregated. Given the overall minority share the random chance of a unit of a given size to deviate from it can be determined statistically. Segregation measures can be fairly large due to random allocation alone. If anything, it is the segregation in excess of the randomly expected level that matters, not the level of segregation including the random component. Properly determined the excess component can be compared between studies using data from whatever size unit (Carrington/Troske 1997).
A conceptual problem has also been plaguing segregation research. This is the distinction between horizontal and vertical segregation (Charles 2003; Watts 2005). There has been an argument that separate should not be conflated with unequal. Working in different occupations, industries, or establishments does not necessarily mean one job is better than the other. This poses, first, the question of how separation and hierarchy are related conceptually and causally, and, second, how to separate the measurement of the one from the other. The ultimate answers are not yet apparent.

The unit of analysis has been varying. Much of the non-US literature on ‘occupational’ segregation has been using industry units as provided for by the United Nation’s ISIC and the European Union’s derived NACE. This literature should therefore be referred to as ‘industrial’ segregation to distinguish it from studies actually using occupational units as, for instance, provided for by the ILO’s ISCO. In industrial segregation research a focus on the two-digit level of ISIC or NACE has emerged. This informal convention among researchers has led to a series of papers on sex segregation with somewhat comparable results (Nermo 2000). In the US there used to be very little research on ‘racial’ segregation by industry and next to none on migrant worker segregation by industry (Tomaskovic-Devey et al 2006).

Until very recently, there used to be virtually no evidence on segregation by skill or educational level or by language (Hellerstein/Neumark 2008:459).

Data needs for adequately measuring occupational segregation

Following a line of research that has been developing in the US since the early 1980s (Levine 1982; Charles 1992), Nermo (2000) applied log-linear analysis to a five-dimensional matrix of 1120 cells. The five dimensions were sex (2), industry (20), country (7), working time (2), and sector (2). In order to study ‘ethnic’ segregation in employment sex would need to be replaced by ‘ethnic group’, or the latter would need to be added as a sixth factor. Omitting the agricultural sector, as Nermo did, might have to be reconsidered. A question would also be whether to include seasonal employment if it tends to be carried out by workers not part of the resident population. The method finds differences in employment segregation but does not explain them. Explanation remains a separate issue. Nermo (2000), for instance, concluded without formal analysis that welfare regimes had no influence on sex segregation in employment since the latter did not vary much across northern, western, and southern European countries billed to be exhibiting different regimes. The veracity of this conclusion remains to be shown.

European countries are included in comparative studies of industrial segregation between the sexes (Jacobs/Lim 1992; Charles 2003), and there are also a few studies specifically on European countries (Hakim 1992; Charles 1998; Nermo 2000) unless they are published in less accessible languages.

Since the mid-1990s, U.S. research has begun to use matched employer-employee data. These seem to be custom-made for the purpose at hand but would lend themselves to the investigation of other research questions as well. The Decennial Employer-Employee Database (DEED), for instance, was based on detailed 1990 census returns that were matched to the Business Register, both owned by the U.S. Bureau of the Census (Hellerstein/Neumark 2008:461-462). Researchers become research affiliates of the Bureau and thus gain the opportunity to create the dataset they need from the existing sources (practiced similarly in places in Europe). The
DEED comprises individual level information on age, sex, marital status, ‘racial’ or ethnic category, full-time or part-time, number of children (if female), level of education, English fluency, hourly wage, hours worked in 1989, earnings in 1989, and industry, plus establishment size, establishment payroll, and census region. Earlier matched datasets were less comprehensive but the opportunity to create and use them was obtained in similar manner.

In the US the Equal Employment Opportunity Commission (EEOC) has been an important source of data for segregation research. “The EEO-1 reports we utilize document workplace-level segregation in the private sector since 1966. Coverage is currently limited to establishments in private sector firms with 50 or more employees if the firms are federal contractors and 100 or more employees if the firms are not federal contractors. Before 1983, separate reports were required for contractor firms with 25 or more employees and noncontractor firms with 50 or more employees. By the year 2003, more than 4.5 million establishment observations had accumulated, meaning plenty of data exist for disaggregating segregation levels and trends to the community and industry level. / For each reporting establishment the EEO-1 data contain sex-specific employment counts for five racial/ethnic groups … across the following nine occupational categories: officials and managers, professionals, technicians, sales workers, office and clerical workers, craft workers, operatives, laborers, and service workers. This allows establishment-level estimates of occupational segregation by sex/race/ethnicity as well as more focused models on access to specific occupational categories. Firms are instructed that employees do not include temporary or casual workers, but do include leased employees as well as both part-time and full-time employees” (Tomaskovic-Devey et al 2006:569). Eight of the nine occupational categories share names with eight of the nine ISCO major groups. The difference is that EEO-1 data have a separate category ‘service workers’ while lacking the ISCO category ‘skilled farm workers’. The authors’ warn that, “It is clearly worth remembering that these data shed no light on within-occupation, within-establishment segregation. We still are underestimating actual segregation” (Tomaskovic-Devey et al 2006:569-570). On the other hand the nine occupational categories do in part reflect a socially relevant job hierarchy, although clearly these are not lines of intra-firm authority. EEOC data are accessed the same way that U.S. Census Bureau data are, i.e. by affiliating researchers to the agency (Tomaskovic-Devey et al 2006:566 fn 1; Kalev et al 2006:596; Hirsh 2009:252).

