

Origins of the modern career: Individual determinants of career mobility during
modernization - The example of the Netherlands ca. 1865– 1940

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Introduction

In the last decades there has been renewed interest in a long-term perspective on studying careers. One reason for this renewed interest in the historical study of careers is that what is nowadays referred to as “modern career” is assumed to have its breeding grounds in the mid to late 19th century. From that time on careers are assumed to have developed towards becoming more successful, that is towards upwardly mobile working lives. However, empirical knowledge about the shape of occupational careers and the conditions affecting this shape in the period before the 1940s is surprisingly scarce and scattered (cf. Rosenfeld 1992 for the most comprehensive review for the time after World War II). In general it is either based on 1) specific occupations (cf. Mitch, Brown & van Leeuwen 2004 Chapter 13 on agricultural workers in Norfolk), 2) one or more organizations in comparison (Mitch et al. 2004 Chapter 4 on case studies on the post office, Great Western Railways and Lloyds Bank), or 3) regional samples (van Dijk 1984, on regions in the Netherlands). The restriction to certain small regions or specific occupational groups prohibits a generalization of the findings.

Research and theory development have also been hampered by the ambiguity of the concept “career”. It carries a host of different connotations, ranging from the view that only upwardly mobile people have careers - and therefore a large part of the population does not have a career at all - to a more comprehensive understanding of careers as complete working lives including downward, lateral and upward mobility, and even periods of unemployment (Mitch et al. 2004, chapter 1). We will use this last definition and study any kind of careers, characterized by upward mobility, by downward mobility or by no mobility at all. Additionally, we will focus on the successful career.

The research question we will answer is: *Which individual characteristics explain whether people had successful occupational careers and how does this influence change over time, i.e. during the 19th and 20th century?*

We aim at contributing to the existing literature in two ways. First, we are employing a theoretical framework which addresses two important influences on careers: on the one hand we study the role of resources for careers by considering amongst other aspects the influence of human capital and parental status on occupational careers. On the other hand we study the impact of norms and social expectations on careers by considering expectations formulated as role models such as the male-bread winner and the female housewife model. Therewith we offer a more systematic theoretical approach to the long-term study of careers.

Second, our data, The Historical Sample of the Netherlands (HSN) is an excellent data base for studying careers in a long-term perspective. First, the data contain information on careers of 1295 men and 743 women who lived between 1845 and 1940. Since the data are a sample of birth, marriage and population registers all kinds of occupations as well as rural and urban areas are included. Second, by reconstructing life courses from the above mentioned sources we have for almost 2000 individuals between one and 26 measurements of occupational status. Therewith our data overcome many of the mentioned drawbacks of earlier research discussed before.

Theory Section

Resources

Human capital

The most basic approach to occupational attainment is human capital theory. Human capital is understood as formal as well as informal education and job experience, in general or specifically with regard to one's occupation (Mincer 1974). It has been argued that those with more (whatever sort of) human capital are more likely to get ahead (Becker 1975). More able persons will have more successful occupational careers, and they are also the last persons to be fired because they are the most valuable to an employer.

An additional hypothesis that follows from human capital theory is about the effect of experience on occupational success. Over a life course individuals gain experience specifically with regard to their job or in general with regard to their occupational field. Those experiences/ qualifications etc. help pursuing a successful career because experienced employees are more productive. Moreover, we assume that at a young age there will potentially be more returns of human capital in comparison to later phases of a life (Mincer 1974:128).

In literature the human capital theory is often applied to the effect of formal skills, i.e. schooling on income or successful careers (Mincer 1974). In the period and country we study, the Netherlands between 1865 and 1940, secondary schooling was still very rare. Primary school attendance, though, was common but not complete.

We therefore assume that basic schooling was not yet a common characteristic among the population (Boonstra 1993) and that therewith (basic) schooling played an important role as selection criterion for successful occupational attainment.

Although it took until 1901 till the first mandatory schooling law was introduced, already before most people had some basic schooling by that time (Mandemakers, 1996:50-55). Hence one could assume that during the 19th century the role of this type of human capital, basic reading and writing skills, changed over time as the distribution of this skill became more spread among the population. The more widespread this qualification became the less it served as selection criteria, for example for employers, thus its value for successful careers can be expected to have decreased.

