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Marianne Dæhlen

Centre for the Study of Professions, Oslo University College, Norway

marianne.dahlen@adm.hio.no

Change in job values during education

(Preliminary draft)

Abstract:

Previous research has suggested that preferences for work or job values are important in explaining occupational positions. However, these findings show rather conflicting results, indicating that job values emerge in different stage of life. Based on data obtained from a Norwegian Database for Studies of Recruitment and Qualification in the Professions, this study examines the influence of education and gender on change in job values. The results show that job values do change during education, but these changes are rather small and seem to be unrelated to gender and type of education. Differences in job values between men and women, and mainly between students on different programs, are maintained during education, indicating that choice of education is the first step in realising one’s preferences for work. However, during education students on some programs seem to have changed their emphasis on “leisure” values and “having a work where you can work independently”. Still, the main impression is that education has a small impact on students’ change in job values.

Work-related preferences are a central topic in research on work and segregation and several studies have suggested that preferences for work are important in explaining occupational positions. However, values should not be interpreted as externally given, but rather as the result of socialisation processes throughout important stages in a person’s life. The question is; when does internalisation of work-related values take place? Are these kinds of values deeply rooted in a person’s early socialisation, which Hakim (1998, 2000) claims women’s so-called lifestyle preferences to be? Or do job values emerge during education while students prepare themselves for future careers and adjust to opportunities likely to be open to them? The role of education in the socialisation of the individuals is

strongly emphasised in functionalistic approaches (Parsons, 1959). A third possibility is that job values and work-related preferences are primarily influenced by adult experiences in and out of the labour market as asserted by, e.g. Crompton & Harris (1998) and Tolbert & Moen (1998).

The study focuses on the influence of higher education on students' job values. Is such education important in shaping students' job values, or are the students' job values already determined when entering an educational program? In other words, do job values change during education indicating that education has an important role beyond teaching the students theoretical and practical skills as implied by a Parsonian view of education, or are job values more stable indicating these kind of values to be more deep-rooted in a person as suggested by Hakim?

Most empirical research on job values has had a particular focus on the influence of gender in particular, and a large body of recent research shows that men and women seek different rewards from working (Beutel & Marini, 1995; Marini, Fan, Finley & Beutel, 1996; Birkelund, Gooderham & Nordhaug, 2000; Konrad, Ritchie, Lieb & Corrigan 2000). Research on gender and job values has paid little attention to the importance of education. On the other hand, there is a long tradition in studying the impact of colleges on students (Feldman, 1969; Pascarella & Terenzini, 1991; Pascarella, Wolniak & Pierson, 2003; Beekhoven, De Jong & Van Hout, 2003). However, this research mainly addresses how colleges impact on career plans, study progress etc. The influence of education on change in job values has rarely been examined. This is surprising given the importance attached to the teaching of attitudes and ethics in many educational programs. It is also surprising in view of the findings that "...education emerges as the most important predictor (...) of job preferences, even after controlling for occupation" (Tolbert & Moen, 1998: 181).

One exception, however, is Johnson & Elder's (2002) study about change and stability in job values among people who have obtained post-secondary education and among those who have not. The findings show that change in job values depends on level of education and that more educated workers place greater emphasis on extrinsic rewards at work than less educated workers. However, more detailed distinctions between types of education seem necessary.

Past research on job values has distinguished between extrinsic and intrinsic rewards from working. While high income, job security, and opportunities for advancement are

considered extrinsic rewards, meaningful work tasks, altruistic and social rewards, are characterised as intrinsic. Much of recent research on gender-related job values shows that men place greater emphasis on extrinsic rewards while women place greater emphasis on intrinsic rewards. Additionally, studies have shown that women are more likely to value the possibility of part-time work and flexible working hours (see, e.g., Tolbert & Moen, 1998, and the studies cited therein). These dimensions have been central in both cross-sectional studies of job values and in longitudinal studies of change in job values. In this article, I focus on the following types of rewards; altruistic rewards include helping other people and being useful to society; extrinsic rewards reflect the possibilities for high income and promotion; leisure values are flexible working hours and a lot of leisure time; intrinsic rewards such as an interesting job; social values include contact with other people; security against unemployment; and finally, a job were you could work independently.

