

Entering Higher Education –
Gender and Class Perspectives

Caroline Berggren
Entering Higher Education –
Gender and Class Perspectives



GÖTEBORGS
UNIVERSITET

ACTA UNIVERSITATIS GOTHOBURGENSIS
GÖTEBORG STUDIES IN EDUCATIONAL SCIENCES 243

© *Caroline Berggren*, 2006
ISBN 91-7346-556-9
ISSN 0436-1121

Foto: Bo-Lennart Ekström

Distribution: ACTA UNIVERSITATIS GOTHOBURGENSIS
Box 222
SE-405 30 Göteborg, Sweden

ABSTRACT

Title: Entering Higher Education – Gender and Class Perspectives
Language: English
Keywords: higher education, gender, class, admission system, labour market, differentiation
ISBN: 91-7346-556-9

This thesis studies the entrance to higher education, and how different categories of students act in times of recession, in relation to the admission system and when choosing educational track. The purpose has been to develop both a comprehensive and a fine-grained understanding of educational participation and attainment.

The thesis consists of three papers, along with an integrating essay that further explains and discusses the three studies as an integrated research project. There is also a Swedish language summary written in easy language.

The empirical basis of all three studies has been register data for full birth cohorts. In the first study, six cohorts born in the middle of the 1970s are analysed. In the following two studies the cohort born in 1974 is further analysed. The registers primarily contain educational data, but also background information such as parents' education and income is available. These registers are linked on an individual level which makes it possible to follow the individuals' educational choices and attainment until they are 30 years old. Two multivariate analysis methods have been used: binary logistic regression and Cox regression.

In the early 1990s there was an economic recession, which was associated with an increased matriculation rate among intermediate and working class students. However, at the end of the decade when the private sector recovered, the development concerning matriculation was different for men and women from these classes. Possible explanations are that the educational choices are still quite gender traditional, and the gender segregated labour market. In addition, men from lower classes are generally educationally low achieving which limits their competitiveness in the admittance system.

There are different paths to higher education, the primary purpose being to provide a "second chance" for who like to change trajectory later in life. However, the study showed that these paths primarily facilitated the entrance for upper middle class students and among them men in particular.

Higher education has undergone a large expansion, which has led to an increased diversity of educational options. Class and gender differentiation is studied both regarding attractiveness (prestige) and field of study. Students coming from upper middle class are particularly successful in entering the most attractive programmes. One of the explanations is that women from the upper middle class is the highest achieving group of students. They can therefore successfully compete for a place of study in all types of programmes.

TABLE OF CONTENTS

Introduction.....	11
The Educational Framework.....	13
The organisation of the educational system	13
The admission system	15
The Conceptual Framework	17
Gender and class differences in educational achievement and participation.....	17
Explanations for the observed gender and class differences	24
Summarising the field	29
Explanations for the observed gender and class differences within small scale studies	31
Research Questions.....	37
The labour market	37
The admission system	37
The division within higher education.....	37
Concepts - Variables.....	39
Class and Socioeconomic status.....	39
Gender	41
Intersections of gender and class.....	43
Entrance to higher education.....	43
Attractive programmes	43
The selection instruments.....	46
Data – Analysis methods	47
Data.....	47
Analysis methods	48
The Empirical Studies.....	51
The labour market	51
The admission system	52
The division within higher education.....	53
Integrated results from the three studies	54
Discussion	59
The contribution	59
Gender and Class perspectives.....	60
Methodological aspects	62
Communicating my study results – possibilities and obstacles ...	64
Women’s educational success.....	65
References.....	67
Appendix.....	79

ACKNOWLEDGEMENTS

First of all, I would like to thank Professor Jan-Eric Gustafsson and Professor Elisabet Öhrn, my two supervisors, for guiding me through this project. Moreover, Professor Lesley Andres at the University of British Columbia has kept an eye on my progress and provided some valuable advice. My other colleagues within the research group, have in many different ways supported my work. Beyond the group, many other colleagues at the Department of Education and particularly so those at the Unit for Individual, Culture and Society and the collegium of Gender and Education, have supported me, by reading my manuscripts and by providing encouragement and inspiration. I am not able to mention the names of them all. Instead, I would like to restate the crucial importance of an open minded research climate, where it is possible to discuss research within a large group of people, all with different perspectives and different approaches. Such an atmosphere is an absolutely essential part of a positive and developing environment for learning and for research.

I would also like to thank The Bank of Sweden Tercentenary Foundation for funding this project.

Finally, a supportive and understanding family is always invaluable.

Mölndal in April, 2006.

Caroline Berggren

INTRODUCTION

The aim of this thesis is to elaborate on previous understanding of which categories of students who enter higher education. Up to now, the class differentiation in recruitment to higher education has attracted most attention, even though differences with respect according to gender and ethnicity have been studied as well. However, these groups are large with a considerable variation within them. This thesis studies gender and class structure simultaneously.

The thesis is one within a long tradition of longitudinal large scale studies performed at the Department of Education at Göteborg University. The research programme “Individual Statistics Project” also called “Evaluation Through Follow-up” started in the early 1960s in cooperation with Statistics Sweden. The Swedish system of personal identification numbers was crucial for the conduct of the programme. In Sweden the personal ID is used systematically in nearly all aspects of people’s lives. Irrespectively in which part of Sweden people live, many actions and events such as school choice, change of occupation, civil union or child birth are registered and reported to the Statistics Sweden. Representative samples of students from a certain age group have been drawn regularly. Information from students, parents and later on teachers and headmasters have been collected by means of questionnaires. The research project has primarily focused on the reasons for differences in educational choices and outcome. The longitudinal design makes it possible to study if and how different factors change over time. The project has also evaluated the outcome of educational reforms. Besides research, the database has formed the basis for official reports and the works of commissions (Härnqvist, 1998; Härnqvist, Emanuelsson, Reuterberg, & Svensson, 1994).

Later on, register data for the whole population born 1972-1979 was added to the information gathered via questionnaires (Gustafsson, Andersson, & Hansen, 2000). Educational registers, in particular, were used, but also excerpts from censuses and income registers, so that the family background can be analysed. In 2000 the research

programme was extended further in a project called “Validation of the university entrance system, VALUTA”. Register data for whole age cohorts born in 1972-1984 was added to the existing database. This thesis has been carried out within the VALUTA project.

Another research milieu within the Department of Education that also has influenced me is the collegium “Gender Perspective in Education”. At this collegium, researchers meet and exchange experience of analysis methods, theories and new research within the field of gender studies and education. As a member of “Gender Perspective in Education” I have come in contact with approaches that have, among other things, influenced my research questions, my choice of theoretical framework, my criticism of gender biased concepts and the way I analyse the data. Some of the research that has influenced my understanding of how people’s actions are affected by the gender structures will be presented under the heading “Explanations for the observed gender and class differences within small scale studies.”

THE EDUCATIONAL FRAMEWORK

This is an empirical field of research where the analyses of data and the results that these produce gradually leads to the development of an understanding of a phenomenon. The work is driven and developed by the practical statistical work that in its turn is guided by strict criteria for how it is to be executed. Hypothesis testing is a common way of driving the research forward. Several of the theories that are applied within the field are generally of an economic kind, or they are using concepts based on economic metaphors.

Several factors influence a person's choice whether or not to enter higher education. In addition to individual characteristics, the organisation of the education system and the admission system are crucial for what is possible to choose. The educational system is continually changing. An underlying cause of most changes is the government's wish to control and influence both the level and the direction of the education among the population.

The following description focuses the period that concerns the age groups that forms the empirical bases in this thesis. They went through the educational system during the 1980s and 90s.

THE ORGANISATION OF THE EDUCATIONAL SYSTEM

A compulsory comprehensive school was introduced in the beginning of the 1960s (Skolöverstyrelsen, 1962). The pupils began at the age of 7. For the oldest age groups, 14-16 years, there were possibilities to choose tracks or subjects, but this differentiation was considerably reduced in the following curriculum that was introduced in 1969 (Skolöverstyrelsen, 1969). Only few choices remained, such as a choice between general or advanced courses in mathematics and in English in grades 7-9, and whether or not to study a second foreign language.

In the beginning of the 1980s about 80% of the pupils transferred from compulsory school to upper secondary school. Today almost all students continue to upper secondary school (SCB, 2005).

The introduction of the Higher Education Ordinance of 1977 (SFS, 1977) among other things implied that college educations such as those for nurses and teachers, and colleges of advanced technology/polytechnic educations were incorporated into higher education. The result was a decreased variation of educations aiming at a specific occupation at upper secondary school level. The vocational programmes that were still offered at secondary school attracted men primarily.

Until the introduction of the new curriculum in 1994 (Utbildningsdepartementet, 1994) there was a clear distinction between the vocationally oriented programmes with a duration of two years and the theoretical programmes that ran for three or four years. Examples of vocational and technical programmes that aimed at a specific professional status were the construction-, electricity- and vehicle programmes. There also were vocational programs that directed the student toward a field but not to a specific occupation, such as for example child and recreation, business and administration, and health care programmes. At the end of the 1980s employment could be obtained after graduating from these programmes, for example as child-care worker or assistant nurse. However, the labour market has since then changed, and higher educational qualifications are now required (le Grand, Szulkin, & Tåhlin, 2002). Those students who aimed at higher education chose the theoretical programmes, such as for example the natural science, social science or humanistic programme.

The theoretical programmes provided general and sometimes special eligibility for entry into higher education. Only few of the vocational programmes provided general eligibility. To enter prestigious or attractive programmes within higher education special eligibility was required. Those students who wanted to make sure that they would be eligible for a large variety of study places in higher education had to obtain a degree from a three- or four-year theoretical programme,

preferably with an orientation toward natural science (Skolöverstyrelsen, 1983).

Today, the duration of all upper secondary school programmes is three years, and they all provide general eligibility to higher education. The new curriculum was introduced in 1994 (Lpf 94), one of the primary intentions being to equalize access to higher education (Utbildningsdepartementet, 1994)

As an effect of the Higher Education Ordinance of 1977 (SFS, 1977) the numbers of places of study increased, because several educations were incorporated into higher education. During the period 1990 to 2001 the number of students increased by more than 60 percent (HSV, 2002). During the 1990s the government particularly invested in education in technology and natural sciences, so in these fields the places of study were about doubled.

THE ADMISSION SYSTEM

The Higher Education Ordinance of 1977 restricted entrance to all single courses and study programs. A selection system of the applicants was needed when there were more applicants than places of study. This was an opportunity for the government to influence the composition of the student population. Among other things it was regarded important to improve the possibilities for older students to gain access to higher education. Students, who had not been successful in upper secondary school, should be provided a second chance. To diminish the dominance of “traditional” students new entrance possibilities were created.

One of these alternatives was the Swedish Scholastic Assessment Test, SweSAT. It was introduced as a selection instrument for those who did not have any school-leaving certificate from upper secondary school, but had reached the age of 25 and had work experience. Those who had knowledge of Swedish and English corresponding to two years of upper secondary education and a minimum number of years of work experience had general eligibility for higher education. When applying for courses and programs with restricted access, work experience of 5 years increased the merit points by 0.5 on the SweSAT scale that ranges from 0.0-2.0 (UFB, 1992). Yet another

alternative route to higher education was via studies at municipal adult education. Those who had turned 20 could for example pursue studies equivalent to upper secondary school, and obtain eligibility.

In a longitudinal study, Kim (1998) analysed the effects of the 1977 admission reform using a sample of 600 applicants. Of those who applied in 1980, only 40 percent were matriculated. Most of those who did not matriculate at the first time repeated their application and adjusted their qualifications to the demands. As the years passed more and more of the 600 original applicants became matriculated. For some applicants the admittance tended to be a drawn out process. After 15 years, the proportion of matriculated had increased from 40 to 90 percent. A question of equality versus efficiency was raised, among other things because the admission system has several contradictory goals. One goal was to increase the diversity of the student population and another one to select those applicants who are most likely to complete their education.

Since the outcome of the new regulations were not fully satisfactory, several changes have been made. One example is the increased use to the SweSAT and another, the introduction of Municipal Adult Education. Since 1991 everyone can take the SweSAT, and the test result may be used also by those who have completed upper secondary school. With the introduction of the 1994 curriculum for upper secondary school (Utbildningsdepartementet, 1994) it became possible also for those who had completed upper secondary school to improve their grades for competitive purposes. A course studied and completed in upper secondary school, can be studied once again, for example in municipal adult education, in order to improve the grade (Löfgren, 2003).

THE CONCEPTUAL FRAMEWORK

Large scale data analyses give an overview, and allow fine grained descriptions of results for subgroups. Often the population is divided by gender, class or by migrational background, and patterns of differences in educational achievement and educational choices have been identified for these groups. In the following section, differences related to gender and class are presented, and some of the common explanations of these are discussed.

GENDER AND CLASS DIFFERENCES IN EDUCATIONAL ACHIEVEMENT AND PARTICIPATION

After the introduction of the comprehensive school during the 1960s (Skolöverstyrelsen, 1962), it became easier to compare the achievement of different groups of students. Students from higher classes or who had well educated parents have since long been known to achieve the highest grades in school (e.g. Boudon, 1974; Svensson, 1971), and they still do (Erikson & Jonsson, 2002). In the later part of the 1960s, it was observed in Sweden that girls' achievement level had increased and become somewhat higher than boys' (Svensson, 1971). Since then, girls and women have further improved their achievement. Today somewhat more girls than boys finish compulsory school with complete grades, and girls achieve higher grades in all subjects except physical education (Utbildningsdepartementet, 2004).

Looking at the choices that could be made in compulsory school, there was a slight tendency that more boys within the highest class chose advanced courses in English and mathematics, compared to girls. In the lower classes the relation was the opposite; more girls chose the advanced alternatives (SCB, 1988). In other words, there was an interaction between gender and class with respect to achievement and choices.

Both gender and class differences increased at the upper secondary school level. It was most likely that students from the highest class should enter upper secondary school, and there were no gender

differences in the transition rate in this class. In the middle and working classes it was more likely that the girls transferred (Härnqvist, 1998). The vocational-technical programmes attracted a majority of students from working class, the majority being men, while theoretical programmes primarily attracted students from middle and higher classes, the majority being women (Erikson & Jonsson, 1993; SCB, 1995). Some explanations for these group differences are structural. For example, the choices of general or advanced courses that the students had made in compulsory school did set some limits for what was possible to choose in upper secondary school (Skolöverstyrelsen, 1983). Furthermore, the occupational educations that primarily women had chosen were with the 1977 reform placed within higher education (SFS, 1977), and the students had to adjust to a gender segregated labour market (SOU, 2004).

Some school subjects and educational paths have been perceived as either male or female coded. Natural sciences, and mathematics in particular, have since long been regarded as suitable for men. However, these domain separations are now challenged since women have not only raised their educational achievement, they have also increased the variation in their choice of fields to study (Arnot, David, & Weiner, 1999; Reuterberg & Svensson, 2000; Svensson, 1998). However, even though female students consider mathematics as an important and interesting subject, it does not imply that they continue that trajectory in their further studies (Andersson, 1998; Ayalon, 2003).

Studying class differences in achievement, there is an average difference of about a quarter to half a grade on a five step scale in favour of upper middle class students compared to working class students in upper secondary school (Erikson & Jonsson, 1996; Svensson, 1998).

As mentioned initially, statistics do not generally consider both gender and class simultaneously, but some recent Swedish surveys indicate that women in the class fraction below achieve as well as men in the class fraction above (Björnsson, 2005; Svensson, 1998). Researchers (Delamont, 2001; Öhrn, 2002) have pointed at the small gender difference in achievement, and emphasized that there are other group

differences, such as social class and cultural affiliation that ought to be regarded as well. However, it might be that the conventional wisdom that the gender difference is small in relation to the class difference is not valid any longer.

In the decision whether or not to enter higher education, the effect of class becomes even more evident compared to the choices at lower levels of the educational system (Erikson & Jonsson, 1993, 1996). For reasons already mentioned, the majority of middle class students, both men and women, and working class women, had chosen upper secondary school programmes that gave access to higher education. Moreover, educational achievement in these groups was higher compared to the achievement among working class men (Svensson, 1998; Öhrn, 2000). However, having the right qualifications or being eligible is not equivalent to becoming matriculated or enrolling in higher education. The inclination to enter higher education differs between the groups, even in the situation when students from different classes have got the same grade point average. Middle class students are more inclined to transfer to higher education than are working class students (Erikson & Jonsson, 1993, 1996). At high achievement levels men are more likely to transfer compared to women (Andres, 1998; Härnqvist, 1998). Choice of higher education studies can be perceived as natural for students whose parents are well-educated, it is only a matter of what type of higher education they will enter (Vogel, 1987).

When studying the age composition of higher education students, it has been found that the proportion of students from intermediate or working class is much higher among mature students, those around 30 years, compared to the younger age groups. The mature students are also more likely to be women (Balke, 2002; Egerton & Halsey, 1993). In these two studies the reason for the later entrance was not further analyzed, but one reason might be as mentioned above, that entering higher education is not an obvious decision among working class students. Another reason may be that they have lower GPA and therefore must spend time supplementing their grades.

A student can make use of different paths to become accepted and matriculated in higher education. Some of them are a straight stretch,

while others are twists and turns. Erikson and Jonsson (1993) studied the entrance alternatives that were available until the early 1990s and came to the conclusion that they provided yet another starting-point for the middle classes. Differentiated analyses according to gender were not performed. The additional paths were used by students from lower classes as well as from higher. However, students from higher classes were better at making use of the additional opportunities to transfer to higher education. These results correspond to those from a survey by Statistics Sweden ten years later, where gender but not class was analysed. Here it was shown that women study at municipal adult education to increase their GPA, while men supplement their school-leaving certificate without attending municipal adult education to the same extent as women. However, men were more successful in transferring to higher education after municipal adult education compared to women. It should be observed, though, that the results must be interpreted with caution since the dropout rate was very high (SCB, 2003).

The Swedish Scholastic Assessment Test was introduced as an alternative for those applicants who had no school leaving certificate from upper secondary school. The test efficiency has been evaluated from different perspectives, and among other things patterns of test taking in different groups have been investigated. Only a limited subset of the population takes the test. Fewer men from working class take the test, because they do not intend to enter higher education, and well-achieving women do not need to take the test in order to become competitive for higher education studies, because they have already achieved high grades (Mäkitalo, 1994). Those men who take the test are generally more successful than the women, which tends to be the case for this type of multiple choice test (Willingham & Cole, 1997). The combined effect of the self selection and the test construction is a 0.2 higher score for males on a scale which ranges from 0.0-2.0 (Gustafsson et al., 2000). Test takers from higher classes score higher than test takers from lower classes, although the latter group is more positively selected (Reuterberg, 1998). Test takers whose origin is upper middle class (SES I) achieve a score which is 0.25 units higher compared to test takers whose parents are non-skilled workers (SES VII) (Gustafsson et al., 2000). It is possible to take the test as many times as wished (Brandell & Lindqvist, 2002). Those students who

take the test twice or more, usually improve their results. As only the best result is counted, this is done without any risk taking (Cliffordson, 2004; Gustafsson et al., 2000; HSV, 1996; Reuterberg, 1997). Thus, these studies focussing upon selection effects and repeated test taking indicate that the test contributes to maintaining the composition of the present student population.

Researchers in other countries have also observed that changes in the educational system with the purpose to facilitate the entrance for underrepresented groups of students contributes to maintaining a traditional composition of the group of students rather than changing it. Lee and Frank (1990) in the U.S. have compared students who have used the “usual” route, which was directly from high school to four-year colleges or universities, with those who have transferred from high school, via two-year community colleges, to further education. The results showed that the groups of students were very much the same. In both paths to university the students were from higher social class and somewhat more likely to be male.

In Israel, as in Sweden, vocational tracks in upper secondary school have been made more academic in order to make more students eligible for higher education. The new regulations were successful; the influence from the family background decreased and women increased their lead further when it came to obtaining a plain diploma (probably comparable to general eligibility in Sweden). However, the old universities did not want to risk their distinction. As a response, an additional requirement, the university-qualifying diploma was introduced (cf. special eligibility in Sweden). The differentiation of selection to the old universities could thereby be maintained. Instead it was the new university colleges who accepted the plain diploma (Ayalon & Shavit, 2004).

This leads on to the differentiation within higher education. When there is a large supply of higher education institutions and places of study, this is likely to lead to a differentiation within higher education. A conceptual differentiation, like what is done with respect to the labour market (SOU, 2004) can also be applied upon higher education. For example; higher education institutions and programmes can be differentiated into fields, which is a horizontal differentiation; or into

hierarchies of prestige, which is a vertical differentiation; or internally with a differentiation within the programmes, when orientations or specialisations are offered.

The expansion of higher education which has resulted in an increased differentiation of institutions and educational paths has been a topic for many researchers in different countries. Extensive analyses have been done in Finland, among other things on the role of the newly created universities in rural areas. Students from families with well-educated parents have increased their participation in higher education and particularly in the well established universities within the capital area (Kivinen, Ahola, & Hedman, 2001). These are called research universities. The new universities are called service universities; common types of programs are offered and access is easier. These universities to a larger extent attract students with no or little academic tradition (Kivinen & Ahola, 1999). As a measure of prestige, the authors analysed what type of programmes students with a well-educated home background apply for. General tendencies were that law and medicine stood out as desirable fields, where men were more likely to turn to law and women to medicine. Humanities primarily attracted women from middle class, while men from this class turned to natural sciences and technology (Kivinen & Rinne, 1991).

The differentiation and specialisation within programmes has not been as frequently studied. In Sweden, differentiations can for example be seen within medicine where women and men choose different specialities: more men become surgeons, while women form the majority within psychiatry and geriatrics. A similar division can be seen within law where a majority of the lawyers working in the health care sector are women, while the sector of finance and business is male dominated (SOU, 2004).

In the British higher education system a division was made into universities, polytechnics and colleges (Egerton & Halsey, 1993). Service class (comparable to upper middle class) students were attending all three types of institutions, but this class held its largest advantage in relation to the intermediate and working class within the university. Like in Sweden, teacher and nurse educations are

incorporated in higher education, in Britain usually in colleges and some in polytechnics. Since students choose traditionally, women came to form the majority within colleges, and men within university and polytechnics. Moreover, those programmes that were more likely to be chosen by women had a comparatively short duration and a pronounced occupational focus. Men and women tend to be in majority in different programmes and when these programmes were provided at different colleges the hierarchical differentiation became visible on an institutional level.

In the U.S, where education is privately held, the institutional differences become crucial. Male dominated fields, like engineering, were more likely to be provided at elite institutions, and this in turn resulted in different levels of funding (Jacobs, 1999). The differentiation according to class and gender is also present in Sweden; however, most university colleges and universities have a variety of programmes and courses that are offered, some prestigious and some not so prestigious. The differentiation will then be most visible on programme level. Erikson and Jonsson (1993, 1996) studied, prestigious programs, which according to their definition lasted for at least 3½ years, and generally lead up to a well paid high status occupation. They are for example: Master of Science in Engineering, Master of Law, and University Medical Degree. The authors compared students from upper middle class (SES I) with those with a family background of unskilled workers (SES VII) and analysed men and women separately. The development of the social selection was studied for some decades. The conclusion was that the social selection to prestigious programs was initially higher for women than for men, but during the 1980s it decreased for women, which resulted in an equal level of social selection within both genders at the end of the 1980s. When comparing prestigious programmes with the other programmes, there was a stable and twice as high class difference in the transfer to prestigious programmes. A study of class mobility (Jonsson, 2004) that covers the period until 1999, shows that the classes have been quite stable since the 1980s, with the exception of working class women who have improved their class position and probably done so due to increased participation in education.

EXPLANATIONS FOR THE OBSERVED GENDER AND CLASS DIFFERENCES

Theories explaining the class differences are usually of an economic character. They are either explicitly discussing costs and benefits, or use metaphors for economical concepts. Whether or not labour market explanations should be considered as economical is a question I will leave open. Explanations for the gender differences are rare, as are theories considering both the gender and class structure. In connection with a presentation of the theories, some critique will also be mentioned.

Several researchers have been inspired by the Cultural reproduction theory by Bourdieu (e.g., 1977, 1984, 1997) and have applied his concepts, even though the methodology is not always applied wholly. It is particularly the concepts referring to the different forms of capital that are used, but there are also examples when the concept of habitus is applied within large scale studies. The cultural capital concept, particularly in the form of the educational background of the father, or a synthesis of the parents' educational level is often used. The idea is that students from a family familiar with the dominant form of cultural capital, will experience it easier to obtain a cultural capital of their own, to succeed in school and achieve a good school leaving certificate, degrees or diplomas (Bourdieu, 1977, 1984; Broady, 1990, 1985; Kivinen et al., 2001). It is also easier for students with well-educated parents, who have an experience of higher education themselves, because then the parents can guide and help their children to choose a suitable educational track (Kivinen & Rinne, 1996). Economical capital can, for example, provide the time required to transfer cultural capital from one generation to the next, and the period of study can be free from economic obligations and worries (Bourdieu, 1997; Orr, 2003). Beside these two forms of capital, the possession of social capital also facilitates success within the educational system. The social capital is a network where information and knowledge is shared among the group members. To be able to successfully manoeuvre within the educational system, the students need to be guided to choose the "right" university, the "right" programs, in order not to get lost and end up with a less useful degree. A family network would be helpful during the period of education,

and especially afterwards to get dividend from a high status education (Bourdieu, 1977; Kivinen & Ahola, 1999; Kivinen & Rinne, 1996).

In addition to these frequently used capital metaphors, the concept of habitus is important. This concept stands for an unreflected way of acting that is shaped within the family and from the life the person has lived so far. The living is influenced by the amount and mixture of capitals that is available. It leads to a selection of ways of perceiving, regarding and acting in social situations. Therefore, different groups of people have different forms of habitus, and as a consequence, certain forms of habitus are more useful within the educational system than are others (Broady, 1990; Dumais, 2002; McClelland, 1990).

The theory of Bourdieu has among other things been criticized for not being able to represent the situation of the underprivileged, such as the working class and women. It does not consider the strategies that these groups use to survive and make the best out of life in a male dominated society where the values of the middle class are reproduced. The norms of the dominant groups are not always incorporated in the unreflected way Bourdieu suggests (Adkins & Skeggs, 2004). As just mentioned, the theory is particularly about middle class reproduction and has therefore been criticised for being unable to handle change.

Boudon (1974) is another French sociologist, whose theory about social selection within education is frequently referred to in Swedish studies (e.g. Erikson & Jonsson, 1996; Härnqvist, 1998). He sees two main explanations for stratification. There is a primary effect which means that children from higher classes show a higher achievement level compared to other children. The secondary effect implies that at equal levels of achievement, children from higher classes are more likely to continue to choose theoretical studies rather than vocational ones and they are more likely to continue studying. The theory also builds upon a discussion about benefit, cost and utility. Different social classes perceive the benefits and the utility of the choices differently. The cost may be both social and monetary; an example of a social cost is choosing another educational track than one's friends do. It is also mentioned (Boudon, 1974) that there may be problems in operationalising the concepts of benefit, cost and utility. This is maybe

a reason why the primary and secondary effects are most commonly used.

The Rational choice theory or rational action theory is based on the assumption that people make economically favourable choices (Blossfeld & Prein, 1998). People are supposed to acquire knowledge of alternatives that are available and thereafter spend time comparing and ranking this information. Blossfeld and Prein mention some of the problems with the theory: people may not behave rationally, they may not collect enough information, and they may not act in the “best” way for themselves. This theory does not consider the context; in what way cultural norms influence, and that ethics and morals prevent economical self-interest. The theory has an unproblematic way of deciding what is the best choice or action for all kinds of people. There is an unexpressed androcentric and middle class oriented valuation of what rationality is. The theory can also be criticised for not taking into account that different groups of people have more or less access to information and regard information from different sources differently (Hutchings, 2003). Information can also be withheld as a demonstration of power (Ås, 1978).

The Human capital theory is similar to rational choice theory in the way it perceives the individual. The individual is seen as an independent unit unrelated to the gender and class structures. Human capital theory assumes that there is a positive relation between education and income. Education will increase a person’s chance of getting an employment and thereby increase her or his life time earnings. Education is also advantageous for the society that gets a well educated population (Christoffersson, 1983; Woodhall, 1999). The theory seems to be somewhat out of date; it was developed before the expansion of the whole educational system. Despite this, there seems to be a rebirth of these ideas. Kivinen and Ahola (1999) discuss the weakness of the theory and among other things point at the importance of choosing the “right” track within higher education, and having the “right” contacts in the labour market in order to get an economic return from the educational investments. Today there is a discussion about over-education and that education is used as a screening device by the employer rather than a demand and necessity for the knowledge that the education represents. Particularly well

educated women and immigrants have difficulties in finding an employment that corresponds to their qualifications (le Grand, Szulkin, & Tåhlin, 2004; Oscarsson & Grannas, 2002). Statistics also show that women will not reach the same life time earnings as men, despite women being more educated than men (Ljunglöf, 2004). The human capital theory does not consider qualitative differences in education, that some educations brings higher economic return than others. Another shortcoming of the theory is that everyone is assumed to value high salary as the most important. However, non-monetary rewards such as interesting and rewarding tasks and having a pleasant working climate can be ranked at least as high (Andersson, Fürth, & Holmberg, 1997; Christoffersson, 1983).

Lucas (2001) presents some theories of a similar kind that aim at explaining the transition rate among different social groups from one step to another on the educational ladder. Maximally Maintained Inequality implies that the class differences in educational attainment will not decrease before the inclination to enter is fulfilled among students from the higher classes. The theory does not consider different qualitative aspects of education, only the level. A development of the theory called Effectively Maintained Inequality does, in addition, account for the more or less favourable choices that can be made within a certain educational level. This means that students from higher classes will be secured the most advantageous choice. The influence from the family background will still hold for later transitions. Another theory in the same vein is the Life Course Perspective, assuming that if almost all people completed secondary education the class differences would decrease in the following transition. Family background will decrease at later transitions because children become more and more independent.

These theories fit the all-embracing large scale studies that have been performed. The level of aggregation in the analyses corresponds to the level of abstraction in the theories. On the other hand, these theories are too general to be useful when an additional social structure beside class is included in the analysis; that is, when the large groups are disaggregated. Bourdieus' theory of cultural reproduction has been reformulated also to fit women's reproduction, as can be seen in the section: "Explanations for the observed gender and class differences

within small scale studies” (p. 31). It is certainly possible also to reformulate any of the other androcentric theories, mentioned above, to comprise aspects of gender. However, that is not within the aims of this thesis.

Labour market changes and in connection to that, the organisation of the educational system have been used to explain the participation rate in higher education for different groups of students. There have been major changes within the labour market, requiring a population that is more educated than before, but the demand for education may have increased more than what is really needed. As a result a discussion about over education has emerged (Kivinen & Ahola, 1999; le Grand et al., 2004; Åberg, 2003), and further education has been perceived as a storage for a part of the population (Kivinen & Ahola, 1999; Kivinen & Rinne, 1998). The demand for higher education has been suggested to closely accompany the labour market fluctuations, particularly among those who would otherwise choose work in the first place (Gustafsson et al., 2000).

The division of men and women into different positions and branches in Sweden has been used as an explanation for the gender traditional educational choices that young students make (Skolverket, 2002; SOU, 2004). Sweden has, compared to some other European countries, a large share of women who are well established on the labour market. About 50% of the women are employed within the public sector, where the traditional female care and house work is organised as paid labour. In comparison 20% of the men are employed within the public sector. Countries which show an apparently gender equal labour market, are likely to have a larger share of females occupied with non-paid work within the family (SOU, 2004). Young women who try to break the norms of what is perceived as suitable educational choices, and for example enter a vocational technical upper secondary school programme demonstrate a comparatively high dropout rate (Skolverket, 2002). Reasons for this are that these young women form a small minority, they enter a setting where the teachers and school-fellows are male, and the subject is organised by and for men. A Norwegian study (Brock-Utne, 1997) found that when boys entered a female subject area such as home economics, the subject

was changed to also suit boys. However, the same adjustment of traditional male subjects to girls has not been reported.

As mentioned previously, large scale studies focussing upon gender differences are not as common as studies focussing on class differences. Perhaps as a consequence of this theories explaining gender differences are nearly absent within this field. There are some exceptions, however, and one is presented below.

Wernersson (1992) has suggested a model for understanding how the gender structures are preserved in the school setting. The starting-point is classroom research where several studies have shown that girls generally do not get as much attention from the teachers as the boys do. Girls more often choose to demand less “public space” and instead they give priority to personal relations and develop an ability of co-operation. Boys must learn how to handle the hierarchies within school and within the peer group. It is likely that those boys who are at the top of the hierarchy will develop a positive self concept and a competence for structural social relations. Different experiences during childhood and adolescence will probably influence boys and girls to develop different rationales. It will then be more common among boys to prioritise status and money, compared to girls. On the other hand, it is more likely that girls will consider needs from children they expect to have, when they choose education and later on occupation.

There is also a slight intersection between class and gender in Wernersson’s theory, though it is not explicitly mentioned. Note, that it is only those boys who are on the top of the hierarchy who will develop a positive self concept within the school context. Those who are neglected will probably develop differently.

SUMMARISING THE FIELD

Researchers from several disciplines have contributed to the development of the field of educational participation and attainment. The majority of them are educationalists, sociologists, statisticians and economists. Statistical methodological development and economical theories are prominent. It is an empirically based field, where the theory usually is developed when the empirical results either confirm

or reject a stated hypothesis. However, the models created are still primitive in the sense that they seldom take more than one group affiliation (e.g. class) into consideration at a time, and little attention seems to be paid to interaction effects. Some researchers do adjust their models to different groups within a population. For example, Andres (1998) and Härnqvist (1998) showed differences in post-high school status or transition to higher education according to class and gender when for example educational track and achievement were considered. Kivinen and Rinne (1991), who rely upon Bourdieu, map the field of higher education institutions according to student gender and their fathers' education and show that there are major gender differences. However, when competitiveness of admission is included in their analysis as a third dimension, gender is suddenly dropped. Ayalon and Shavit (2004) have included several group affiliations in their analyses, and show how these groups interact with cohorts (i.e. time), but not how the group affiliations interact with each other. Having these examples in mind, it does not appear to be any practical problems in analysing the interaction of several influencing factors. However, a gender and class perspective that is being focussed throughout the research is rare within this field. Perhaps it is simply a lack of interest, or lack of knowledge about current feminist theories, that is displayed by the absence of theories considering different outcomes from multiple group affiliations.

Turning to the results that have emerged from previous research, it is clear that girls and women have made large inroads within the system of education. Their achievement level is on the average higher than that of their male counterparts, and they have increased the scope of subjects they choose to study. The social selection to higher education is still there; however, the research done is not in agreement as to whether or not the expansion of higher education has contributed to increased equalisation within the student population for different groups. The reasons for different views lie to a large extent in the definition of higher education, where some researchers make overall analyses, while others are studying a selection of programmes or institutions. Recent research indicates that working class women have improved their class position, but how this is related to education has not been clarified.

Social engineering, such as influencing the admission system, seems to have failed when the purpose is to facilitate the entrance for underrepresented groups of students. However, the effects are often studied among young students, and it is not known how the additional entrance possibilities affect presumptive students of mature age. As mentioned previously, there is not a comprehensive gender and class perspective on this type of analyses, so it is not clear if the additional entrance possibilities might actually be working for some of the underrepresented groups.

There is a close relation between how the labour market and the educational system is organised. The gender divided labour market, and its hierarchies, is used as an explanation for the gender divided educational choices that students, primarily men, still make. The demand for workers with little education has decreased and more people turn to higher education in order to accommodate the new requirements. It has been suggested that labour market fluctuations would influence the composition of groups of students within higher education. In times of an economic recession, students who are eligible but with non-academic traditions would be influenced to enter higher education.

EXPLANATIONS FOR THE OBSERVED GENDER AND CLASS DIFFERENCES WITHIN SMALL SCALE STUDIES

Some of the theories that have influenced this work have their origin in small scale studies. Data in those studies often collected via interviews. The interaction of class and gender is obvious in this type of research which clearly shows the need for gender and class divided analysis, also within large scale statistical studies. These theories have therefore come to influence both my decision to disaggregate the categories of class and of gender, and not to use the common theories within the field.

The cultural reproduction theory developed by Pierre Bourdieu has been applied by, or influenced, several researchers within this field, both those working with large scale and those working on small scale studies. However, particularly the feminist researchers working with small scale studies have raised extensive critique of the theory of Bourdieu (e.g. Adkins & Skeggs, 2004; Dillabough, 2003; McCall,

1992; Moi, 1991; Reay, 1997; Skeggs, 1997). Summarising the critique, the theory is an insufficient tool in order to understand the working classes, women and other subordinate social groups. It does not depict the struggle that subordinate groups have to deal with every day. However, the cultural reproduction theory is a very good tool in understanding how the positions of the elite are inherited, how the middle classes and the elite reproduce their positions with the help of the educational system. Some of the concepts are still useful also for subordinate groups, if the interpretations of the concepts are extended or if additional capital metaphors are developed.