Data needs for explaining occupational segregation
If ‘racial’ or ethnic parts of the population differed systematically in the amount or quality of education they received, occupational segregation in the labour market and the establishment would perhaps not surprise. The suspected locus of discrimination would then be in the education system. If occupational segregation were also observed for employees with the same education and skill, “varying forms of discrimination in the labor market, residential segregation coupled with constraints in commuting to work (spatial mismatch), or labor market networks that exist along racial or ethnic lines” (Hellerstein/Neumark 2008:459) would need to be considered as causes. In the case of (recent) immigrants, there is also a chance they would sort themselves or get sorted into occupations and workplaces where others speak their language. It turns out that educational differences explain none of black-white occupational segregation. English language skills may explain part of the Hispanic-white segregation (Hellerstein/Neumark 2008).
In recent U.S. segregation research there effectively seems to be a reversal of the burden of proof. The unstated assumption from which it starts is that discrimination is the cause of segregation. Then it goes on to show how much of segregation might be due to other causes.

In order to find out how much job applicants themselves contribute to job segregation their choices among six jobs in one company were regressed on age, sex, mean preference for the other jobs, and five ‘race’ categories. The choices were made in the course of fully automated phone interviews without any human interaction that could have resulted in conscious or unconscious steering of applicants. The expectation that women would be sorting themselves into feminized and men into masculinized occupations regardless of what they paid was confirmed. There also were some indications that ‘Asians’ and ‘Hispanics’ were more likely to sort themselves away from customer contact which would conform with the assumption of feeling less comfortable with English. The industry’s low-wage profile conformed with a certain over-representation of blacks among the applicants in comparison to the local population (Fernandez/Friedrich 2007). Consequently state of the art research on segregation or exclusion currently requires data both on the job preferences of applicants for employment before any selection and steering by the company they apply to and data on how management processes the applications and assigns workers to jobs. The research also shows that obviously one option would be the reshuffling of the components of job descriptions in order to degender them, if a less sex segregated labour market and less earnings inequality is desired. It may be necessary to do so continuously, since jobs would probably get regendered quickly.

A curious lacuna of social segregation research should be noted. Segregation has served as an independent variable to explain wages (England et al 1988; Carrington/Troske 1998b) but not the other way around. At the same time it is obvious that the richer and the poorer mingle neither residentially nor occupationally.

Career research is close to research on vertical segregation. For Chicago it was concluded that “Black employment is concentrated in a Black-oriented system of services” (Collins 2005:194). You tend to find black employees where you also tend to find black customers, and the latter’s distribution is skewed: “By virtue of their lower positions in the income distribution, Blacks tend to be over-represented in populations utilizing public services such as public housing, health and hospital care, corrections and city transport systems” (Collins 2005:194). In higher-up corporate positions Blacks in Chicago “are typically responsible for affirmative action plans and for mediating race-conscious labor and community relations” (Collins 2005:197). These are often dead-end as they are viewed as support positions not contributing to the bottom line. “… success in performing these jobs builds on soft skills, such as interpersonal skills, and external (i.e. community) relationships. This competes with and undermines the development of hard skills such as administrative/decision-making and building internal (i.e. corporate) networks. The cumulative effect is that job holders can neither move up in the company beyond their current position in real terms, nor can they move over into a line position, nor can they move into mainstream personnel where they might expand their horizon” (Collins 2005:199).

published material of this kind on Chicago is readily available in Europe the same appears not to be true of European cities such as Barcelona, Milan or Cologne, or even Paris, London or Brussels. This is certainly not due to the same problem not existing in Europe.

Bringing the firm back in (Bielby/Baron 1980) was a call to include intra-firm structure and its imperatives in models of organisational and occupational change. This was at a time when macro-structural givens were debated widely. Since then, these have fallen somewhat by the wayside again, not least, perhaps, because techniques of adequate inclusion in formal models were not available at the time. Nonetheless, macro-structural givens are important. Firms’ behaviour is conditioned, if not determined, by the markets they face, not least the labour market. Alba (2009) has been arguing that in the US demographic change is already diminishing the opportunity for firms to indulge in whites-only reflexes and will continue to do so. By this reckoning the white highly educated population will not be a sufficient replacement for the retirees of the next 20 years, and firms will simply be forced to recruit from other sections of the population. The technical impasse is also solved now. Multi-Level Analysis is widely available and examples of its application as well as textbook treatments abound. There is really nothing to stop us now from including macro- and micro-structure in our models except the continuing dearth of micro-structural information in survey data.