The students in this study are on programs that lead to professional diplomas at the undergraduate level, and quite a few of them lead to a position in the public sector of the economy. Care for children, elderly and the sick are to a high degree left to these professionals, and central educational groups are typically welfare state educations like Teacher Education, Social Work, and Nurse. Characteristic for these occupations is their orientation towards pupils, clients, or patients and they are connected to altruistic and social rewards of work. The high degree of flexible working hours and possibilities for part-time work is a common feature as well. Additionally, these professions recruit more women than men. However, programs less oriented towards e.g. clients such as Journalism, Business and Public administration, are represented as well. These studies have a more balanced share of men and women. Than again, these professions are more characterised by extrinsic rewards at work. In some ways, the higher the level related to altruistic and social rewards from working as a professional, the lesser the share of men.

Contrasting educational programs with different job values involved and to some extent different share of men and women make it an advantageous position in examining education's impact on job values. If education is important in explaining job values, the question is what factor in education is decisive? The results show that education is important in explaining job values but primarily as a way to select students with different preferences for work to different educational programs.

One reason for the lack of empirical studies of change in job values during education may be that most studies are either cross-sectional or panel data from cohorts by birth (e.g. Shu & Marini, 1998; Johnson, 2001a; Tolbert & Moen 1998) and not by school class. In examining change in job values during education, longitudinal data on different groups of students are needed. This study uses panel data from students at university colleges of professional education, and information about job values in the first and the final year of schooling makes it possible to examine the influence of education on job values. Since students are clustered in educational programs, multilevel methods are used.

Change or stability in job values

Recent research has shown a considerable change in job values during the transition from adolescence to adulthood. Furthermore, young people seem to have unrealistically high occupational aspirations and women's aspirations seem to be higher than men's (Johnson 2001a). Thus, aspirations decline with age due to experiences of constraints and available opportunities in the labour force. This decline seems to be relatively larger for women than for men and, consequently, gender differences in job values narrow. Based on the same data, other studies by the same author have shown a considerable change in job values in relation to social origins and age (Johnson, 2001b; Johnson, 2002). These studies show that job values change, and Johnson concludes that job values are adapted to the rewards received at work and get more realistic with age. When it comes to job values and level of education the findings show that job values change with continued schooling, but they also influence further investment in education (Johnson & Elder, 2002). Consequently, recent empirical work indicates a change in job values from the age of 15-16 to the age of 31-32. However, if change in job values appears first and foremost in the early adulthood or later on is less examined, even if these studies indicate the latter.

The findings in Tolbert & Moen's study (1998) support the latter point of view. They suggest that preferences for job attributes are shaped by work conditions. Their study shows that men and women seek different rewards at work, i.e. men are more oriented toward extrinsic rewards and women are more oriented toward intrinsic rewards. Furthermore, the findings indicate that this gender gap is likely to be widest among younger workers and students and that it narrows with age.

Hakim (1998, 2000), however, claims that women's preferences for work, domestic life and leisure, so-called lifestyle preferences, are more stable and developed by early adulthood. Furthermore, she disagrees with the concept of treating women as a homogeneous group and focuses on the heterogeneity of women rather than differences between men and women and suggests that women's occupational choice is based on their commitment to either career or family.

So far, studies of change in job values or work commitment show rather conflicting results, indicating that preferences for work emerge in different stage of life. When Hakim suggests women's lifestyle preferences to be deeply rooted in early adulthood and less likely to change, she indirectly points out the importance of institutions like the family, in the process of socialisation and internalisation of lifestyle preferences. Others, who emphasise the influence of rewards received at work on job values change, somehow seem to stress the importance of the labour market in the process of internalising important job values.

Then again, according to arguments raised by Parsons, one of the primary functions of the school class is as an agency of socialisation "...which individual personalities are trained to be motivationally and technically adequate to the performance of adult roles" (Parsons, 1959: 297). Socialisation of students' commitment to and identification with the future occupation is also assumed to be of vital importance in professional schooling (Freidson, 2001).

So far, three outcomes seem possible. Preferences for work are stable, the change during education or they change as a result of experiences in the labour market. The question in this study is; does the system of higher professional education influence the students to emphasise central job values and prepare them to be motivationally adequate for their future roles as professionals? In other words, do students' job values change during education?