Other grand theories that have been applied within the field are theories about the male supremacy and the hierarchical organisation within the group of men (Connell, (1987, 1995, 2002). Hirdman's (1988, 2003) theory is also about the male supremacy, or the male norm for "man", for human beings. Moreover, it is about processes of gender separation in society and within the family.

Applications of Bourdieu's, Connell's and Hirdman's theories will be given below, together with theories originating from small scale studies.

First a summary of explanations for the poorer achievement level generally, and lower participation level in higher education, among working class boys will be given. "Working class boys" is a group that does not pay much attention to schoolwork. Their idea of what it means to be a man collide with studies, they tend to frown upon intellectual work which they perceive as feminine (Archer, Pratt, & Phillips, 2001; Hill, 1998; Mac an Ghail, 1994; Trondman, 1995). Studying means for them that their income is postponed to a distant future, which is perceived as too risky (Archer, 2000; Archer et al., 2001). The more obvious hierarchies among men compared to those among women (Connell, 1987, 1995, 2002) is another hurdle. The educational setting is a middle class arena, which means that working class men as a group do not possess enough resources or capital (Bourdieu, 1997) to enable them to compete on equal conditions with middle class men. They are on beforehand destined to loose the competition; therefore, they had better not expose themselves to a defeat (Archer & Yamashita, 2003; Haywood & Mac an Ghail, 2003;

Mac an Ghail, 1994, 1996). This is a vicious circle, a history of failure at school prevents them from choosing and being able or eligible to choose further studies. Instead they stick to the hope to continue in their fathers' footsteps, as manual workers.

There are theories explaining why working class women act differently in comparison with their male counterparts. Education does not challenge femininity anymore, which makes it easier, in this respect, for working class women to invest in studies. In addition, they do not have the same positive associations to their class as their male counterparts (Skeggs, 1997). To continue studying, to mix with middle class students, and to leave a low valued class position may be easier for working class women than for working class men (Archer, 2003; Reay, 1997). On the other hand there are restraining factors too. Traditional working class femininity is among other things associated with responsibilities and caring. Education can from this point of view be perceived as a selfish action (Reay, 2003). Time spent on looking after others and taking care of relationships collide with the time that is needed to get done with the studies (Archer & Leathwood, 2003; Berggren, 2001; Tett, 2000). However, responsibility is not always restraining, a component of reliability (Skeggs, 1997) is likely to facilitate studies. A feeling of responsibility about the future can become apparent in an investment in education, and to be reliable is an important characteristic in order to successfully complete studies.

There are several theories which explain the higher achievement and participation level among students from higher classes. To continue education is more or less taken for granted among upper middle class students, it is not a choice that is preceded by careful considerations (Hutchings, 2003). Students from middle and higher classes need an academic degree as a means to reproduce their status, or improve it (Arnot et al., 1999; Bourdieu, 1984). Nowadays the same situation holds for both men and women in these classes. Lucay *et al.* (2003) describe transfer of the upper middle class girls to higher education as a conveyor belt. The upper middle class students are likely to have parents who have completed a post secondary education themselves (Kivinen & Rinne, 1996). There is an understanding of what higher education implies. Some of the parents are likely to have a relatively stable private economy; maybe they can also support their children

during periods of stretched economy. The knowledge that there is an economic backup will relieve the economic pressure, and concentration can be directed to the studies (Archer, 2000; Bourdieu, 1997). Nevertheless, the pressure to be educationally successful is heavy upon students from higher classes. The expectation seems to be particularly high on the young women in upper middle class (Arnot et al., 1999; Florin, 2005; Lucay & Reay, 2002). Jakobsson (2000) has applied Hirdman's theory about gender separation when explaining gender differences in achievement in theoretical upper secondary school programmes. In Jakobsson's study, young men believed in ability as transmitted by heredity and perceived themselves as logical and smart. Since young women are not men, they must therefore lack those positive "male" characteristics. Accordingly, the young women had to compensate their perceived deficiencies, which most likely were unfounded, which lead the women to work harder and consequently achieve higher grades. In other words, the young men's very positive self-perception, or even too positive self-perception, might prevent them from reaching their "true" potential.

Some theories explain the low participation rate among the working class in higher education and in high status fields particularly. Students from lower classes do not have that easy access to information about the educational system. Furthermore, they express scepticism about the reliability of the official information. The information is perceived as serving the interests of dominant groups (Hutchings, 2003). Another consequence linked to lack of the "right" social capital is the feeling of being different, not feeling comfortable in the academic milieu. The result might be a "negative" self-selection where students sort themselves out from higher education and especially from higher status fields (Archer, 2000; Reay, 2001). An expression that is often cited in this connection is "That's not for the likes of us" (Bourdieu & Passeron, 1990, p. 157). It has been used when explaining working class student's choices in higher education, but also when explaining women's under representation within male dominated areas. What in earlier days were clearly demarcated male territories has changed into less obvious divisions, but exclusion is still working, though under more sophisticated forms (Florin & Johansson, 1992). A division within the genders is likely to be positive for men, since they are not exposed to a comparison with

women which might turn out not to be in their favour (Hirdman, 1988, 2003). Women who do cross gender borders can be subject to group pressure or even sexual harassment in order to accommodate to the established order (Abrahamsson & Gunnarsson, 2002; Bourdieu, 2001; SOU, 2004). Those women who do succeed need a whole set of resources, or symbolic capital, as Moi (1991) chooses to express it. In order to occupy a prestigious position women need an academic degree, a well-developed network and in some situations personal wealth. Richness in all of these factors is needed to compensate for their deficient gender.

Caroline Berggren

RESEARCH QUESTIONS

Most of the topics that have been researched and debated within the field, can be further developed if a gender and class perspective is systematically applied. By understanding the intersections between multiple group affiliations a more fine-grained and sophisticated understanding can replace the rather generalised one that is currently dominating.

THE LABOUR MARKET

The suggested hypothesis, that an economic recession would increase the demand for higher education studies particularly among underrepresented groups of students, will be tested. It is possible to carry through this study because of the economic fluctuations during the 1990s. Early in that decade there was an economic recession followed by a period of recovery at the end of the decade. Particular attention will be paid to the categories that emerge when dividing the population according to both gender and class.

THE ADMISSION SYSTEM

Several entrance possibilities to higher education are available. Some of them are specifically designed for students who would like to change trajectory in mature age. The effect of the most common entrance possibilities will be analysed and the duration of the effect will be studied until the presumptive students are 30 years old, with the population divided according to gender and class.

THE DIVISION WITHIN HIGHER EDUCATION

The class and gender differentiation into higher education is dealt with in the two previous questions. As a natural continuation the question emerges as to how the class and gender differentiation has developed within higher education. The group differentiation will be analysed both according to a horizontal differentiation; that is differentiation into fields of study, and according to a vertical differentiation; that is

differentiation into fields related to prestige or attractiveness. By group differentiation is meant differentiation both according to gender and to class.

CONCEPTS - VARIABLES

Most of the concepts are used in all three studies. They will be described here, along with concepts and measures used in a single study.

CLASS AND SOCIOECONOMIC STATUS

In the three studies, the social origin is divided into broad categories, so called classes. The Swedish occupational classification, the socioeconomic index representing socioeconomic status (SES) is used. This classification is a vertical and horizontal determination of a person's position on the labour market. It is created according to the following principles:

First, people active on the labour market, defined as working 16 hours per week or more, are separated from those who are not working, for example retired people and students. Second, there is a division between employed and self-employed. Third, education is included; however, the classification does not consider the individual person's actual educational level, only what kind of education that person is expected to hold when in a certain labour market position. Fourth, the employed are further divided into working class position or service class/middle class position, according to what kind of trade union the employed is associated with. Fifth, working class position is divided into production of goods or production of services. Sixth, service class/middle class position is dependent on staff managing function or number of employees under the position. Seventh, self-employed are divided into farmers and others. Eighth, those who are not employed are categorised according to previous employment or according to the category that the spouse is in.

Education is an important factor in the classification. The Swedish society is perceived as very meritocratic compared to several other European countries (Breen & Jonsson, 2005). Therefore access to education and educational qualifications are important in order to get access to different occupations and thereby to a certain position in

society. The importance of wealth and ownership of means of production has been reduced (Vogel, 1987).

The detailed grouping that is the result of this categorisation is then aggregated into three classes: I, II and III. There is also a fourth category, which contains those individuals where no information is available for categorisation. A relatively large proportion within this fourth category is made up of immigrants. This grouping of people on the labour market into three classes has a long tradition within Swedish statistics, about 100 years. The classification tries to identify homogenous groups; that is, people who are holding similar positions in working life and on the labour market and who are supposed to share similar living conditions. It also describes the composition of these groups, where differences in access to power and resources are major factors. These groups or classes are usually perceived as distinct groups in relation to work conditions, influence, living conditions and lifestyle. The purpose of the classification is to study differences in these aspects. However, the division only captures the most basic differences between different social milieus (Vogel, 1987).

There is no agreement on an international standard. This reduces the comparability to a general level (Keeves & Saha, 1997; SCB, 1983). However, the SES that is applied in these three studies closely correspond to the EGP class scheme (Erikson & Goldthorpe, 1992). Both the SES and the EGP are aggregations of occupations. Comparing the SES and the EGP, there are only minor differences that Erikson & Jonsson (1993) argue have no practical implications.

The threefold division that is made in this thesis differs somewhat from the threefold division made by Erikson and Goldthorpe and what has been previously used in Sweden (Svensson 2002). The reason is that the socioeconomic groups are changing; for example, more and more people are reaching a higher level of education, rationalisation within agriculture has reduced the numbers of farm workers radically, and the few surviving farms are large. There has been a general increase in status that can be seen in a reduced amount of workers and an increased amount of people belonging to the highest class (Abercrombie & Urry, 1983; Vogel, 1987). Often the highest class is used as a reference group; an increase of about 10% of this group

within a period of 15 years reduces the exceptionality of the members of the group. In order to maintain the relative sizes of the classes some changes have been made. Only higher-grade professionals, administrators, officials, and self-employed with academic degree are assigned to the highest class. In the third class, the increased status level for a majority of the population has resulted in an extension of the working class so that it now comprises lower-grade technicians beside skilled and unskilled workers (Svensson, 1999, 2002). When doing comparisons with earlier research these changes have to be taken into account.

In this thesis, the fundamental unit in the classes is the household. Information about SES is mostly based on both, but sometimes only one of the parents. The parent who has got the highest position represents the status of the household. The students' origin, which is treated in the analyses, corresponds to the parents' labour market position. An often occurring objection to the use of labour market position as a basis for class division is that people will change occupation; people can thereby not be equated with their job (Abercrombie & Urry, 1983). However, in this thesis the class is supposed to reflect the different access to resources that was available during childhood and adolescence. Data as a basis for the classification was collected in the census of 1985 and 1990. It might be perceived as somewhat out-dated information, but when the purpose is to reflect the different amount of resources available for the students when they grew up, it fits well in time.

GENDER

In these studies gender is one of two structures that are focussed. The perspective is that the gender order (Connell, 1987, 2002; Hirdman, 1988, 2003) influences all peoples lives and actions. On an individual level gender is also the common concept for men and women. In this thesis gender is equal to sex.

Gender is often overlooked in large scale studies. When using multiple regression analyses, many variables are included. Gender as one of them sometimes turns out to be non-significant. This then leads to the assumption that gender is not a crucial factor. Statistical work often relies on statistical theories, but when using statistical methods

in empirical research there is also a need for behavioural theory. For example, a study of the interaction of gender and class would probably show that there are gender differences in some classes, or in one class only, which may be the explanation for not obtaining a significant difference when the groups are aggregated. As previously mentioned, gender is often overlooked, or rather consciously disregarded. There are several examples when data is collected only for half the population, for men, but the results are generalised to the whole population of both men and women. This is a violation of basic statistical procedures. A well-known study within the field of sociology of education is a comparative study lead by Walter Müller, John Goldthorpe and Robert Erikson in the later parts of the 1980s. Data from nine European countries were compared, in the so called CASMIN project (Erikson & Goldthorpe, 1992; Müller & Karle, 1993). In some countries, data for women were missing which made it impossible to compare the countries. As a solution to the problem all women were simply deleted from the analyses. The project has been very successful and many articles have been published. In none of the titles of these publications are there any hints as to the restrictions inherent in these studies. In the article of Ishida, Müller, and Ridge (1995), it is not until page five the omission is mentioned, and in van de Werfhorst (2002) article I initially got the impression that the data is complete since the sample is claimed to be “nationally representative” (p 407). In that paper the sample of men was generalised to the population of men **and** women. However, it also must be mentioned that in studies within single countries, where data from both men and women were available, the problem discussed above was not present. In Breen and Jonsson, (2005) an overview is made of studies about educational attainment and social mobility from the 1970s until the millennium. A comparison is made, especially between the above mentioned CASMIN project and a follow up project (Breen, 2004). There are two main results: one is that the countries have become more similar with respect to social mobility and the other that there was an increased fluidity (upwards and downwards mobility between the classes) in most countries. However, there is no discussion about the fact that there are two different populations; it is the male population in the CASMIN project that is compared with the total populations comprising both men and women

in the follow up. This is surprising since the authors also state that "...women display more social fluidity than men..." (p. 236).

Other examples of the omission of women are Mare (1980), which presents a frequently cited educational transition model and Stolzenberg (1994), which is a study of different factors influencing continued education. Unfortunately, the omission of women and the excessive generalisation of results from data on only men is not a phenomenon that is going away (e.g. Hauser & Andrew, 2005).

Sometimes, gender is analysed in large scale studies but are only briefly, if at all, interpreted (e.g. Breen & Jonsson, 2000; Erikson & Jonsson, 1998). Probably, the knowledge about gender theories is simply lacking.

INTERSECTIONS OF GENDER AND CLASS

In the three studies gender and class are focussed and other structuring principles are omitted. There are several reasons for this choice. First, class and gender, particularly the former, has a long tradition of being analysed within this field. Second, Sweden has until quite recently been a rather homogenous society with relatively few immigrants; therefore, ethnicity was omitted. Third, incorporating several structuring principles in the same article, puts great demands on the author to summarise and communicate all the different aspects within a limited space in order to be published (McCall, 2005).

ENTRANCE TO HIGHER EDUCATION

Entering is defined as applying and being matriculated in higher education for the first time. Two of the studies deal with entering, irrespectively of field or rate of studies. One study makes a horizontal and vertical differentiation of the entrance. Whether the student has continued the course or programme or has changed his or her mind soon after matriculation is left out of consideration.

ATTRACTIVE PROGRAMMES

"Attractive programmes" is an index that has been created to reflect some of the selectivity that was associated to higher education before

the expansion. At that time, an academic degree was likely to lead to a position in society associated with status and authority. However, since then and particularly as an effect of the Higher Education Ordinance of 1977 (SFS, 1977), the supply of programmes and single subject courses have increased and as a consequence, the selectivity has diminished. The selectivity that earlier existed in the decision whether or not to enter university, has now been transferred to a question of what type of higher education programmes to study.

According to the attractiveness definition relied upon here, those higher education programmes that have attracted students with the highest grade point average from compulsory school, for a period of almost a decade, are attractive. They form 20% of all programmes. (For a detailed description of how the attractiveness index is constructed see VALUTA, 2006). Examples of attractive programmes are: agriculture, pharmacy, architecture, fire protection engineering, engineering, horticulture, law, medicine, landscape architecture, speech pathology and therapy, fine arts in church music, psychology, dental surgery and veterinary medicine. Furthermore: journalism, business, computer science and mathematics among others.

The attractiveness index is constructed in such a way that the sorting is done within gender. If it had been sorted only according to grades in compulsory school, the programmes that are primarily demanded by women would have dominated. The purpose is as far as possible to create a measure that is not influenced by arbitrariness. For example, the frequently used economic return measure does not consider that interest might guide the educational choice.

Two other frequently used measures of attractivity are the proportion of students with well-educated parents, and the proportion of students with parents from upper middle class (SES 1) who are attending the programme. The correlations of the attractiveness index with both of these measures were 0.66 (Pearsons r). This means that the attractiveness index has much in common with the other two measures, but it also reflects the students own course in life in that the measure does not exclusively rely on family background.

Several other definitions of prestige have been used within sociology of education. Some examples are presented below, along with explanations why they are not used in this thesis.

Measures which are most in agreement with the attractiveness index are scores on matriculation diploma (Ayalon & Shavit, 2004) or average SAT scores (Davies & Guppy, 1997; Persell Hodges, Catsambis, & Cookson Jr., 1992). Turning our attention to Swedish conditions, relying on academic ability, measured by grade point average (GPA) or Swedish Scholastic Assessment Test (SweSAT) scores is difficult, since there are several admission quota groups which lead to different cut off points to the same programme depending on which quota group the student has been admitted to. A certain number of places of study are in advance allocated for admission on the bases of GPA, while others are allocated for the SweSAT (SFS, 1993, Ch. 7). Moreover, information on SweSAT scores is only available for a limited part of the population. Few students within working class, and particularly the men within this group, take the test.

Economic returns on the labour market (Davies & Guppy, 1997; Erikson & Jonsson, 1996) is a frequently used measure, although Erikson and Jonsson (1993) argue that it is somewhat arbitrary. Concerning returns on the labour market, they are different for men and women also in the case when they hold the same position (Ljunglöf, 2004; Ljunglöf & Pokarzhevskaya, 2003; SCB, 2004). The highest positions in society are more likely to be obtained by men, which might influence women's expectations and thereby their educational choice (Andersson et al., 1997; Mickelson, 2003; SOU, 2004). The economical measure is gender biased and is therefore not used.

Defining prestigious programmes according to at what type of higher institution they are offered (Ayalon & Shavit, 2004; Jacobs, 1999; Kivinen & Ahola, 1999), is not easily applicable for Swedish conditions. In Sweden there are not a very clear divisions between different universities, compared to other countries (Davies & Hammack, 2005). The universities offer many different kinds of programmes, both prestigious and not prestigious. On the other hand,

there is a difference between the universities and the recently established university colleges, the latter only offering bachelor's degree.

The amount of men attending different fields (Jacobs, 1986, 1995), or type of institution (Jacobs, 1999) is also used as a high status indicator with the understanding that male dominated institutions attract more money. In Sweden higher education institutions, universities and university colleges are state financed even though a few are privately held or foundations. There are no tuition fees. The admittance system is centralised, so the same regulations hold for the whole country.

THE SELECTION INSTRUMENTS

In all three studies, previous school achievement and the Swedish Scholastic Assessment Test (SweSAT) are included. These variables are chosen, because upper secondary school grades and SweSAT scores are the two main selection instruments to higher education.

Previous school achievement is either grade point average from compulsory or upper secondary school. The grades not only measure the knowledge the student has obtained, they also express the resources or capital that was available in the family during childhood and adolescence, motivation, adaptation *etcetera*. The number of SweSATs taken may be interpreted as an indicator of the motivation for university studies.

DATA – ANALYSIS METHODS

DATA

In all the three studies, register data has been analysed. The main object for the choice of data and the linked registers are the cohorts born in 1973-1978, and those individuals who lived in Sweden at the age of 16 years. As mentioned in the introduction, Sweden has a long tradition of using personal ID numbers. The ID number makes it possible to link different registers, so that a person's educational career, for example, can be studied. The VALUTA project has used registers that are associated with education, since the primary aim is to study the characteristics of the instruments used for selection to higher education. Moreover, background information such as parents' education, income, occupation, civil union and migrational background are also included. Statistics Sweden makes the connection between the registers before they are handed over to the research project. The actual personal ID is replaced by a new non-traceable ID number before delivery, in order not to reveal the correct identification, for obvious reasons of personal integrity.

The aim of the project has set the bounds for what registers are available. This has of course influenced my research topic. Examples of questions that are not possible to analyse within the project are: "Does pregnancy influence the decision to enter higher education?" or "Does health problems influence educational outcome?" Generally, decisions what is seen as worth registering and not, also set bounds. For example, unpaid work is not registered, which is likely to underestimate women's work load. Another weakness with register data is that peoples own motives for their actions are not available. On the other hand, the greatest advantage with register data is that it concerns events that have actually happened, actions are not influenced by the knowledge that someone is going to analyse them, and the data quality is high.

The use of official statistics in research has been questioned, particularly when dealing with crime and deviance (Bryman, 2004).

The reported occurrence of crime is dependent on willingness to report and register crime. Educational data, such as grades, can also be manipulated; however, this source of error is likely to be comparatively small. Instead, there might be another problem that has to do with definitions. For example, a course can be defined as technical by the institution (in order to get more funding), but would be judged as belonging to the humanities by an educational researcher.

Categorisations of occupations usually held by women are not done in the same way as those held by men. For example, nurses are only divided into nurse and midwife, while a skilled worker within the industry making tools has 13 different named occupations (Löfström, 2005; SCB, 1983). The classification used within this thesis is one of broad divisions so this probably does not affect the results in any important way.

ANALYSIS METHODS

In the three studies, two different types of regression analysis are used. One of them is binary logistic regression (Miles & Shevlin, 2001; Pedhazur, 1997), where the dependent variable can assume two different values, for example, has entered higher education or has not entered higher education. The other type is time dependent Cox regression (Parmar & Machin, 1995), where the dependent variable is the academic year the student has entered higher education. Regression analysis is a multivariate method that can handle several influencing factors and show the influence from each one of them, with the assumption that all the other factors are held constant.

The studies in this thesis have focussed on the difference between two categories (e.g. upper middle class and working class) and how this difference is influenced by factors like grades or the SweSAT. The difference is expressed with an odds ratio. This ratio summarises the relation between the odds (i.e. the proportion) in one category with the odds in another category (Ribe, 1999). In a popular description like this, odds can be compared to probability. As an example, using data from the third study (Berggren, submitted), that is available in Table 1, in all 1978 of totally 26 657 women from the intermediate class (SES 2) entered attractive programmes, which makes a share of 7% (0.074). Among men within the same class the proportion was

$2760/27\ 777 = 0.099$, almost 10%. The difference between these two categories is $0.099/0.074 = 1.338$. This means that the likelihood to enter attractive programmes is 33.8% higher among men in this class compared to their female counterparts. The odds are 1.34 times higher that men in the intermediate class will enter an attractive programme, compared to women in the same class. (A similar example is given in the second study, Berggren, in press a). Please observe that, unlike the analyses that have been done in this thesis, the example given above is a comparison between men and women in the same class. In the thesis, the results show the relation between the classes. Since the research interest is both gender and class, the analyses have been divided by gender. This means that information about class differentiation is available for both men and women. However, since these methods are only able to show the relationship between two groups at the time, it limits the possibility to compare several affiliations simultaneously. The odds for men and women can therefore not be compared in these studies.

When more factors are included in the analyses, the model becomes more and more complex. The degree of influence that can be attributed to each factor can be estimated by comparing the resulting odds ratios between a simple model, without the factor that is of interest, with a more complex model where the factor is included. This difference in odds ratios between two models, can be expressed as percentages (Aneshensel, 2002). It must, of course, be realized that the models I use are simplifications of real life, where an endless number of other factors also are influencing the conditions.

In the second study (Berggren, in press a) the time point for entrance to higher education is also considered. Cox regression is a type of survival analysis that has been developed to estimate the time when the “terminal event” will occur. Since the context in this thesis, entering higher education will hopefully not be considered as a terminal event, the term hazard ratio is not used, instead odds ratio replace that term. The results of the analysis are shown as odds ratio (or the difference in probability between two categories) for entrance in higher education a certain academic year. In the academic year that follows, the base for the calculations has changed, since some of the

people within each category have been admitted and are therefore withdrawn from further analysis.

When other influencing factors are included in the analysis, some of them vary depending on time. Students will be able to add work experience to their application, during the years some of them will have taken yet another SweSAT test and so on. In other words, the analysis method must be able to handle this change during the years. Therefore, time dependent Cox regression has been chosen.

Time

The question of time or ageing has been treated in two ways in the thesis. In the first study, six cohorts covering the same age interval are compared. In this way, the influence from age is not mixed with time period influences. For example, changes in the educational system do not confound the results, which facilitates the interpretation.

In the second study, changes due to increased age are studied by way of time dependent Cox regression. Large scale analysis with a longitudinal design is a precondition for this type of analysis. That is probably one of the reasons why the method is not very common within the field of education. A common way of making comparison and studying the development over a period of time is to use so called cross sectional studies where different age groups in different cohorts are analysed (e.g. Erikson & Jonsson, 1993; Gustafsson et al., 2000). However, growing up in different decades influences people in many different ways, implying that a younger age group might not behave as an older age group did, when they reach the same age. The causal connections, if made at all, have to be made with the awareness that each time period brings some influences that can not be taken into account. To sum up, the results become more reliable when the same individuals are followed.

THE EMPIRICAL STUDIES

The three studies are about entering higher education, i. e. to become matriculated. The two first studies deal with entering, irrespectively of field or rate of studies. The third one makes a coarse division into two dimensions: attractive programs and others, and a division into fields. None of the studies account for drop out or change of study track. The main object is students born during the 1970s. It is their way through the educational system until university matriculation that is followed.

THE LABOUR MARKET

The research question, developed in the first article “Labour Market Influence on Recruitment to Higher Education – Gender and Class Perspectives” (Berggren, in press b) arose from a hypothesis given in a study by Gustafsson *et al.* (2000). In that study, Gustafsson *et al.* analyse almost the same population as I do, but in the early 1990s, when the labour market was in a weakening phase. The discussion is whether or not a weakening labour market with scarce access to employments could influence the tendency among working class students to enter higher education. However, at that time data was not available for the period after when the labour market was recovering, so the hypothesis was left for future studies. This study deals with the period from 1991 to 2000 inclusive. In the beginning of the 1990s there was a recession and the question is whether or not the difficult labour market could increase the numbers of students, particularly from the working class.

In order to answer this question, as many influencing factors as possible has to be discussed or preferably being included in the analysis. First, it is important to keep age under control, since age influences both the risk for unemployment and the inclination to enter higher education. Only those individuals that were in age group 18-21 years were included. To study changes in matriculation rate over time, six cohorts were compared, which together cover the whole 1990s. Second, the competition for a place of study is likely to be important. It is among other things dependent on numbers of places of study

offered in higher education and on the size of the cohorts. Third, the influence from the private economy and the availability of financial aid is important, and even though such data is not available these factors are discussed. Fourth, the competitiveness, in the form of grade point average and numbers of SweSAT taken, is important and these variables are included in the analysis. Several of these aspects influence men and women differently. For example, the labour market is gender segregated, the organisation of the educational system influences men and women differently, and women generally have higher grades.

The restraining and promoting influence of these surrounding factors were discussed, and the main conclusion was that the hypothesis about the labour market influence seemed to be correct for men. There was a tendency for working class men to increase their enrolment rate in the middle of the 1990s, to decrease again somewhat at the end of the decade when the labour market recovered. The conditions were different for women. Women from both intermediate and working class have since the recession continuously increased their enrolment rate, also when the labour market was regarded as recovering. However, men and women have different employers. The municipal sector that hitherto had been women's principal employer, did not recover during the period studied; that is during the 1990s.

THE ADMISSION SYSTEM

In the second study: "Broadening Recruitment to Higher Education through the Admission System – Gender and Class Perspectives" (Berggren, in press a) the effect of the most frequently used additional entrance paths on the composition of the student population is analysed. The original entrance path, by means of grade point average from upper secondary school, is compared with the alternative entrance routes. The latter have been created for those who for any reason were not eligible, or could not compete due to insufficient or absent grades from upper secondary school. It is a way of facilitating entrance for underrepresented groups of students.

Each path has been analysed separately in order to distinguish the influence on entrance. In all these analyses gender and class are included. Several factors that influence the inclination to use

alternative entrance routes are regarded. They are for example grades and track in upper secondary school. Just like in the previous study, the influence from the labour market and the organisation of the educational system are discussed.

Since several of the paths to higher education are not available before a certain time has passed; for example, municipal adult education may not be entered before the age of 20, and it takes five years of work experience to get credits, time has also to be dealt with. A statistical tool, particularly suited for the study of time, was used, and the individuals were followed until they were 30 years.

The main finding was that upper middle class students, and among them a majority of men, made the most out of every single alternative entrance path. However, entering via the SweSAT was most favourable for this group and the effect remained during the whole period studied. The conclusion was that the alternative paths had not served their purpose as an equalising factor. Instead, they had contributed to maintain the present class distribution and gender order.

THE DIVISION WITHIN HIGHER EDUCATION

The expansion of higher education into new regions and fields is supposed to facilitate the entrance for students from underrepresented groups. However, the large supply of programs and courses that is offered is likely to lead to a differentiation within higher education. More students from all groups are entering higher education nowadays, so the question is transformed from whether to enter or not, to what to enter. In the third study: "Horizontal and Vertical Differentiation within Higher Education - Gender and Class Perspectives" (Berggren, submitted) a differentiation of higher education is made according to prestige or as I call it: "attractiveness". This is made in order to bring into focus some of the selectivity that was associated with higher education before the expansion. At that time, comparatively few students entered university. Today a much larger proportion of a cohort study at higher education and higher education as such has lost its former evident status. In this study, both a vertical (attractiveness) and horizontal (field) differentiation of the matriculation is made.

The study simultaneously deals with several dimensions of entrance. Not only gender, class, attractive and less attractive programmes, and the division into different fields of study, are regarded, the influence from grade point average and numbers of SweSAT taken are also included in the analyses. Also in this study, the different conditions for men and women on the labour market and the conditions within the educational system are discussed.

Upper middle class students is the group that is most likely to enter all types of educational programmes and courses, also those educational alternatives that are categorized as less attractive. The access to attractive programs, for example medical programs, seems not to have become easier for working class students. However, women have made large inroads into higher education. They have not only increased numerically, they have also increased their educational alternatives to include attractive and previously male dominated fields as well. Men from all classes primarily choose programmes within the field of technology. As shown in the previous study, and also confirmed by this study, the SweSAT is used by well initiated groups of students (i.e. upper middle class students, primarily men) to gain entrance to the most attractive programmes.

INTEGRATED RESULTS FROM THE THREE STUDIES

The results from the three empirical studies will be summarised and presented in an integrated form for the four "fringe" groups: upper middle class women, working class women, upper middle class men and working class men. They have been chosen because this is where the variation within the student population becomes most clearly visible. The intermediate group is large, and the average student within this group shows a behaviour which is simply in between that of the "fringe" groups and will therefore not be summarised in this section.

The group of women from upper middle class families is the category of students that is most likely to enter higher education. Slightly above 70% of them have entered higher education at the age of 30. They seem to be conscious about their future plans, and a large proportion of them make a direct transfer from upper secondary school. Most of them have chosen a theoretical programme in upper secondary school

and have completed the education with the highest grade point average, compared to other groups of students. Upper middle class women with high grades can, and do, enter attractive programmes in higher education. They can choose from a large variety of programmes, from those traditionally chosen by this group such as teacher, psychologist and social worker, to the previously male dominated programmes such as lawyer, medical doctor and engineer. Also women within this group with somewhat lower grades enter higher education. For these women there are two main options: either they select a less attractive track in higher education or they try to increase their competitiveness. The competitiveness is usually improved either via municipal adult education and/or by taking the SweSAT. More than 40% of these women study at municipal adult education and a very large proportion of them take the SweSAT (67%). Both these paths facilitate their entrance into higher education. Since many of these women are “naturally” directed toward higher education, they are not very exposed to labour market fluctuations when deciding whether or not to enter. Compared to other groups of students, the way the educational system is organised, and if it changes seems not to hamper them. They are a very well-achieving group and can probably accommodate to changing conditions.

The group of women coming from the working class is the category that has most visibly increased their participation in higher education of all the groups. However, compared to upper middle class women their participation still is low. About 30% of the women within this group have entered higher education at the age of 30. Just like in the other groups, a majority of them have entered before the age of 22. About 40% of them have studied theoretical programmes in upper secondary school which makes quite many of them eligible to enter higher education. Generally their grades from upper secondary school are slightly lower than the average of the total population. Their school performance is better, in all respects, compared to the men within their own class. It is more similar to the performance of men from the intermediate class regarding grade point average, the proportion that is studying theoretical programmes in upper secondary school, and the proportion that enters higher education. There are some women within this group that have high grades and who are competitive for a place of study in all types of programmes. However,

compared to women from upper middle class that have got the same grade point average, they are less likely to enter. In addition, women from working class are even less likely to enter the most male dominated fields, such as technology, at equal competitiveness; that is, at equal grade point average, and at equal SweSAT scores. Those women who are aiming at higher education but need to improve their competitiveness do so, but are not as successful as other groups. This is the group of which the largest proportion studies at municipal adult education (57%), but few of them realise a transfer to higher education via this path. It may be that they have another aim with these studies, such as obtaining a professional occupation within child or health care. Somewhat more than 30% take the SweSAT, but they are not very successful. A part of the explanation is that they do not take the test as many times as other groups and therefore don't get the same score increase. This group of students seems to be more vulnerable to the organisation of the educational system and to the labour market compared to the other groups. One important factor is that a large proportion of them make traditional occupational choices in the sense that programmes within education and health care are preferred. Nowadays, most of these programmes are offered within higher education which leaves few alternatives left. Moreover, these types of employments are usually offered within the public sector, which also leads to a high exposure to the decrease of public spending that took place in the 1990s.

Upper middle class men still have a firm grip on higher education. A large proportion within this group has traditionally turned to higher education. Today 65% have entered at the age of 30; however, they are surpassed by their female counterparts. About the same proportion of men and women from this class have studied any of the theoretical programmes in upper secondary school, but not as many men are able to transfer directly to higher education. They have not achieved as high grades and therefore can not enter the most attractive places of study in higher education directly after upper secondary school. If they are going to achieve an educational qualification in order to be able to enter the most attractive positions in society, they need to improve their competitiveness. They also do so. Not as many men as women study at municipal adult education (34% within this group), but those who do are successful in the sense that they gain entrance to

higher education via this path. They are also able to successfully enter via the SweSAT. Slightly fewer men take the test compared to the women within this class, but they take the test somewhat more times, and gain higher scores. The test also tends to favour men. Those men who have achieved high grades, with or without supplementation, can enter the attractive programmes. The same applies for those who have achieved high test scores. Those who are not as competitive can enter programmes within technology and natural sciences. The increase in the number of study places has for some programmes within these fields led to low admission requirements. For this group, the question of whether or not to enter higher education seems not to be dependent on labour market fluctuations.

Men who have grown up in working class families do not have a tradition of academic studies and comparatively few change that trajectory. Barely 20% have entered higher education at the age of 30. Since they are not "naturally" directed toward higher education, their previous school choices have also not prepared them for such a career. This is the group of students who is most likely to have chosen vocational programmes in upper secondary school which in most cases also lead to well defined occupations. There is in other words no particular need for higher education studies. When these students studied at upper secondary school, few of the vocational programmes provided eligibility to higher education. This means that supplementing grades at municipal adult education in order to enter higher education is not only a question of one or two subjects; it is a more difficult task that is likely to take some time. Compared to women within their own class, not as many men (36%) study at municipal adult education and few of them gain entrance via this path. Changing trajectory via the SweSAT is a rarely used alternative; only 20% take the test. Despite the fact that those who do take the test in this group is a very positively selected group, in the sense that they are motivated, and comparatively well achieving, few of them achieve test scores that can provide them a place of study at the most attractive programmes. Those (32%) who have completed a theoretical upper secondary school programme and aim at higher education, are most likely to enter a programme within the field of technology. Few are inclined to choose gender atypically. Entering a traditional female dominated field will likely entail a loss of status, not forgetting the

diminished financial return of that choice. There are still employments on the labour market for these men. An exception is that in times of an economic recession, when the private sector is quick to accommodate to new circumstances and when employments become scarce, some of the men within this group will turn to higher education, but as soon as the economy recovers, they will again turn to the labour market.

DISCUSSION

THE CONTRIBUTION

The questions that have been studied in this thesis have been a topic in several other studies. However, this thesis has contributed to a more differentiated and developed understanding of how different categories of students act in relation to the educational system.

In the first study, it was shown how a recession increased the matriculation rate among intermediate and working class students. This was also expected from the hypothesis. However, it was not expected that the gender segregated labour market and the gender differentiated educational choices would influence the presumptive applicants to a different pattern of development for men and women at the end of the decade. The differences were noticeably primarily among working class men and women. This result could not have been found if just one of the two affiliations had been used for categorisation. Maybe the fluctuations in the working class would have been even larger if they had been more educationally competitive. It also is shown that the repeated test taking adds bias over and above the grades.