**Overeducation**

A subtopic of occupational exclusion is overeducation, i.e. the employment of workers in jobs not requiring as much education or training as they have. The issue is fraught with conceptual divisions. One frequently raised issue is the possible temporariness of overeducation and its link to the life-course (Quintini/Martin 2006). This is very much a European province of research.

The special relevance of overeducation for immigrants is often neglected by authors focusing on differences between the sexes where it is indeed not much of an issue. The OECD has been taking up the migration issue against considerable scepticism on the part of some of its constituents. Their argument tends to be that education certificates are not comparable internationally, which is of course true, but they apparently fail to appreciate that this does not also mean foreign certificates are always inferior to in-country ones. PISA and other programmes of testing cognitive skill at particular ages might eventually provide a yardstick by which to compare the worth of certificates across borders.

Canadian and US studies have been tending to find a link between the quality of origin country educational systems and occupational performance after migration (Sweetman 2004; Mattoo et al 2005). The datasets for these studies needed to be assembled from various sources. From a North American educational context there has also been an argument that certificates, though formally equal, are not in fact comparable between schools within countries (Reitz 2004). If so, comparable educational worth of certificates would not be an inter-national but rather an inter-school issue.

The OECD has been using data mainly from the 2000 round of censuses with some additional data from Labour Force Surveys (Dumont/Monso 2007). At minimum, information on the educational level and the occupational level is required. In
international comparisons the ISCED and the ISCO classifications, respectively, have been used, usually aggregated so they constitute a three by three matrix.

In the 2007 version, the OECD grouped ISCO major groups 1 to 3, 4 through 8, and 9 into three groups calling them high, intermediate and low qualification, and likewise grouped ISCED levels 0 to 2, 3 and 4, and 5 and 6 into low, intermediate and high education (Dumont/Monso 2007:156; OECD 2008b:78, and misleadingly OECD 2008b:138). “An overqualified individual is one who holds a job that requires lesser qualifications than one that would theoretically be available at his education level” (OECD 2008b:139; Dumont/Monso 2007:136). Over-qualification is only possible if individuals have at least intermediate education.

Friedberg (2000) showed for Israel that imported education has little value in the labour market but any supplemental education obtained in Israel does raise wages, though not necessarily to the non-migrant level.

A vote for exclusion
Outside the labour market some cutting edge research has been coming forth from Europe. One instance is the use of panel data from national election surveys in Flanders 1991, 1995, and 1999 to explain voting for the Vlams Blok (Rink et al 2009). The main question was how much it was influenced by the share of immigrants in the population. The researchers added the immigrant population share, the unemployment rate and other variables at the municipal level to the survey variables in the dataset. A multilevel logistic regression with three levels (temporal, individual, municipal) was performed with independent variables centred around the mean. Only 12 percent of the variance were explained. A vote for the Vlams Blok became more likely up to about 5 percent immigrant share in the population and decreased thereafter. This result held even if respondents from the two largest cities were excluded. Individual unemployment increased the likeliness but municipal unemployment had no effect which may not be surprising given that unemployment was probably focused on immigrants. Income had no independent effect over and above education and occupation. Women, young age, and agnosticism made a Vlams Blok vote more likely. How to raise explained variance remained an open question. Perhaps including the age of the youngest child would have helped some but not likely very much. Several hypotheses to account for the 5 percent peak were proposed. An additional one might be that voters might switch to more harmful tactics than voting once the 5 percent are crossed.

As the whole procedure is very similar to studies reported on above in the section on unspecified readiness to discriminate two immediate questions arise:
- Does unspecified readiness to discriminate also respond to population shares?
- Can models partly explaining readiness to discriminate also explain voting behaviour to a similar degree?

If closely similar models performed equally well on discriminating, voting, and perhaps also opinion, this would imply coherence across various kinds of behaviour and between behaviour and opinion.

Violence is the severest form of exclusion
Another notable study modelled anti-foreigner violence in Germany by county, event by event from 1990 to 1995 (Braun/Koopmans 2010). The data were gathered from various sources and partly joined together. The other part was used for validating the data entered into the analysis. A stratified Cox regression was employed on the event history data. Some of the main results are that a 1 percentage point greater population share of foreigners increased the violence hazard by 6.5 percent, and 1,000 new asylum requests in the previous month by 2.5 percent. Unfortunately the model did not allow for detecting a plateau effect as found in the Flanders voting study. Each negative statement about foreigners reported in the press raised the hazard of violence that week by 5 percent. Declining areas with net outmigration were more likely to spawn violence. The lack of a successful right-wing party also raised the hazard. The intensity of press coverage also had a significant increasing effect. Geographic proximity of a county to one with violence did not matter once political, agrarian, and population share similarity between a given county and the nearest one with violence were entered into the analysis.