Change or stability by gender and education

According to Hakim there is no reason to expect a change in the students' job values due to the assumption that these kinds of values are more dependent on experiences and socialisation prior to choice of education. In that case, preferences for work or job values are mechanisms that direct people into different occupations and consequently similarities in job values among men and women holding the same kinds of jobs seem likely to expect.

Recent empirical work on work attitudes confirms this similarity in attitudes between the sexes (e.g. Marsden, Kalleberg & Cook, 1993; Rowe & Snizek, 1995). In other words, while men and women on typically client-oriented programs are expected to emphasise altruistic and social values when recruited, students on e.g. Public administration and Business are likely to have extrinsic preferences for work.

However, it may be the case that any similarity among professionals at work is a result of influences during education or work, implying that these kinds of values change and are not as deep-rooted as claimed by Hakim. If education influences job preferences, two outcomes seem possible. Firstly, among men and women on the same program it seems reasonable to expect that any original differences lessen during education as a result of being exposed to the same influence. Thus, gender-related differences decrease and men and women on the same program become more alike. Secondly, if the students' initial job values differ and subsequently select different educational pathways, it seems reasonable to assume that differences in job values between educational programs will widen during education. For instance, Public administration and Business students become more oriented towards extrinsic values, while Nurse students become more oriented towards altruistic values.

Data, measures, and methods of analysis

The data are obtained from the Database for Studies of Recruitment and Qualification in the Professions (StudData) in Norway. StudData contains responses to questions covering a wide range of issues asked in the first and final year of schooling.¹ Most of the educational programs the students attend require three years of full-time study, including work placement periods. The programs lead to professional diplomas at the undergraduate level. The surveys were conducted autumn 2000 (wave 1) and spring 2002/03 (wave 2). For the most part panel data is available, but due to panel attrition and new participants in wave 2 some data are cross-sectional and thus information is only available from either wave 1 or wave 2. In the following analyses both panel and cross-sectional data are used. However, the analyses have also been carried out using only the panel data. These analyses showed more or less identical results.

About 2 500 students on different educational programs and university colleges were asked to participate in the first survey and approximately 74 percent of them did so. In wave 2 a few more educational programs were included and roughly 75% of almost 3 700 invited

participated. However, the panel retention is somewhat different (about 46 percent) due to dropouts, non-response in wave 1 or wave 2, and missing responses on one or more of the statements. This may involve a bias. However, attrition due to missing responses on one or more of the statements is not likely to be systematic and to have any substantial effect on the results on change in job values. Apparently, panel attrition, whether caused by absence, or probably more vital, by leaving college, seems to be complex and ought to be looked into further in another context.

The students are from 32 different classes. As mentioned, for some students we have information about job values from two points in time. This nested membership between wave 1 and 2, the students and the classes calls for a multilevel modelling. While Ordinary Least Square regression models do not take into account any variance at different levels but only at the individual level, multilevel techniques make it possible to examine contextual effects of for instance belonging to the same school class. Additionally, if panel attrition is independent of any other variables, multilevel structures make it possible to obtain efficient estimates even with different number of measurement occasions (Goldstein, 2003). In this article I use a three-level random intercept model where the two points of time (wave 1 and 2) is at level one, students at level two, and finally the 32 different school-classes at level 3. The model can be written as:

$$Y_{ijk} = \beta_{0ijk} + \beta_1 X_{1ijk} + \beta_2 X_{2jk} + \beta_3 X_{3k} + \dots + \beta_p X_{pk} + v_{0k} + u_{0jk} + e_{0ijk},$$

where Y_{ijk} is the emphasis on the actual job value in wave i for person j in school class k . In both waves the students were asked to grade the importance of ten statements about different conditions when considering a job offer. Following previous studies of job values, seven job value domains were distinguished. Altruistic, leisure, and extrinsic job values are measured by the mean score of two different statements while 'an interesting job', 'a job that establishes contact with other people', 'security against unemployment', and 'a job where you can work independently' are measured by a single statement. Value 1 indicates *not important* and value 4 indicates *very important*.² β_{0ijk} is the fixed part and represents the intercept. The random effects ($v_{0k} + u_{0jk} + e_{0ijk}$) vary with period of time, individuals and classes. $\beta_1 X_{1ijk}$, $\beta_2 X_{2jk}$, $\beta_3 X_{3k}$, and $\beta_p X_{pk}$ are fixed effects of the relationship between the independent variables and job values. Independent variables in the analyses are job values in