The additional entrance paths to higher education was the topic in the second study. Previous studies have shown that it is difficult to influence the composition of groups of students by regulations. This study adds even more doubt to such efforts. The influence of three different additional entrance possibilities for more than a decade was studied. The long period of study and the time differentiated analysis makes the study well suited to investigate the recruitment effects of the “second chance”. The different paths were compared. Every one of the paths facilitated students from upper middle class and particularly men, but the entrance via the SweSAT was particularly important when it comes to maintaining the “traditional” student composition.

The third study encompasses two dimension of differentiation within higher education; how the differentiation appears among different categories of students; and how the two main entrance possibilities, by means of grades and the SweSAT, influence the admission. Such a comprehensive approach has not been carried through before. This improves the understanding for the changed differentiation in a changing higher education system. Again, it is shown that the entrance via the SweSAT contributes to a maintained and a strengthened differentiation within higher education.

GENDER AND CLASS PERSPECTIVES

Throughout the three studies gender and class perspectives have been applied. A perspective requires more than just including the two variables in the analyses. It is the intersection of the two structures gender and class that is focussed, and how the outcome varies between the categories. This perspective implies among other things that gender and class are given a prominent position in all figures and tables; it implies a search for an adequate theory that accounts for both of the two structures; and, it implies a use of measures that clearly show the group differentiation and which does not hide or blur it. In the following section these statements are elaborated.

Gender and class differentiation is a theme in many studies; however, the structures are usually treated one at the time, or often they are not the main focus of the analyses (i.e. Erikson & Jonsson, 1993; Kivinen & Rinne, 1991; Svensson, 1998). In this thesis, a starting point in the analyses has been a description of how the groups, which have emerged from the crossing of gender and class, relate to the influencing factors that gradually will be included in the analysis. Thereafter, gender divided multiple analyses are performed where the complexity is built up step by step. In contrast to several other studies, gender or class is not abandoned at any stage. Researchers often choose to change focus to another variable, probably in order to simplify the research question.

Since this thesis has been inspired by two normally separate research fields: large scale data analysis and gender theories, the demands upon me as a communicator are high in order to satisfy readers from different disciplines. I have striven to explain the statistical analyses in

“understandable” words. I have as much as possible abandoned tables filled with coefficients, to the advantage of figures which only display the odds ratio between the classes. Unfortunately, this was not possible to do in the third study (Berggren, submitted) because the figures would then have flooded the article.

When the two structures; gender and class, are analysed simultaneously, it is evident from the results in this thesis that a general theory (i.e. labour market fluctuation, cultural reproduction theory, human capital theory) does not really fit as explanation for all of the disaggregated categories. The conditions in society (i.e. educational system, labour market) are different for men and women and for people from different classes, which previous studies have shown and this thesis confirms.

In the absence of an integrated theory and a comprehensive model, theories originating from several different small scale studies have influenced the planning of the study and the interpretation of the results. Objections might be raised to this use of theories, which in some cases does not have a direct connection to the variables used in the analysis. Within large scale analysis, a variable, such as “number of books” is usually used to indicate cultural capital, or “years of education” is used to indicate human capital. This has not been carried out all the way through. Some researchers might perceive use of theories originating from small scale studies in this setting as somewhat speculative. However, small scale studies base their understanding upon many variables. The variety of data leads to a deepened understanding of a phenomenon in a certain setting. If the interpretations made within small scale studies are applicable and reasonable also to the results generated from a large scale study this is not merely speculations.

Concepts and measures also have to be evaluated from a gender and class perspective. One example is the use of the attractiveness index that has replaced the commonly used “economic return” measure. As mentioned in the method section, economic return on the labour market is one way of defining prestigious and attractive programmes in higher education. However, the economic returns are not equal for men and women, therefore the concept can be perceived as gender

biased. Another example of how facts can be hidden is in the way the odds are estimated. Mares (1980) recommendation is to include only those students in the analysis who have completed the educational level before the transition to a higher level. The argument for this is that there is otherwise an additional effect from the background. The aim of this thesis is to study the total effect of the differentiation through the educational system up to and including the most attractive programmes within higher education. Therefore, the odds are estimated from the total population. There is only one deviation from this aim and that is the third study about differentiation in higher education. In those analyses, I had to use upper secondary school grades in order not to introduce a confounding with the attractiveness index. This choice implies that the differentiation into attractive programmes looks smaller than it really is. There is a loss of about 17% of the cohort that has not got any grades from this level, which means that fewer students from the working class are included in the analyses.

Yet another example of a biased concept is the Swedish occupational classification index, which also has been criticised by feminist researchers. However, this bias is not likely to have negatively influenced this research, since the categories I have analysed are very broad.

METHODOLOGICAL ASPECTS

The access to an extensive database provides great advantages. First, there are not any drop-outs because of the reliance on register data. Whole cohorts are studied and there are no errors due to sampling effects. Second, the data is linked longitudinally, which improves the reliability of the results considerably. The same individuals are followed over a period of time which reduces misinterpretations due to societal changes. Third, it is possible to focus upon a certain group (i.e. underrepresented students) and relate the effect of, for example additional paths, to other groups of students. The accuracy of the conclusions is thereby improved considerably.

The theoretical model that is used in order to understand the relationship between factors, has in this thesis been gradually built up, as the complexity has increased by the successive addition of factors

(i.e. GPA and the SweSAT). When the analyses are performed in several stages it is possible to distinguish the influence from each factor, which would not have been possible if all factors had been included at the same time. The results would then have been blurred.

Another example of differentiation within this thesis is the division into time points. The influence from municipal adult education and work experience would probably have been underestimated or even perceived as non-existing if they had been included in, for example, a logistic regression analysis, together with the other paths.

The division into three (four) social classes makes very broad categories. The intermediate class consists almost of half of the population and it has not been paid attention in relation to its size. If the intermediate class is divided up, fractions can probably be found that act similar to the upper middle class, as well as other fractions which act like the working class. There might also be fractions that act contrary to what is expected. One example is that some under-privileged groups of students can be well achieving as a way of resistance when the expectations are too low and predictable (Arnot, 2002).

A way of improving the analysis would be to let the approach of intersection have greater influence. The concept of intersection differs from the traditional way of analysis within large scale methods. "Usually", within large scale studies, the point is to separate the influence of one affiliation from the other. When two variables interact, an interaction variable can be constructed which provides the researcher with an estimate how important the "mix" is in relation to the "pure" variables. Comparing interaction with the concept of intersection, the concepts are not replaceable. Intersection is when two or more affiliations influence each other mutually, and affect the actions. It is not like a crossroad where lines meet and then continues unaffected (Lykke, 2003, 2005). In this large scale context, it might be translated as keeping gender and class and the interaction term as a whole. The categories are created when affiliations such as gender and class are crossed. Assuming that gender is divided into two categories and class into three categories, crossing these makes six categories. The advantage is that these categories can be related to each other and

interactions that may exist only in few categories can be found (McCall, 2005, 2005). The approach of intersection is limited in my studies. It is possible to compare multiple groups in the descriptive statistics; however, to keep matters reasonably simple I have chosen to limit the use of the multivariate statistical method to a comparison between two categories at the time.

Another way of improving the intersectional approach would be to add yet another affiliation. Affiliations that are to be chosen should be important for the situation and the context. In the educational context, cultural affiliation is important and the influence from demography has previously been shown to be significant. As discussed above such an addition would increase the complexity considerably. Assuming that the six categories that came up from the two structures gender and class, would be crossed with cultural affiliation as a dichotomous variable; migrated or not, the number of categories would be twelve. The complexity increases considerably, but it will also be possible to find and describe multiple disadvantaged groups.

Another way of organising the analyses could be to work “backwards”. For example, to start the analyses by obtaining the information about how many people are entering attractive programmes, and then afterwards analyse their characteristics. This method would also be in agreement with Bourdieu’s theory and several feminist theories, which criticise research that on beforehand categorise people.

COMMUNICATING MY STUDY RESULTS – POSSIBILITIES AND OBSTACLES

The results provide evidence that both gender and class needs to be taken into account when studying the educational system and the labour market. The theories or models that are developed need also to consider both these structures. Results emerging from small scale studies could improve the theoretical development and the model building within large scale studies.

However, an exchange of ideas between researchers theorising gender and those who are working with large scale studies seems to not be as straightforward as could be expected. There are some demarcations

that are difficult to understand. My aim has been to overcome these differences. I have shown the importance of studying both gender and class. Moreover, I have tried to explain my research as clearly as I could and to avoid statistical expressions, in order to be understood also by researchers who are working with the same issues, but who are not familiar with the large scale methodology.

Those of my results that are showing how the admission system facilitates entry for categories of students that were not intended to be facilitated, confirm the result from previous research. It is interesting to see how the idea of a “second chance” continues to exist, despite its counteracting effect. Why is it not more questioned? If applying cultural reproduction theory (Bourdieu, 1997; Bourdieu & Passeron, 1990), the disinclination to change something that reproduces the status of one’s own group, becomes understandable.

Presumptive students also need to know how the educational system and the admission system is organised. It is difficult for a researcher to reach the prospective students with this information, unless the results are easily accessible. A Swedish language summary of the results (Berggren, forthcoming), written in easy language, can hopefully reach some of the study advisors and thereby some of the prospective students. On the other hand, previous research (Hutchings, 2003) has also shown that those channels of information have difficulties in reaching those groups of students who have no academic traditions from home.

WOMEN’S EDUCATIONAL SUCCESS

The results show that women have increased their participation in higher education within all fields and at all levels. The gender equalising attempts seem to have been successful, at least within education. However, there are indications that female success reaching beyond the educational system, will not be easily earned (Florin, 2005). National surveys (Björnsson, 2005) show that young women have higher grades in almost all subjects, including mathematics and physics, than their male counterparts. But not as many women choose to continue within these fields in higher education. It is likely that the demarcations today are less visible and less obvious, but that they are still there (Florin, 2005; Florin & Johansson, 1992). Those categories,

which have increased their participation in higher education most of all are primarily women from intermediate and working class. Women from upper middle class have increased the variety of educational fields from which they choose. They also form a majority within most of the attractive fields. Does this success also imply a corresponding success on the labour market?

REFERENCES

- Abercrombie, N., & Urry, J. (1983). *Capital, Labour and the Middle Classes*. London: Allen & Unwin.
- Abrahamsson, L., & Gunnarsson, E. (2002). Arbetsorganisation, kompetens och kön. In K. Abrahamsson (Ed.), *Utbildning, kompetens och arbete [Education, Competence and Work]* (pp. 225-254). Lund, Sweden: Studentlitteratur.
- Adkins, L., & Skeggs, B. (Eds.). (2004). *Feminism After Bourdieu*. Oxford: Blackwell Publishing.
- Andersson, A. E. (1998). Differential Selectivity to Upper Secondary School with Respect to Previous Achievement for Males and Females. *Journal of Nordic Educational Research*, 18(4), 217-228.
- Andersson, Å. E., Fürth, T., & Holmberg, I. (1997). *70-talister. Om värderingar förr, nu och i framtiden [1970 ties. Values Before, Now, and in the Future]* (2 ed.). Stockholm: Natur och kultur.
- Andres, L. (1998). Rational Choice or Cultural Reproduction? Tracing transitions of young Canadians to higher education. *Journal of Nordic Educational Research*, 18(4), 197-206.
- Aneshensel, C. S. (2002). *Theory-Based Data Analysis for the Social Sciences*. Thousand Oaks, Calif: Pine Forge.
- Archer, L. (2000). 'Bettering Yourself? Discourses of risk, cost and benefit in ethnically diverse, young working-class non-participants' constructions of higher education. *British Journal of Sociology of Education*, 21(4), 555-574.
- Archer, L. (2003). The 'Value' of Higher Education. In L. Archer, M. Hutchings & A. Ross (Eds.), *Higher Education and Social Class. Issues of exclusion and inclusion* (pp. 119-136). London: RoutledgeFalmer.
- Archer, L., & Leathwood, C. (2003). Identities, Inequalities and Higher Education. In L. Archer, M. Hutchings & A. Ross (Eds.), *Higher Education and Social Class. Issues of exclusion and inclusion* (pp. 175-191). London: RoutledgeFalmer.
- Archer, L., Pratt, S. D., & Phillips, D. (2001). Working-class Men's Constructions of Masculinity and Negotiations of

- (Non)Participation in Higher Education. *Gender and Education*, 13(4), 431-449.
- Archer, L., & Yamashita, H. (2003). Theorising Inner-city Masculinities: 'race', class, gender and education. *Gender and Education*, 15(2), 115-132.
- Annot, M. (2002). *Reproducing Gender? Essays on educational theory and feminist politics*. London: RoutledgeFalmer.
- Annot, M., David, M., & Weiner, G. (1999). *Closing the Gender Gap. Postwar Education and Social Change*. Cambridge: Polity.
- Ayalon, H. (2003). Women and Men Go to University: Mathematical Background and Gender Differences in Choice of Field in Higher Education. *Sex Roles*, 48(5/6), 277-290.
- Ayalon, H., & Shavit, Y. (2004). Educational Reforms and Inequalities in Israel: The MMI Hypothesis Revisited. *Sociology of Education*, 77(2), 103-120.
- Balke, G. (2002). *Olika bakgrund - olika uppfattning? [Different Background - Different Opinion?]* (No. 2002:2). Göteborg, Sweden: Avd f omvärldsanalys, planering och uppföljning [Dep of Planning and Evaluation].
- Berggren, C. (forthcoming). Arbetsmarknaden och efterfrågan på högre utbildning – ett köns- och klassperspektiv. In J. Olofsson (Ed.). Stockholm: SNS.
- Berggren, C. (in press a). Broadening Recruitment to Higher Education through the Admission System - Gender and Class Perspectives. *Studies in Higher Education*.
- Berggren, C. (in press b). Labour Market Influence on Recruitment to Higher Education - Gender and Class Perspectives. *Higher Education*.
- Berggren, C. (submitted). Horizontal and Vertical Differentiation within Higher Education - Gender and Class Perspectives.
- Berggren, I. (2001). *Identitet, kön och klass. Hur arbetarflickor formar sin identitet [Identity, Gender and Class. How Working Class Girls Shape Their Identity]*. (Göteborg Studies in Educational Sciences, 157). Göteborg, Sweden: Acta Universitatis Gothoburgensis.
- Björnsson, M. (2005). *Kön och skolframgång: tolkningar och perspektiv [Gender and school success: Interpretations and perspectives]* (No. 13). Stockholm: Myndigheten för skolutveckling.

- Blossfeld, H.-P., & Prein, G. (Eds.). (1998). *Rational Choice Theory and Large-Scale Data Analysis*. Boulder: Westview Press.
- Boudon, R. (1974). *Education, Opportunity, and Social Inequality*. New York: John Wiley & Sons.
- Bourdieu, P. (1977). Cultural Reproduction and Social Reproduction. In J. Karabel & A. H. Halsey (Eds.), *Power and Ideology in Education* (pp. 487-511). New York: Oxford University Press.
- Bourdieu, P. (1984). *Distinction. A Social Critique of the Judgement of Taste* (R. Nice, Trans.). London: Routledge & Kegan Paul.
- Bourdieu, P. (1997). The Forms of Capital. In A. H. Halsey, H. Lauder, P. Brown & A. Stuart Wells (Eds.), *Education. Culture, Economy, and Society* (pp. 46-58). Oxford: Oxford University Press.
- Bourdieu, P. (2001). *Masculine Domination*. Cambridge: Polity.
- Bourdieu, P., & Passeron, J. C. (1990). *Reproduction in Education, Society, and Culture* (2 ed.). London; Newbury Park, Calif.: Sage in association with Theory Culture & Society Dept. of Administrative and Social Studies Teesside Polytechnic.
- Brandell, L., & Lindqvist, T. (2002). Deltagandet i högskoleprovet 1977-2001 [Participation in National University Aptitude Test 1977-2001]. Retrieved 2006-04-28 from <http://nu.hsv.se/nu/analyser/PMHprov020522.pdf>
- Breen, R. (Ed.). (2004). *Social Mobility in Europe*. Oxford: Oxford University.
- Breen, R., & Jonsson, J. O. (2000). Analyzing Educational Careers: A Multinomial Transition Model. *American Sociological Review*, 65(5), 754-772.
- Breen, R., & Jonsson, J. O. (2005). Inequality of Opportunity in Comparative Perspective: Recent Research on Educational Attainment and Social Mobility. *Annual Review of Sociology*, 31, 223-243.
- Broadly, D. (1990). *Sociologi och epistemologi [Sociology and Epistemology]*. Stockholm: HLS.
- Broadly, D. (Ed.). (1985). *Kultur och utbildning. Om Pierre Bourdieus sociologi [Culture and Education. About the Sociology of Pierre Bourdieu]*. Stockholm: UHÄ FoU-enheten.
- Brock-Utne, B. (1997). Kunnskap uten makt [Knowledge without Power]. *Journal of Nordic Educational Research*, 17(4), 263-279.
- Bryman, A. (2004). *Social Research Methods* (2nd ed.). New York: Oxford University Press.

- CASMIN. Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) [Project description]. Retrieved 2006-04-28 from <http://www.sowi.uni-mannheim.de/lehrstuehle/lesas/forschung/casmin/casmin.html>
- Christoffersson, N.-O. (1983). *Utbildningsekonomi - en forskningsöversikt*. Stockholm: Byrån för pedagogiskt forsknings- och utvecklingsarbete Skolöverstyrelsen.
- Cliffordson, C. (2004). Effects of Practice and Intellectual Growth on Performance on the Swedish Scholastic Aptitude Test (SweSAT). *European Journal of Psychological Assessment*, 20(3), 192-204.
- Connell, R. W. (1987). *Gender and Power. Society, the person and sexual politics*. Cambridge: Polity in association with Blackwell.
- Connell, R. W. (1995). *Masculinities*. Berkeley: University of California.
- Connell, R. W. (2002). *Gender*. Cambridge: Polity.
- Davies, S., & Guppy, N. (1997). Fields of Study, College Selectivity, and Student Inequalities in Higher Education. *Social Forces*, 75(4), 1417-1438.
- Davies, S., & Hammack, F. M. (2005). The Channeling of Student Competition in Higher Education: Comparing Canada and the U.S. *The Journal of Higher Education*, 76(1), 89-106.
- Delamont, S. (2001). *Changing Women, Unchanged Men? Sociological perspectives on gender in a post-industrial society*. Buckingham: Open University.
- Dillabough, J.-A. (2003). Gender, Education, and Society: The Limits and Possibilities of Feminist Reproduction Theory. *Sociology of Education*, 76(4), 376-379.
- Dumais, S. (2002). Cultural Capital, Gender, and School Success: The Role of Habitus. *Sociology of Education*, 75(1), 44-68.
- Egerton, M., & Halsey, A. H. (1993). Trends by Social Class and Gender in Access to Higher Education in Britain. *Oxford Review of Education*, 19(2), 183-196.
- Erikson, R., & Goldthorpe, J. H. (1992). *The Constant Flux. A Study of Class Mobility in Industrial Societies*. Oxford: Clarendon.
- Erikson, R., & Jonsson, J. O. (1993). *Ursprung och utbildning. Social snedrekrytering till högre studier. [Origin and Education. Social Selection to Higher Education]*. Stockholm: Fritzes.
- Erikson, R., & Jonsson, J. O. (1996). The Swedish Context: Educational Reform and Long-term Change in Educational Inequality. In R.

- Erikson & J. O. Jonsson (Eds.), *Can Education Be Equalized?* (pp. 65-93). Boulder, Colorado: Westview.
- Erikson, R., & Jonsson, J. O. (1998). Social Origin as an Interest-bearing Asset: Family Background and Labour-market Rewards among Employees in Sweden. *Acta Sociologica*, 41(1), 19-36.
- Erikson, R., & Jonsson, J. O. (2002). Varför består den sociala snedrekryteringen? [Why does the Socially Uneven Recruitment Remain?]. *Pedagogisk Forskning i Sverige*, 7(3), 210-217.
- Erikson, R., & Jonsson, J. O. (Eds.). (1996). *Can Education Be Equalized? The Swedish Case in Comparative Perspective*. Boulder, Colorado: Westview Press.
- Florin, C. (2005). Flickorna drar ifrån [The Girls are Extending their Lead]. *Framtider 3*, Retrieved 2006-04-28 from <http://www.framtidsstudier.se/sv/redirect.asp?p=1564>
- Florin, C., & Johansson, U. (1992). Mandom, mod och mogna män [Manhood, Bravery and Mature Men]. *Kvinnovetenskaplig tidskrift*(4), 44-55.
- Gustafsson, J.-E., Andersson, A., & Hansen, M. (2000). Prestationer och prestationsskillnader i 1990-talets skola [Achievements and Differences in Achievements in 1990s Education]. In J. Palme (Ed.), *Välfärd och skola* (pp. 135-211). Stockholm: Fritzes.
- Hauser, R. M., & Andrew, M. (2005). Another Look at the Stratification of Educational Transitions, *Research Committee on Social Stratification, RC28*. Oslo, Norway.
- Haywood, C., & Mac an Ghail, M. (2003). *Men and Masculinities. Theory, research and social practice*. Buckingham: Open University.
- Hill, M. (1998). *Kompetent för "det nya arbetslivet"? [Competent for "The New Working Life"?*]. (Göteborg Studies in Educational Sciences, 126). Göteborg, Sweden: Acta Universitatis Gothoburgensis.
- Hirdman, Y. (1988). Genussystemet - reflexioner kring kvinnors sociala underordning [The Gender System - Reflexions on the Social Subordination of Women]. *Kvinnovetenskaplig tidskrift*(3), 49-63.
- Hirdman, Y. (2003). *Genus - om det stabilas föränderliga former [Gender - About the Changing Shapes of Stability]* (2 rev ed.). Malmö, Sweden: Liber.

- HSV. (1996). *Högskoleprovet genom elva forskares ögon [The SweSAT through the Eyes of Eleven Researches]*. Stockholm: National Agency for Higher Education.
- HSV. (2002). *Swedish Universities & University Colleges. Short version of annual report 2002*. Stockholm: National Agency for Higher Education.
- Hutchings, M. (2003). Information, Advice and Cultural Discourses of Higher Education. In L. Archer, M. Hutchings & A. Ross (Eds.), *Higher Education and Social Class. Issues of exclusion and inclusion* (pp. 97-118). London: RoutledgeFalmer.
- Härnqvist, K. (1998). Explaining the Recruitment to Post-secondary Education: the Case of Sweden. *Journal of Nordic Educational Research*, 18(4), 207-216.
- Härnqvist, K. (1998). *A Longitudinal Program for Studying Education and Career Development* (No. 1998:01). Göteborg, Sweden: Department of Education and Educational Research.
- Härnqvist, K., Emanuelsson, I., Reuterberg, S.-E., & Svensson, A. (1994). *Dokumentation av projektet "Utvärdering genom uppföljning" [Documentation of the project "Evaluation Through Follow-up"]* (No. 1994:03). Göteborg, Sweden: Institutionen för pedagogik.
- Ishida, H., Müller, W., & Ridge, J. M. (1995). Class Origin, Class Destination, and Education: A Cross-National Study of Ten Industrial Nations. *American Journal of Sociology*, 101(1), 145-193.
- Jacobs, J. A. (1986). The Sex-Segregation of Fields of Study: Trends during the College Years. *Journal of Higher Education*, 57(2), 134-154.
- Jacobs, J. A. (1995). Gender and Academic Specialities: Trends among Recipients of College Degrees in the 1980s. *Sociology of Education*, 68(2), 81-98.
- Jacobs, J. A. (1999). Gender and the Stratification of Colleges. *The Journal of Higher Education*, 70(2), 161-187.
- Jakobsson, A.-K. (2000). *Motivation och inläring ur genusperspektiv [A Gender Perspective on Motivation and Learning]*. Göteborg university, Göteborg, Sweden.
- Jonsson, J. O. (2004). Equality at a Halt? Social Mobility in Sweden, 1976-99. In R. Breen (Ed.), *Social Mobility in Europe* (pp. 225-250). Oxford: Oxford University Press.

- Keeves, J. P., & Saha, L. J. (1997). Measurement of Social Background. In L. J. Saha (Ed.), *International Encyclopedia of the Sociology of Education* (pp. 218-224). Oxford: Pergamon.
- Kim, L. (1998). *Val och urval till högre utbildning [Choice and Selection in Higher Education]*. (Uppsala Studies in Education, 76). Uppsala, Sweden: Acta Universitatis Upsaliensis.
- Kivinen, O., & Ahola, S. (1999). Higher Education as Human Risk Capital - Reflections on Changing Labour Markets. *Higher Education*, 38(2), 191-208.
- Kivinen, O., Ahola, S., & Hedman, J. (2001). Expanding Education and Improving Odds? Participation in Higher Education in Finland in the 1980s and 1990s. *Acta Sociologica*, 44(2), 171-181.
- Kivinen, O., & Rinne, R. (1991). Mapping the Field of Stratification in Higher Education: The Finnish Experience. *Higher Education*, 21(4), 521-549.
- Kivinen, O., & Rinne, R. (1996). Higher Education, Mobility and Inequality: the Finnish case. *European Journal of Education*, 31(3), 289-310.
- Kivinen, O., & Rinne, R. (1998). State, Governmentality and Education - the Nordic Experience. *British Journal of Sociology of Education*, 19(1), 39-52.
- le Grand, C., Szulkin, R., & Tåhlin, M. (2002). Har jobben blivit mer kvalificerade? [Have the Job Requirements Increased?]. In K. Abrahamsson (Ed.), *Utbildning, kompetens och arbete [Education, Competence and Work]* (pp. 159-182). Lund, Sweden: Studentlitteratur.
- le Grand, C., Szulkin, R., & Tåhlin, M. (2004). Överutbildning eller kompetensbrist? Matchning på den svenska arbetsmarknaden 1974-2000 [Over-education or Lack of Competence? Matching on the Swedish Labour Market 1974-2000]. In M. Bygren, M. Gähler & M. Neremo (Eds.), *Familj och arbete - vardagsliv i förändring [Family and Work - Changes in Ordinary life]* (pp. 283-321). Stockholm: SNS Förlag.
- Lee, V. E., & Frank, K. A. (1990). Students' Characteristics that Facilitate the Transfer from Two-Year to Four-Year Colleges. *Sociology of Education*, 63(3), 178-193.
- Ljunglöf, T. (2004). Livslöner 2002 [Aggregate Lifetime Salary 2002]. Retrieved 2006-04-28 from http://www.saco.se/upload/doc_archive/3313.pdf

- Ljunglöf, T., & Pokarzhevskaya, G. (2003). Därför tjänar män mer än kvinnor [Therefore, Men Earn More than Women]. Retrieved 2006-04-28 from http://www.saco.se/upload/doc_archive/2877.pdf
- Lucas, S. R. (2001). Effectively Maintained Inequality: Education Transitions, Track Mobility, and Social Background Effects. *American Journal of Sociology*, 106(6), 1642-1690.
- Lucay, H., Melody, J., & Walkerdine, V. (2003). Uneasy Hybrids: psychosocial aspects of becoming educationally successful for working-class young women. *Gender and Education*, 15(3), 285-299.
- Lucay, H., & Reay, D. (2002). Carrying the Beacon of Excellence: social class differentiation and anxiety at a time of transition. *Journal of Educational Policy*, 17(3), 321-336.
- Lykke, N. (2003). Intersektionalitet - ett användbart begrepp för genusforskning [Intersectionality - a Useful Concept in Gender Research]. *Kvinnovetenskaplig tidskrift*(1), 47-56.
- Lykke, N. (2005). Nya perspektiv på intersektionalitet. Problem och möjligheter [New perspectives on Intersectionality. Problems and possibilities]. *Kvinnovetenskaplig tidskrift*, 26(2-3), 7-17.
- Löfgren, K. (2003). Enskild prövning och komplettering av gymnasiebetyg. [Individual Testing and Supplementing Upper Secondary School marks]. Retrieved 2006-04-28 from <http://www.umu.se/edmeas/publikationer/pdf/pmnr182sec.pdf>
- Löfström, Å. (2005). Könnsrollerna består [The Gender Roles Remain]. *Välfärd Nr 1*. Retrieved 2006-04-28, from http://www.scb.se/Grupp/allmant/BE0801_2005K01_TI_06_A05ST0501.pdf
- Mac an Ghaill, M. (1994). *The Making of Men. Masculinities, sexualities and schooling*. Buckingham: Open University.
- Mac an Ghaill, M. (Ed.). (1996). *Understanding Masculinities. Social relations and cultural arenas*. Buckingham, Great Britain: Open University.
- Mare, R. D. (1980). Social Background and School Continuation Decisions. *Journal of the American Statistical Association*, 75(370), 295-305.
- McCall, L. (1992). Does Gender Fit? Bourdieu, Feminism, and Conceptions of Social Order. *Theory and Society*, 21(6), 837-867.

- McCall, L. (2005). The Complexity of Intersectionality. *Signs: Journal of Women in Culture and Society*, 30(31), 1771-1800.
- McCall, L. (2005). Intersektionalitetens komplexitet. *Kvinnovetenskaplig tidskrift*, 26(2-3), 31-56.
- McClelland, K. (1990). Cumulative Disadvantage among the Highly Ambitious. *Sociology of Education*, 63(2), 102-121.
- Mickelson, R. A. (2003). Gender, Bourdieu, and the Anomaly of Women's Achievement Redux. *Sociology of Education*, 76(4), 373-375.
- Miles, J., & Shevlin, M. (2001). *Applying Regression & Correlation: a guide for students and researchers*. London: SAGE.
- Moi, T. (1991). Appropriating Bourdieu: Feminist Theory and Pierre Bourdieu's Sociology of Culture. *New Literary History*, 22(4), 1017-1049.
- Müller, W., & Karle, W. (1993). Social Selection in Educational Systems in Europe. *European Sociological Review*, 9(1), 1-23.
- Mäkitalo, Å. (1994). *Non-comparability of Female and Male Admission Test Takers* (No. 1994:06). Göteborg, Sweden: Department of Education and Educational Research.
- Orr, A. J. (2003). Black-White Differences in Achievement: The Importance of Wealth. *Sociology of Education*, 76(4), 281-304.
- Oscarsson, E., & Grannas, D. (2002). Under- och överutbildning på 2000-talets arbetsmarknad [Under- and Over-Education on the Labour Market in the 21st Century]. In K. Abrahamsson, L. Abrahamsson, T. Björkman, P.-E. Ellström & J. Johansson (Eds.), *Utbildning, kompetens och arbete [Education, competence, and work]* (pp. 63-92). Lund, Sweden: Studentlitteratur.
- Parmar, M. K. B., & Machin, D. (1995). *Survival Analysis. A Practical Approach*. Chichester: Wiley.
- Pedhazur, E. J. (1997). *Multiple Regression in Behavioral Research: explanation and prediction* (3. ed.). Fort Worth, Tex.; London: Harcourt Brace.
- Persell Hodges, C., Catsambis, S., & Cookson Jr., P. W. (1992). Differential Asset Conversion: Class and Gendered Pathways to Selective Colleges. *Sociology of Education*, 65(3), 208-225.
- Reay, D. (1997). Feminist Theory, Habitus, and Social Class: Disrupting Notions of Classlessness. *Women's Studies International Forum*, 20(2), 225-233.

- Reay, D. (2001). Finding or Losing Yourself? Working-class Relationships to Education. *Journal of Educational Policy*, 16(4), 333-346.
- Reay, D. (2003). A Risky Business? Mature Working-class Women Students and Access to Higher Education. *Gender and Education*, 15(3), 301-317.
- Reuterberg, S.-E. (1997). *Gender Differences on the Swedish Scholastic Aptitude Test* (No. 1997:02). Göteborg, Sweden: Department of Education and Educational Research.
- Reuterberg, S.-E. (1998). On Differential Selection in the Swedish Scholastic Aptitude Test. *Scandinavian Journal of Educational Research*, 42(1), 81-97.
- Reuterberg, S.-E., & Svensson, A. (2000). *Köns- och socialgruppskillnader i matematik - orsaker och konsekvenser [Gender and Socioeconomic Differences in Mathematics]* (No. 2000:20). Göteborg, Sweden: Department of Education.
- Ribe, M. (1999). Oddskvoter berättar [Odds Ratios Explain]. *VälfärdsBulletinen*, 4 [Welfare]. Retrieved 2006-04-28 from http://www.scb.se/templates/Standard_55219.asp
- SCB. (1983). *Socioekonomisk indelning (SEI) [Swedish socioeconomic classification]*. Stockholm: Statistiska centralbyrån [Statistics Sweden].
- SCB. (1988). *Utbildningsstatistisk årsbok [Yearbook of Educational Statistics]*. Stockholm: SCB [Statistics Sweden].
- SCB. (1995). *Utbildningsstatistisk årsbok [Yearbook of Educational Statistics]*. Stockholm: SCB [Statistics Sweden].
- SCB. (2003). *Nybörjare i komvux [First-year students autumn 2000 in municipal adult education]* (No. UF 35 SM 0301). Örebro, Sweden: Statistics Sweden.
- SCB. (2004). *På tal om kvinnor och män [Women and Men in Sweden]*. Örebro, Sweden: SCB [Statistics Sweden].
- SCB. (2005). *Utbildningsstatistisk årsbok [Yearbook of Educational Statistics]*. Örebro, Sweden: SCB [Statistics Sweden].
- SFS. (1977). Högskoleförordningen (1977:263) [The Higher Education Ordinance 1977:263]. Retrieved 2006-04-28 from <http://www.notisum.se/rnp/sls/lag/19770263.htm>
- SFS. (1993). Högskoleförordningen (1993:100) [the Higher Education Ordinance 1993:100]. Retrieved 2006-04-28 from <http://www.notisum.se/rnp/sls/lag/19930100.htm>

- Skeggs, B. (1997). *Formations of Class and Gender. Becoming Respectable*. London; Thousand Oaks [Calif.]: Sage.
- Skolverket. (2002). *Efter skolan [After Upper Secondary School]*. Stockholm: Fritzes.
- Skolöverstyrelsen. (1962). *Läroplan för grundskolan*. Stockholm.
- Skolöverstyrelsen. (1969). *Lgr 69 Läroplan för grundskolan. Allmän del*. Stockholm: Skolöverstyrelsen.
- Skolöverstyrelsen. (1983). *Lgy 70 Läroplan för gymnasieskolan, allmän del*. Stockholm: Liber.
- SOU. (2004). *Den könsuppdelade arbetsmarknaden [The Gender Segregated Labour Market]* (No. 2004:43). Stockholm: Ministry of Industry, Employment and Communications.
- Stolzenberg, R. M. (1994). Educational Continuation by College Graduates. *American Journal of Sociology*, 99(4), 1042-1077.
- Svensson, A. (1971). *Relative Achievement. School performance in relation to intelligence, sex and home environment*. (Göteborg Studies in Educational Sciences, 6). Göteborg, Sweden: Acta Universitatis Gothoburgensis.
- Svensson, A. (1998). *Hur lyckas eleverna i den nya gymnasieskolan? [How Do Students Succeed in the New Upper Secondary School?]* (No. 1998:07). Göteborg, Sweden: Institutionen för pedagogik.
- Svensson, A. (1999). *Socialgruppsbegreppet - sett ur den pedagogiska forskningens synvinkel [Socioeconomic index - seen from the view of educational research]* (No. 1999:05). Göteborg, Sweden: Institutionen för pedagogik och didaktik [Department of Education].
- Svensson, A. (2002). *SEI-koden i aggregerad form*. Unpublished manuscript, Göteborg.
- Tett, L. (2000). I'm Working Class and Proud of It - gendered experiences of non-traditional participants in higher education. *Gender and Education*, 12(2), 183-194.
- Trondman, M. (1995). Vem talar för framtidens förlorare? [Who Speaks for the Losers of the Future?]. In G. Bolin & K. Lövgren (Eds.), *Om unga män* (pp. 167-192). Lund, Sweden: Studentlitteratur.
- UFB. (1992). *Utbildningsväsendets författningsböcker 1992/93. Del 3. Högskolans utbildning och forskning*. Stockholm: Fritzes.
- Utbildningsdepartementet. (1994). *1994 Curriculum for Compulsory Schools (Lpo 94)*. Stockholm: Swedish Ministry of Education and Science.