F. Conclusions
The intention for this paper was not to describe the substantial results but primarily the data being used in discrimination research along with some methodological hints. The paper was limited to describing a small number of studies that may serve as benchmarks but may also soon be supplanted by others. Thematically the studies were limited to the labour market, employment, and occupations, not because other areas are less important but because of an economy of time and space.

Unmistakably method and data needs have been following the discovery of ever more intricate aspects of discrimination. It is hard to tell if discrimination has been changing, as Massey (2005) thought, or sensibility to it and its varied and subtle forms. As time-series of data in North America get longer, the persistence of discrimination keeps becoming more obvious. Even if there is no clear evidence, Massey’s hunch should be taken seriously. The legal changes that were set in motion in EU member countries following the year 2000 directives are gradually making themselves felt in the practices of public and private employers, of social partners and governments at all levels. As the changes ripple through societies one may expect Massey’s premonitions to become true in Europe: discrimination becomes more subtle but no less effective. An army of researchers will be necessary to make this visible if it is happening, and to dig deeper into the practices. Effective enforcement will depend on this as much as on efficient complaints bodies. Both are currently lacking in most places in Europe, especially away from capitals.

Most of the literature by which research on discrimination was described and data needs assessed in this paper originated from U.S. universities. European research on the subject is far less numerous and much harder to access. Even benchmark studies using data on European societies are being generated from debates held elsewhere. It would be very interesting to see what sort of approach equally ambitious researchers in equally flourishing European universities would take to the topic given the opportunity.

Strategically speaking, replication with European data of empirical research undertaken elsewhere would be of great value. Not requiring as much genius as original work replication is an extremely good way of building competence. It is still time-consuming, not only for the researchers in Europe but also for those whose
work is being replicated. This may need to be paid for in some way. Replicate research would both help to build capacity and competence and would provide empirical insights into the prevalence or likeliness of discrimination in Europe. Practical experience suggests that the general existence of discrimination does not really require proof anymore but the precise locations and mechanisms of discrimination do. Teachers at all levels from kindergarten to university, employers, trade union officials, mayors, etc etc, all tend to be adamant they are not personally discriminating, and yet when there are data, the evidence does usually and unsurprisingly show practices are discriminatory. Special attention does also need to be paid to well-meant practices.

Longitudinal data are the only means for making biographical changes visible. In Europe there has been a conspicuous disregard for the impact of legal, political, social, or economic change on the biographies of people living in Europe. Longitudinal data are also the only feasible means available for breaking the box of methodological nationalism because they could force research organisations to follow respondents across intra-EU borders. This would add a whole new dimension to cooperation between nationally defined research organisations. From a strategical point of view the creation of longitudinal datasets – extending beyond the narrow four-year limit in EU-SILC – should become part of Eurostat's remit as soon as possible. The creation of such datasets needs to be carefully planned. It takes several years before the sample can be interviewed the first time. A political decision will also take years. The intervening period could be used for preparatory work such as feasibility studies and pilots.

A directive on complaints data is badly needed. It ought to transfer ownership of complaints bodies partially or wholly from national authorities to the EU Agency for Fundamental Rights. This is the only feasible way of creating a homogeneous body of data on complaints against discrimination and racism. Over time, a valuable database would come into being. Its usefulness could be further enhanced, if companies throughout Europe were required to report annually on the composition of their workforce. A beneficial side-effect would, no doubt, be that employers as much as trade unions would learn to pay attention to the ways by which new workers are recruited. Usefulness could be still further enhanced if all non-profit organisations receiving a substantial part of their funding from communities and states were also included. These have tended to escape research altogether and yet, anecdotal evidence suggests, their practices may be considerably more discriminatory than those of for-profit organisations. A comparison between the practices of one kind of organisation and the other might also help to clarify to some degree the role of competition in propagating or diminishing discrimination (Black/Brainerd 2004).

For academic research access to data is often no easier than for somebody with a commercial interest. Having received a research grant from an organisation existing for the purpose of funding academic research ought to trigger an exemption, not a general one but one defined by the purposes of the specified research, from the strict privacy protection exercised in many EU countries.

Serious discrimination research has been tending to stretch social science methodology to its limits. It is hoped that new generations of researchers in Europe will show the ambition to close the methodology gap relative to the U.S. Such ambition can be kindled or thwarted. Positive efforts by a few member countries of the EU will not suffice. Competition for the best research needs to be Europe-wide for
otherwise the pool of researchers will simply be too small for meaningful competition and cooperation. There is also still a language issue, although it is clearly shrinking in importance. A continued effort needs to be made, though, to Europeanise teaching content in universities and staffing in research organisations.

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