wave 2, gender and different educational programs. Due to the size of the school-classes and assumed similarities in job values among some of the programs I operate with only eight different educational programs in the analyses. The data set is restructured so that each occasion (wave 1 and 2) produce separate records, i.e. two records have been produced per student. Descriptive statistics for all variables are given in Table 1.

I begin by describing any change in job values during education in simple tabular analysis followed by examining the correlations between values at wave 1 and 2. Then, any change in job values during education by gender and educational program is explored in predicting multilevel regression estimates.

RESULTS

Table 1

Change in job values

Regardless of gender, students find a wide range of job rewards rather desirable. The average emphasis on job values is highest regarding the intrinsic job value having “an interesting job”. Additionally, the average emphasis is relatively high on “altruistic values” and the job features “a job that establishes contact with other people”, and “security against unemployment”. With few exceptions, women’s average emphasis on job values is higher than men’s.

The results indicate a general reduction of the importance of job values, but also relative small changes between men and women from wave 1 to wave 2. Any difference between men’s and women’s job values seems to continue during education. Additionally, changes in job values seem to go in the same direction for men and women and any difference in how male and female students change their job values are small and not significant at the 0,05 level with the exception of “having a job with a lot of leisure time”. Consequently, the results indicate that gender-related differences in job values are maintained during education.

In table 2 the results of correlations between job values in the first and final year of schooling indicate some changes in job values which are consistent with previous research

(Johnson 2001a). This change seems to be strongest in job features like “having an interesting job”, “security against unemployment,” and “a job with flexible working hours”. However, any gender-related change in job values has not been identified (table 1).

Table 2

Effects of gender and education on job values change

Table 3 shows multilevel regression estimates of the relationship between job values, gender and educational programs. The intercepts express the importance ratings for the different types of rewards among female students on Teacher Educational program in the first year.

Table 3

In the beginning of an educational program there are systematic differences in job values between students on different programs. The results of the chi-square tests indicate that differences in job values can be explained as differences between educational programs with the exception of “leisure values” and “having an interesting job”. The general impression is that students are selected to specific programs by their job values. On the one hand, students on programs characterised by an orientation towards pupils, clients, or patients, like Teacher Education, Social Work, Early Childhood Education, Nurse, and Therapeutical programs, tend to emphasise “altruistic values”, “contact with other people”, and “security against unemployment”. On the other hand, students on the remaining programs, which have less orientation towards clients etc, tend to emphasise these values less. While students on Public administration and Business place greater emphasis on both “extrinsic values” and “work independently”, students on Technical programs value “extrinsic values” more and students Journalism, Library and information Science value to have “a job were you can work independently”.

In the beginning of an educational career there is a slight difference in how male and female students emphasise different job values, even when controlling for any impact of different choice of education. However, these differences seem not to be a result of traditionally gender-related differences in job values. Even if men, compared to women, place less emphasis on “altruistic job values”, they also place less emphasis on “interesting job” and

“security against unemployment”. In addition, the estimated effect of gender on “leisure” and “extrinsic rewards” is small and not significantly different from zero. The results indicate, however, that women generally place greater emphasis on job rewards than men do, which is consistent with previous research (Johnson 2001a). This trend seems to continue during education. In sum, when considering the importance of educational choice on job values, the results indicate that the relationship between gender and job values is more complex.

The results indicate, as already shown in table 1, that students adjust the importance of job values downwards. However, with the exception of changes in “leisure values” and “work independently”, the chi-square tests indicate that no change is a result of the training they have gone through. Change in job values seems to occur among students on different educational programs. The overall picture indicates that original differences in job values between educational programs are maintained during education. For instance, first year students on Teacher Educational program are less oriented towards extrinsic job values than students on Public administration and Business. During education the teacher students downgrade their emphasis on this job value, but students on Public administration and Business do this as well. Consequently, the difference between students on the two programs is maintained.