- Utbildningsdepartementet. (1994). *1994 Curriculum for the non-compulsory school system (Lpf 94)*. Stockholm: Swedish Ministry of Education and Science.
- Utbildningsdepartementet. (2004). *Könsskillnader i utbildningsresultat* (No. 7). Stockholm: Utbildningsdepartementet.
- VALUTA. An Attractiveness Index to Determine the Hierarchical Differentiation within Higher Education. Retrieved 2006-04-28 from http://www.ped.gu.se/projekt/valuta/Attractiveness_index.pdf
- van de Werfhorst, H. G. (2002). A Detailed Examination of the Role of Education in Intergenerational Social-class Mobility. *Social Science Information*, 41(3), 407-438.
- Wernersson, I. (1992). Könsdifferentiering och socialisation i grundskolan [Gender Differentiation and Socialisation in Compulsory School]. In R. Åberg (Ed.), *Social bakgrund. Utbildning. Livschanser* [Social background. Education. Life chances] (pp. 89-108). Stockholm: Carlsson.
- Willingham, W. W., & Cole, N. S. (1997). *Gender and Fair Assessment*. Mahwah, N.J.: L. Erlbaum Associates.
- Vogel, J. (1987). *Det svenska klassamhället* [The Swedish Class Society] (No. 50). Stockholm: Statistiska centralbyrån.
- Woodhall, M. (1999). Human Capital Concepts. In A. H. Halsey, H. Lauder, P. Brown & A. Stuart Wells (Eds.), *Education, Culture, Economy, and Society* (pp. 219-223). Oxford: Oxford University Press.
- Åberg, R. (2003). Unemployment Persistency, Over-education and the Employment Chances of the Less Educated. *European Sociological Review*, 19(2), 199-216.
- Ås, B. (1978). Hersketekniker [Ruling Techniques]. *KjerringRåd*, 4(3), 17-21.
- Öhrn, E. (2000). Changing patterns? Reflections on contemporary Swedish research and debate on gender and education. *NORA*, 8(3), 128-136.
- Öhrn, E. (2002). *Könsmönster i förändring? - en kunskapsöversikt om unga i skolan* [Changing Gender Patterns?]. Stockholm: Statens skolverk.

APPENDIX

Study I

Berggren, C. (in press). Labour Market Influence on Recruitment to Higher Education - Gender and Class Perspectives. *Higher Education*.

Reprinted with kind permission of Springer Science and Business Media.

Study II

Berggren, C. (in press). Broadening Recruitment to Higher Education through the Admission System - Gender and Class Perspectives. *Studies in Higher Education*.

Reprinted with kind permission of Studies in Higher Education.

Study III

Berggren, C. (submitted). Horizontal and Vertical Differentiation within Higher Education - Gender and Class Perspectives.

Study II and study III have been formatted to fit the layout of thesis and will therefore not be identical to the published versions.

I

Labour market influence on recruitment to higher education – Gender and class perspectives

CAROLINE BERGGREN

*Department of Education, Göteborg University, P.O. Box 300, SE 405 30 GÖTEBORG,
Sweden (E-mail: Caroline.Berggren@ped.gu.se)*

Abstract. The hypothesis that an economic recession in society leads to class equalisation in the recruitment of new students to higher education is tested, using data from Sweden. The 1990s is a period suitable for these analyses, as the recession started in 1991, reached the highest unemployment level in 1993; finally, at the end of the decade the labour market recovered. Multivariate, binary logistic regressions of entry into higher education are performed with gender divided analyses. Register data from Sweden comprising the total population in the age range 18–21 years from six cohorts are analysed. When the labour market was the most difficult, more young students from lower classes entered higher education. When the labour market recovered, men from lower classes tended to abandon higher education. However, women from lower classes continued to increase their involvement. The result indicate that the Swedish Scholastic Assessment Test, works in favour of men from higher classes through repeated test taking. The hypothesis about the influence from the labour market was supported for the group of men, while results were less clear for women. The results indicate that future research must carefully consider gender aspects.

Keywords: class, gender, grade point average, labour market, logistic regression, recession, recruitment to higher education, register data, SweSAT

Introduction

The expansion of higher education in the industrial countries has given rise to several studies within sociology of education. The changed composition of groups of students with respect to class and gender has been a challenging theme. In addition to the expanding educational sector, the state of the labour market is a possible factor to account for changes in the recruitment of students (Gustafsson et al. 2000). The hypothesis is that if people are unemployed it is more likely that they turn to higher education than otherwise. A period of a weakening economy, followed by high unemployment rates occurred in most of the industrial countries in the beginning of the 1990s. The labour market recovered at the end of the decade. This gives a good opportunity to test

the hypothesis of whether or not a weakening labour market will result in an increase of underrepresented groups of student in higher education. The example used in this article is Sweden. The results are interpreted within the framework of two structural theories: the theory about the gender order (Connell 1987, 2002; Hirdman 1988, 2003), and the cultural reproduction theory (Bourdieu and Passeron 1990; Bourdieu 1992, 1997). Multivariate statistical analysis methods were applied on an extensive data set comprising six birth cohorts.

The background

There is a discussion of whether or not the expansion of higher education has resulted in an increased equalisation due to class and gender in the student population. The interpretation of the development is divided. Some researchers conclude that there is a move towards equalisation, while others are more cautious in their judgement. The disagreement is, among other things; due to different theoretical bases, different analytical focus on either gender or class or both, and differences in the definition of the concept of higher education. The purpose of this section is to describe the development of the attainment in higher education due to class and gender, and the different interpretations given this development. The greater part of the description originates from Swedish data, mainly because there is comprehensive information available. Two Swedish sociologists, Erikson and Jonsson (1993, 1994, 1996, 2002) have recently presented a comprehensive survey about social selection in the recruitment to higher education in Sweden. They have based their studies upon register data and upon samples, which generally are representative for the country, and with a longitudinal design.

To begin with there are some concepts that need to be clarified. Higher education is in Sweden synonymous with tertiary education. All post upper-secondary education was brought together under the umbrella of higher education in 1977, when the first Higher Education Act (SFS 1977) came into force. This implies that today's higher education concept comprises, besides the traditional academic disciplines, also polytechnic educations (e.g. engineers), and the former traditional female vocational trainings (e.g. nurses and teachers). Despite these changes, Erikson and Jonsson (1993, p. 164) still restrict their studies to comprise only the traditional academic disciplines, including certain polytechnic ones, mainly to be able to make comparisons over a long time period.

The expressions 'social selection' and 'class equalisation' will be used as synonyms despite their different theoretical origin. The indicators of student background will either be parents' class or educational level, which simply reflects the differentiation within this field. When discussing the structure of the groups of students, it refers to gender and class composition.

Erikson and Jonsson (1993, 1996) describe a continuous move towards class equalisation in educational attainment during the 1900s in Sweden. The social selection into higher education decreased particularly during the period 1930–1970, and especially among women. In the beginning of the century the social selection was higher among women than among men, but the social selection decreased within the group of women and was the same within the genders at the end of the century. The daughters of farmers and self-employed families had increased their attainment in higher education more than their brothers. Also women from the middle class increased their attendance in long and prestigious programs (Erikson and Jonsson 1993, 1996). During the 1990s the social bias has decreased somewhat more, particularly among students entering the short and medium length university programs, and among the youngest students. Women now form the majority in almost all programmes of higher education (Gustafsson et al. 2000, p. 201).

However, despite the fact that these researchers describe a continuous change toward class and gender equalisation, they also observe that the hierarchical order is still there. The upper middle class has the greatest advantages, while children of manual workers have the greatest disadvantages (Erikson and Jonsson 1993, 1996; Gustafsson et al. 2000; Delamont 2001). Delamont (2001) and Brock-Utne (1997) argue that the gender order has been quite constant over the century. They agree that women have access to more alternatives than before, and that young women are more qualified; however, their qualifications does not give the same financial return on the labour market as they do for men (Ljunglöf 2004). There are several examples of how students from well-educated families have a sense for choosing the educational path that is the most favourable, while the majority of students from less educated families, women and the mature students are directed towards educational sectors with less status. Women dominate the shortest programmes with a clearly pronounced vocational focus, while men still keep their lead within prestigious programs (Egerton and Halsey 1993; Gustafsson et al. 2000; Tegner 2002). Students from the middle class dominate all educational institutions, but the domination is less

pronounced within universities outside the largest cities, and within colleges (Egerton and Halsey 1993; Kivinen et al. 2001).

In Sweden, the admission to higher education is restricted. The two main selection instruments are marks from completed upper secondary education and the Swedish Scholastic Assessment Test, SweSAT. There have been changes concerning educational achievement, and selection instruments, that have implications for gender and class composition.

Since the 1970s in Sweden and the 1980s in Britain, young women's school marks are on the average better than young men's. Young women take more degrees than men do, and form the majority in programs preparatory for further studies (Svensson 1998; Arnot et al. 1999, p. 16; Gustafsson et al. 2000, p. 205; Öhrn 2002). Men seem in many respects to be a more diverse group than women; among the men are both the lowest achieving and the highest. On the one hand, a minority of the young working class men reject school; on the other hand, there are very successful young men who study at A-level and choose science (Arnot et al. 1999, p. 23; Delamont 2001). Natural sciences is also chosen by high achieving men in Sweden, but the young women in this group have even higher grade point average than the men (Svensson 1998). It must be emphasized that the general gender differences in educational achievement are small and must therefore be studied in relation to other group differences, such as social class and cultural affiliation (Delamont 2001, p. 111; Öhrn 2002, p. 56). There is an average difference of about a quarter to half a grade on a five step scale in favour of upper middle class compared to working class in upper secondary school (Erikson and Jonsson 1996; Svensson 1998). This implies that women and students from higher classes have better chances of entering higher education directly via their grade point average from upper secondary school. They don't need to sit for the SweSAT or in other ways improve their qualifications.

The alternative selection instrument is the SweSAT. The test may be taken as many times as wished, also after the student has been accepted to a place of study in higher education (Brandell and Lindqvist 2002). The SweSAT can in that case be a way of increasing the qualifications so the student can enter a more attractive program than she/he began with. Those who take the SweSAT is a selected group and among them men are more successful than women (Reuterberg 1997). It has also been shown that taking the test gives an experience that, at least statistically, will improve the results the next time (Cliffordson 2004b). Briefly summarised; women enter higher education via upper secondary school grades, while the SweSAT is an alternative in favour of men.

Moreover, the inclination to enter higher education is more apparent in the middle class than in the working class. Students from working class need a support in high grades to make the first move to tertiary education (Erikson and Jonsson 1993, 1996). Differences in inclination due to gender operate in a similar way; at high achievement levels men are more inclined to enter higher education than women are (Andres 1998; Härnqvist 1998). Men seem to be more guided by their level of achievement rather than by pure interest.

Finally, the first Higher Education Act (SFS 1977) had a large effect on the composition of groups of students in Sweden. When the former post upper secondary education was incorporated into higher education, it resulted in an increased number of women, and an increased number of students from working class. The reason is that these trainings were, and still are, occupied by a comparatively large part of women from the working class. Corresponding vocational training for men, such as construction, electricity and vehicle programmes are still offered at upper secondary school level.

Theoretical perspectives

Two major structures influence society: gender order and class hierarchy. Individuals are carriers of the structures, although they themselves as living men and women do not necessarily represent these values and ideas. The gender theory used in this article is a combination of theories about male supremacy (Connell 1987, 2002; Mac an Ghaill 1994, 1996; Hirdman 2003), hierarchical organisation within the group of men (Connell 1987, 2002; Mac an Ghaill 1994, 1996), and processes of gender separation (Hirdman 1988, 2003).

That 'Man is the norm' implies that men are perceived as objective representatives for both men and women, and what is associated with men and male activity is often perceived as the highest valued. Men define themselves in relation to each other. Women also define themselves primarily in relation to men, and only secondarily in relation to other women (Mac an Ghaill 1994; Hirdman 2003).

There is a struggle about power in all situations in society where people meet, a struggle about how to gain advantages, to get hold of resources, and to define situations. The latter means having the power to decide what is going to be on the agenda, what is interesting and worth discussing and how to understand a situation. Men as a group have more power than women as a group. In order to keep their superior position in

relation to women men have to co-operate. This male project does not always favour the individual man, but as long as enough men are motivated to support the idea, it continues. On an institutional level this excludes women from positions with authority and sustains a subordination of areas with a majority of women (Connell 1987). There is an ongoing process to keep the two genders separated (Hirdman 1988, 2003). The separation can be interpreted as a way of avoiding a comparison when the outcome might not favour men, a process in order to maintain male privileges and power. Examples of the gender separation is the gender divided secondary and tertiary education (Florin and Johansson 1992; Brock-Utne 1997; Högskoleverket 1998, p. 39; Arnot et al. 1999, p. 21; Croxford 2000); and the gender divided labour market (SCB 2004). What was previously a typical male choice (e.g. latin studies) can later become a typical female choice, but the division, what is typical male and female is a dichotomising process constantly in progress.

Young women are brought up to be different from men. As women are not men, they must be something else. A most successful male hierarchical technique is to sexualise women and regard them as objects. The norm for women is, for example, to be attractive, responsible and respectable, and to take care of relations (Mac an Ghail 1994; Skeggs 1997; Berggren 2001; Connell 2002; Hirdman 2003). Women will thereby spend time and effort to become attractive and they are disadvantaged in the fight for attractive and powerful positions. When women are outmanoeuvred, the fight for power takes place within the group of men. There is a hierarchical organisation within the group of men; the training for competition begins at early age (Mac an Ghail 1994; Delamont 2001; Connell 2002). Connell (1987) argues that to create a hierarchy three elements are needed: a hegemonic masculinity, a conservative, or as I prefer to call it, a supportive masculinity, and a subordinate masculinity. The 'key' to status in the hegemonic masculinity depends on the situation. Within the educational system the middle class, well-achieving, independent, enterprising men are at the top of the hierarchy and dominate the field (Florin and Johansson 1992). Men who cannot compete on these premises form other groups outside the educational system with other standards for success. They thereby avoid being losers and can carry on with retained self-confidence. The key factor to success in these other groups can be to have a work in the manufacturing industry, to get an income so they can own a car, or to have enough money to enjoy themselves etc. (Trondman 1995; Collinson and Hearn 1996; Haywood and Mac an Ghail 1996; Hill 1998; Tett 2000; Archer et al. 2001; Archer and Leathwood 2003;

Archer and Yamashita 2003). These are signs of the working class hegemonic masculinity.

The hierarchical organisation of the gender order intersects with the organisation of the classes, which are also hierarchically structured. According to the cultural reproduction theory, the educational system is a place where students from privileged home background reproduce their advantage in relation to other groups. There is an increasing demand for higher education in all classes. The necessity for degrees has forced also those social groups, which previously could entirely rely on their economical capital, to continue tertiary education with the purpose of keeping their advantage (Bourdieu 1992, p. 132). In order to succeed within the educational system, several forms of capital are needed. Two forms of symbolic capital will be used in this paper: first, cultural capital inherited and imbibed from the family and the surrounding milieu, and second, what I call school capital, which is capital acquired by the student her/him self, such as a school leaving certificate, degrees or diplomas. An amount of cultural capital is decisive for success within the educational system. Bourdieu's concept of cultural capital includes, apart from access to 'cultural goods' (Bourdieu 1997, p. 47), how to express oneself, how to manoeuvre within the society and within the educational system, and also a knowledge about cultural distinctions, such as familiarity with classical music, art and so on. Social capital, in the form of relations, friends, contacts and connections, gives access to the sort of cultural capital that is unobtainable for others (Bourdieu 1997). Working-class students do not have access to the same information about higher education as middle-class students have. Their parents, sister and brothers and friends who have no experiences of higher education and cannot guide them (Hutchings 2003). The educational system attracts, and sometimes also seduces, students from less privileged background to improve their position. For the students, who lack the 'right' social capital it is difficult to decide which type of education that is most likely to be beneficial. For example, with a rich possession of capital students can avoid being trapped in an educational pathway that does not correspond to the demands on the labour market and thereby leads to unemployment, or becomes invalid soon after graduation. Moreover, social capital continues to play a crucial part after graduation, for advancement within the labour market (Kivinen and Rinne 1996; Kivinen and Ahola 1999). An amount of economical capital is also important, above all to enable time for the transfer of cultural capital from one generation to another and to be free from economic obligations during the period of study (Bourdieu 1997). An

embodied form of capital is the habitus. It is an unreflected way of regarding, perceiving and acting in social situations, a habit. The habitus is acquired through transformation within the family and from the life the person has lived so far. A different type of habitus is more or less passable depending on the situation (Broady 1990). Hutchings (2003) argues that very few people make 'rational' decision whether to enter higher education or not. Among people from the middle class the choice to continue studying is likely to be obvious, while a more frequent occurring attitude among people from working class is that they have never considered the alternative at all. This is an example of how different habitus guides the person to choose different paths in life.

The research question

Gustafsson et al. (2000, p. 202) studied the flow of students from compulsory school to higher education in Sweden during the 1990s. They confirmed results from previous studies concerning women's high transfer rate to higher education, and also demonstrated a further decreased social selection during these years. A tentative explanation of the changed social structure of the group of students was the difficult labour market caused by the recession in the beginning of the 1990s. So the question in this study is: did the weakening economy affect the social structure of the group of students in higher education? Furthermore, can gender and class theories contribute to a more developed understanding of these processes?

The context

During the 1990s there were several other extensive changes in society apart from a changing labour market. These other changes might also have influenced the recruitment into higher education. Some of the factors can be expected to increase the demand for higher education, while others can be expected to restrain it, or even to work in both directions. Most of these influencing factors are not included in the analyses, but they have to be taken into account when interpreting the results. Below is an attempt to summarise and describe these events.

Shortage of vacancies

In the beginning of the 1990s there was a dramatic decrease in the number of employed persons, especially in the age group 16–24 years.

In 1990 the share of unemployed in the age group 16–24 was 3.7%, while in 1993 it reached a peak of 18.4%. In the following years the unemployment rate decreased slowly. In 2000 it was at a level of 8.1%. During the period of highest unemployment, more young men than women were unemployed, but women were to a higher extent forced to work part time. The municipal sector that had been women's principal employer before the recession, did not revert to what it had been (SCB 2003). The public sector had until then provided a large number of jobs in the service sector, but the economic cutbacks in this sector, resulted in a decrease also in these types of employments (Daun 1998; Kivinen and Ahola 1999). The high unemployment rate can be conceived as having a pushing effect, but can also be conceived as working in the opposite direction. People knew that there were declining numbers of vacancies in all sectors, and on all levels. The risk of investing in a long education, without being assured of getting a job afterwards, perhaps had a restraining effect (Kivinen and Rinne 1998a; Kivinen and Ahola 1999).

Expansion of higher education

The Swedish government has an intention to increase the amount of students in higher education. A well-educated population is considered essential for the ability to adapt to the demands of the labour market, and is a way of maintaining competitiveness and high standards of living. A government policy is to approach 'universal access' to higher education (Trow 1974, p. 63). That is "... 50 percent of those born in any given year shall have embarked on university level studies by the age of 25" (Utbildningsdepartementet 2001, p. 1). The goal is about to be reached: of those born in 1977, who turned 25 the academic year 2002/2003, 43% have entered higher education (Högskoleverket 2004).

Decreased cohort size

When the cohorts are large, it is conceivable that the competition for the available study places is intense and that many students will not be accepted. During the 1990s the cohorts available for entering higher education diminished in size. A reduced size of the cohorts together with an expansion of the number of study places in higher education can be expected to reduce the admission requirements, thereby further facilitating the pulling effects.

Private economy

Working class students in particular are concerned about their private economy. They often have no or small savings, and they cannot rely on

their parents in a difficult economical situation (Archer 2003). Financial aid is in Sweden available for all students, and is not conditioned by the finances of other family members. It consists of two components: a grant and a loan (CSN 2003). Financial aid has been, and still is, a very important tool for decreasing the under-representation of working class students in higher education (Reuterberg and Svensson 1992, 1994). The financial aid for students has not been reduced during the 1990s; neither has it increased. Owing to the unchanged financial aid, the students' economical situation was more stretched towards the end of the decade. The reason is mainly that the costs of housing have increased. It is very difficult for a student to support him or herself only on the financial aid. A contribution in the form of a job on the side, parental support, or dipping into prior savings is necessary (Pahne and Yngvesson 2004). This article does not have the intention to further cover the various aspects of a changed private economical situation.

Data and variables

Validation of the University Entrance System (VALUTA) is a Swedish project, which aims at studying the function of the admittance system in relation to the interests of several groups of stakeholders (e.g. students, higher education, society). The empirical basis of the project is a database formed primarily from register data from Statistics Sweden. The database includes all individuals born in 1972–1984, a total amount of 1.4 million individuals. Data are available for the period 1991–2000 and the registers are linked together on an individual level, which makes it feasible to follow individual paths. In this study, the individuals born in 1973–1978 are chosen, and studied during those years when they were 18–21 year old.

Age

The government's wish to increase the population's educational level primarily concerns the young adult population, those below 25 years. In this study the interval of age is even more restricted and includes those who are 18–21 years. One reason for this choice is that it covers the immediate transition from upper secondary school to higher education. A second reason is that the living conditions are more homogenous with

respect to family situation within this age range, because few have formed a family yet. Other studies have also restricted the age group in a similar way (Gustafsson et al. 2000). Finally, it was judged important to utilize as many cohorts as possible from the available database.

Gender

The information on sex originates from registration at the age of 16.

Entrance to higher education

Entry to higher education is defined as applying and being matriculated for the first time, irrespective of educational sector and rate of studies. Whether the student has continued the course or program or has changed his or her mind soon after matriculation is left out of consideration.

Class

Class or socioeconomic status, SES, is in this article defined as a union of the father's and mother's education and occupation. The parent who has attained the highest level of education and the highest, most prestigious occupation represents the household. The variable is an indicator of the amount of capital that is available. It is not possible to distinguish between the different forms of capital. It is assumed that possession of one sort of capital can be transferred into another sort of capital if needed.

The censuses of 1985 and 1990 have both been taken advantage of, which reduces the dropout rate to slightly above 6%. Compared to the EGP class scheme (Erikson and Goldthorpe 1992, pp. 38–39), the grouping used here is a coarse grouping of the 11 groups in the 'full version' (Table 1). Upper middle class is equivalent to higher-grade professionals, administrators, officials, and self-employed with academic degree (I). Intermediate consists of middle and lower middle class, self-employed without academic degree and farmers (II, IIIa, IIIb, IVa, IVb, IVc). Working class is lower-grade technicians, skilled and unskilled workers (V, VI, VIIa, VIIb). The group of indeterminable is a heterogeneous group, to a large proportion composed of immigrants.

Table 1. Class

	SES			
	Upper middle 1	Intermediate 2	Working 3	Indeterminable 0
Percent	20.1	46.9	28.6	4.4
N	126 999	295 859	180 585	27 470

Marks

Marks are seen as an indicator of how much school capital the student has acquired. A new curriculum was introduced in 1994, which has a system of criterion-referenced marks instead of the former norm-referenced grading assessment. The norm-referenced system consisted of marks from 1 to 5, where 5 was the highest. The criterion-referenced system includes the levels: Pass, Pass with distinction and Pass with special distinction. If the student does not pass, no mark is awarded (Skolverket 2003). The new curriculum was gradually introduced, so these two systems overlap each other. In this study both kinds of marks are applied.

Grade point average according to the school-leaving certificate (GPA16) of the compulsory school is used in the analysis dealing with class differences. More than 96% of the individuals analysed in this paper were assigned the norm-referenced marks from compulsory school. In compulsory school the students could choose between two degrees of difficulty within the subjects English and Mathematics. To be able to separate those who had studied a general course from those who had studied an advanced course, the students with grades from the advanced course got one level higher marks. Which adjustment was determined with a regression procedure in which a dummy variable was used to indicate course level (Reuterberg 2001). Thus, in these analyses a scale from 1 to 6 is applied on these two subjects, which results in a GPA16 with a maximum of 5.125.

Marks from upper secondary school could be considered as more appropriate as it is an assessment more close to the application for higher education. Of the studied population an average of 17.6% in the cohorts 1973–1978 have not completed upper secondary education. The drop out is not random; it is highly dependent on class. Almost $\frac{1}{4}$ of the individuals from working class do not have any upper secondary school leaving certificate, which for those from upper middle class the

corresponding share is 10%. Another disadvantage is that there is 'grade inflation' in the new grading system (Cliffordson 2004a).

The majority of the individuals included in this study have received norm-referenced marks in their upper secondary school leaving certificate, while the majority in the last cohort, 1978, have received criterion-referenced marks. To make these grading systems comparable a percentile ranking transformation has been conducted. The percentiles have later been transformed into deciles to make it easier to interpret the results; that is, each single subject GPA19 can vary from 1 to 10.

Numbers of SweSAT's taken

This is a variable assumed to reflect primarily the motivation for entering higher education, and is therefore related also to cultural and social capital. This variable does not cover the school capital as much as the marks do, since it only measures how many times the test is taken, not the results on the test. The reason for not using the scores on the test is that only a subset of the individuals has taken the test.

Method

In addition to the usual descriptive statistics, binary logistic regression is applied (Pedhazur 1997; Miles and Shevlin 2001). In a binary logistic regression, the dependent variable can only assume two mutually exclusive values. In these analyses they are either 'matriculated' or 'not matriculated'. The results of the analyses are expressed in odds ratios. The independent variables can either be categorical or continuous. When the variable is categorical, as for example SES, it is coded as a dummy variable, SES 3 is chosen as the reference (Pedhazur and Schmelkin 1991). The odds in favour of entering are computed in relation to belonging to the group of SES 3. If the odds ratio is 1, then the classes act similarly in this respect. In the analyses men and women are treated separately. That is, men from one class can only be compared with men from other classes, and women from one class can only be compared with women from other classes. When the variable is continuous the interpretation is that for each step higher on the scale, the odds in favour of entering increases with the value of the parameter. The odds ratio can assume values from zero to plus infinity. Logistic regression has the advantage that it can analyse the relative influence of

different factors, and it can be used to separate the direct and indirect effects of the independent variables. When one independent variable (e.g. SES) is included in the analysis, the coefficient represents the total effect of this variable. When a second independent variable is added to the analysis (e.g. GPA) the coefficient expresses the direct effect of SES, with GPA held constant.

Since the analyses are performed on complete cohorts, no tests of significance are done. To avoid confusing effects of cohort and age, the analyses are carried out separately for each age group over each four-year period. The base gradually changes as students have been admitted to higher education. Those who already have entered are excluded from the next step of analysis.

The GPA16 has been chosen because data is available for almost all individuals. The disadvantage is that it might not be such a powerful predictive variable as GPA19, which is closer in time to the application. The consequence of the choice of variable might be that the effect of class is overestimated.

Results

A total of 630 913 individuals are included in these analysis. They are distributed over six cohorts.

The cohort size is declining. At the end of the 1970s about 15 000 fewer children were born per year compared to four or five years before. The proportion of matriculated students has increased over time. During the years when they were 18–21, about 30% of them had entered higher education (see Table 2). The cohorts consist of 51% men and 49% women.

Table 2. Size of cohorts and amount of matriculated at higher education

	Cohorts					
	1973	1974	1975	1976	1977	1978
Academic year	1991/1992 –1994/1995	1992/1993 –1995/1996	1993/1994 –1996/1997	1994/1995 –1997/1998	1995/1996 –1998/1999	1996/1997 –1999/2000
Total N	111 977	112 948	106 889	107 775	99 711	97 613
Matriculated N	30 681	33 265	32 438	31 607	30 705	29 622
Matriculated %	27.4	29.5	30.3	31.1	30.8	30.3

Table 3. Number and amount of those matriculated who are women

	Cohorts					
	1973	1974	1975	1976	1977	1978
Women N	17 162	18 528	18 059	17 669	17 439	16 754
Women %	55.9	55.7	55.7	55.9	56.8	56.6

Table 4. Matriculated students by class and gender

	Cohorts											
	1973		1974		1975		1976		1977		1978	
	M	W	M	W	M	W	M	W	M	W	M	W
SES 1 N	5 424	5 951	5 839	6 334	5 530	6 068	5 196	5 930	5 041	5 756	4 871	5 312
Percent	47.2	53.9	50.0	56.7	49.9	57.4	49.5	58.1	49.0	58.9	49.5	56.7
SES 2 N	6 222	8 423	6 898	9 074	6 732	8 818	6 533	8 617	6 193	8 409	5 932	8 076
Percent	22.8	32.3	25.0	34.5	26.3	35.7	26.8	37.1	26.0	37.5	26.0	37.3
SES 3 N	1 640	2 515	1 753	2 809	1 813	2 846	1 847	2 776	1 687	2 845	1 632	2 792
Percent	10.0	16.1	10.5	17.8	11.5	19.0	12.3	19.9	11.5	20.5	11.5	20.4
SES 0 N	233	273	247	311	304	327	362	346	345	429	433	574
Percent	11.2	14.0	12.2	16.6	13.9	16.1	13.3	16.6	13.6	18.2	13.9	20.1

Women’s continuously increasing involvement in higher education has at the end of the period reached a level of almost 57%, as can be seen from Table 3.

Gender and class, of those who enter higher education is shown in Table 4.

Within most groups an increasing proportion is matriculated, even though this tendency seems more marked for females and for students from SES 0. SES 0 is a heterogeneous group, mostly composed by immigrants. It has not been possible to determine the background of this group, so in the rest of the article this group will be excluded from presentations, but it is still included in analyses.

The logistic regression analyses have been performed in a series. In the first model SES is the only independent variable, then marks are controlled for, and finally marks and number of times the SweSAT is taken are both added in the model.

The odds ratios are displayed in graphs. Figure 1 shows the total effect on entrance of SES/class separately for men and women.

The effect of class is stronger for men than for women. The odds for men belonging to SES 1 to enter higher education were at most 8½

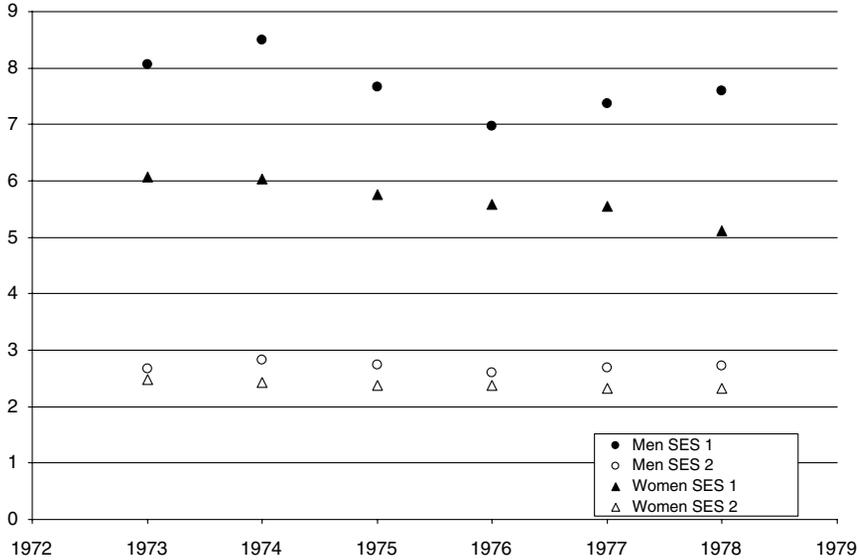


Figure 1. Entering higher education. Total effects of SES divided by gender. Comparison between six cohorts. Odds in relation to men and women SES 3, respectively.

times higher than the odds for men belonging to SES 3. For women in SES 1 the odds were at most 6 times higher compared to women in SES 3. Moreover, at the end of the decade, the development for men is in the opposite direction than for women. The estimates for women belonging to SES 1 are declining from 6 to 5. For men, however, there is for the cohorts born between 1977 and 1978 a trend towards an increasing effect of class.

Marks from upper secondary school form the main selection instrument into higher education, and in the next step of analysis the effects of school capital have been partialled out. Both marks from upper secondary school, GPA19, and from compulsory school, GPA16, have been used.

Table 5 shows the average marks among those who entered higher education during the years they were 18–21 years.

Grade point average from compulsory school, GPA16, is surprisingly stable. GPA16 is about 0.6 steps higher among the matriculated students compared to the whole population in these six cohorts. The level of GPA19 was highest among those who entered the academic years 1995/1996–1998/1999. There is a minor GPA difference in favour of female students when completing compulsory school and that difference increases in upper secondary school.

Table 5. Grade point average from compulsory and upper secondary school among those matriculated, divided by gender

	Cohorts					
	1973	1974	1975	1976	1977	1978
GPA16 men	3.91	3.87	3.86	3.87	3.87	3.87
GPA16 women	4.00	3.98	3.98	3.98	3.99	3.98
GPA16 all	3.96	3.93	3.93	3.93	3.94	3.93
GPA19 men	6.67	6.59	6.58	6.48	6.81	6.61
GPA19 women	7.11	7.17	7.20	7.10	7.50	7.25
GPA19 all	6.92	6.91	6.92	6.83	7.21	6.97

The increasing gender difference from GPA16 to GPA19 is in agreement with Svensson's (1998) results, which show that women increase their marks during upper secondary school, especially within programmes of social studies. It can also be observed that the gender difference is increasing, and it was largest for those born in 1977. It must be taken into account, however, that the 1977 cohort was the last one with norm referenced grading assessment, but these marks were assigned in a school system with criterion referenced marks. From previous studies we know that females and students from higher classes perform on the average better than other groups of students (Svensson 1998; Arnot et al. 1999; Gustafsson et al. 2000; Öhrn 2002).

Figure 2 shows results from a multiple logistic regression analysis, where the impact from marks is controlled for when estimating the effect of SES.

There is a substantial reduction in odds when the grade point average at age 16, GPA16, is kept under control. The difference in relation to SES 3 that is still there, indicate at most three times higher odds for men belonging to SES 1. The remaining difference can be interpreted as the effect of different habitus. Students from higher classes are more oriented toward higher education, even when previous school achievement is at the same level. Erikson and Jonsson (1996) conclude that the class differences, with reference to entrance, were equal among men and women in the beginning of 1990s, and that there was a slight trend towards equalisation among young women. As can be seen from Figure 2, that trend continues during the whole decade. The odds among women in SES 1 gradually approach 1. For males, however, the trend reverses from 1976, even when controlling for GPA16.

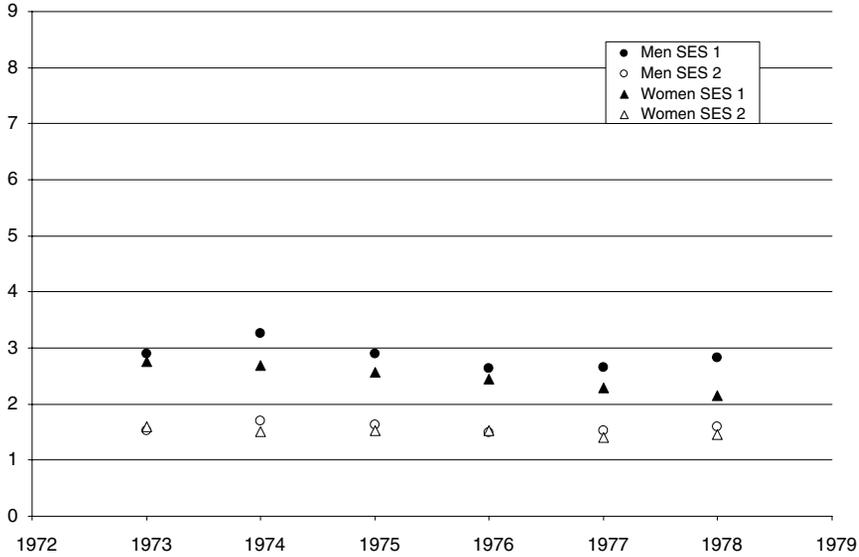


Figure 2. Entering higher education. Effects of SES divided by gender, and controlling for GPA16. Comparison between six cohorts. Odds in relation to men and women SES3, respectively.

In the following analysis, an attempt is made to reflect at least a part of what can be considered as the academic matched habitus (Table 6).

As expected from previous research (Reuterberg 1997) a slightly larger proportion of men take the SweSAT, and they take it more times than women do. When men and women are divided into classes, there is a clear and unanimous trend that a larger proportion of students from higher classes take the SweSAT, compared to working class students. Exactly the same trend can be observed concerning numbers of test taken. With increased status, both according to class and gender,

Table 6. Percent test takers and average number of SweSATs taken among those matriculated divided by gender

	Cohorts					
	1973	1974	1975	1976	1977	1978
Men %	83	81	80	80	81	85
Men mean	2.62	2.59	2.50	2.44	2.36	2.48
Women %	81	79	78	78	78	83
Women mean	2.37	2.38	2.33	2.27	2.17	2.28

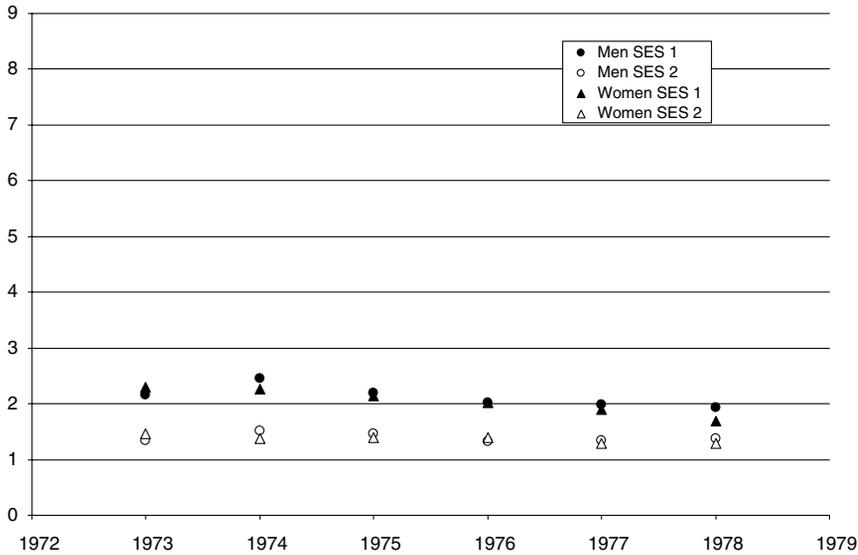


Figure 3. Entering higher education. Effects of SES, when controlling for GPA16 and numbers of SweSAT taken. Comparison between six cohorts. Odds in relation to men and women SES 3, respectively.

follows a more frequent test taking. Men from SES 1 take the test more times than other groups.

The following analysis is a further elaboration of the previous logistic regression analyses. This time the number of SweSAT participations is added beside SES and GPA (Figure 3).

The odds ratios are approaching 1 for several groups, which means that less difference is left unexplained. Those gender differences previously detected can now be explained by the readiness of men from SES 1 to take the SweSAT. The reduction in odds compared to the previous analysis is most obvious in the group of men from SES 1, and this holds for all six cohorts.

Discussion

There is a slight increase in female participation in higher education during the decade. This development among women is a continuation of a trend shown by Erikson and Jonsson (1996) and more recently by Gustafsson et al. (2000). When looking at the class distribution within the group of women, the intermediate and the working class women

have increased their share. Women from upper middle class also show an increasing trend with exception of the last cohort. The development among men is different. There is an increased participation among intermediate and working class men until the middle of the decade, followed by a decreasing tendency. The share of men from upper middle class who enters is quite stable during the period. The unemployment level reached its highest level in 1993. The difficult labour market coincides with the decreasing odds in favour of males from SES 1 that are observed from the academic year 1993/1994 (i.e. the cohort born in 1975). There is an even future decrease in odds among men from SES 1 for the cohort born in 1976. However, the trend reversed at the same time as the labour market recovered. The question, whether or not the state of the labour market influenced the inclination among underrepresented groups of students to enter higher education must be answered with both a yes and a no, 'yes' referring to men and 'no' referring to women.

Why can an effect of the weakening economy only be seen among men?

A very likely explanation is the gender divided labour market. When the market recovered, the effect could only be seen in the private sector which is the principal employer for men (SCB 2003). The supply of traditional female jobs continued to be scarce. As a result the women had to turn to higher education in order to strengthen their positions on the labour market. As Olofsson (1998) suggests, it is more likely that women were pushed out of the labour market rather than tertiary studies being an active first-hand choice. In addition, the class differences among women are perhaps not decreasing, because they have been transferred into the differentiation of more or less prestigious programmes of higher education.

The effect of the weakening economy could maybe have been even more marked among men if there had not been counteracting factors. In this study there appears to be two major restraining factors.

First, working class men's comparatively low achievement level restrains them. Their limited possession of school capital is manifested through low or no grade point average from upper secondary school, and low or no results from the SweSAT. This is likely to cause a low motivation for higher education, and also makes it difficult to compete for entrance. The gender differences in achievement can originate from the perception that men and women are different from each other (Hirdman 2003). Jakobsson (2000) found that young men tend to perceive themselves as logical and smart, while young women hold the

ideas that they lack those characteristics and must compensate this by hard work. The female students worked harder than the men, and thereby achieved higher grades. The hierarchies within the group of men also contribute to low achievement among certain men. Within the classroom, a successful masculinity is a middle class one that values the schoolwork, while an opposite masculinity with anti-school values rules outside the classroom. If a young man cannot compete within the school system he has to find another place, with other rules, where he can successfully compete (Mac an Ghaill 1994; Trondman 1995; Haywood and Mac an Ghaill 1996; Hill 1998; Archer et al. 2001; Archer and Yamashita 2003).

The second major counteracting factor is the prospect of several years with a tight private economy. It probably restrains working class men when they consider higher education and student aid. Working class men's identity is closely linked to having a job and an income (Trondman 1995; Collinson and Hearn 1996; Haywood and Mac an Ghaill 1996; Hill 1998; Tett 2000; Archer et al. 2001; Archer and Leathwood 2003; Archer and Yamashita 2003), which is probably not compatible with entering higher education, when the outcomes are uncertain. The motive for further studies is lacking for working class men, as long as they are not forced to attend studies in higher education in order to attain a high salary, and as long as there are alternative career paths (Brock-Utne 1997).

According to the differences in SweSAT, the results from the logistic regression analyses indicate that the SweSAT played an important role in reclaiming class differentiation among men at the end of the studied period. The SweSAT, was originally introduced in 1977 for those who did not have any school-leaving certificate to compete with. This option became available for all students in 1991. It could have brought about an equalisation, but this study show that men from higher classes benefit by the SweSAT through relying on repeated test taking. An explanation for this is that higher classes with their cultural and social capital have greater access to information about the test, and how repeated test taking can be used to increase their possibilities to get better results the next time (Cliffordson 2004b).

It is likely that the SweSAT reduces women's participation as well. The test rewards a quick competition, as it is given at one occasion instead of being an assessment of achievement of two or three years at upper secondary school. Moreover, it is a multiple-choice questionnaire, without open questions. Both these factors are usually seen as favouring

men (Willingham and Cole 1997), which leads to fewer women in higher education.

There are also factors that did not show any influence; such as, reduction of cohort size and an increasing number of study places. The effect of grade point average from upper secondary school, GPA19, on entrance did not decrease, which could have been expected. One likely factor explaining this is an increasing number of mature students that has strengthened the competition. In Sweden, among those who enter higher education, one third is older than 25 years (Högskoleverket 2004).

Gender and class theories have here been used to explain the behaviour among the students. The same theories can be applied to the educational system, in an analysis of how these structures work within the institutions, and in explaining the establishment of certain regulations.

When the traditional female educational paths were included in higher education in 1977, it obviously resulted in an increase of female students. This change can be seen as being parallel to the expansion of the public sector during 1960–1990. During this period the traditional female domestic work, that until then had been unpaid, got a new position as paid. But the women seldom competed with the men; a parallel female dominated labour market was created. The inclusions of the female dominated programmes within higher education resulted in a similar gender separation. A special ‘room’ was created, which is in accordance with a principle expressed as ‘add women, but don’t stir’ (Hirdman 2003, p. 182). Kivinen and his co-workers have in several articles (Kivinen and Rinne 1991, 1996, 1998a, 1998b; Kivinen and Ahola 1999; Kivinen et al. 2001) discussed the consequences of mass education for higher education and for the students. Particularly in periods of unemployment, the educational institutions get a function similar to a waiting room. The students become well educated in terms of number of years counted, but the real benefit of all these years can be doubted. Kivinen et al. do not make a gender analysis, but it does seem to be particularly applicable to the female working class students. The critique of Kivinen et al. can also be applied to women’s situation: when women cannot be lured back to the homes, they can be kept in this waiting room. Kivinen et al. also comment that there does not seem to be any reason for those already established on the labour market or in the educational hierarchy to question the situation. An additional example of the consequences of the gender and class order is when the SweSAT became accessible for everyone. Men from higher classes since then derive the greatest advantage of the SweSAT. Via this entrance

possibility they get access to future studies, a means for them to maintain their status in society. As men from higher classes make the group that have the greatest influence within institutions, and students from their own category benefit most from the test, there will be no incentives for change of this second entrance alternative.

In future research the interaction between gender, class and age; as well as, gender, class and choice of educational track, and gender, class and part time studies needs to be analysed.

This is interesting since previous studies show that it is more likely that mature women return to university college compared to a mature men (Jacobs 1999; Balke 2002; Tegner 2002). In addition, students from home backgrounds where parents only have compulsory school education, are reported to enter higher education several years later than students from families with well educated parents (Balke 2002). These results indicate that there could be a class and gender bias due to the age limits used in this study.

The interaction with choice of educational track has been left out of consideration in this study, even though large gender and class differences may be expected in this aspect. Researchers agree that students from working class, and predominately women, choose shorter programmes with more explicit vocational focus (Erikson and Jonsson 1993, 1996; Kivinen and Ahola 1999; Gustafsson et al. 2000; Kivinen et al. 2001; Tegner 2002). Besides, it is more likely that females and mature students study part time. Prestigious programs are generally fulltime studies, which means that those who for any reason prefer part time studies are excluded from that possibility (Jacobs 1999). Future research has to examine these aspects.

Conclusions

The aim of this study is to analyse if there is a change in the composition of groups of students due to class and gender in periods of recession. Young students from working class of both genders increase their share in higher education in periods of recession when employments are scarce. During the period studied here, men from working class returned to labour market at the end of the decade, while women from similar background continued to increase their involvement in higher education. Thus, for men an economic recession has a class equalising effect. However, with the present data the hypothesis could not be tested for women. The municipal sector never reverted to the status as women's

principal employer, so there is no clear answer. It is conceivable that women encounter different demands on the labour market, and that women's higher educational achievement is an adaptation to these demands. Students from higher classes, and especially men, benefit from the alternative selection instrument, the SweSAT, that offers them a second chance to enter higher education. The test contributes to maintaining the current class and gender order.

References

- Andres, L. (1998). 'Rational choice or cultural reproduction? Tracing transitions of young Canadians to higher education', *Journal of Nordic Educational Research* 18(4), 197–206.
- Archer, L. (2003). 'The 'Value' of higher education', in Ross, A. (ed.), *Higher Education and Social Class. Issues of Exclusion and Inclusion*. London: RoutledgeFalmer, pp. 119–136.
- Archer, L. and Leathwood, C. (2003). 'Identities, inequalities and higher education', in Ross, A. (ed.), *Higher Education and Social Class. Issues of Exclusion and Inclusion*. London: RoutledgeFalmer, pp. 175–191.
- Archer, L., Pratt, S.D. and Phillips, D. (2001). 'Working-class men's constructions of masculinity and negotiations of (non)participation in higher education', *Gender and Education* 13(4), 431–449.
- Archer, L. and Yamashita, H. (2003). 'Theorising inner-city masculinities: 'Race', class, gender and education', *Gender and Education* 15(2), 115–132.
- Arnot, M., David, M. and Weiner, G. (1999). *Closing the Gender Gap. Postwar Education and Social Change*. Cambridge: Polity.
- Balke, G. (2002). *Vad tycker du om dina studier? [What do You Think about Your Studies?]*. Göteborg, Sweden: Avd f omvärldsanalys, planering och uppföljning [Department of Planning and Evaluation].
- Berggren, I. (2001). *Identitet, kön och klass. Hur arbetarflickor formar sin identitet [Identity, Gender and Class. How Working Class Girls Shape Their Identity]*. Doctoral dissertation, Göteborg University.
- Bourdieu, P. (1992). *Distinction. A Social Critique of the Judgement of Taste*. London: Routledge.
- Bourdieu, P. (1997). 'The forms of capital', in Stuart Wells, A. (ed.), *Education, Culture, Economy, and Society*. Oxford: Oxford University Press, pp. 46–58.
- Bourdieu, P. and Passeron, J.C. (1990). *Reproduction in Education, Society, and Culture*. London ; Newbury Park, CA: Sage in association with Theory Culture & Society Department of Administrative and Social Studies Teesside Polytechnic.
- Brandell, L. and Lindqvist, T. (2002, 2002-05-22). 'Deltagandet i högskoleprovet 1977–2001 [Participation in National University Aptitude Test 1977–2001]'. Högskoleverket [National Agency for Higher Education]. Retrieved, from the World Wide Web: <http://www.hsv.se/sv/CollectionServlet/39/46/148/763.html>
- Broadly, D. (1990). *Sociologi och epistemologi [Sociology and Epistemology]*. Stockholm: HLS.

- Brock-Utne, B. (1997). 'Kunnskap uten makt [Knowledge without Power]', *Journal of Nordic Educational Research* 17(4), 263–279.
- Cliffordson, C. (2004a). 'Betygsinflation i de målrelaterade gymnasiebetygen [Inflation in Goal-Related Grades from Upper Secondary School]', *Pedagogisk Forskning i Sverige* 9(1), 1–14.
- Cliffordson, C. (2004b). 'Effects of practice and intellectual growth on performance on the Swedish scholastic aptitude test (SweSAT)', *European Journal of Psychological Assessment* 20(3), 192–204.
- Collinson, D. and Hearn, J. (1996). 'Men' at 'Work': Multiple masculinities/multiple workplaces', in Mac an Ghaill, M. (ed.), *Understanding Masculinities : Social Relations and Cultural Arenas*. Buckingham, Great Britain: Open University, pp. 61–76.
- Connell, R.W. (1987). *Gender and Power. Society, the Person and Sexual Politics*. Cambridge: Polity in association with Blackwell.
- Connell, R.W. (2002). *Gender*. Cambridge: Polity.
- Croxford, L. (2000). 'Gender and national curricula', in Riddell, S. (ed.), *Gender, Policy and Educational Change. Shifting agendas in the UK and Europe*. London: Routledge, pp. 115–133.
- CSN. (2003). 'Information on Swedish Study Assistance'. Centrala studiestödsnämnden. Retrieved, from the World Wide Web: <http://www.csn.se/BlanketterOchInformationsmaterial/GenerellaFiler/PDF/2130E.pdf>
- Daun, H. (1998). 'Comprehensive schooling at the intersection of market, state, and civil forces: Two Swedish case studies', in Tjeldvoll, A. (ed.), *Education and the Scandinavian Welfare State in the Year 2000. Equality, Policy, and Reform*. New York: Garland, pp. 305–334.
- Delamont, S. (2001). *Changing Women, Unchanged Men? Sociological Perspectives on Gender in a Post-Industrial Society*. Buckingham: Open University Press.
- Egerton, M. and Halsey, A.H. (1993). 'Trends by social class and gender in access to higher education in Britain', *Oxford Review of Education* 19(2), 183–196.
- Erikson, R. and Goldthorpe, J.H. (1992). *The Constant Flux. A Study of Class Mobility in Industrial Societies*. Oxford: Clarendon.
- Erikson, R. and Jonsson, J.O. (1993). *Ursprung och utbildning. Social snedrekrytering till högre studier. [Origin and Education. Social Selection to Higher Education]*. Stockholm: Fritzes.
- Erikson, R. and Jonsson, J.O. (1994). *Sorteringen i skolan [Sorting in School]*. Stockholm: Carlssons.
- Erikson, R. and Jonsson, J.O. (1996). 'The Swedish context: Educational reform and long-term change in educational inequality', in Jonsson J, O. (ed.), *Can Education Be Equalized?* Boulder, Colorado: Westview Press, pp. 65–93.
- Erikson, R. and Jonsson, J.O. (2002). 'Varför består den sociala snedrekryteringen? [Why does the Socially Uneven Recruitment Remain?]', *Pedagogisk Forskning i Sverige* 7(3), 210–217.
- Florin, C. and Johansson, U. (1992). 'Mandom, mod och mogna män [Manhood, Bravery and Mature Men]', *Kvinnovetenskaplig tidskrift* (4), 44–55.
- Gustafsson, J.-E., Andersson, A. and Hansen, M. (2000). 'Prestationer och prestationsskillnader i 1990-talets skola [Achievements and Differences in Achievements in 1990s Education]', in Palme, J. (ed.), *Välfärd och skola*. Stockholm: Fritzes, pp. 135–211.

- Härnqvist, K. (1998). 'Explaining the recruitment to post-secondary education: the case of Sweden', *Journal of Nordic Educational Research* 18(4), 207–216.
- Haywood, C. and Mac an Ghaill, M. (1996). 'Schooling masculinities', in Mac an Ghaill, M. (ed.), *Understanding Masculinities : Social Relations and Cultural Arenas*. Buckingham, Great Britain: Open University Press, pp. 50–60.
- Hill, M. (1998). *Kompetent för "det nya arbetslivet"?* [*Competent for "The New Working Life"?*]. Doctoral dissertation, Göteborg, Sweden.
- Hirdman, Y. (1988). 'Genussystemet – reflexioner kring kvinnors sociala underordning [The Gender System – Reflexions on the Social Subordination of Women]', *Kvinnovetenskaplig tidskrift* (3), 49–63.
- Hirdman, Y. (2003). *Genus – om det stabilas föränderliga former [Gender – About the Changing Shapes of Stability]*. Malmö, Sweden: Liber.
- Högskoleverket. (1998). *Kvinnor och män i högskolan [Women and Men in Higher Education]*. Stockholm: National Agency for Higher Education, Statistics Sweden.
- Högskoleverket. (2004). *Universitet & högskolor – Högskoleverkets årsrapport 2004 [Swedish Universities & University Colleges – Annual Report 2004]*. Stockholm: National Agency for Higher Education.
- Hutchings, M. (2003). 'Information, advice and cultural discourses of higher education', in Ross, A. (ed.), *Higher Education and Social Class. Issues of Exclusion and Inclusion*. London: Routledge Falmer, pp. 97–118.
- Jacobs, J.A. (1999). 'Gender and the stratification of colleges', *The Journal of Higher Education* 70(2), 161–187.
- Jakobsson, A.-K. (2000). *Motivation och inlärning ur genusperspektiv [A Gender Perspective on Motivation and Learning]*. Doctoral dissertation, Göteborg University.
- Kivinen, O. and Ahola, S. (1999). 'Higher education as human risk capital – Reflections on changing labour markets', *Higher Education* 38(2), 191–208.
- Kivinen, O., Ahola, S. and Hedman, J. (2001). 'Expanding education and improving odds? Participation in Higher Education in Finland in the 1980s and 1990s', *Acta Sociologica* 44(2), 171–181.
- Kivinen, O. and Rinne, R. (1991). 'Mapping the Field of stratification in higher education : the Finnish experience', *Higher Education* 21(4), 521–549.
- Kivinen, O. and Rinne, R. (1996). 'Higher education, mobility and inequality: the Finnish case', *European Journal of Education* 31(3), 289–310.
- Kivinen, O. and Rinne, R. (1998a). 'From the mass to the elite: Structure, limits, and the future of Scandinavian educational systems', in Tjeldvoll, A. (ed.), *Education and the Scandinavian Welfare State in the Year 2000. Equality, Policy, and Reform*. New York: Garland, pp. 335–352.
- Kivinen, O. and Rinne, R. (1998b). 'State, governmentality and education – the nordic experience', *British Journal of Sociology of Education* 19(1), 39–52.
- Ljunglöf, T. (2004). 'Livslöner 2002 [Aggregate Lifetime Salary 2002]'. Saco. Retrieved, from the World Wide Web: http://www.saco.se/upload/doc_archive/3313.pdf
- Mac an Ghaill, M. (1994). *The Making of Men. Masculinities, Sexualities and Schooling*. Buckingham: Open University Press.
- Mac an Ghaill, M. (1996). *Understanding Masculinities. Social Relations and Cultural Arenas*. Buckingham, Great Britain: Open University Press, P.223.
- Miles, J. and Shevlin, M. (2001). *Applying Regression & Correlation : A Guide for Students and Researchers*. London: Sage.

- Öhrn, E. (2002). *Könsmönster i förändring? – en kunskapsöversikt om unga i skolan [Changing Gender Patterns?]*. Stockholm: Statens skolverk.
- Olofsson, P.O. (1998). 'Unga kvinnor samhällets förlorare. [Young Women, Losers in Society]', *Dagens Nyheter*. Stockholm.
- Pahne, E. and Yngvesson, Y. (2004, 2004-03-03). 'Studenternas standard kraftigt sänkt på 15 år [The Living Standards of Students Considerably Lowered in 15 years]'. FöreningsSparbanken. Retrieved, from the World Wide Web: <http://www.foreningssparbanken.se/sst/inf/out/infOutExtern/0,3057,6921,00.html>
- Pedhazur, E.J. (1997). *Multiple Regression in Behavioral Research : Explanation and Prediction*. Fort Worth, TX ; London: Harcourt Brace.
- Pedhazur, E.J. and Schmelkin, L.P. (1991). *Measurement, Design, and Analysis: An Integrated Approach*. Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Reuterberg, S.-E. (1997). *Gender Differences on the Swedish Scholastic Aptitude Test*. Göteborg, Sweden: Department of Education and Educational Research.
- Reuterberg, S.-E. (2001). 'Hantering av bortfall i longitudinella studier: Ett exempel [Treatment of Missing Data in Longitudinal Studies: An example]', *Pedagogisk Forskning i Sverige* 6(3), 173–194.
- Reuterberg, S.-E. and Svensson, A. (1992). *Social bakgrund. Studiestöd och övergång till högre studier [Social Background. Financial Aid and Transfer to Higher Education]*. Stockholm: Allmänna förlaget.
- Reuterberg, S.-E. and Svensson, A. (1994). 'Financial aid and recruitment to higher education in Sweden: Changes between 1970 and 1990', *Studies in Higher Education* 19(1), 33–45.
- SCB. (2003, 2003-07-15). 'Sysselsättning och arbetslöshet 1975–2002 [Employment and Unemployment 1975–2002]'. Avd f arbetsmarknads- och utbildningsstatistik. Retrieved, from the World Wide Web: http://www.scb.se/statistik/AM/AM0401/_dokument/GUL2002.pdf
- SCB. (2004). *På tal om kvinnor och män [Women and Men in Sweden]*. Örebro, Sweden: Statistiska centralbyrån (Statistics Sweden).
- SFS. (1977). 'Högskoleförordningen (1977:263) [the Higher Education Ordinance 1977:263]'. Ministry of Education and Science. Retrieved, from the World Wide Web: <http://www.notisum.se/rnp/sls/fakta/a9770263.htm>
- Skeggs, B. (1997). *Formations of Class and Gender. Becoming Respectable*. London; Thousand Oaks [CA]: Sage.
- Skolverket. (2003, 2003-02-19). 'Assessment and grades'. The National Agency for Education. Retrieved, from the World Wide Web: <http://www.skolverket.se/english/system/assessment.shtml>
- Svensson, A. (1998). *Hur lyckas eleverna i den nya gymnasieskolan? [How Do Students Succeed in the New Upper Secondary School?]*. Göteborg, Sweden: Institutionen för pedagogik.
- Tegner, O. (2002). *Swedish Universities & University Colleges. Short version of annual report 2002* Stockholm: National Agency for Higher Education, p.47.
- Tett, L. (2000). 'I'm working class and proud of it – gendered experiences of non-traditional participants in higher education.' *Gender and Education* 12, 183–194.
- Trondman, M. (1995). 'Vem talar för framtidens förlorare? [Who Speaks for the Losers of the Future?]', in Lövgren, K. (ed.), *Om unga män*. Lund, Sweden: Studentlitteratur, pp. 167–192.

- Trow, M. (1974). 'Problems in the transition from elite to mass higher education', *Policies for Higher Education* (pp. 51–101). Paris: OECD.
- Utbildningsdepartementet. (2001). *Reforms in Higher Education – A More Open System. Summary of Government Bill 2001/02:15*. Stockholm: Ministry of Education and Science.
- Willingham, W.W. and Cole, N.S. (1997). *Gender and Fair Assessment*. Mahwah, N.J: L. Erlbaum Associates.

II

BROADENING RECRUITMENT TO HIGHER EDUCATION THROUGH THE ADMISSION SYSTEM – GENDER AND CLASS PERSPECTIVES

Abstract

Alternative entrance possibilities into higher education have been established in Sweden in order to facilitate the entrance of underrepresented groups of students. The question is whether or not the additional entrance possibilities have served their purpose and if so, to what extent. This is a longitudinal study using register data on one whole cohort, with the aim to follow these individuals' educational careers up to university matriculation. The analyses simultaneously consider effects of gender and class. Results show that upper middle class men are most successful in utilising every one of the additional entrance possibilities. The additional entrance possibilities have increased class bias in higher education even more, and particularly the SweSAT is an important contributor to this bias.

Key words: higher education, gender, class, time-dependent Cox regression, additional paths, alternative entry routes, non-standard educational trajectories

Introduction

In Sweden, as in other countries, students from the middle and upper middle classes form the majority of the student population in higher education. Like in most countries, admission to higher education is restricted. Students have to compete for a place of study. For a long time, grade point average from upper secondary education was used for rank-ordering applicants to higher education programs. With the main purpose of increasing the diversity of the student population, additional entrance possibilities have been established, such as an alternative selection instrument, the Swedish Scholastic Assessment

Test (SweSAT), or quota groups directed towards mature students with no or an insufficient upper secondary school leaving certificate.

The main purpose of the current study is to investigate if such alternative entrance paths to higher education have been successful in equalising entrance to higher education with respect to gender and class. Some previous studies indicate that changes in the admission system have not been successful in reaching such goals (Ayalon & Shavit, 2004; Erikson & Jonsson, 1993; Lee & Frank, 1990). Nevertheless, this study tries to make a comprehensive analysis by including a whole birth cohort, which is followed up to the age of 30, in order to find out if some or any alternative entrance possibility may have an equalising effect.

Previous research

Selection to higher education is a frequently recurring theme in sociology of education. Usually, selection due to class is focussed, while gender is rarely discussed, at least in large-scale studies. (Although there are exceptions such as Andres, 1998; Egerton & Halsey, 1993; Gayle, Berridges, & Davies, 2002; Hodges Persell, Catsambis, & Cookson Jr., 1992; and Jacobs, 1999).

In a Swedish study, Erikson and Jonsson (1993) investigated effects of the admissions system on the composition of the student population. They relied, among other things, on register data from Statistics Sweden and came to the conclusion that students from privileged families are most successful in making use of alternative paths to higher education. They found, for example, that young men from upper middle class supplement their school-leaving certificate from a vocational upper secondary school program at municipal adult education. However, this research focussed on the period up to the beginning of 1990s, and since then there have been further changes in the admission procedures.

Similar results have been obtained in the US, where Lee and Frank (1990) showed that the path via community college to four-year colleges facilitates entrance for men, for students from higher social classes, and for whites. In Israel the government implemented an alternative to the university-qualifying diploma, a plain diploma, in

order to increase equality, which was shown to be the case. However, at the same time the university-qualifying diploma got an increased importance, which caused the selection within higher education to increase, and status quo to be kept (Ayalon & Shavit, 2004). It is worth noticing, though, that this study focused on eligibility and not on matriculation. The latter also involves applying to and being accepted by the higher education institution and each of these steps adds further differences to the composition of the groups of students.

A Swedish study showed that students with a non-academic family background are about five years older when entering a higher education program than students with academic background (Balke, 2002). The same study also showed that women form the majority in the student population, and this female quantitative dominance is even more pronounced among the mature students. The same situation can be seen in UK, where a larger proportion of mature students (older than 30 years) came from intermediate and working class and a greater part were women (Egerton & Halsey, 1993).

A Swedish longitudinal study (Kim, 1998), that unfortunately did not consider class, showed gender differences in attitudes towards not being accepted into higher education. Among those who applied to higher education at a certain occasion, only 40 percent were matriculated. However, within a period of 15 years the share of matriculated applicants had risen to 90 percent. Most of those who did not matriculate at the first time repeated their application and adjusted their qualifications to the demands. Women who were rejected tended to adjust their applications to programmes with lower requirements, while men perceived they had other alternatives to academic studies. Those who aimed at higher education got a place sooner or later.

In conclusion these studies indicate that attempts to equalize access to higher education through offering alternative entrance routes have not been successful, because those who are most motivated to gain access find ways to exploit also the alternative paths to their own advantage.

Paths to higher education in Sweden

The Swedish higher education include, beside the traditional academic disciplines, colleges of advanced technology / polytechnic educations

(e.g. engineers), and nurse and teacher training colleges. As has already been mentioned, admission to higher education is restricted and often there are more applicants than places of study. In addition to the eligibility, the students have to compete either by grade point average from upper secondary school (or equivalents), GPA, or results from the Swedish Scholastic Assessment Test, SweSAT. Below the major paths to higher education that existed for those who were born in 1974, which is the cohort investigated in the empirical study.

The upper secondary school, and particularly the “theoretical” three-year programmes provided eligibility for higher education, while the two-year vocational programs generally did not, without adding courses. The two-year programmes attracted pupils from working class, the majority boys, while the longer programmes attracted students from middle class and a majority of girls (Erikson & Jonsson, 1993; SCB, 1995). The major reason for the gender difference was the Higher Education Ordinance of 1977 (SFS, 1977), that among other things entailed an incorporation of the trainings viewed as female, such as nurse and teacher into higher education (HSV, 2004). In contrast, young men could get a traditional male training within upper secondary school and for instance become building worker, electrician, or a car mechanic.

The SweSAT was introduced in 1977 for those who did not have a school-leaving certificate from upper secondary school, but had reached the age of 25 and had work experience. However, since 1991 everyone can take the test, and there is no restriction on how many times the test can be taken. In admissions recent research shows that the SweSAT favours men from upper middle class (Cliffordson & Askling, in press). One reason for this is that those men who take the test score higher than the women. Moreover, students from higher classes tend to take the test more times and they usually improve their results. As only the best result is counted, this is done without any risk taking (Cliffordson, 2004; Gustafsson *et al.*, 2000; HSV, 1996; Reuterberg, 1997).

Work experience is yet another factor that can increase chances of getting access to higher education. Work experience of five years

increases the SweSAT merit points by 0.5 on a scale that ranges from 0.0-2.0 (UFB, 1992).

Another alternative route to higher education is via studies at municipal adult education. Those who have turned 20 can for example pursue studies equivalent to upper secondary school, and obtain eligibility. Originally, this option also had the purpose of giving those with incomplete or insufficient grades a second chance, like the SweSAT.

This study will analyse how the alternative paths to higher education influence the odds of matriculation for men and women in different classes.

The effect of the alternative paths might be different depending on age; therefore time of matriculation will be of particular interest.

Method

The empirical basis of the study is a database formed primarily from register data from Statistics Sweden. The registers are linked together at the individual level. All persons who were born in 1974, and who lived in Sweden at the age of 16 are included. These person's actions in relation to the educational system can be studied for more than a decade; that is, from the beginning of the 1990s until the early 2004.

Time for matriculation

The dependent variable is the year when the student has entered higher education for the first time (i. e. being matriculated). It is possible to enter higher education both autumn and spring terms, but the spring offering of programs and courses is substantially smaller. Autumn and spring matriculations were merged into matriculations during the academic year in order to remove the seasonal variation. Whether or not the student has continued the course or program or has changed his or her mind soon after matriculation is left out of consideration. In the analysis, the "event variable" is dichotomous: has the student been matriculated in higher education or not.

Class and Gender

The class variable is based on a Swedish socio-economic status index, SES, which closely corresponds to the EGP class scheme (Breen, 2004; Erikson & Goldthorpe, 1992; Erikson & Jonsson, 1993). A categorisation into three classes is used, based on the occupational status of the parents of the students. The occupational status is defined according to: 1) income from employment or self-employment, 2) the expected education corresponding to the held position, 3) trade union association, 4a) for working class, whether the position involves production of goods or services, 4b) for higher classes, whether it is a management function or not. The information is obtained from the census of 1990; additional information is also collected from the 1985 census. Upper middle class, SES 1 includes higher-grade professionals, administrators, officials, and self-employed with academic degree. Intermediate, SES 2, consists of middle and lower middle class, self-employed without academic degree and farmers. Working class, SES 3 is lower-grade technicians, skilled and unskilled workers. The group of indeterminable, SES 0, is a heterogeneous group, to a large proportion composed by immigrants.

Table 1. SES/class and gender distribution

	Men				Women			
	SES 1	SES 2	SES 3	SES 0	SES 1	SES 2	SES 3	SES 0
%	20.7	48.0	28.9	2.5	20.9	48.4	28.4	2.3
N	11 956	27 777	16 705	1 432	11 534	26 657	15 630	1 257

The entire cohort born in 1974 consists of 112 948 individuals, of which 51% are men (N=57 870), and 49% women (N=55 078). The small group of indeterminable, SES 0, will be included in all analyses, but results will not be displayed in tables or figures in order to simplify the presentation.

Choice of educational track in upper secondary school

In the early 1990s there were two types of tracks in upper secondary school: the vocational two-year programmes, and three-year programmes preparatory for further studies. Three alternatives are considered in the analyses: has not taken part in any upper secondary school studies; has studied a two-year programme; or has studied a three-year programme.

Grade point average from upper secondary school

The curriculum for this cohort prescribed a norm-referenced grading system that consisted of marks from 1 to 5, where 5 was the highest. A GPA is available for 94 096 individuals, that is those who have completed upper secondary school, which means that the share of missing is almost 17% in this variable.

The Swedish Scholastic Assessment Test, numbers of tests taken

This test is administrated twice a year, during spring and autumn. On a yearly basis, the number of tests taken can be either 0, 1 or 2. The test may be taken as many times as wished; therefore, the frequencies for each year have been added together into a cumulative variable in order to reflect the recurrent efforts to gain access. 43% (N=48 462) of the individuals have taken the test, and usually they take it once (N=18 924).

The Swedish Scholastic Assessment Test, the best result

As mentioned before, the test can be taken several times, it is valid for five years, and only the best result is counted. The range of the result is from 0.0-2.0. There is missing data for almost 57% of the cohort in this variable; therefore, it is only useful in the descriptive statistics.

Municipal adult education

Municipal adult education offers studies on different levels. It is not possible to distinguish the different levels in the database; however, almost 98% of those enrolled in municipal adult education have studied on a level equivalent to upper secondary school. The variable is constructed in the same way as the variable “number of SweSATs taken”. It has three values: not taking part in any municipal adult education, studying one term, or two terms each academic year. The information from each academic year is added into a cumulative variable. 56% (N=63 035) have never studied in municipal adult education. Among those who have been enrolled, two terms is the most common duration (N=13 653).

Work experience

Work experience of five years can improve qualifications, in such a way that 0.5 points is added to the SweSAT score. The variable is dichotomous: either the student has work experience or not. 1 747 students have taken advantage of this, most of them in the age group, 27-28 years. It is reasonable that the effect is seen in the older age group.

Analytical techniques

Descriptive statistics will first be presented for each variable; thereafter, Cox regression with time dependent covariates is used to analyse the influence of several variables or covariates that vary over time. Cox regression is a tool within survival analysis that can handle several independent variables in the same model, in the same way as ordinary logistic regression analysis does. (For a comparison between logistic and Cox regression, see Parmar and Machin, 1995: 12-13). In these analyses time interacts with most of the independent variables. In other words, the effect of those variables that explain the time of entry is different during different time periods (all the independent variables except SES, gender, educational track in upper secondary school, and GPA vary over time). This means that a special version of Cox regression must be adopted, the so-called time dependent Cox regression (Parmar & Machin, 1995).

The categorical variables are treated in three different ways. First, SES is coded as dummy variables; SES 3 is always the reference group, or the baseline (Pedhazur & Schmelkin, 1991). Second, gender is treated through conducting different analyses for men and women. These analyses are displayed in the same figures, but should be interpreted carefully keeping in mind that direct comparison between men and women are not possible. Men from SES 1 and men from SES 2 can only be compared with men from SES 3, and the same comparisons are applicable within the group of women. The advantage gained by dividing the classes by gender is that gender differences within only one of the classes become visible. Finally, the categorical variables like yearly information on numbers of SweSAT taken, or numbers of terms enrolled at municipal adult education, have been added together into cumulative variables and are treated as if they were continuous.

The coefficients (odds ratios) that are the result of the analyses describe a difference between two groups. For example, in the academic year 1994/95, 2 396 of 8 429 women from SES 1 compared to 798 out of 14 196 women from SES 3 were matriculated. To obtain the odds ratio, the SES 1 proportion is divided by the SES 3 proportion: $0.284/0.056=5.07$. This means that the odds are five times higher that a woman from SES 1 becomes matriculated compared to a woman from SES 3. The same numbers can also be interpreted as saying that among women from SES 1 the likelihood to become matriculated is 407% higher than among women from SES 3.

The figures present the difference between SES 1 and SES 3, and between SES 2 and SES 3. These estimates represent the total effect of class on matriculation.

The other independent variables or covariates are not shown in the figures. However, when independent variables are added to the Cox regression the estimates associated with SES change, to the extent that the independent variables explain the relation between SES and matriculation. To determine the effect of an independent variable, the odds of the total effect thus are compared with the odds when a factor is under control. For example, for men in the academic year of 1998/99, the total effect of SES 1 in relation to SES 3 is 2.62. When work experience is held under control, the odds in favour of men in SES 1 decrease to 2.43. The odds have reduced to 93% of the total effect, or a reduction of 7% (Aneshensel, 2002).