“Altruistic values” and job features like “contact with other people”, and “security against unemployment” are still more important among students on Teacher Education, Social Work, Early Childhood, Nurse, and so-called Therapeutical programs. “Having an interesting job” is important for all the students and even if students on Journalism find this more desirable than Teacher students, the estimates for the students on the remaining programs are small and not significantly different from zero at the 0.05 level. Additionally, the chi-square test is not significantly different from zero. In other words, the results indicate that this is a desirable job feature for students on different educational programs. Additionally, the random effect of school class variance is small and not statistically significant except in the case of extrinsic values and security against unemployment. Consequently, there are few differences between classes within the same program.

So far, when examining job values among students on different educational programs, the results show that students are selected by their preferences for work and that differences between programs are more or less maintained during education. Even if men and women do differ in some aspects of job values their change is more or less in the same

direction. In other words, students – both men and women - seem to be highly selected by their job values and these job values seem to continue during education.³ In other words, job values seem to be stable as suggested by Hakim.

However, in the case of leisure values and the job feature having a job where you can work independently, the predicted estimates indicate changes by educational programs, which is also supported by chi-square tests being significant different from zero at the 0,05 level. Figure 1 and 2 shows change in the emphasis on “leisure values” and the job feature “having a job where you can work independently”.

Figure 1

The trend seems to be that students find this job value more important during education, and especially students on Public administration and Business and Social Work have increased their emphasis. Students on Teacher Education program, however, find this job value less important during education. Additionally, the increase in this emphasis among students on Therapeutical programs and Journalism and Library & information science is not significant different from zero at the 0,05 level.

Figure 2

Students on Early Childhood Education and Technical programs have increased their emphasis on the job feature work independently compared to students on Teacher Educational program. For students on the remaining programs the differences is not significant different from zero.

To sum up, job values do change during education, but these changes are rather small and unsystematic. Any change in job values seems not to be explained by gender and type of education. Students seem to be selected by their preferences for work, and these preferences are to a large degree maintained during education. However, in the case of “leisure values” and “having a job where you can work independently”, the findings show that students on different educational programs change their emphasis in different directions. However, these findings are not necessary in conflict with arguments claiming that students are selected by their job values. It may just indicate that students’ knowledge of the rewards

they can expect is less accurate related to these two job values. Thus, a detailed distinction between types of education seems to be important in explaining students' job values.

Conclusion

Education is important in explaining job values, but primarily as a selection to different educational programs. The results imply that education is an arena that directs people with similarly job values into the same programs. Choice of education seems to be the first step in realising one's preferences for work. In other words, students seem to be highly selected by their job values, which indicate the importance of socialisation and experiences prior to choice of education as Hakim claims women's life-style preferences to be.

Changes in job values during education are rather small and seem to be unrelated to gender. Additionally, differences in job values are better explained by different educational programs than by gender. However, some differences between the sexes are revealed, but these are not primarily gender-related in the way that men seek extrinsic rewards and women seek intrinsic. The results indicate, however, that women place greater emphasis on job rewards than men do, which is also confirmed in previous research (Johnson 2001a). Both male and female students seem to be highly selected by their job values and these job values seem to continue during education. Any estimated change in job values is rather small and indicates more or less the same effect on men and women's change in job values. However, the differences between programs are rather distinct. These results support Hakim's assertion of the need for examining differences within the sexes and not only between men and women. However, we should not shut out the possibility of gender-related change in job values when they obtain experiences in the labour market.