The odds are calculated for the entire population, in order to demonstrate the total selection effect into higher education, and not only the more restricted selection that takes place from the preceding educational level; that is, from upper secondary school to higher education. Through the matriculation the population becomes more and more negatively selected after each year.

Results

The two following figures, one for men and one for women, show the probability of entering higher education, or to be matriculated. Most of the students entered at the age of 19-20, that is, they transferred directly to higher education from a completed course programme preparatory for further studies (N=13 966 were matriculated 1993/94).

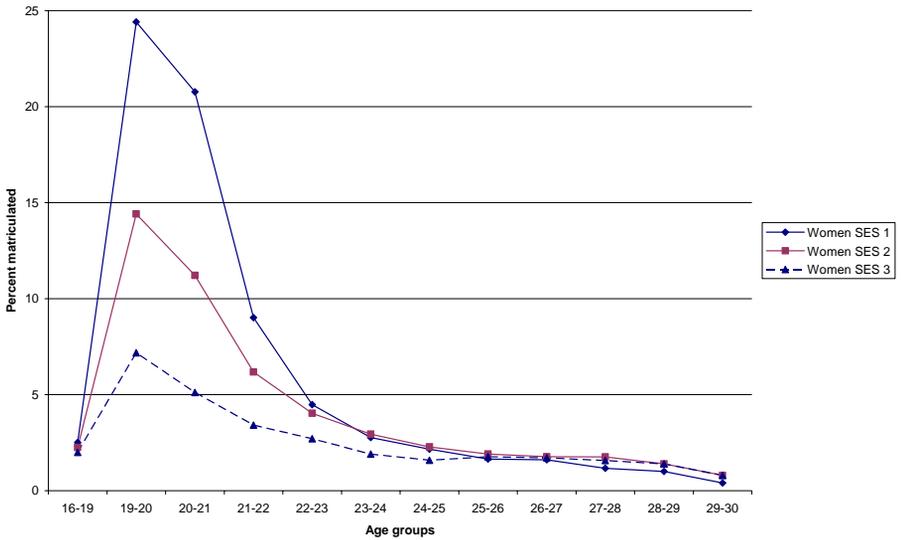


Figure 1. Women entering higher education. Proportion in each SES/class.

Table 2. Entering higher education. Numbers by age of entry, by SES/class and gender

Age	16-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	Not begun Abs Nos	Tot entered %
SES 1 W	289	2 816	2 396	1 039	517	321	249	190	186	135	111	50	3 235	72
SES 1 M	145	2 517	2 061	1 288	649	353	202	199	124	127	77	48	4 166	65
SES 2 W	600	3 841	2 990	1 647	1 074	784	609	510	473	471	381	206	13 071	51
SES 2 M	200	2 870	2 235	1 550	997	755	568	394	386	318	227	113	17 164	38
SES 3 W	312	1 122	798	535	423	297	249	277	269	247	223	130	10 748	31
SES 3 M	70	674	541	432	331	226	225	174	178	163	119	69	13 503	19

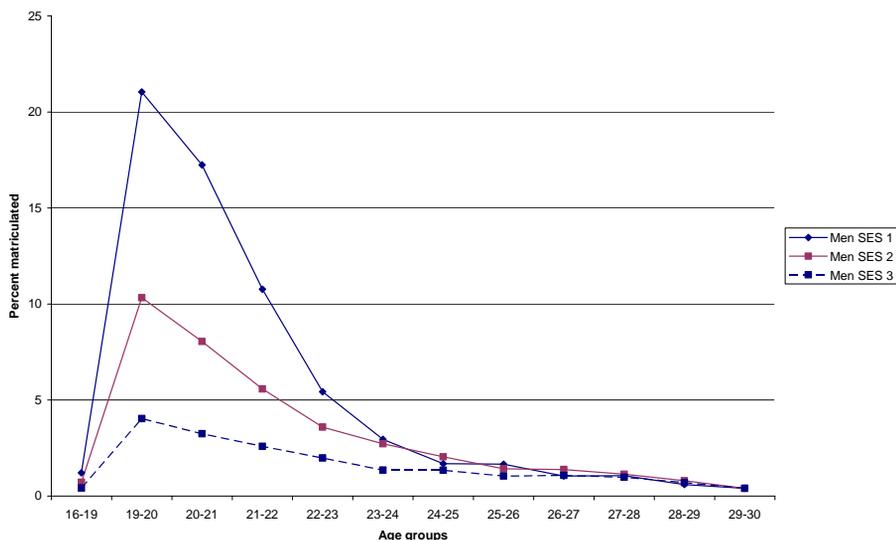


Figure 2. Men entering higher education. Proportion in each SES/class.

The absolute numbers of students matriculating during the whole period studied, the academic years 1990-2004, can be seen in Table 2. During this period 44% (N=49 065) of the cohort was matriculated, and of these a majority were women (55%). The gender imbalance was most pronounced among the youngest beginners, at the age of 19 and below, of which 74% were women. Most likely this is the effect of the female dominated programs that were accessible via some of the two years upper secondary school programmes. The intermediate class was the largest and the most well represented in higher education in all age groups.

Students from upper middle class matriculate early, while students from working class matriculate later. These results correspond well with British conditions where almost 90% of the students from higher classes are estimated to have entered at the age of 20 (Gilchrist *et al.*, 2003). The number of presumptive students in upper middle class thus gradually decreased during the years and not many were left to aspire for future studies towards the end of the time period. According to Ayalon and Shavit (2004) and Kim (1998) the higher classes must

reach a certain level of saturation before new groups of students can gain access. This level seems to be very high.

Mature students are often described as women with non-academic traditions or with working class background (Balke, 2002; Egerton & Halsey, 1993; Reay, 2002). This might lead to the mistaken expectation that the majority of mature students are working class; however, upper middle class students also enter higher education at mature age, as do, of course, the students from the intermediate class, since they form the largest group.

In order to find out the reasons for the group differences, different independent variables were entered into a time-dependent Cox regression analysis. The total effect of class is displayed in Figure 3 for men and women separately.

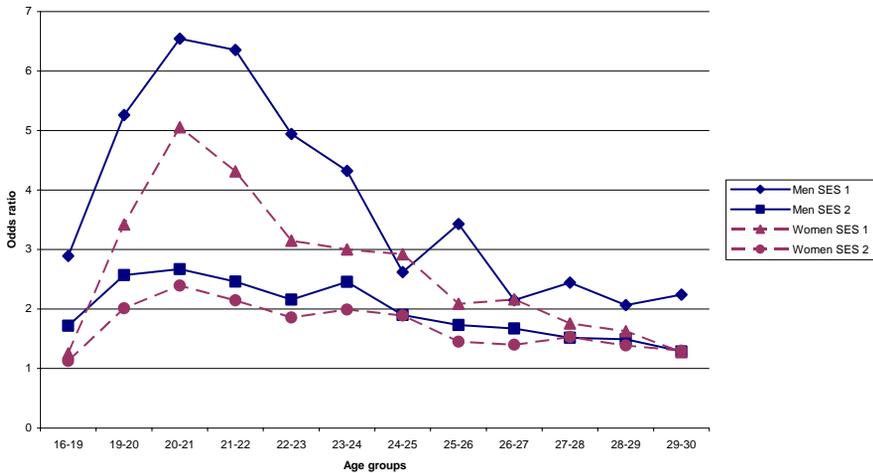


Figure 3. Entering higher education. Total effects of SES/class by gender. Odds in relation to men and women SES 3 respectively.

The class differences were larger among men than among women. The differences could be most clearly seen in the early years, before 25. In the years 20-22, the odds were about 6.5 times higher for men from upper middle class compared to men from working class. There were comparatively few men from working class who entered higher education at young age. After age 25, the group differences declined

to about two times. The curve seems to be somewhat shaky at the end of the period, especially for men. A possible explanation is the decreasing numbers available for computation in the last age groups. Small changes in numbers turn into large changes in odds. At the age of 30, 65% of the young men from upper middle class had entered higher education, and 72% of the young women. As mentioned previously, students from upper middle class who intended to enter higher education had already fulfilled those plans.

Before entering higher education, the student must possess adequate qualifications. In these analyses, it is not further examined in which of the quota groups, the student finally was admitted (on the basis of GPA or SweSAT, with or without work experience).

Table 3. Percentages and numbers of the cohort completing upper secondary school.

Year completing	1991	1992	1993	1994	1995-	not completed
%		27	47	8	1	17
N	94	30 760	53 043	8 677	1 589	18 785

At a normal rate of study in compulsory and upper secondary school, a two-year upper secondary school programme was by the 1974 birth cohort completed in 1992, and a three-year programme was completed in 1993. As can be seen from Table 3, approximately 50% of the cohort graduated from three-year programmes in upper secondary school. The 17% who had not completed upper secondary school were unequally distributed over the groups. Table 4 below shows the group differences in participation in upper secondary school, and in choice of educational track.

Table 4. Percentages in upper secondary school, percentages in programs preparatory for further education, and the mean GPA, by SES/class and gender.

	Men			Women		
	SES 1	SES 2	SES 3	SES 1	SES 2	SES 3
% in up sec sch	91	86	76	90	86	76
% prep further educ	73	50	32	77	61	42
Mean GPA	3.40	3.15	2.98	3.58	3.33	3.15

Almost 25% of the working class students left upper secondary school without completing it, or entered labour market directly after the

compulsory nine years of comprehensive school. Students from working class also were less likely, compared to the other groups, to choose programmes preparatory for further studies. The mean differences in GPA imply that students from upper middle class, and especially the women, had an advantage in the competition for a place of study in higher education.

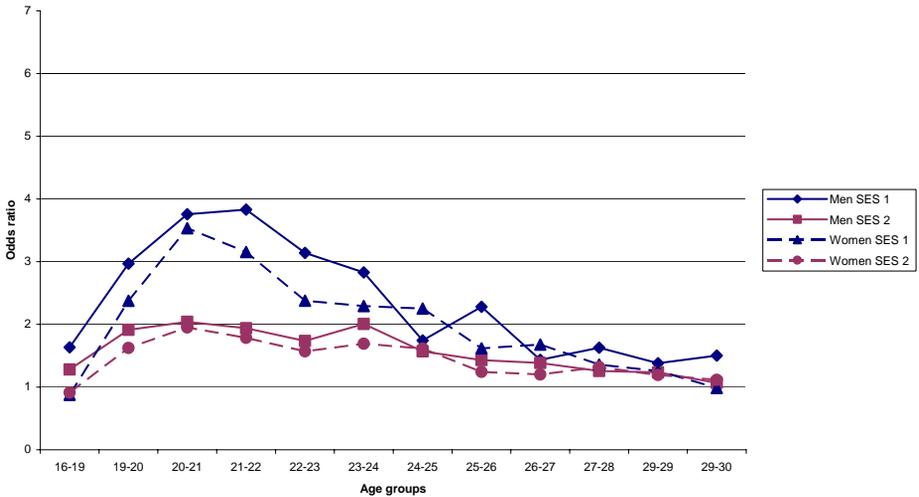


Figure 4. Direct effects of SES/class by gender, and controlling for educational track up sec school. Odds in relation to men and women SES 3 respectively.

Figure 4 shows the direct effects of class when controlling for educational track in upper secondary school. The class differences can to a large extent be explained by the fact that students from higher classes had chosen programmes that were preparatory for further studies. The reduction in odds was most noticeable at early ages, but the factor exerted influence during the whole period. The effect was strongest for men, at an early age. The odds in favour of men from upper middle class decreased by more than 40% compared to the total effect. Among women the reduction was at most 30%.

Academic achievement, measured as GPA from upper secondary school, showed similar effects. When the population was restricted to include upper secondary school students only, the decrease in odds among men in upper middle class was at most 36% in the age group 19-20 years. After that the effect from GPA declined quickly. The

corresponding decrease among women in upper middle class was 38%. The effect of GPA declined somewhat more rapidly among men than among women.

To sum up, early educational choices drive in a certain direction that seems to be difficult to deviate from. Those who have a degree from a vocational track and want to change trajectory are demanded a greater effort, since it probably involves supplementary studies. The role of GPA loses its significance over time; those who have a high GPA matriculate early, and they can successfully compete for a place in higher education programmes.

The other selection instrument is the SweSAT. The frequency of test use was high for upper middle class and low for working class, and it was particularly low for men in working class. The largest selection was in the decision whether or not to take the test. However, there also were differences in numbers of test taken, and the test results showed that upper middle class students, and particularly the men, had great advantage of the test score increase associated with repeated test taking.

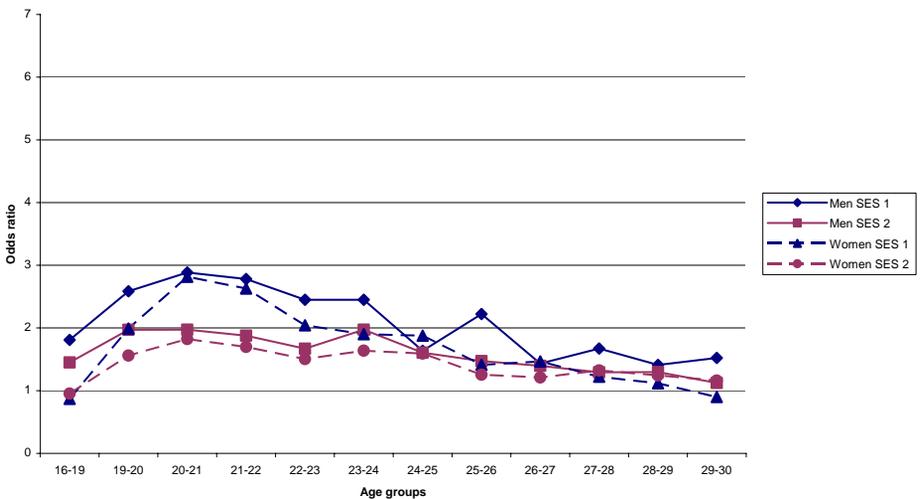


Figure 5. Direct effects of SES/class by gender, and controlling for numbers of SweSAT. Odds in relation to men and women SES 3 respectively.

The number of SweSATs taken was the only variable that was held under control in the analysis (see Figure 5), so the model computed what SES effect would have been observed if all individuals had taken the test an equal number of times. The reduction in odds is independent of the results on the test.

The decreased class differences were even more evident when SweSAT was held under control than when educational track was controlled for. This variable accounted for 56% of the total odds ratio between men from upper middle class and working class in ages 20-22. The corresponding reduction in odds among women from upper middle class was about 40%. The SweSAT kept its relevance until the last age group, where the reduction in odds was 32% for men from upper middle class. The effect on the comparison between students belonging to the intermediate class compared to the working class was smaller. Nevertheless, the reduction was certainly not negligible. The reduction in odds for men and women from the intermediate class was about 10-25%; the highest reduction was among men in the young age groups.

To sum up, the decision whether or not to take the test, depended very much on class. Men from upper middle class benefited most from this test, followed by women from the same class. The upper middle class youth seem to have high expectations to obtain an academic degree. Also those within this group, who were not academically successful in upper secondary school, are able to gain entrance by taking the test. The class differentiation caused by the SweSAT was observed during the whole period.

Municipal adult education can also improve the possibilities of being accepted and matriculated in higher education. Here students can supplement their upper secondary school education, particularly to gain eligibility for a broader range of higher education programmes.

Table 6. Percentages participating in municipal adult education, and mean years studied, by SES/class and gender

	Men			Women		
	SES 1	SES 2	SES 3	SES 1	SES 2	SES 3
%	34	37	36	44	53	57
Mean years	2.7	2.8	2.9	3.0	3.2	3.5

As can be seen in Table 6, the largest difference in the frequency of use of municipal adult education was observed between women and men. A larger share of women participated in municipal adult education, particularly working class women. The women also tended to stay on longer. When a Cox regression was performed with the number of semesters in municipal adult education as a covariate it was, somewhat surprisingly, among men from upper middle class that the odds were reduced most. The reduction in odds was slightly more than 10% after age 22. For upper middle class women there was a slight reduction in odds of about 5% at age 22-24. In the last age group, municipal adult education was not associated with any increase in entrance rate; the effect rather seemed to be negative. To interpret the results it must be taken into consideration that the variable represents all levels of education; adult comprehensive education, upper secondary adult education and supplementary education (SFS, 2004). Furthermore both theoretical and vocationally oriented courses are offered. However, the registers do not distinguish between the different types of courses, so it is not possible to find out with certainty what the students have studied. It can only be assumed that students from different classes take part in studies with different aims. It seems as if men from upper middle class were most successful in using municipal adult education with the view of increasing their entrance prospects. Working class students probably got a vocational training, maybe in order to accommodate to a changing labour market. The influence from municipal adult education is not displayed in a figure, since the differences compared to Figure 3 were very small and difficult to discern visually.

Yet another possibility to increase competitiveness is by taking advantage of work experience. A period of five years of work experience qualifies for an increase of the SweSAT score by 0.5 points on the 0.0-2.0 scale.

Table 7. Percentages and numbers referring to work experience, by SES/class and gender.

	Men			Women		
	SES 1	SES 2	SES 3	SES 1	SES 2	SES 3
%	2.0	1.9	1.5	2.4	3.2	2.7
N	236	538	254	279	852	418

As expected, an effect of work experience on matriculation did not emerge before the age group 23-24, and the highest reduction in odds, almost 20%, was seen among men in upper middle class in the age group 25-26. Among women in upper middle class the reduction was about 10% during the last five years. Comparing the odds between the intermediate and working class students, there was a small reduction of 5% among men, and the corresponding reduction among women was about 7%. Obviously, the working class students were not favoured by this option either. Probably, the explanation is that additional merit points obtained from work experience can only be used in connection with the SweSAT. However, working class students tend not to take the test, so they cannot take advantage of the additional merit points to the same extent as the upper middle class students do.

To sum up, the paths that were meant to make it easier for underrepresented groups of students to enter higher education seem not to have served their purpose. The two options, improving marks via adult education or improving competitiveness via work experience, or both, has been successfully utilised by men from upper middle class. It is also interesting to note that the reduction in odds coincides quite well with the time point when the option could be taken advantage of by the students.

Conclusions and Discussion

The main result of the empirical study is that every single one of the alternative entrance routes facilitates the entrance into higher education for the upper middle class youth and particularly so for the men. These findings are in agreement with previous studies, where the alternative paths are also seen as most beneficial for the already privileged (Erikson & Jonsson, 1993; Lee & Frank, 1990). In addition to earlier findings, this study has made distinctions between men and women in different social classes, showing that there are interactions between gender and class.

Moreover, special attention has been paid to the time of entrance, since the idea of the “second chance” suggests a delayed entrance. The

study further analyses when this second chance is used and by which group of students. There is, on the one hand, a general understanding that those students who were not successful in school at an early age must be given a second chance, and that those who want to change occupational trajectory at a mature age should be given that opportunity. On the other hand, it is known that resourceful students are those who can make best use of the alternative paths. Below, these paths will be discussed, and related to previous results from both large- and small-scale studies.

The SweSAT appears to make the greatest contribution to sustain the imbalance between classes within the student population, primarily because of the repeated test taking. It is known that those who take the SweSAT more than once are likely to increase their scores each time they accomplish the test (Cliffordson, 2004). However, this knowledge does not seem to be equally spread among the students. It is the upper middle class students that make the most of this opportunity. Within this class it is the men that are most successful. There are several explanations for this. One is that the groups of men and women who take the test are not comparable (Mäkitalo, 1994). The high achieving female students can enter higher education directly, and low achieving men do not want to enter (Archer & Yamashita, 2003; Mac an Ghaill, 1994; Trondman, 1995); therefore, there is no need for these groups to take the test. In addition, this type of test tends to favour men (Reuterberg, 1997; Willingham & Cole, 1997).

In one way the SweSAT lives up to the expectations; the test really improves the chances for the mature students, since there is a considerable effect during the whole period studied. Students from older cohorts take advantage of the test, and can successfully compete with students from the following cohorts. However, the fact remains that the use of this path is not equally distributed over the student categories.

Besides the SweSAT, municipal adult education is used as an alternative entrance route. The use of municipal adult education to a large extent corresponds to the use of the community college in the US (Lee & Frank, 1990). A majority of the students at municipal adult

education are women and they come from intermediate or working class, and yet, those who make use of this alternative are mostly men from upper middle class followed by their female counterparts. Lee and Frank (1990) argue that it is those who had a favourable starting position before community college, that also manage to transfer to four-year college. In this study, completion of a theoretical program in upper secondary school can be considered as the favourable starting position. A large share of students from upper middle class has this educational background, together with about 55% of the students from the intermediate group. This background makes it relatively easy to supplement a few subjects in order to become eligible for entry. In other words, a larger reduction in odds among students from intermediate class and particularly women could be expected. An explanation for the absence of this effect might be found in the structure of the educational system, which influences men and women from the same class differently. When higher education expanded, the government primarily increased study places within technology and natural sciences. At the same time as the number of study places increased, the competition for these places decreased. Today, there are fields within engineering with no competition at all (SCB, 2003; Svensson, 2004). Technology and natural sciences have for a long period of time attracted men from upper middle class. Thus, there might not be any great need for higher grades within this student category, but rather a need to complement the school-leaving certificate with one or a few subjects. One reason why students from higher classes are successful in using alternative paths is that they have access to essential information about the educational system and can make astute choices (Archer *et al.*, 2003; Bourdieu, 1997; Kivinen *et al.*, 2001; Kivinen & Rinne, 1996). They can for example, strategically choose a short and “easier” program in upper secondary school with the aim to get good results. Afterwards, they supplement the missing subjects at municipal adult education (Erikson & Jonsson, 1993).

The nonexistent or small effect of municipal adult education for women may be due to the fact that women, particularly from upper middle class, have higher grades and can enter directly. Among women from intermediate and working class, not so many intend to enter higher education, for different reasons (Archer, 2000). The

studies at municipal adult education might aim at a specialised vocational training, as is possible to do in community college too.

Work experience is an additional qualification that could improve the entrance chances for those persons who have begun the vocational trajectory. However, since work experience only can be counted if the person has taken the SweSAT, and the test itself favours upper middle class men, the equalising effect that could have been obtained from work experience does not occur.

The results show that in all classes, women are more likely to enter compared to men. One explanation is the organisation of the educational system that includes occupational trainings which recruit a majority of women in higher education. Women become more or less forced to continue studying in order to get an employment with decent working conditions and a safe income, despite the poor repayment of academic studies for most women (Ljunglöf, 2004; SCB, 2004). Another explanation is the decrease of female employment within the municipal sector (e.g. health and care) that is likely to have increased the demand for studies at higher education among women (Berggren, in press). The labour market offers alternatives for men (Brock-Utne, 1997). There are still jobs for working class men, which is likely to reduce their motives for most kinds of further studies. For men from upper middle class, the delayed entrance might not only be caused by extended studies in order to gain more credentials, it can also be due to a relatively positive labour market where they can work until they feel motivated for continued studies. The gender divided conditions within the educational system and the labour market makes it necessary to do gender divided analyses.

Students from different classes have different access to resources or forms of capital. This structure intersects with gender and age. The effects from municipal adult education and work experience are both much smaller compared to the effect of the SweSAT. An explanation is that those students from upper middle class who are inclined to enter have already done so. There is unequal access to knowledge about the positive effects of the repeated test taking, and the smart choices in upper secondary school. Furthermore, if the parents cannot pass on this kind of information, the school and the teachers cannot be

relied upon to compensate for this. Hutchings (2003) argued that those groups of students who are not perceived as potential higher education students do not get as much information as others from the school staff.

Resources in the form of wealth have not been discussed but are nevertheless important. Since no pure income variable was available, the class origin has to be a proxy, with the assumption that students from higher classes can be backed up by their parents economically and thereby make prolonged studies feasible (Archer, 2000; Bourdieu, 1997). There are no tuition fees in Sweden; however, being dependent on student loan for quite a long time is likely to restrain potential applicants from lower classes (Archer *et al.*; 2001, Reay, 2003).

The attempts to increase diversity and equalisation of the student population via amendments of the admittance system have not reached the stated goals and partly they have been counterproductive. Erikson and Jonsson (2002) suggest actions in preschool and compulsory school, in order to facilitate cognitive, social and emotional development for all children. On the other hand, they do not believe that the government is willing to invest the necessary resources.

References

- Andres, L. (1998) Rational choice or cultural reproduction? Tracing transitions of young Canadians to higher education. *Journal of Nordic Educational Research*, 18(4), 197-206.
- Aneshensel, C.S. (2002) *Theory-based data analysis for the social sciences* (Thousand Oaks, Calif: Pine Forge).
- Archer, L. (2000) 'Bettering yourself? Discourses of risk, cost and benefit in ethnically diverse, young working-class non-participants' constructions of higher education. *British Journal of Sociology of Education*, 21(4), 555-574.
- Archer, L., Hutchings, M. & Ross, A. (2003) *Higher education and social class. Issues of exclusion and inclusion* (London: RoutledgeFalmer).
- Archer, L., Pratt, S.D. & Phillips, D. (2001) Working-class men's constructions of masculinity and negotiations of

- (non)participation in higher education. *Gender and Education*, 13(4), 431-449.
- Archer, L. & Yamashita, H. (2003) Theorising inner-city masculinities: 'race', class, gender and education. *Gender and Education*, 15(2), 115-132.
- Ayalon, H. & Shavit, Y. (2004) Educational reforms and inequalities in Israel: The MMI hypothesis revisited. *Sociology of Education*, 77(2), 103-120.
- Balke, G. (2002) Olika bakgrund - olika uppfattning? [Different background - different opinion?] (Göteborg, Sweden, Avd f omvärldsanalys, planering och uppföljning [Dep of Planning and Evaluation]).
- Berggren, C. (in press) Labour market influence on recruitment to higher education - gender and class perspectives. *Higher Education*.
- Bourdieu, P. (1997) The forms of capital, in A.H. Halsey, H. Lauder, P. Brown & A. Stuart Wells (Eds.) *Education. Culture, economy, and society* (Oxford: Oxford University Press), 46-58.
- Breen, R. (Ed.) (2004) *Social Mobility in Europe* (Oxford: Oxford University Press).
- Brock-Utne, B. (1997) Kunnskap uten makt [Knowledge without power]. *Journal of Nordic Educational Research*, 17(4), 263-279.
- Cliffordson, C. (2004) Effects of practice and intellectual growth on performance on the Swedish scholastic aptitude test (SweSAT). *European Journal of Psychological Assessment*, 20(3), 192-204.
- Cliffordson, C. & Askling, B. (in press) Effects of different grounds for admission on recruitment and achievement in medical education. *Scandinavian Journal of Educational Research*.
- Egerton, M. & Halsey, A.H. (1993) Trends by social class and gender in access to higher education in Britain. *Oxford Review of Education*, 19(2), 183-196.
- Erikson, R. & Goldthorpe, J.H. (1992) *The constant flux. A study of class mobility in industrial societies* (Oxford, Clarendon).
- Erikson, R. & Jonsson, J.O. (1993) *Ursprung och utbildning. Social snedrekrytering till högre studier. [Origin and education. Social selection to higher education]* (Stockholm, Fritzes).

- Erikson, R. & Jonsson, J.O. (2002) Varför består den sociala snedrekryteringen? [Why does the socially uneven recruitment remain?] *Pedagogisk Forskning i Sverige*, 7(3), 210-217.
- Gayle, V., Berridges, D. & Davies, R. (2002) Young people's entry into higher education: quantifying influential factors. *Oxford Review of Education*, 28(1), 5-20.
- Gilchrist, R., Phillips, D. & Ross, A. (2003) Participation and potential participation in UK higher education, in L. Archer, M. Hutchings & A. Ross (Eds.) *Higher education and social class. Issues of exclusion and inclusion* (London: RoutledgeFalmer), 75-95.
- Gustafsson, J.-E., Andersson, A. & Hansen, M. (2000) Prestationer och prestationsskillnader i 1990-talets skola [Achievements and differences in achievements in 1990s education], in J. Palme (Ed.) *Välfärd och skola* (Stockholm: Fritzes), 135-211.
- Hodges Persell, C., Catsambis, S. & Cookson Jr., P.W. (1992) Differential asset conversion: class and gendered pathways to selective colleges. *Sociology of Education*, 65(3), 208-225.
- HSV (1996) *Högskoleprovet genom elva forskares ögon [The SweSAT through the eyes of eleven researches]* (Stockholm, National Agency for Higher Education).
- HSV (2004) *Universitet & högskolor - Högskoleverkets årsrapport 2004 [Swedish universities & university colleges - annual report 2004]* (Stockholm, National Agency for Higher Education).
- Hutchings, M. (2003) Information, advice and cultural discourses of higher education, in L. Archer, M. Hutchings & A. Ross (Eds.) *Higher education and social class. Issues of exclusion and inclusion* (London: RoutledgeFalmer) 97-118.
- Jacobs, J.A. (1999) Gender and the stratification of colleges. *The Journal of Higher Education*, 70(2), 161-187.
- Kim, L. (1998) Val och urval till högre utbildning [Choice and selection in higher education] *Department of Education* (Uppsala, Sweden, Uppsala University).
- Kivinen, O., Ahola, S. & Hedman, J. (2001) Expanding education and improving odds? Participation in higher education in Finland in the 1980s and 1990s. *Acta Sociologica*, 44(2), 171-181.

- Kivinen, O. & Rinne, R. (1996) Higher education, mobility and inequality: the Finnish case. *European Journal of Education*, 31(3), 289-310.
- Lee, V.E. & Frank, K.A. (1990) Students' characteristics that facilitate the transfer from two-year to four-year colleges. *Sociology of Education*, 63(3), 178-193.
- Ljunglöf, T. (2004) *Livslöner 2002 [Aggregate lifetime salary 2002]* (Stockholm, Saco). Available online at: www.saco.se/upload/doc_archive/3313.pdf (accessed 20 December 2005).
- Mac an Ghaill, M. (1994) *The making of men. Masculinities, sexualities and schooling* (Buckingham, Open University Press).
- Mäkitalo, Å. (1994) Non-comparability of female and male admission test takers (Göteborg, Sweden: Department of Education and Educational Research).
- Parmar, M.K.B. & Machin, D. (1995) *Survival analysis. A practical approach* (Chichester, John Wiley & Sons).
- Pedhazur, E.J. & Schmelkin, L.P. (1991) *Measurement, design, and analysis: an integrated approach* (Hillsdale, N.J, Lawrence Erlbaum Associates).
- Reay, D. (2002) Class, authenticity and the transition to higher education for mature students. *Sociological Review*, 50(3), 398-418.
- Reay, D. (2003) A risky business? Mature working-class women students and access to higher education. *Gender and Education*, 15(3), 301-317.
- Reuterberg, S.-E. (1997) Gender differences on the Swedish scholastic aptitude test (Göteborg, Sweden: Department of Education and Educational Research).
- SCB (1995) *Utbildningsstatistisk årsbok [Yearbook of educational statistics]* (Stockholm: SCB [Statistics Sweden]).
- SCB (2003) Universitet och högskolor. Grundutbildning: Sökande och antagna till universitet och högskolor höstterminen 2003 [Higher education. Undergraduate education: applicants and admitted to higher education for the autumn term 2003] (Örebro, Sweden: Statistics Sweden). Available online at: www.scb.se/templates/tableOrChart____51279.asp (accessed 20 December 2005).

- SCB (2004) Löneskillnader mellan män och kvinnor i Sverige [Pay differentials between women and men in Sweden] (Stockholm: Avd för arbetsmarknads- och utbildningsstatistik).
- SFS (1977) Högskoleförordningen (1977:263) [The higher education ordinance 1977:263] Ministry of Education and Science. Available online at: www.notisum.se/rnp/sls/lag/19770263.htm (accessed 20 December 2005).
- SFS (2004) Education Act (1985:1100) Swedish statute book. Ministry of Education and Science. Available online at: www.sweden.gov.se/content/1/c6/02/15/38/1532b277.pdf (accessed 20 December 2005).
- Svensson, A. (2004) Antagningen till civilingenjörsutbildningarna [Admission to civil engineer education](Göteborg, Sweden: Department of Education).
- Trondman, M. (1995) Vem talar för framtidens förlorare? [Who speaks for the losers of the future?], in G. Bolin & K. Lövgren (Eds.) *Om unga män* (Lund, Sweden: Studentlitteratur), 167-192.
- UFB (1992) *Utbildningsväsendets författningsböcker 1992/93. Del 3. Högskolans utbildning och forskning* (Stockholm, Fritzes).
- Willingham, W.W. & Cole, N.S. (1997) *Gender and Fair Assessment* (Mahwah, N.J, L. Erlbaum Associates).

III

HORIZONTAL AND VERTICAL DIFFERENTIATION WITHIN HIGHER EDUCATION – GENDER AND CLASS PERSPECTIVES.

Abstract

Swedish women have made inroads into all kinds of higher education programmes, and this also applies to the prestigious and previously male dominated programmes. The matriculation into higher education of one full birth cohort is studied during the period 1990-2004. The effects of the factors gender, class, grades and the Swedish scholastic assessment test are analyzed.

Introduction

Class differentiation in higher education has been a frequently studied topic within sociology of education for a long period of time. The question is: does the social selection with reference to entrance decrease, increase, or does it remain the same, possibly assuming other forms? However, it is difficult to draw any certain conclusions from the available studies and to answer the question by a clear “yes” or “no”. The main reason for this is that higher education has undergone major changes associated with its large expansion within the industrial countries (e.g. Halsey, 1993). For example, the distinction that was previously associated with university studies now has changed into a distinction of study programmes within the large “umbrella” of higher education. Studies from Sweden as well as from several other countries show that the already privileged groups of students was more likely to choose long and prestigious programmes, such as Law and Medicine, and to study at universities with old traditions (Andres Bellamy & Guppy, 1991; Ayalon & Yogev, 2005; Davies & Guppy, 1997; Gustafsson, Andersson, & Hansen, 2000; Kivinen & Ahola, 1999; Kivinen, Ahola, & Hedman, 2001; Kivinen & Rinne, 1991).

“Privileged” is usually associated with being raised in a well-educated family, which is likely to have a degree of affluence as well, but it does also point at the male gender. Despite women having increased their participation in higher education in all types of sectors, men are still

somewhat more likely to be found within the most prestigious fields (Andres Bellamy & Guppy, 1991; Arnot, David, & Weiner, 1999; Gustafsson et al., 2000; Jacobs, 1995; Persell Hodges, Catsambis, & Cookson Jr., 1992; SOU, 2004), and particularly within natural sciences and technology (Ayalon, 2003; Davies & Guppy, 1997; Jacobs, 1999).

In large scale studies, the focus is usually either on class or on gender differentiation, which means that a general conclusion is made either about class differences or about gender differences. However, the conclusions and interpretations might not be valid when the large, aggregated groups are divided along both these lines of categorization. This paper deals with both the gender and the class structures and how they intersect. The question is whether or not there are gender differences within the classes concerning participation in prestigious study programmes. The prestigious programmes are divided into fields, which implies that the analyses consider both the vertical and the horizontal differentiation. The paper also includes a discussion about the definition of prestigious programmes. A commonly used definition of prestigious education is based on the level of economic return after graduation (e.g. Davies & Guppy, 1997; Erikson & Jonsson, 1993, 1996b); however, this definition implies a gender bias.

Higher education - between previous school experiences and the labour market

Educational background

To get a place of study in higher education in Sweden, and particularly a place at an attractive programme, the student has to be eligible and be able to compete for the place. The requirements for eligibility depend on the field of study. Several of the attractive programmes pose additional qualification requirements in mathematics and natural science. Moreover, there are more applicants than places of study available at the attractive programmes, which leads to a selection of the applicants with respect to grades obtained in upper secondary school and/or scores on the Swedish Scholastic Assessment Test (SweSAT).

When looking at group differences in grades, statistics are usually divided either according to class or to gender. The general conclusion from various studies is that young women in every class achieve, on the average, higher grades than their male counterparts (Arnot et al., 1999; Gustafsson et al., 2000; Skolverket, 2004). The conventional wisdom that the class

difference in educational achievement is larger than the gender difference (Delamont, 2001; Öhrn, 2002) might soon have to be revised. In the Nordic countries there are indications that women in the class just below achieved as well as men in the class just above (Berggren, in press, b; Björnsson, 2005; Svensson, 1998). A different picture emerged when looking at the outcome of the SweSAT, where men from upper middle class achieved the highest scores. An explanation is the self-selection, in that only a limited subset of each age group takes the test (Mäkitalo, 1994). Few men from working class take the test, and the highest achieving young women from upper middle class do not need to take the test, because they may enter due to their high grade point averages from upper secondary school (Cliffordson, 2004; HSV, 1996; Reuterberg, 1997, 1998).

The structure of the educational system has a great influence in the sense that it forms the framework that defines what is available to choose from. Higher Education is an umbrella term that beside the traditional academic disciplines also includes post upper-secondary educations such as advanced technology (e.g. engineers) and nurse and teacher training. This means that educations primarily chosen by women, both the prestigious and the ordinary alternatives, are offered within higher education. For men, education for a profession is offered within higher education, while the “traditional” male trainings such as building worker, car mechanic or electrician are offered within upper secondary school.

In Sweden, as in other Western countries, it is the students from the privileged families that have made the educational choices that lead to a place at the most prestigious programmes within the universities. The class difference within these selected tracks does not seem to be declining (Andres Bellamy & Guppy, 1991; Ayalon & Shavit, 2004; Ayalon & Yogev, 2005; Broady & Gustafsson, 2000). On the other hand, recent studies show that the gender difference has declined. It is the young women who have increased their participation in previously male dominated fields. They have increased their level of performance for example in mathematics and science (Arnot et al., 1999; Svensson, 1998; Öhrn, 2002), and can enter prestigious study programmes at the university. However, they are reluctant to choose a prestigious programme that is gender atypical. Despite good grades in mathematics, that path tends to be avoided (Ayalon, 2003; SOU, 2004).

Gender and class affiliation also influence the perception of what are suitable educational alternatives (Archer, 2003; Reay, Davies, David, & Ball, 2001). The feeling of being in the right place, or in the wrong place, is likely to have a strong influence on the choice. It is known that working class students need, on the average, higher grades to make the transition to a higher educational level, compared to students from upper middle class (Erikson & Jonsson, 1993, 1996a). Maybe the working class students need high grades to be convinced that they are capable. For females, there probably are obstacles against choosing a “traditional” male educational track where a clear majority of the students are men, where the teachers are men, and where the content and teaching methods have been developed by men. For men, choosing a “traditional” female track entails a loss in power, prestige and status (Croxford, 1994; SOU, 2004).

The Labour Market

In a Swedish survey (Andersson, Fürth, & Holmberg, 1997) young men and women stated that education and work was important, while leisure time and flexible working hours was not seen as important. Work was supposed to be interesting and independent, and a positive working climate and nice colleagues to co-operate with was demanded by both genders. Only a small gender difference in favour of men could be seen in the valuation of a high salary and in the wish to become a manager. Whether this is an indication that women do not value these parts in working life as much as men, or if it is an adaptation to reality was not analysed further. On a general level, the Swedish results do not seem to deviate much from the views that for example the Scottish youth hold (Tinklin, Croxford, Ducklin, & Frame, 2005), with the possible exception of the demand for flexible hours to be able to combine family and career. Both young men and women in the Scottish study were aware of the gender segregated labour market and the difficulties that go with a non-traditional occupational choice.

The liberal and broad-minded attitudes about career that young people seem to hold, unfortunately do not appear to have much influence on the labour market. The labour market in Sweden has a reputation of being highly gender segregated. This is partly caused by the fact that traditional female care and house work is organised as paid labour on the market, compared to countries where it is organised as non-paid work within the family (SOU, 2004).

Gender segregation can be described in three ways. One is the horizontal gender segregation which implies that men and women have different occupations, work within different sectors, have different employers and different places of work. The second is the vertical gender segregation, which is about the gendered career making where men are more likely to reach the highest positions. The third, finally, is the internal gender segregation which implies that men and women who hold the same occupation, and work at the same place, are steered toward different types of tasks or have chosen different specialities (SOU, 2004). Corresponding forms of gender segregation is likely to be found within the educational sector.

In Sweden, men have mainly been employed within the private sector and women within the public sector. During the 1990s there was a recession, and both men and women were exposed to unemployment. At the end of the decade the private sector had almost fully recovered, but employment within the public sector still was on a comparatively low level (SCB, 2003). It is likely that women turned to education in order to adapt to a changing labour market or to obtain a profession less exposed to labour market changes (Berggren, in press, a). This is an example of how the horizontal gender segregation contributes to a higher inclination among women to study at higher education. Turning to the vertical segregation, women are more or less directed to higher education in order to get an employment with decent working conditions, and a safe income. If they want to make a career as well, they are directed towards the prestigious programmes, since it is much more difficult, and in some sectors impossible to improve the working situation without it (SOU, 2004). The internal gender segregation is also present within higher education. The majority of the students in the medical programme are women; however, when choosing specialist competence the field is segregated so that men dominate surgery and women geriatrics. The speciality that is male dominated also provides the highest economic reward (Spjut, 2006). There is also an accumulation of men within the most prestigious and well-paid sectors within Law and Engineering (Abrahamsson, 2002; SOU, 2004). This internal gender division probably exists in other countries too; it is for example reported in Israel (Ayalon, 2003).

Prestige and Attractiveness

In Sweden the different universities are not as clearly ranked according to prestige, as is the case in many other countries (Davies & Hammack, 2005). The universities offer many different kinds of programmes, both prestigious and not so prestigious. On the other hand, some of the recently established university colleges only can award the bachelors degree. In Sweden universities and university colleges are state financed, even though a few are privately held or are set up as foundations. There are no tuition fees. The admittance system is centralised, so the same regulations hold for the whole country.

In previous research, there have been several ways of defining prestige or status of different educational choices. Economic returns on the labour market (Ayalon & Shavit, 2004; Davies & Guppy, 1997; Erikson & Jonsson, 1996b) is a frequently used measure. However, the returns on the labour market, are different for men and women (Ljunglöf, 2004; SCB, 2004). The highest positions in society (such as member of boards in large companies) are almost not accessible for women, which might influence their expectations and thereby their educational choices (Andersson et al., 1997; Mickelson, 2003; SOU, 2004). Other indicators of attractiveness are scores on matriculation diploma (Ayalon & Shavit, 2004) or average SAT scores among those admitted (Davies & Guppy, 1997; Persell Hodges et al., 1992).

There are some contradictions between the use of indicators based on economic returns and academic qualifications, such as admission points. Some programmes are very attractive in the sense that very high points for admission are required. Some examples are speech pathology and therapy, dietetics, and physiotherapy which primarily attract women (SCB, 2003). However, graduates from these programmes are offered comparatively low economic returns on the labour market. There does not seem to be much of a discussion regarding the opposing outcomes of the used measures.

In this study, a constructed attractiveness index was used. It is based on grade point averages from compulsory school. (The index will be described in greater detail in the method section.)

Aim of the study

The overall aim is to study whether or not the expansion of higher education has resulted in an increased equalisation within the student population with reference to matriculation in various fields of higher education study programmes. The study will focus on horizontal and vertical gender and class segregation; analyse the influence of the two major entrance paths, via upper secondary school or via the SweSAT, on differentiation; and finally, to discuss the concepts of prestige and attractiveness.

Method

The empirical basis of the study was a database formed primarily from register data from Statistics Sweden. The registers were linked together at the individual level. All persons who were born in 1974, and who lived in Sweden at the age of 16 were included. These person's actions in relation to the educational system could be studied for more than a decade; that is, from the beginning of the 1990s until the early 2004.

Variables

Attractive study programmes

For this study it is of great interest to define and measure degrees of attractiveness of study programmes. However, relying on academic ability as measured by GPA or SweSAT scores is difficult in Sweden, since there are several admission quota groups (e. g., for admission on the basis of GPA from upper secondary school, or on the basis of the SweSAT) which leads to multiple cut-off points for the same programme. Instead an attractiveness index has been constructed which is based on the grade point average from compulsory school, obtained at the age of 16, and which is available for almost all individuals born in the period 1972-1984 (about 4% of the individuals miss the GPA value). A mean for each programme was calculated from the individual GPA of those students who were admitted for the first time. This "programme-mean" was based on admissions during the period 1993-2002 in order to make it less exposed to momentary variations. Those programmes with the highest mean GPA were defined as attractive; they form 20% of all programmes in higher education. Comparing the attractiveness variable with two other frequently used variables: the proportion of parents with tertiary education, and the

proportion of parents from upper middle class (SES 1), the correlation with both of them was 0.66, (Pearsons r) (Berggren manuscript).

Fields

A division into fields was made from an aggregation of programmes with similar orientation. Four major clusters were distinguished: 1) Humanities and social sciences which also include law, business and psychology; 2) Natural sciences which for example include mathematics, biology, and pharmacy; 3) Technology also including architecture; and 4) medicine and odontology, which also include veterinary. There was also a cluster of “Other” including for example journalism, agriculture, art, music and speech pathology and therapy. Since the “Other” group was very heterogeneous, it will only be included in the descriptive statistics and not analysed further.

Gender and Class

The class variable is based on a Swedish socio-economic status index, SES, which closely corresponds to the EGP class scheme (Breen, 2004; Erikson & Goldthorpe, 1992; Erikson & Jonsson, 1993). A categorisation into three classes is used, based on the occupational status of the parents of the students. The occupational status is defined according to: 1) income from employment or self-employment, 2) the expected education corresponding to the held position, 3) trade union association, 4a) for working class, whether the position involves production of goods or services, 4b) for higher classes, whether it is a management function or not. The information is obtained from the census of 1990; additional information is also collected from the 1985 census. Upper middle class, SES 1, includes higher-grade professionals, administrators, officials, and self-employed with academic degree. Intermediate, SES 2, consists of middle and lower middle class, self-employed without academic degree and farmers. Working class, SES 3 is lower-grade technicians, skilled and unskilled workers. The group of indeterminable, SES 0, is a heterogeneous group, to a large proportion composed by immigrants.

Class or SES, it treated as a categorical variable and is coded as a dummy variable, SES 3 being chosen as the reference group (Pedhazur & Schmelkin, 1991).

The entire cohort born in 1974 consists of 112 948 individuals, of which 51% are men (N=57 870), and 49% women (N=55 078).

Grade point average

Information about GPA from upper secondary school was not available for 18 852 students. This means that almost 17% of the total population has not completed upper secondary education. The drop out is not random; it is highly dependent on class. Almost 25% of the individuals from working class do not have any upper secondary school leaving certificate, while for those from upper middle class the corresponding share is 10%.

The Swedish Scholastic Assessment Test, numbers of tests taken

This test is administrated twice a year, during spring and autumn. It is optional to take the test. The variable shows how many times the test is taken, not the results on the test. It is assumed to reflect the motivation for entering higher education. The reason for not using the scores on the test is that only a subset of the individuals has taken the test; that is 43% (N=48 462).

Analytical techniques

In addition to the usual descriptive statistics, binary logistic regression is applied (Miles & Shevlin, 2001; Pedhazur, 1997). In a binary logistic regression, the dependent variable can only assume two of each other exclusive values. For example: matriculated in higher education on an attractive programme, or not. Only the first matriculation was counted. Whether or not the student has continued the study programme or has changed his or her mind soon after matriculation was left out of consideration. It is possible to enter higher education both autumn and spring terms, but the offering of programmes at spring is substantially reduced. Autumn and spring matriculations were merged into matriculations during the academic year in order to remove the seasonal variation.

The odds ratios of matriculating for the different groups are computed using logistic regression. For the SES variable, the odds ratio are computed in relation to the SES 3 group. If the ratio is 1, there is no difference between the classes in rate of matriculation. In some analyses men and women are treated separately; that is, men from one class are compared with men from other classes, and women from one class are

compared with women from other classes. The comparison between men and women must be done with caution, since there are two different analyses.

With logistic regression analysis it is possible to separate direct or total effects from indirect effects. When one independent variable (e.g. SES) is included in the analysis the coefficient represents the total effect of this variable. When a second independent variable is added to the analysis (e.g. GPA) the SES coefficient expresses the direct effect of class, when GPA is held constant (as if the GPA was the same for all individuals).

To measure the effect of a factor, the odds of the total effect are compared with the odds when a factor is under control. For example, looking at women entering attractive programmes, the total effect of SES 1 in relation to SES 3 was 7.34. This means that the odds for a woman belonging to SES 1 to enter an attractive programme was more than 7 times higher compared to a woman in SES 3. When GPA is held under control, the odds in favour of women in SES 1 have decreased to 3.71. The odds ratio have reduced to $3.71/7.34=0.51$, 51% of the total effect, or a reduction by 49% (Aneshensel, 2002).

No tests of significance are done, since all analyses are performed on a complete cohort.

Results

Table 1 shows the distribution of the population. The first column shows the total population. In the second column the selection into higher education can be seen. Finally, in the third column, the numbers in each group and the percentages of the total population who have entered any of the attractive programmes are shown.

TABLE 1
Distribution in numbers, and percentages of the total population.

	Distribution total population		Matriculation any course or programme		Matriculation attractive programmes	
	N	%	N	%	N	%
SES 1 W	11 534	10.2	8 299	7.3	2 201	1.9
SES 1 M	11 956	10.6	7 793	6.9	3 118	2.8
SES 2 W	26 657	23.6	13 587	12.0	1 978	1.8
SES 2 M	27 777	24.6	10 613	9.4	2 760	2.4
SES 3 W	15 630	13.8	4 882	4.3	435	0.4
SES 3 M	16 705	14.8	3 202	2.8	593	0.5
SES 0 W	1 257	1.1	361	0.3	71	0.0
SES 0 M	1 432	1.3	332	0.3	99	0.0
Total	112 948	100.0	49 069	43.4	11 255	10.0

Almost half of the population is assigned to the intermediate class (SES 2); this group also forms the largest group in higher education. However, when looking at attractive programmes only, there is an equal number of students from the upper middle and the intermediate classes, despite the smaller upper middle class population. Although more women than men enter higher education, more men enter attractive programmes. In this cohort, 11 255 students have entered an attractive programme and among them 6 570 (58%) were men. It is interesting to see that in all classes the female predominance in higher education generally is reduced to a minority when studying the attractive programmes only. One explanation is of course the definition of an attractive programme. Many men choose Master of Engineering. This programme has many places of study, and accounts for almost 50 % of those defined as attractive.

These differences that deal both with the horizontal and the vertical differentiation were analysed in two steps; first, the vertical differentiation was analysed. A comparison was made between the attractive programmes and all the other alternatives; that is, programmes not defined as attractive, single subject courses, and part time courses. Each analysis was made separately for men and women, and these groups were then further divided into classes. After that, attention was given to the attractive programs only. In order to statistically explain some of the differences according to both the vertical and the horizontal differentiation, grade point average from

upper secondary school and numbers of SweSAT taken were held under control logistic regression analyses.

In Table 2, the distribution of the group differences in upper secondary school completion and in the variables GPA and SweSAT can be seen.

TABLE 2
Distribution of GPA and SweSAT

	Men			Women		
	SES 1	SES 2	SES 3	SES 1	SES 2	SES 3
% complete up sec school	91	86	75	90	86	76
Mean GPA	3.40	3.15	2.98	3.58	3.33	3.15
% taken the SweSAT	64	39	20	67	50	32
Mean result SweSAT	1.2	1.0	0.9	1.0	0.9	0.7
Mean no of SweSAT taken	2.6	2.2	2.0	2.4	2.2	1.9

There is a clear and expected differentiation due to class with respect to previous school achievement, and women have a higher achievement level. The largest class difference is in the decision whether or not to take the SweSAT. Confirming previous studies (Reuterberg, 1997; Willingham & Cole, 1997), men are more successful than women in this type of test.

In the following analyses, the population is restricted to those who have completed upper secondary school and have a GPA that can be used, that is 94 096 individuals of the total 112 948.

In the initial analysis, vertical segregation was defined to have only two levels: either entering an attractive programme, or entering one of other alternatives. Table 3 shows results from several steps in the analyses were independent variables were added one by one in the binary logistic regression analyses. Model 1 shows the total effect of class origin, model 2 shows the class differentiation that was left when GPA was under control. Finally, in model 3 the numbers of SweSATs taken was added.

TABLE 3

Odds ratios. Entering Higher Education on attractive programmes vs other programmes and course

Dependent Independent	Model 1		Model 2		Model 3	
	Attractive M	Other W	Attractive M	Other W	Attractive M	Other W
SES I	8.03	2.89	4.76	2.51	2.68	1.52
SES II	2.62	1.91	2.13	1.81	1.66	1.51
GPA			9.36	1.43	10.92	1.24
Nos SweSAT			10.28		14.17	1.61
					1.59	1.62

The class differentiation for matriculating into attractive programmes was very high. The odds were 8 times higher that a man from upper middle class would enter an attractive study programme compared to a man from working class. The differences within the group of women also were high, there being a more than 7 times higher odds for a woman belonging to upper middle class compared to a woman from working class. There also were some class differences when studying the odds for entering other study programmes and single subject courses, but they were comparably low.

When previous school achievement, the GPA, was added in model 2, the differentiation decreased considerably. The reduction in odds was largest among women, for both upper middle class, and intermediate class in relation to working class women, and this was true for both the attractive and the other programs. This indicates that class background becomes less important when women from working class achieve well.

In model 3, the number of SweSATs have been added. SweSAT is supposed to increase the chances for the underrepresented groups of students to enter higher education; however, the outcome was the opposite. The SweSAT contributed to increased class differentiation in all types of higher education studies, and most strongly among men.

The further analyses were restricted to the attractive programmes only. Table 4 shows the distribution of the groups of students over the different fields of study.

TABLE 4

Fields within attractive programmes
Distribution in numbers, and percentages within gender and class.

	Men			Women		
	SES 1	SES2	SES 3	SES1	SES 2	SES 3
Humanities and social sciences	702 22.5%	509 18.4%	108 18.2%	859 39.0%	779 39.4%	175 40.2%
Natural sciences	236 7.6%	209 7.6%	53 8.9%	321 14.6%	336 17.0%	85 19.5%
Technology	1851 59.4%	1828 66.2%	398 67.1%	602 27.4%	560 28.3%	111 25.5%
Medicine and odontology	213 6.8%	107 3.9%	24 4.0%	259 11.8%	148 7.5%	36 8.3%
Other attractive programmes	116 3.7%	107 3.9%	10 1.7%	160 7.3%	155 7.8%	28 6.4%
Total	3118 100%	2760 100%	593 100%	2201 100%	1978 100%	435 100%

As can be seen from Table 4 there were more men than women within Technology that consists of different specialisations within Master of Engineering. However, there were a large number of women within this field too, since the engineering programmes numerically dominate the places of study. Compared to men, the distribution over different fields was more balanced within the group of women. There was a majority of women within natural sciences. Men and women take up about equal numbers of places of study on an attractive mathematical science programme, but biology, geology and pharmacy are also included in this field which contributes to the predominance of women.

The entry into the four major fields was analysed by binary logistic regression. Women and men were analysed separately. The dependent variable was entering a certain field or not, and mean GPA and numbers of SweSAT were added one by one in the two last steps (Model 2 and Model 3). The results are presented in Tables 5 and 6.

TABLE 5

Odds ratios women. Entering an attractive programme within a certain field. Simple and extended models

Dependent Independent	Humanities			Natural sciences			Technology			Medicine		
	1	2	3	1	2	3	1	2	3	1	2	3
SES I	6.25	2.83	2.04	4.65	2.65	1.76	6.75	3.21	2.29	9.57	3.20	1.85
SES II	2.38	1.71	1.47	2.15	1.71	1.41	2.77	2.05	1.74	2.42	1.53	1.18
GPA		7.92	9.09		3.73	4.14		6.34	7.20		15.58	25.06
Nos SweSAT			1.37			1.43			1.37			1.66

TABLE 6

Odds ratios men. Entering an attractive programme within a certain field. Simple and extended models

Dependent Independent	Humanities			Natural sciences			Technology			Medicine		
	1	2	3	1	2	3	1	2	3	1	2	3
SES I	7.84	4.12	2.28	5.41	3.28	2.00	6.24	3.30	2.30	10.95	3.79	1.67
SES II	2.43	1.91	1.46	2.16	1.80	1.46	2.53	2.00	1.72	2.43	1.64	1.08
GPA		4.77	5.12		3.13	3.11		6.72	6.86		11.73	16.78
Nos SweSAT			1.47			1.37			1.30			1.64

There were substantial class differences in rate of matriculation, especially within the field of medicine. Generally the class difference was more pronounced among men than women; however there was an opposite tendency within technology.

The number of SweSATs taken has previously been shown to further increase the gender and class differences. The results clearly show that it was upper middle class youth and particularly men who make use of the SweSAT to enter attractive programmes. The variables GPA and SweSAT explain more than 80% of the class difference within the medical field, which is because of the very high degree of competition for a place of study. It is only possible for those with the highest GPA and highest SweSAT scores to enter medical studies. The SweSAT was particularly favourable for upper middle class men, since this factor reduced the odds by 56% (within Medicine). A large reduction in odds among men from upper middle class was also apparent within the field of humanities. Probably they need the SweSAT scores to become competitive to enrol in law studies or international business programme.

Discussion

There have been several extensive changes within higher education with the purpose of reducing the class differentiation within the groups of students. Though it is difficult to make any clear comment on the broad question of whether or not an equalisation has taken place, a general conclusion in this study is that the class differences seem to be quite stable. That is also the conclusion from a previous study by Erikson and Jonsson's (1996a) covering the period up to 1990. This study showed an increased class equalisation until 1970, but since then it has remained fairly unchanged.

Leaving the big picture, there are major differences between groups of higher education students. The class differentiation into attractive programmes is high and is maintained and has even increased by the additional entrance path provided by the SweSAT. The study alternatives that are not so attractive, also are more likely to recruit students from higher classes than lower. It is probably an alternative for those students from higher classes who have not been sufficiently educationally successful to enter the prestigious fields. Several researchers (Arnot et al.,

1999; Ayalon & Shavit, 2004; Kivinen et al., 2001; Lucay & Reay, 2002) have described the naturalness of continued studies among students from higher classes.

Studying the gender differences, it is clear that women have made large inroads into higher education. Women have since the 1960s in Sweden (Öhrn, 2000) and somewhat later in the UK (Arnot et al., 1999), increased their educational achievement level and are now most competitive. Women have not only increased their share within the attractive programmes but also in those programmes previously dominated by men. With the exception of the field of Technology, the attractive fields can not be perceived as being male dominated any more. Some explanations for this change are that women are now economically independent and support themselves. Within higher classes women are pushed by their families, just like upper middle class men were before, to achieve an academic degree in order to reproduce the status of their family (Arnot et al., 1999; Lucay & Reay, 2002). Moreover, there are structural circumstances that put pressure on young women to achieve higher educational achievement levels compared to their male counterparts. The organisation of the educational system pushes women to study for an academic degree. Since the end of the 1970s previous college trainings that were in particular demand by women, such as nurse and education, were incorporated into higher education. This meant that fewer educational programmes leading directly into an occupation were left for women at lower levels of education.

Women also are pushed by the labour market to obtain an academic degree. Due to its horizontal gender segregation, the labour market has different standards for men and women. The public sector that is women's principal employer have standardised requirements that generally means that an academic degree is needed in order to be employed within health care, social work or education. Men, on the other hand, are more likely to be employed privately, where the demands are not as formal.

Looking at the intersection of gender and class, women from all classes have increased their enrolment in higher education. The availability of "traditional" working class male educations within upper secondary school makes men from lower classes less anxious to enter higher education. However, a somewhat larger proportion of men in every class enter an attractive programme compared to their female counterparts. This is to a

large extent explained by the Master of Engineering programme that is defined as attractive, has many places of study and has hitherto been male dominated. Within the field of technology, the class differentiation is larger among women than among men. In the other fields it is exactly the opposite. An explanation could be that to be able to enter such a male dominated field, women are dependent on all kinds of support from their family and friends. It is likely that women from upper middle class possess several kinds of capital, both economic and symbolic which compensate for their defective gender (Moi, 1991). The smaller class differentiation among men might be due to the fact that engineering aims at a clear and distinct profession that corresponds to the requests among the intermediate and working class. They become something “real” after a degree in engineering (Hill, 1998).

In previous studies, men and students from higher classes have been reported to form the majority within prestigious programmes. In this study, prestige has been defined as educational attractiveness and has also been divided into fields. The result shows that the picture is not one-sided. The definition of attractiveness, or prestige obviously determines the outcome. When economic outcomes are used, it is less likely that women’s choices will be judged as being the most profitable, since what is performed by men is usually associated with a higher value (Abrahamsson, 2002; Bourdieu, 2001). The two structuring principles of gender and class intersect. The result of this organisation is that the choices that men from higher classes make, are likely to be defined as the most prestigious (Acker, 1990). It can be difficult for women to enter prestigious male dominated fields. There are several ways of preventing women from making a gender atypical choice, from persuasion to the threat of sexual harassment (Abrahamsson & Gunnarsson, 2002; Bourdieu, 2001; SOU, 2004). Many women are aware of the gender and class division and do not choose educational alternatives from which they are locked out anyway (Ayalon, 2003; Bourdieu, 2001). In the case when a previously male dominated field becomes female dominated, the value of it diminishes. One example, is the field of academia, were the grants have been cut down after women’s increased participation in higher education (Andres Bellamy & Guppy, 1991). Other standards for success within the labour market may take over, when men’s success within education decreases (Abrahamsson, 2002; Kivinen & Ahola, 1999; Lahelma, 2005).

This study has dealt with the differentiation within undergraduate education. However, post graduate education has also increased and 45% of those awarded a PhD in Sweden are women (HSV, 2005). It is likely that there is class and gender differentiation according to level of higher education studies too.

Summary

There is a differentiation according to gender and class when students matriculate in higher education. 72% of the women from upper middle class have entered higher education at the age of 30. The corresponding share among their male counterparts is 65%. Among women from working class, 31% have entered higher education, and among men from working class the share is 19%. This differentiation that is to the advantage of women and students from upper middle class is then changed when studying the attractive programmes only. Of those women from upper middle class who have entered higher education, 27% enters an attractive programme; the share is 40% among the men from upper middle class. Similar differences can be seen in the other classes; for example, 9% of the women from working class who have entered higher education have entered an attractive programme, while the share is much larger among their male counterparts, it is 19%.

The differentiation into attractive programmes can to a large extent be explained by the higher grade point average that women from upper middle class achieve. In addition, there is an effect from the SweSAT that favours students from higher classes and men in particular.

References

- Abrahamsson, K. (Ed.). (2002). *Utbildning, kompetens och arbete [Education, competence and work]*. Lund, Sweden: Studentlitteratur.
- Abrahamsson, L. (2002). Just när det blev viktigt blev det manligt [When it became important, it became masculine]. *Kvinnovetenskaplig tidskrift*(1), 37-52.
- Abrahamsson, L., & Gunnarsson, E. (2002). Arbetsorganisation, kompetens och kön. In K. Abrahamsson (Ed.), *Utbildning,*

- kompetens och arbete [Education, competence and work]* (pp. 225-254). Lund, Sweden: Studentlitteratur.
- Acker, J. (1990). Hierarchies, jobs, bodies: A theory of gendered organizations. *Gender and Society*, 4(2), 139-158.
- Andersson, Å. E., Fürth, T., & Holmberg, I. (1997). *70-talister. Om värderingar förr, nu och i framtiden [1970 ties. Values before, now, and in the future]* (2 ed.). Stockholm: Natur och kultur.
- Andres Bellamy, L., & Guppy, N. (1991). Opportunities and obstacles for women in Canadian higher education. In J. S. Gaskell & A. T. McLaren (Eds.), *Women and education* (2 ed., pp. 163-192). Calgary: Detselig Enterprises.
- Aneshensel, C. S. (2002). *Theory-based data analysis for the social sciences*. Thousand Oaks, Calif: Pine Forge.
- Archer, L. (2003). Social class and higher education. In L. Archer, M. Hutchings & A. Ross (Eds.), *Higher education and social class. Issues of exclusion and inclusion* (pp. 5-20). London: RoutledgeFalmer.
- Arnot, M., David, M., & Weiner, G. (1999). *Closing the gender gap. Postwar education and social change*. Cambridge: Polity.
- Ayalon, H. (2003). Women and men go to university: Mathematical background and gender differences in choice of field in higher education. *Sex Roles*, 48(5/6), 277-290.
- Ayalon, H., & Shavit, Y. (2004). Educational reforms and inequalities in Israel: The MMI hypothesis revisited. *Sociology of Education*, 77(2), 103-120.
- Ayalon, H., & Yogev, A. (2005). Field of study and students' stratification in an expanded system of higher education: The case of Israel. *European Sociological Review*, 21(3), 227-241.
- Berggren, C. (in press a). Labour market influence on recruitment to higher education - gender and class perspectives. *Higher Education*.
- Berggren, C. (in press b). Broadening recruitment to higher education through the admission system - gender and class perspectives. *Studies in Higher Education*
- Björnsson, M. (2005). *Kön och skolframgång: Tolkningar och perspektiv [Gender and school success: Interpretations and perspectives]* (No. 13). Stockholm: Myndigheten för skolutveckling.
- Bourdieu, P. (2001). *Masculine domination*. Cambridge: Polity.
- Breen, R. (Ed.). (2004). *Social mobility in Europe*. Oxford: Oxford University.

- Broady, D., & Gustafsson, J.-E. (2000). *Välfärd och skola: Antologi från kommittén välfärdsbokslut [Welfare and education]*. Stockholm: Fritzes.
- Cliffordson, C. (2004). Effects of practice and intellectual growth on performance on the Swedish scholastic aptitude test (SweSAT). *European Journal of Psychological Assessment, 20*(3), 192-204.
- Croxford, L. (1994). Equal opportunities in the secondary-school curriculum in Scotland, 1977-91. *British Educational Research Journal, 20*(4), 371-392.
- Davies, S., & Guppy, N. (1997). Fields of study, college selectivity, and student inequalities in higher education. *Social Forces, 75*(4), 1417-1438.
- Davies, S., & Hammack, F. M. (2005). The channeling of student competition in higher education: Comparing Canada and the U.S. *The Journal of Higher Education, 76*(1), 89-106.
- Delamont, S. (2001). *Changing women, unchanged men? Sociological perspectives on gender in a post-industrial society*. Buckingham: Open University.
- Erikson, R., & Goldthorpe, J. H. (1992). *The constant flux. A study of class mobility in industrial societies*. Oxford: Clarendon Press.
- Erikson, R., & Jonsson, J. O. (1993). *Ursprung och utbildning. Social snedrekrytering till högre studier. [Origin and education. Social selection to higher education]*. Stockholm: Fritzes.
- Erikson, R., & Jonsson, J. O. (1996a). The Swedish context: Educational reform and long-term change in educational inequality. In R. Erikson & J. O. Jonsson (Eds.), *Can education be equalized?* (pp. 65-93). Boulder, Colorado: Westview Press.
- Erikson, R., & Jonsson, J. O. (Eds.). (1996b). *Can education be equalized? The Swedish case in comparative perspective*. Boulder, Colorado: Westview Press.
- Gustafsson, J.-E., Andersson, A., & Hansen, M. (2000). Prestationer och prestationsskillnader i 1990-talets skola [Achievements and differences in achievements in 1990s education]. In J. Palme (Ed.), *Välfärd och skola* (pp. 135-211). Stockholm: Fritzes.
- Halsey, A. H. (1993). Trends in access and equity in higher education: Britain in international perspective. *Oxford Review of Education, 19*(2), 129-140.
- Hill, M. (1998). *Kompetent för "det nya arbetslivet"? [Competent for "the new working life"?*]. Göteborg University, Göteborg, Sweden.

- HSV. (1996). *Högskoleprovet genom elva forskares ögon [the SweSAT through the eyes of eleven researches]*. Stockholm: National Agency for Higher Education.
- HSV. (2005). *Swedish universities & university colleges. Short version of annual report 2005* (No. 2005:37 R). Stockholm: National Agency for Higher Education.
- Jacobs, J. A. (1995). Gender and academic specialities: Trends among recipients of college degrees in the 1980s. *Sociology of Education*, 68(2), 81-98.
- Jacobs, J. A. (1999). Gender and the stratification of colleges. *The Journal of Higher Education*, 70(2), 161-187.
- Kivinen, O., & Ahola, S. (1999). Higher education as human risk capital - reflections on changing labour markets. *Higher Education*, 38(2), 191-208.
- Kivinen, O., Ahola, S., & Hedman, J. (2001). Expanding education and improving odds? Participation in higher education in Finland in the 1980s and 1990s. *Acta Sociologica*, 44(2), 171-181.
- Kivinen, O., & Rinne, R. (1991). Mapping the field of stratification in higher education: The Finnish experience. *Higher Education*, 21(4), 521-549.
- Lahelma, E. (2005). School grades and other resources: The "failing boys" discourse revisited. *Nordic Journal for Women's Studies*, 13(2), 78-89.
- Ljunglöf, T. (2004). Livslöner 2002 [Aggregate lifetime salary 2002]. Retrieved January 9, 2005, from http://www.saco.se/upload/doc_archive/3313.pdf
- Lucay, H., & Reay, D. (2002). Carrying the beacon of excellence: Social class differentiation and anxiety at a time of transition. *Journal of Educational Policy*, 17(3), 321-336.
- Mickelson, R. A. (2003). Gender, Bourdieu, and the anomaly of women's achievement redux. *Sociology of Education*, 76(4), 373-375.
- Miles, J., & Shevlin, M. (2001). *Applying regression & correlation: A guide for students and researchers*. London: SAGE.
- Moi, T. (1991). Appropriating Bourdieu: Feminist theory and Pierre Bourdieu's sociology of culture. *New Literary History*, 22(4), 1017-1049.
- Mäkitalo, Å. (1994). *Non-comparability of female and male admission test takers* (No. 1994:06). Göteborg, Sweden: Department of Education and Educational Research.

- Pedhazur, E. J. (1997). *Multiple regression in behavioral research: Explanation and prediction* (3. ed.). Fort Worth, Tex.; London: Harcourt Brace.
- Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Persell Hodges, C., Catsambis, S., & Cookson Jr., P. W. (1992). Differential asset conversion: Class and gendered pathways to selective colleges. *Sociology of Education*, 65(3), 208-225.
- Reay, D., Davies, J., David, M., & Ball, S. J. (2001). Choices of degree or degrees of choice? Class, 'race' and the higher education choice process. *Sociology*, 35(4), 855-874.
- Reuterberg, S.-E. (1997). *Gender differences on the Swedish scholastic aptitude test* (No. 1997:02). Göteborg, Sweden: Department of Education and Educational Research.
- Reuterberg, S.-E. (1998). On differential selection in the Swedish scholastic aptitude test. *Scandinavian Journal of Educational Research*, 42(1), 81-97.
- SCB. (2003). Sysselsättning och arbetslöshet 1975-2002 [Employment and unemployment 1975-2002]. Retrieved January 9, 2005, from http://www.scb.se/statistik/AM/AM0401/_dokument/GUL2002.pdf
- SCB. (2003). *Universitet och högskolor. Grundutbildning: Sökande och antagna till universitet och högskolor höstterminen 2003 [Higher education. Undergraduate education: Applicants and admitted to higher education for the autumn term 2003]* (No. UF 46 SM 0301). Örebro, Sweden: Statistics Sweden.
- SCB. (2004). *På tal om kvinnor och män [Women and men in Sweden]*. Örebro, Sweden: SCB [Statistics Sweden].
- SFS. (1993). Högskoleförordningen (1993:100) [the higher education ordinance 1993:100]. Retrieved January 9, 2005, from <http://www.notisum.se/rnp/sls/lag/19930100.htm>
- Skolverket. (2004). Education results 2004 - national level. Retrieved January 9, 2005, from <http://www.skolverket.se/publikationer?id=1279>
- SOU. (2004). *Den könsuppdelade arbetsmarknaden [The gender segregated labour market]* (No. 2004:43). Stockholm: Ministry of Industry, Employment and Communications.

- Spjut, C. (2006). Vad är det som avgör din lön? [What determines your salary?]. Retrieved January 9, 2005, from <http://www.sjukhuslakaren.org/100/spjut.html>
- Svensson, A. (1998). *Hur lyckas eleverna i den nya gymnasieskolan? [How do students succeed in the new upper secondary school?]* (No. 1998:07). Göteborg, Sweden: Institutionen för pedagogik.
- Tinklin, T., Croxford, L., Ducklin, A., & Frame, B. (2005). Gender and attitudes to work and family roles: The views of young people at the millennium. *Gender and Education, 17*(2), 129-142.
- Willingham, W. W., & Cole, N. S. (1997). *Gender and fair assessment*. Mahwah, N.J.: L. Erlbaum Associates.
- Öhrn, E. (2000). Changing patterns? Reflections on contemporary Swedish research and debate on gender and education. *Nordic Journal for Women's Studies, 8*(3), 128-136.
- Öhrn, E. (2002). *Könsmönster i förändring? - en kunskapsöversikt om unga i skolan [Changing gender patterns?]*. Stockholm: Statens skolverk.