Table I: Descriptive Statistics

Educational programs, Wave 2	Women	Men	Share of women	N
Social work, including Child Care and Social education	15,09	11,50	85,27	224
Early childhood Education	10,90	2,09	95,83	144
Teacher Education	19,91	35,89	70,99	355
Nurse	21,48	6,97	93,15	292
Therapeutical, including Physiotherapy and Prosthetics & Orthotics	10,35	8,71	83,97	156
Technical, including Biomedical Lab, Science, Radiography, and Dental Technology	11,14	8,71	84,94	166
Journalism, Library and Information Science	6,16	12,54	68,42	114
Business and Public Administration	4,98	13,59	61,76	102
Total	1 266	287	81,52	1 553

How do you value different conditions when considering a job offer (1=not important...4=very important)						
	Women			Men		
	Wave 1	Wave 2	Change	Wave 1	Wave 2	Change
<i>Altruistic values</i>						
A job where you can help other people	3,42	3,31	-0,11**	3,16	3,06	-0,10
A job that is useful to society	3,24	3,14	-0,09**	3,08	2,99	-0,09
<i>Leisure</i>						
A job with flexible working hours	2,64	2,68	0,05	2,49	2,61	0,11
A job with a lot of leisure time	2,58	2,61	0,03	2,74	2,60	-0,14*
<i>Extrinsic values</i>						
High income	2,65	2,56	-0,09**	2,61	2,41	-0,20**
Good prospects for promotion	2,82	2,74	-0,08**	2,72	2,55	-0,17**
<i>An interesting job</i>	3,83	3,70	-0,14**	3,76	3,62	-0,13**
<i>A job that establishes contact with other people</i>	3,61	3,48	-0,13**	3,43	3,32	-0,11*
<i>Security against unemployment</i>	3,53	3,27	-0,25**	3,23	2,91	-0,32**
<i>A job where you can work independently</i>	2,79	2,88	0,09**	2,73	2,89	0,16*

Note: Change in job values is significant at the **=0,01 level, and at the *= 0,05 level (paired samples test). The difference in women and men's change in job values is not significant at the 0,05 level (independent samples test) except in the case of A job with a lot of leisure time (significant at the 0,05 level).

Table 2: Correlations (Pearson's r) between job values at Wave 1 and Wave 2

	r	N
<i>Altruistic values</i>		
A job where you can help other people	0,462	1 119
A job that is useful to society	0,404	1 106
<i>Leisure</i>		
A job with flexible working hours	0,352	1 100
A job with a lot of leisure time	0,414	1 088
<i>Extrinsic values</i>		
High income	0,439	1 131
Good prospects for promotion	0,466	1 031
<i>An interesting job</i>	0,225	1 105
<i>A job that establishes contact with other people</i>	0,413	1 120
<i>Security against unemployment</i>	0,318	1 123
<i>A job where you can work independently</i>	0,412	1 104

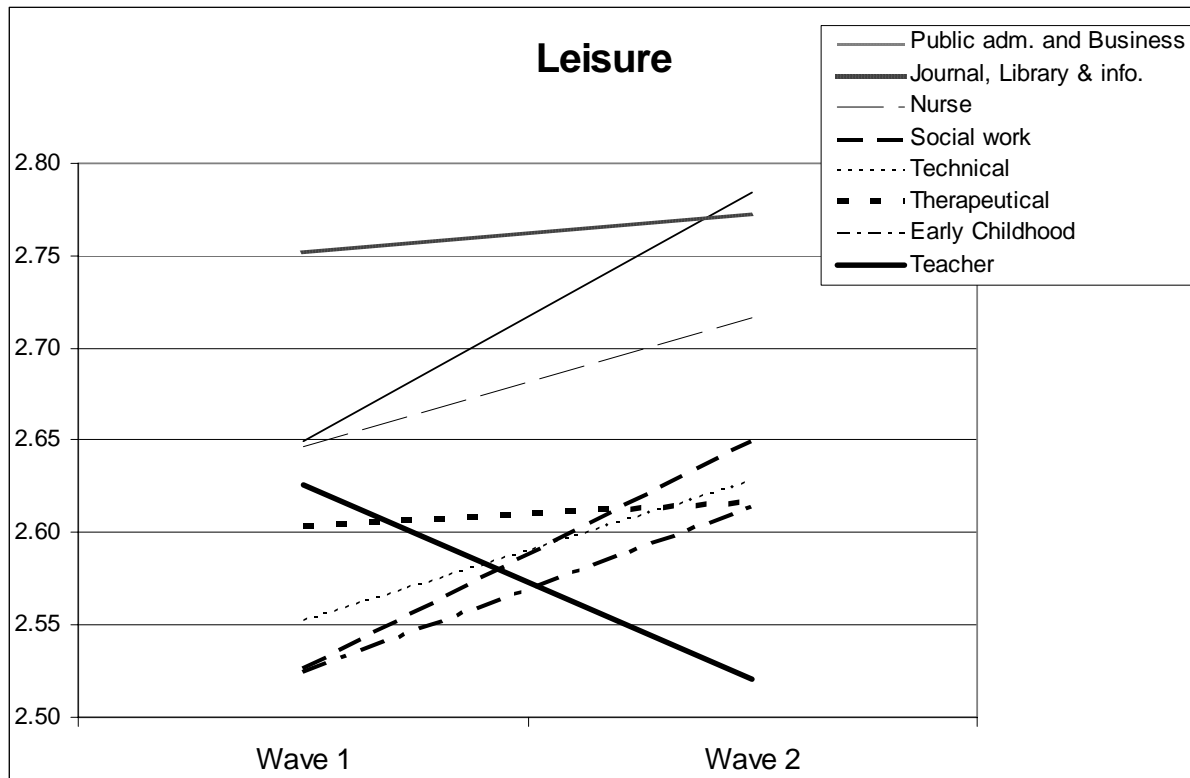
Table 3: Multilevel regression estimates predicting job values at wave 1 and wave 2 by educational programs (two records per student)

	Altruistic	Leisure	Extrinsic	Interesting job	Contact with other	Security	Work independently
Fixed effects:							
Intercept	3,424**	2,626**	2,611**	3,803**	3,695**	3,619**	2,674**
Wave 2	-0,128**	-0,105*	-0,144**	-0,090*	-0,075	-0,277**	0,008
Gender (omitted: women)	-0,155**	-0,006	-0,045	-0,068	-0,152**	-0,253**	-0,091
Educational programs (omitted: Teacher Education)							
Social work	0,118	-0,099	0,106	0,047	0,005	-0,126	0,089
Early Childhood Education	-0,089	-0,101	0,100	0,017	0,055	-0,049	-0,034
Nurse	-0,016	0,021	0,197*	0,024	-0,036	-0,084	0,122
Therapeutical	-0,062	-0,023	0,126	0,081	0,070	-0,099	0,241*
Technical	-0,405**	-0,074	0,261**	0,003	-0,446**	0,030	0,097
Journalism and Library & info. science	-0,439**	0,126	-0,023	0,131*	-0,425**	-0,487**	0,493**
Public adm. and Business	-0,596**	0,024	0,395**	-0,056	-0,311**	-0,271*	0,293*
Gender * wave 2	0,027	-0,036	-0,077	-0,017	0,016	-0,067	0,108
Educational programs * wave 2							
Social work * wave 2	0,030	0,228**	0,039	-0,035	-0,005	0,017	0,056
Early Childhood Edu. * wave 2	0,067	0,194*	0,195**	-0,040	-0,123	0,021	0,254**
Nurse * wave 2	0,029	0,174**	0,117*	-0,063	-0,029	0,023	0,120
Therapeutical * wave 2	0,011	0,118	0,040	-0,061	-0,121	0,094	0,015
Technical * wave 2	0,078	0,181*	0,059	-0,101	-0,153*	-0,007	0,248**
Jour. and Library & info. *wave 2	0,077	0,125	-0,078	-0,005	-0,033	0,051	-0,043
Public adm.and Business * wave 2	-0,027	0,239*	0,042	-0,029	-0,130	0,053	-0,097
Random Effects:							
School class-variance	0,003	0,001	0,007*	0,000	0,003	0,007*	0,009
Individual-variance	0,164**	0,201**	0,171**	0,046**	0,123**	0,112**	0,226**
Wave- variance	0,219**	0,268**	0,198**	0,165**	0,230**	0,320**	0,346**
Chi-square test of Educational programs							
(7 df)	105,276**	8,895	24,653**	10,079	86,933**	32,357**	25,517**
Chi-square test of Educational programs *	2,679	15,849*	13,476	3,713	9,211	1,640	18,305*

wave 2 (7 df)							
-2 loglikelihood	4817,357	5333,023	4692,737	3338,777	4653,080	5275,167	5864,105
N	2 679	2 671	2 686	2 643	2 666	2 670	2 645