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

1. *Karl-Gustaf Stukát*: Lekskolans inverkan på barns utveckling. Sthlm 1966. Pp.148.
2. *Urban Dahllöf*: Skoldifferentiering och undervisningsförlopp. Sthlm 1967. Pp. 306.
3. *Erik Wallin*: Spelling. Factorial and experimental studies. Sthlm 1967. Pp.180.
4. *Bengt-Erik Andersson*: Studies in adolescent behaviour. Project Yg, Youth in Göteborg. Sthlm 1969. Pp. 400.
5. *Ference Marton*: Structural dynamics of learning. Sthlm 1970. Pp. 112.
6. *Allan Svensson*: Relative achievement. School performance in relation to intelligence, sex and home environment. Sthlm 1971. Pp. 176.
7. *Gunni Kärrby*: Child rearing and the development of moral structure. Sthlm 1971. Pp. 207.
8. *Ulf P. Lundgren*: Frame factors and the teaching process. A contribution to curriculum theory and theory on teaching. Sthlm 1972. Pp. 378.
9. *Lennart Levin*: Comparative studies in foreign-language teaching. Sthlm 1972. Pp. 258.
10. *Rodney Åsberg*: Primary education and national development. Sthlm 1973. Pp. 388.
11. *Björn Sandgren*: Kreativ utveckling. Sthlm 1974. Pp. 227.
12. *Christer Brusling*: Microteaching - A concept in development. Sthlm 1974. Pp. 196.
13. *Kjell Rubenson*: Rekrytering till vuxenutbildning. En studie av kortutbildade yngre män. Gbg 1975. Pp. 363.
14. *Roger Säljö*: Qualitative differences in learning as a function of the learner's conception of the task. Gbg 1975. Pp. 170.
15. *Lars Owe Dahlgren*: Qualitative differences in learning as a function of content-oriented guidance. Gbg 1975. Pp. 172.
16. *Marie Månsson*: Samarbete och samarbetsförmåga. En kritisk granskning. Lund 1975. Pp. 158.
17. *Jan-Eric Gustafsson*: Verbal and figural aptitudes in relation to instructional methods. Studies in aptitude - treatment interactions. Gbg 1976. Pp. 228.
18. *Mats Ekholm*: Social utveckling i skolan. Studier och diskussion. Gbg 1976. Pp. 198.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

19. *Lennart Svensson*: Study skill and learning. Gbg 1976. Pp. 308.
20. *Björn Andersson*: Science teaching and the development of thinking. Gbg 1976. Pp. 180.
21. *Jan-Erik Perneman*: Medvetenhet genom utbildning. Gbg 1977. Pp. 300.
22. *Inga Wernersson*: Könsdifferentiering i grundskolan. Gbg 1977. Pp. 320.
23. *Bert Aggestedt and Ulla Tebelius*: Barns upplevelser av idrott. Gbg 1977. Pp. 440.
24. *Anders Fransson*: Att rädas prov och att vilja veta. Gbg 1978. Pp. 188.
25. *Roland Björkberg*: Föreställningar om arbete, utveckling och livsrytm. Gbg 1978. Pp. 252.
26. *Gunilla Svingby*: Läroplaner som styrmedel för svensk obligatorisk skola. Teoretisk analys och ett empiriskt bidrag. Gbg 1978. Pp. 269.
27. *Inga Andersson*: Tankestilar och hemmiljö. Gbg 1979. Pp. 288.
28. *Gunnar Stangvik*: Self-concept and school segregation. Gbg 1979. Pp. 528.
29. *Margareta Kristiansson*: Matematikkunskaper Lgr 62, Lgr 69. Gbg 1979. Pp. 160.
30. *Britt Johansson*: Kunskapsbehov i omvårdnadsarbete och kunskapskrav i vårdutbildning. Gbg 1979. Pp. 404.
31. *Göran Patriksson*: Socialisation och involvering i idrott. Gbg 1979. Pp. 236.
32. *Peter Gill*: Moral judgments of violence among Irish and Swedish adolescents. Gbg 1979. Pp. 213.
33. *Tage Ljungblad*: Förskola - grundskola i samverkan. Förutsättningar och hinder. Gbg 1980. Pp. 192.
34. *Berner Lindström*: Forms of representation, content and learning. Gbg 1980. Pp. 195.
35. *Claes-Göran Wenestam*: Qualitative differences in retention. Gbg 1980. Pp. 220.
36. *Britt Johansson*: Pedagogiska samtal i vårdutbildning. Innehåll och språkbruk. Gbg 1981. Pp. 194.
37. *Leif Lybeck*: Arkimedes i klassen. En ämnespedagogisk berättelse. Gbg 1981. Pp. 286.
38. *Biörn Hasselgren*: Ways of apprehending children at play. A study of pre-school student teachers' development. Gbg 1981. Pp. 107.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

39. *Lennart Nilsson*: Yrkesutbildning i nutidshistoriskt perspektiv. Yrkesutbildningens utveckling från skråväsendets upphörande 1846 till 1980-talet samt tankar om framtida inriktning. Gbg 1981. Pp. 442.
40. *Gudrun Balke-Aurell*: Changes in ability as related to educational and occupational experience. Gbg 1982. Pp. 203.
41. *Roger Säljö*: Learning and understanding. A study of differences in constructing meaning from a text. Gbg 1982. Pp. 212.
42. *Ulla Marklund*: Droger och påverkan. Eleanalys som utgångspunkt för drogundervisning. Gbg 1983. Pp. 225.
43. *Sven Setterlind*: Avslappningsträning i skolan. Forskningsöversikt och empiriska studier. Gbg 1983. Pp. 467.
44. *Egil Andersson and Maria Lawenius*: Lärares uppfattning av undervisning. Gbg 1983. Pp. 348.
45. *Jan Theman*: Uppfattningar av politisk makt. Gbg 1983. Pp. 493.
46. *Ingrid Pramling*: The child's conception of learning. Gbg 1983. Pp. 196.
47. *Per Olof Thång*: Vuxenlärares förhållningssätt till deltagarerfarenheter. En studie inom AMU. Gbg 1984. Pp. 307.
48. *Inge Johansson*: Fritidspedagog på fritidshem. En yrkesgrupps syn på sitt arbete. Gbg 1984. Pp. 312.
49. *Gunilla Svanberg*: Medansvar i undervisning. Metoder för observation och kvalitativ analys. Gbg 1984. Pp. 194.
50. *Sven-Eric Reuterberg*: Studiemedel och rekrytering till högskolan. Gbg 1984. Pp. 191.
51. *Gösta Dahlgren and Lars-Erik Olsson*: Läsning i barnperspektiv. Gbg 1985. Pp. 272.
52. *Christina Kärrqvist*: Kunskapsutveckling genom experimentcentrerade dialoger i ellära. Gbg 1985. Pp. 288.
53. *Claes Alexandersson*: Stabilitet och förändring. En empirisk studie av förhållandet mellan skolkunskap och vardagsvetande. Gbg 1985. Pp. 247.
54. *Lillemor Jernqvist*: Speech regulation of motor acts as used by cerebral palsied children. Observational and experimental studies of a key feature of conductive education. Gbg 1985. Pp. 146.
55. *Solveig Hägglund*: Sex-typing and development in an ecological perspective. Gbg 1986. Pp. 267.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

56. *Ingrid Carlgren*: Lokalt utvecklingsarbete. Gbg 1986. Pp. 299.
57. *Larsson, Alexandersson, Helmstad and Thång*: Arbetsupplevelse och utbildningssyn hos icke facklärd. Gbg 1986. Pp. 165.
58. *Elvi Walldal*: Studerande vid gymnasieskolans vårdlinje. Förväntad yrkesposition, rollpåverkan, självuppfattning. Gbg 1986. Pp. 291.
59. *Eie Ericsson*: Foreign language teaching from the point of view of certain student activities. Gbg 1986. Pp. 275.
60. *Jan Holmer*: Högre utbildning för lågutbildade i industrin. Gbg 1987. Pp. 358.
61. *Anders Hill and Tullie Rabe*: Psykiskt utvecklingsstörda i kommunal förskola. Gbg 1987. Pp. 112.
62. *Dagmar Neuman*: The origin of arithmetic skills. A phenomenographic approach. Gbg 1987. Pp. 351.
63. *Tomas Kroksmark*: Fenomenografisk didaktik. Gbg 1987. Pp. 373.
64. *Rolf Lander*: Utvärderingsforskning - till vilken nytta? Gbg 1987. Pp. 280.
65. *Torgny Ottosson*: Map-reading and wayfinding. Gbg 1987. Pp. 150.
66. *Mac Murray*: Utbildningsexpansion, jämlikhet och avlänkning. Gbg 1988. Pp. 230.
67. *Alberto Nagle Cajés*: Studievalet ur den väljandes perspektiv. Gbg 1988. Pp. 181.
68. *Göran Lassbo*: Mamma - (Pappa) - barn. En utvecklingsekologisk studie av socialisation i olika familjetyper. Gbg 1988. Pp. 203.
69. *Lena Renström*: Conceptions of matter. A phenomenographic approach. Gbg 1988. Pp. 268.
70. *Ingrid Pramling*: Att lära barn lära. Gbg 1988. Pp. 115.
71. *Lars Fredholm*: Praktik som bärare av undervisnings innehåll och form. En förklaringsmodell för uppkomst av undervisningshandlingar inom en totalförsvarsorganisation. Gbg 1988. Pp. 364.
72. *Olof F. Lundquist*: Studiestöd för vuxna. Utveckling, utnyttjande, utfall. Gbg 1989. Pp. 280.
73. *Bo Dahlin*: Religionen, själen och livets mening. En fenomenografisk och existensfilosofisk studie av religionsundervisningens villkor. Gbg 1989. Pp. 359.
74. *Susanne Björkdahl Ordell*: Socialarbetare. Bakgrund, utbildning och yrkesliv. Gbg 1990. Pp. 240.
75. *Eva Björck-Åkesson*: Measuring Sensation Seeking. Gbg 1990. Pp. 255.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

76. *Ulla-Britt Bladini*: Från hjälpskolelärare till förändringsagent. Svensk speciallärarutbildning 1921-1981 relaterad till specialundervisningens utveckling och förändringar i speciallärares yrkesuppgifter. Gbg 1990. Pp. 400.
77. *Elisabet Öhrn*: Könsmönster i klassrumsinteraktion. En observations- och intervjustudie av högstadieelevers lärarkontakter. Gbg 1991. Pp. 211, XXI.
78. *Tomas Kroksmark*: Pedagogikens vägar till dess första svenska professur. Gbg 1991. Pp. 285.
79. *Elvi Walldal*: Problembaserad inläring. Utvärdering av påbyggnadslinjen Utbildning i öppen hälso- och sjukvård. Gbg 1991. Pp. 130.
80. *Ulla Axner*: Visuella perceptionssvårigheter i skolperspektiv. En longitudinell studie. Gbg 1991. Pp. 293.
81. *Birgitta Kullberg*: Learning to learn to read. Gbg 1991. Pp. 352.
82. *Claes Annerstedt*: Idrottslärarna och idrottsämnet. Utveckling, mål, kompetens - ett didaktiskt perspektiv. Gbg 1991. Pp. 286.
83. *Ewa Pilhammar Andersson*: Det är vi som är dom. Sjuksköterskestuderandes föreställningar och perspektiv under utbildningstiden. Gbg 1991. Pp. 313.
84. *Elsa Nordin*: Kunskaper och uppfattningar om maten och dess funktioner i kroppen. Kombinerad enkät- och intervjustudie i grundskolans årskurser 3, 6 och 9. Gbg 1992. Pp. 253.
85. *Valentin González*: On human attitudes. Root metaphors in theoretical conceptions. Gbg 1992. Pp. 238.
86. *Jan-Erik Johansson*: Metodikämnet i förskolläraryrket. Bidrag till en traditionsbestämning. Gbg 1992. Pp. 347.
87. *Ann Ahlberg*: Att möta matematiska problem. En belysning av barns lärande. Gbg 1992. Pp. 353.
88. *Ella Danielson*: Omvårdnad och dess psykosociala inslag. Sjuksköterskestuderandes uppfattningar av centrala termer och reaktioner inför en omvårdnadssituation. Gbg 1992. Pp. 301.
89. *Shirley Booth*: Learning to program. A phenomenographic perspective. Gbg 1992. Pp. 308.
90. *Eva Björck-Åkeson*: Samspel mellan små barn med rörelsehinder och talhandikapp och deras föräldrar - en longitudinell studie. Gbg 1992. Pp. 345.
91. *Karin Dahlberg*: Helhetssyn i vården. En uppgift för sjuksköterskeutbildningen. 1992. Pp. 201.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

92. *Rigmor Eriksson*: Teaching Language Learning. In-service training for communicative teaching and self directed learning in English as a foreign language. 1993. Pp. 218.
93. *Kjell Härenstam*: Skolboks-islam. Analys av bilden av islam i läroböcker i religionskunskap. Gbg 1993. Pp. 312.
94. *Ingrid Pramling*: Kunnandets grunder. Prövning av en fenomenografisk ansats till att utveckla barns sätt att uppfatta sin omvärld. Gbg 1994. Pp. 236.
95. *Marianne Hansson Scherman*: Att vägra vara sjuk. En longitudinell studie av förhållningssätt till astma/allergi. Gbg 1994. Pp. 236.
96. *Mikael Alexandersson*: Metod och medvetande. Gbg 1994. Pp. 281.
97. *Gun Unenge*: Pappor i föräldrakooperativa daghem. En deskriptiv studie av pappors medverkan. Gbg 1994. Pp. 249, [33].
98. *Björn Sjöström*: Assessing acute postoperative pain. Assessment strategies and quality in relation to clinical experience and professional role. Gbg 1995. Pp. 159.
99. *Maj Arvidsson*: Lärares orsaks- och åtgärdstankar om elever med svårigheter. Gbg 1995. Pp. 212.
100. *Dennis Beach*: Making sense of the problems of change: An ethnographic study of a teacher education reform. Gbg 1995. Pp. 385.
101. *Wolmar Christensson*: Subjektiv bedömning - som besluts och handlingsunderlag. Gbg 1995. Pp. 211.
102. *Sonja Kihlström*: Att vara förskollärare. Om yrkets pedagogiska innebörder. Gbg 1995. Pp. 214.
103. *Marita Lindahl*: Inläring och erfارande. Ettåringars möte med förskolans värld. Gbg. 1996. Pp. 203.
104. *Göran Folkestad*: Computer Based Creative Music Making - Young Peoples' Music in the Digital Age. Gbg 1996. Pp. 237.
105. *Eva Ekeblad*: Children • Learning • Numbers. A phenomenographic excursion into first-grade children's arithmetic. Gbg 1996. Pp. 370.
106. *Helge Strömdahl*: On *mole* and *amount of substance*. A study of the dynamics of concept formation and concept attainment. Gbg 1996. Pp. 278.
107. *Margareta Hammarström*: Varför inte högskola? En longitudinell studie av olika faktorerens betydelse för studiebegåvade ungdomars utbildningskarriär. Gbg 1996. Pp. 263.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

108. *Björn Mårdén*: Rektors tänkande. En kritisk betraktelse av skolledarskap. Gbg 1996. Pp. 219.
109. *Gloria Dall'Alba and Biörn Hasselgren (Eds.)*. Reflections on Phenomenography - Toward a Methodology? Gbg 1996. Pp. 202.
110. *Elisabeth Hesslefors Arktoft*: I ord och handling. Innebörder av "att anknyta till elevers erfarenheter", uttryckta av lärare. Gbg 1996. Pp. 251.
111. *Barbro Strömberg*: Professionellt förhållningssätt hos läkare och sjuksköterskor. En studie av uppfattningar. Gbg 1997. Pp. 241.
112. *Harriet Axelsson*: Våga lära. Om lärare som förändrar sin miljöundervisning. Gbg 1997. Pp. 326.
113. *Ann Ahlberg*: Children's ways of handling and experiencing numbers. Gbg 1997. Pp. 115.
114. *Hugo Wikström*: Att förstå förändring. Modellbyggande, simulering och gymnasieelevers lärande. Gbg 1997. Pp. 305.
115. *Doris Axelsen*: Listening to recorded music. Habits and motivation among high-school students. Gbg 1997. Pp. 226.
116. *Ewa Pilhammar Andersson*:Handledning av sjuksköterskestuderande i klinisk praktik. Gbg 1997. Pp. 166.
117. *Owe Stråhlman*: Elitidrott, karriär och avslutning. Gbg 1997. Pp. 350.
118. *Aina Tullberg*: Teaching the 'mole'. A phenomenographic inquiry into the didactics of chemistry. Gbg 1997. Pp. 200.
119. *Dennis Beach*: Symbolic Control and Power Relay: Learning in Higher Professional Education. Gbg 1997. Pp. 259.
120. *Hans-Åke Scherp*: Utmanande eller utmanat ledarskap. Rektor, organisationen och förändrat undervisningsmönster i gymnasieskolan. Gbg 1998. Pp. 228.
121. *Staffan Stukát*: Lärares planering under och efter utbildningen. Gbg 1998. Pp. 249.
122. *Birgit Lendahls Rosendahl*: Examensarbetets innebörder. En studie av blivande lärares utsagor. Gbg 1998. Pp. 222.
123. *Ann Ahlberg*: Meeting Mathematics. Educational studies with young children. Gbg 1998. Pp. 236.
124. *Monica Rosén*: Gender Differences in Patterns of Knowledge. Gbg 1998. Pp. 210.
125. *Hans Birnik*: Lärare- elevrelationen. Ett relationistiskt perspektiv. Gbg 1998. Pp. 177.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

126. *Margreth Hill*: Kompetent för "det nya arbetslivet"? Tre gymnasieklasser reflekterar över och diskuterar yrkesförberedande studier. Gbg 1998. Pp. 314.
127. *Lisbeth Åberg-Bengtsson*: Entering a Graphic Society. Young Children Learning Graphs and Charts. Gbg 1998. Pp. 212.
128. *Melvin Feffer*: The Conflict of Equals: A Constructionist View of Personality Development. Gbg 1999. Pp. 247.
129. *Ulla Runesson*: Variationens pedagogik. Skilda sätt att behandla ett matematiskt innehåll. Gbg 1999. Pp. 344.
130. *Silwa Claesson*: "Hur tänker du då?" Empiriska studier om relationen mellan forskning om elevuppfattningar och lärares undervisning. Gbg 1999. Pp. 248.
131. *Monica Hansen*: Yrkeskulturer i möte. Läraren, fritidspedagogen och samverkan. Gbg 1999. Pp. 399.
132. *Jan Theliander*: Att studera arbetets förändring under kapitalismen. Ure och Taylor i pedagogiskt perspektiv. Gbg 1999. Pp. 275
133. *Tomas Saar*: Musikens dimensioner - en studie av unga musikers lärande. Gbg 1999. Pp. 184.
134. *Glen Helmstad*: Understanding of understanding. An inquiry concerning experiential conditions for developmental learning. Gbg 1999. Pp. 259.
135. *Margareta Holmegaard*: Språkmedvetenhet och ordinläring. Lärare och inlärare reflekterar kring en betydelsefältövning i svenska som andraspråk. Gbg 1999. Pp. 292.
136. *Alyson McGee*: Investigating Language Anxiety through Action Inquiry: Developing Good Research Practices. Gbg 1999. Pp. 298.
137. *Eva Gannerud*: Genusperspektiv på lärargärning. Om kvinnliga klasslärares liv och arbete. Gbg 1999. Pp. 267.
138. *Tellervo Kopare*: Att rida stormen ut. Förlösningsberättelser i Finnmark och Sápmi. Gbg 1999. Pp. 285.
139. *Maja Söderbäck*: Encountering Parents. Professional Action Styles among Nurses in Pediatric Care. Gbg 1999. Pp. 226.
140. *Airi Rovio - Johansson*: Being Good at Teaching. Exploring different ways of handling the same subject in Higher Education. Gbg 1999. Pp. 249.
141. *Eva Johansson*: Etik i små barns värld. Om värden och normer bland de yngsta barnen i förskolan. Gbg 1999. Pp. 295.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

142. *Kennert Orlenius*: Förståelsens paradox. Yrkeserfarenhetens betydelse när förskollärare blir grundskollärare. Gbg 1999. Pp. 300.
143. *Björn Mårdén*: De nya hälsomissionärerna – rörelser i korsvägen mellan pedagogik och hälsopromotion. Gbg 1999. Pp. 223.
144. *Margareta Carlén*: Kunskapslyft eller avbytarbänk? Möten med industriarbetare om utbildning för arbete. Gbg 1999. Pp. 269.
145. *Maria Nyström*: Allvarligt psykiskt störda människors vardagliga tillvaro. Gbg 1999. Pp. 286.
146. *Ann-Katrin Jakobsson*: Motivation och inläring ur genusperspektiv. En studie av gymnasieelever på teoretiska linjer/program. Gbg 2000. Pp. 242.
147. *Joanna Giota*: Adolescents' perceptions of school and reasons for learning. Gbg 2000. Pp. 220.
148. *Berit Carlstedt*: Cognitive abilities – aspects of structure, process and measurement. Gbg 2000. Pp. 140.
149. *Monica Reichenberg*: Röst och kausalitet i lärobokstexter. En studie av elevers förståelse av olika textversioner. Gbg 2000. Pp. 287.
150. *Helena Åberg*: Sustainable waste management in households – from international policy to everyday practice. Experiences from two Swedish field studies. Gbg 2000. Pp. 189.
151. *Björn Sjöström, Britt Johansson*: Ambulanssjukvård. Ambulanssjukvårdarens och läkares perspektiv. Gbg 2000. Pp. 129.
152. *Agneta Nilsson*: Omvårdnadskompetens inom hemsjukvård – en deskriptiv studie. Gbg 2001. Pp. 225.
153. *Ulla Löfstedt*: Förskolan som lärandekontext för barns bildskapande. Gbg 2001. Pp. 240.
154. *Jörgen Dimenäs*: Innehåll och interaktion. Om elevers lärande i naturvetenskaplig undervisning. Gbg 2001. Pp. 278.
155. *Britt Marie Apelgren*: Foreign Language Teachers' Voices. Personal Theories and Experiences of Change in Teaching English as a Foreign Language in Sweden. Gbg 2001. Pp. 339.
156. *Christina Cliffordson*: Assessing empathy: Measurement characteristics and interviewer effects. Gbg 2001. Pp. 188.
157. *Inger Berggren*: Identitet, kön och klass. Hur arbetarflickor formar sin identitet. Gbg 2001. Pp. 366.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

158. *Carina Furåker*: Styrning och visioner – sjuksköterskeutbildning i förändring. Gbg 2001. Pp. 216.
159. *Inger Berndtsson*: Förskjutna horisonter. Livsförändring och lärande i samband med synnedsättning eller blindhet. Gbg 2001. Pp. 539.
160. *Sonja Sheridan*: Pedagogical Quality in Preschool. An issue of perspectives. Gbg 2001. Pp. 225.
161. *Jan Bahlenberg*: Den otroliga verkligheten sätter spår. Om Carlo Derkerts liv och konstpedagogiska gärning. Gbg 2001. Pp. 406.
162. *Frank Bach*: Om ljuset i tillvaron. Ett undervisningsexperiment inom optik. Gbg 2001. Pp. 300.
163. *Pia Williams*: Barn lär av varandra. Samlärande i förskola och skola. Gbg 2001. Pp. 209.
164. *Vigdis Granum*: Studentenes forestillinger om sykepleie som fag og funksjon. Gbg 2001. Pp. 252.
165. *Marit Alvestad*: Den komplekse planlegginga. Førskolelærarar om pedagogisk planlegging og praksis. Gbg 2001. Pp. 238.
166. *Girma Berhanu*: Learning-In-Context. An Ethnographic Investigation of Mediated Learning Experiences among Ethiopian Jews in Israel. Gbg 2001. Pp. 315.
167. *Olle Eskilsson*: En longitudinell studie av 10 – 12-åringars förståelse av materiens förändringar. Gbg 2001. Pp. 233.
168. *Jonas Emanuelsson*: En fråga om frågor. Hur lärares frågor i klassrummet gör det möjligt att få reda på elevernas sätt att förstå det som undervisningen behandlar i matematik och naturvetenskap. Gbg 2001. Pp. 258.
169. *Birgitta Gedda*: Den offentliga hemligheten. En studie om sjuksköterskans pedagogiska funktion och kompetens i folkhälsoarbetet. Gbg 2001. Pp. 259.
170. *Febe Friberg*: Pedagogiska möten mellan patienter och sjuksköterskor på en medicinsk vårdavdelning. Mot en vårddidaktik på livsvärldgrund. Gbg 2001. Pp. 278.
171. *Madeleine Bergh*: Medvetenhet om bemötande. En studie om sjuksköterskans pedagogiska funktion och kompetens i närståendeundervisning. Gbg 2002. Pp. 250.
172. *Henrik Eriksson*: Den diplomatiska punkten – maskulinitet som kroppsligt identitetsskapande projekt i svensk sjuksköterskeutbildning. Gbg 2002. Pp. 157.
173. *Solveig Lundgren*: I spåren av en bemanningsförändring. En studie av sjuksköterskors arbete på en kirurgisk vårdavdelning. Gbg 2002. Pp. 134.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

174. *Birgitta Davidsson*: Mellan soffan och katedern. En studie av hur förskollärare och grundskollärare utvecklar pedagogisk integration mellan förskola och skola. Gbg 2002. Pp. 230.
175. *Kari Søndena*: Tradisjon og Transcendens – ein fenomenologisk studie av refleksjon i norsk førskulelærerutdanning. Gbg 2002. Pp. 213.
176. *Christine Bentley*: The Roots of Variation of English-Teaching. A Phenomenographic Study Founded on an Alternative Basic Assumption. Gbg 2002. Pp. 224.
177. *Åsa Mäkitalo*: Categorizing Work: Knowing, Arguing, and Social Dilemmas in Vocational Guidance. Gbg 2002. Pp. 184.
178. *Marita Lindahl*: VÅRDA – VÅGLEDA – LÄRA. Effektstudie av ett interventionsprogram för pedagogers lärande i förskolemiljön. Gbg 2002. Pp. 332.
179. *Christina Berg*: Influences on schoolchildren's dietary selection. Focus on fat and fibre at breakfast. Gbg 2002. Pp. 134.
180. *Margareta Asp*: Vila och lärande om vila. En studie på livsvärldsfenomenologisk grund. Gbg 2002. Pp. 231.
181. *Ference Marton and Paul Morris (Eds.)*: What matters? Discovering critical conditions of classroom learning. Gbg 2002. Pp. 146.
182. *Roland Severin*: Dom vet vad dom talar om. En intervjustudie om elevers uppfattningar av begreppen makt och samhällsförändring. Gbg 2002. Pp. 306.
183. *Marléne Johansson*: Slöjdpraktik i skolan – hand, tanke, kommunikation och andra medierande redskap. Gbg 2002. Pp. 306.
184. *Ingrid Sanderoth*: Om lust att lära i skolan: En analys av dokument och klass 8y. Gbg 2002. Pp. 344.
185. *Inga-Lill Jakobsson*: Diagnos i skolan. En studie av skolsituationer för elever med syndromdiagnos. Gbg 2002. Pp. 273.
186. *Eva-Carin Lindgren*: Empowering Young Female Athletes – A Possible Challenge to the Male Hegemony in Sport. A Descriptive and Interventional Study. Gbg 2002. Pp. 200.
187. *Hans Rystedt*: Bridging practices. Simulations in education for the health-care professions. Gbg 2002. Pp. 156.
188. *Margareta Ekborg*: Naturvetenskaplig utbildning för hållbar utveckling? En longitudinell studie av hur studenter på grundskolläroprogrammet utvecklar för miljöundervisning relevanta kunskaper i naturkunskap. Gbg 2002. Pp. 313.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

189. *Anette Sandberg*: Vuxnas lekvärld. En studie om vuxnas erfarenheter av lek. Gbg 2002. Pp. 226 .
190. *Gunlög Bredänge*: Gränslös pedagog. Fyra studier om utländska lärare i svensk skola. Gbg 2003. Pp. 412.
191. *Per-Olof Bentley*: Mathematics Teachers and Their Teaching. A Survey Study. Gbg 2003. Pp. 243.
192. *Kerstin Nilsson*: MANDAT – MAKT – MANAGEMENT. En studie av hur vårdenhetschefers ledarskap konstrueras. Gbg 2003. Pp. 194.
193. *Yang Yang*: Measuring Socioeconomic Status and its Effects at Individual and Collective Levels: A Cross-Country Comparison. Gbg 2003. Pp. 247.
194. *Knut Volden*: Mediekunnskap som mediekritikk. Gbg 2003. Pp. 316.
195. *Lotta Lager-Nyqvist*: Att göra det man kan – en longitudinell studie av hur sju lärarstudenter utvecklar sin undervisning och formar sin lärarroll i naturvetenskap. Gbg 2003. Pp. 235.
196. *Britt Lindahl*: Lust att lära naturvetenskap och teknik? En longitudinell studie om vägen till gymnasiet. Gbg 2003. Pp. 325.
197. *Ann Zetterqvist*: Ämnesdidaktisk kompetens i evolutionsbiologi. En intervjuundersökning med no/biologilärare. Gbg 2003. Pp. 210.
198. *Elsie Anderberg*: Språkanvändningens funktion vid utveckling av kunskap om objekt. Gbg 2003. Pp. 79.
199. *Jan Gustafsson*: Integration som text, diskursiv och social praktik. En policyetnografisk fallstudie av mötet mellan skolan och förskoleklassen. Gbg 2003. Pp. 381.
200. *Evelyn Hermansson*: Akademisering och professionalisering – barnmorskans utbildning i förändring. Gbg 2003. Pp. 222.
201. *Kerstin von Brömssen*: Tolkningar, förhandlingar och tystnader. Elevers tal om religion i det mångkulturella och postkoloniala rummet. Gbg 2003. Pp. 383.
202. *Marianne Lindblad Fridh*: Från allmänsjuksköterska till specialistsjuksköterska inom intensivvård. En studie av erfarenheter från specialistutbildningen och från den första yrkesverksamma tiden inom intensivvården. Gbg 2003. Pp. 205.
203. *Barbro Carli*: The Making and Breaking of a Female Culture: The History of Swedish Physical Education 'in a Different Voice'. Gbg 2003. Pp. 283.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

204. *Elisabeth Dahlborg-Lyckhage*: "Systers" konstruktion och mumifiering – i TV-serier och i studenters föreställningar. Gbg 2003. Pp. 208.
205. *Ulla Hellström Muhli*: Att överbrygga perspektiv. En studie av behovsbedömningsamtal inom äldreinriktat socialt arbete. Gbg 2003. Pp. 212.
206. *Kristina Ahlberg*: Synvänder. Universitetsstudenters berättelser om kvalitativa förändringar av sätt att erfara situationers mening under utbildningspraktik. Gbg 2004. Pp. 190.
207. *Jonas Ivarsson*: Renderings & Reasoning: Studying artifacts in human knowing. Gbg 2004. Pp. 190.
208. *Madeleine Löwing*: Matematikundervisningens konkreta gestaltning. En studie av kommunikationen lärare – elev och matematiklektionens didaktiska ramar. Gbg 2004. Pp. 319.
209. *Pija Ekström*: Makten att definiera. En studie av hur beslutsfattare formulerar villkor för specialpedagogisk verksamhet. Gbg 2004. Pp. 244.
210. *Carin Roos*: Skriftspråkande döva barn. En studie om skriftspråkligt lärande i förskola och skola. Gbg 2004. Pp. 248.
211. *Jonas Linderöth*: Datorspeländets mening. Bortom idén om den interaktiva illusionen. Gbg 2004. Pp. 277.
212. *Anita Wallin*: Evolutionsteorin i klassrummet. På väg mot en ämnesdidaktisk teori för undervisning i biologisk evolution. Gbg 2004 Pp. 308.
213. *Eva Hjörne*: Excluding for inclusion? Negotiating school careers and identities in pupil welfare settings in the Swedish school. Gbg 2004. Pp. 190.
214. *Marie Bliding*: Inneslutandets och uteslutandets praktik. En studie av barns relationsarbete i skolan. Gbg 2004. Pp. 308.
215. *Lars-Erik Jonsson*: Appropriating Technologies in Educational Practices. Studies in the Contexts of Compulsory Education, Higher Education, and Fighter Pilot Training. Gbg 2004. Pp. 203.
216. *Mia Karlsson*: An ITiS Teacher Team as a Community of Practice. Gbg 2004. Pp. 299.
217. *Silwa Claesson*: Lärares levda kunskap. Gbg 2004. Pp. 173.
218. *Gun-Britt Wärvik*: Ambitioner att förändra och artefaktens verkan. Gränsskapande och stabiliserande praktiker på produktionsgolvet. Gbg 2004. Pp 274.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

219. *Karin Lumsden Wass*: Vuxenutbildning i omvandling. Kunskapslyftet som ett sätt att organisera förnyelse. Gbg 2004. Pp 204.
220. *Lena Dahl*: Amningspraktikens villkor. En intervjustudie av en grupp kvinnors föreställningar på och erfarenheter av amning. Gbg 2004. Pp 160.
221. *Ulric Björck*: Distributed Problem-Based Learning. Studies of a Pedagogical Model in Practice. Gbg 2004. Pp 207.
222. *Anneka Knutsson*: "To the best of your knowledge and for the good of your neighbour". A study of traditional birth attendants in Addis Ababa, Ethiopia. Gbg 2004. Pp 238.
223. *Marianne Dovemark*: Ansvar – flexibilitet – valfrihet. En etnografisk studie om en skola i förändring. Gbg 2004. Pp 277.
224. *Björn Haglund*: Traditioner i möte. En kvalitativ studie av fritidspedagogers arbete med samlingar i skolan. Gbg 2004. Pp 248.
225. *Ann-Charlotte Mårdsjö*: Lärandets skiftande innebörder – uttryckta av förskollärare i vidareutbildning. Gbg 2005. Pp 239.
226. *Ingrid Grundén*: Att återerövra kroppen. En studie av livet efter en ryggmärgsskada. Gbg 2005. Pp 157.
227. *Karin Gustafsson och Elisabeth Mellgren*: Barns skriftspråkande – att bli en skrivande och läsande person. Gbg 2005. Pp 193.
228. *Gunnar Nilsson*: Att äga π . Praxisnära studier av lärarstudenters arbete med geometrilaborationer. Gbg 2005. Pp 362.
229. *Bengt Lindgren*: Bild, visualitet och vetande. Diskussion om bild som ett kunskapsfält inom utbildning. Gbg 2005. Pp 160.
230. *Petra Angervall*: Jämställdhetsarbetets pedagogik. Dilemman och paradoxer i arbetet med jämställdhet på ett företag och ett universitet. Gbg 2005. Pp 227.
231. *Lennart Magnusson*: Designing a responsive support service for family carers of frail older people using ICT. Gbg 2005. Pp 220.
232. *Monica Reichenberg*: Gymnasieelever samtalar kring facktexter. En studie av textsamtal med goda och svaga läsare. Gbg 2005. Pp 197.
233. *Ulrika Wolff*: Characteristics and varieties of poor readers. Gbg 2005. Pp 206.

(cont.)

GÖTEBORG STUDIES
IN EDUCATIONAL SCIENCES

ISSN 0436-1121

Editors:

Björn Andersson, Jan Holmer and Ingrid Pramling Samuelsson

234. *Cecilia Nielsen*: Mellan fakticitet och projekt. Läs- och skrivsvårigheter och strävan att övervinna dem. Gbg 2005. Pp 312.
235. *Berith Hedberg*: Decision Making and Communication in Nursing Practice. Aspects of Nursing Competence. Gbg 2005. Pp 126.
236. *Monica Rosén, Eva Myrberg & Jan-Eric Gustafsson*: Läskompetens i skolår 3 och 4. Nationell rapport från PIRLS 2001 i Sverige. The IEA Progress in International Reading Literacy Study. Gbg 2005. Pp 343.
237. *Ingrid Henning Loeb*: Utveckling och förändring i kommunal vuxenutbildning. En yrkeshistorisk ingång med berättelser om lärarbanor. Gbg 2006. Pp 274.
238. *Niklas Pramling*: Minding metaphors: Using figurative language in learning to represent. Gbg 2006. Pp 289.
239. *Konstantin Kougioumtzis*: Lärarkulturer och professionskoder. En komparativ studie av idrottslärare I Sverige och Grekland. Gbg 2006. Pp 296.
240. *Sten Båth*: Kvalifikation och medborgarfostran. En analys av reformtexter avseende gymnasieskolans samhällsuppdrag. Gbg 2006. Pp 280.
241. *Eva Myrberg*: Fristående skolor i Sverige -Effekter på 9-10-åriga elevers läsförmåga. Gbg 2006. Pp 185.
242. *Mary-Anne Holfve-Sabel*: Attitudes towards Swedish comprehensive school. Comparisons over time and between classrooms in grade 6. Gbg 2006. Pp 152.
243. *Caroline Berggren*: Entering Higher Education – Gender and Class Perspectives. Gbg 2006. Pp 162.

Subscriptions to the series and orders for single volumes should be addressed to:
ACTA UNIVERSITATIS GOTHOBURGENSIS, Box 222, SE-405 30 Göteborg,
Sweden.

ISBN 91-7346-556-9