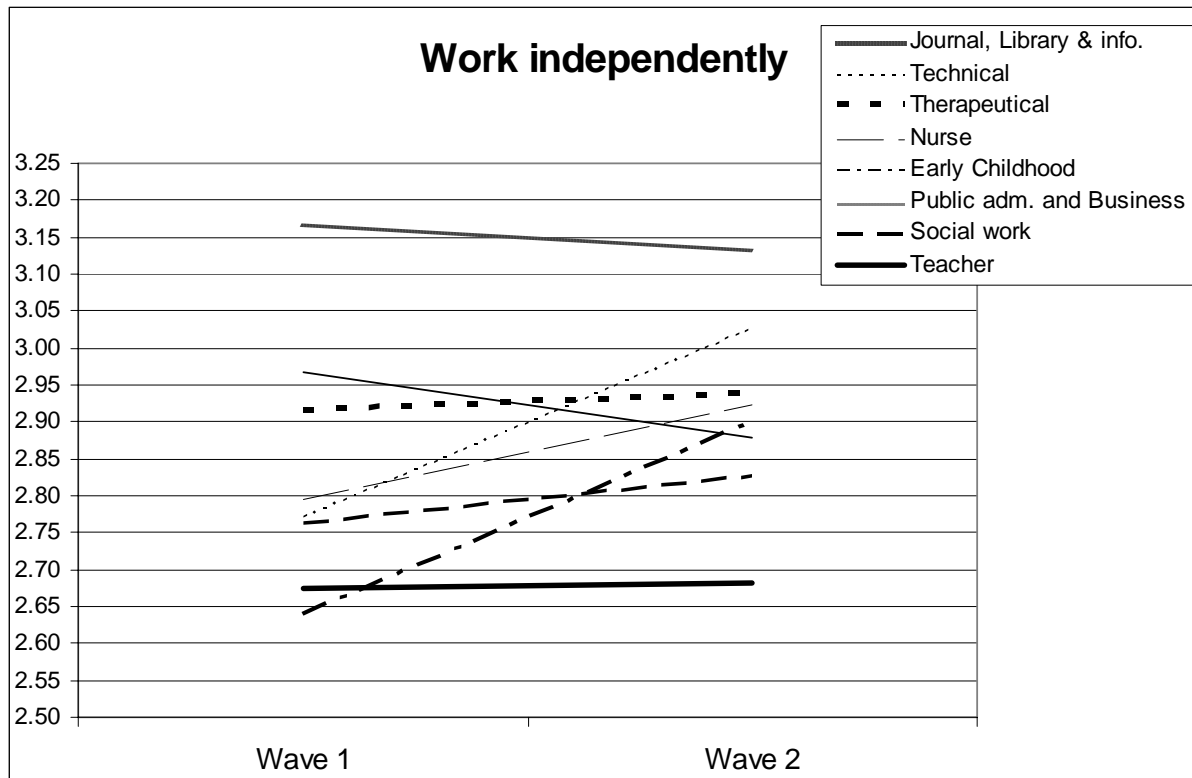
Note: **p < .01, *p < .05

Figure 1: Change in emphasising “leisure values” during education by educational programs



Note: From table 3, female students

Figure 2: Change in emphasising “having a job where you can work independently” during education by educational programs



Note: From table 3, female students

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Notes

¹ Additionally the database is designed for further two samples. The next data collection (wave 3) is in progress, about two years after graduating, and the second (wave 4) is planned five years after graduating. In addition the database includes answers from a second panel. In this panel the individuals were invited to participate in the survey upon finishing their studies (spring 2001). The database is designed for further two samples, two and five years after graduating.

² In wave 2 the students were asked to grade the importance of the statements on a scale from 1 indicating *not important at all* to 5 indicating *very important*. Responses to value 1 and 2 are treated together and consequently the scale is from 1 *not important* to 4 *very important* in the second wave as well.

³ Previous research has shown an impact of social class origin and age in addition to gender in explaining job values. Due to the fact that some students have previous experiences from paid work, this may be important to consider as well. I have estimated regression models that include parents' education, age, and experiences from paid work. Few parameters were found to be significantly different from zero at the 0,05 level and only minor changes in the models.