Parental status

The next aspect to be discussed is the influence of parental status on occupational careers. According to the resources theory children from high status parents benefit from the resources of their parents and therefore have an advantage compared to those whose parents are not able to help. Ascribed characteristics are known to influence occupational attainment (Treiman 1970; Ganzeboom, Treiman & Ultee 1991,) and in pre-industrial and industrializing societies the occupational status of the father is considered as one of the most important factors (Kerr, Dunlop, Harbison & Myers 1960, Kaelbe 1985). High status fathers can help their children to attain occupational training or some education in order to enter their occupational career at a high level. They can give advice or use their social capital to facilitate upward mobility of the children (Ganzeboom, Treiman & Ultee 1991). Furthermore, children from a higher social background may inherit a family run

shop, company or farm or financial capital. The relation between father's and children's occupational status is usually studied by comparing the occupational status of two generations at one point in time. However, given that the father has an impact on the children's occupational status at one point in time it is very likely that there is an influence over the whole career. By influencing the starting position of the child parents can build a good (or better) base for future success and succeeding occupational positions are very often highly dependent on the entry positions. Thus, the more resources the parents are able to invest, the better the careers of the children.

While this association is rather well supported by empirical research (see Ganzeboom, Treiman & Ultee 1991 for a review) there is no conclusive evidence on how this relation changed over time (e.g. Kaelble 1985). Nonetheless, there has been theorizing.

The Logic of Industrialism thesis (Kerr et al. 1960; Treiman 1970) states that modernization processes (e.g. mechanization of work, urbanization etc.) led to an increase in the gross intergenerational mobility by heavily impacting the determinants of occupational mobility. A number of related mechanisms have been proposed which restricted parents in their possibilities to have a direct influence on the occupational decisions of their offspring (see Treiman 1970). First, during modernization and industrialization processes it came to a diversification of jobs and occupations. It follows that it simply was no longer possible for parents to pass over their skills and occupations to their children. Second, due to the specialization of labor, a greater number of jobs required specialized and longer training which families could not provide. Third, in the course of industrialization employers are assumed (to be forced) to choose their

employees increasingly on the basis of their merits, rather than on basis of their social background (Kerr et al. 1960, Blau & Duncan 1967). In sum, these mechanisms indicate that the occupational status of fathers is becoming less important for the success of the career of the children over time.

Partner support

Besides own and parental resources the influence of the spouse is expected to be a third source of support for occupational success. Theoretical approaches focus on the role of the partner to advice, support and also disburden the other, so that one can specialize and focus on occupational attainment (Kalmijn & Neumark 1991). This idea is often referred to as partner-support hypothesis and leads us to the prediction that married persons are more likely to have successful careers, and the more so the more resources the partner has. Theoretically, the resource theory does not predict gender differences with respect to partner-support, so that for both men and women we would expect a positive influence of being married on one's occupational career (Kalmijn & Luijkx 2005).

However, such differences follow from theories based on norms, expectations and discrimination.

Norms, expectations and discrimination

Next to the role of resources the societal context in which individuals live is shaping occupational careers of individuals. We will discuss the role of societal expectations and norms towards who should have what kind of career and also in how far people were restricted in pursuing their occupational hopes and dreams because they were discriminated against. Gender will be in the focus of the discussion. Gender inequalities are one of the most prominent factors enabling or restricting respectively people with regards to their careers. There is a vast amount of literature addressing current gender specific inequality with respect to work (e.g. Mandel & Semyonov 2006).

During the 19th and 20th century gender played an important role in the working sphere likewise (e.g. Lown 1990 for the UK, Leydesdorff 1970 for the Netherlands). In the following we will discuss in how far the societal expectations towards married men and women impacted their careers.

Marital status

Before, being married has been discussed already as a positive influence on occupational careers. Theory on social norms, expectations and discrimination provide us with other mechanisms on how marital status influences occupational success. For males it is referred to as the breadwinner/ family provider (role) model and for females the housewife norm (Vanhaute 2002; Pfau-Effinger 2004; Van Poppel et al. 2006). Both role models serve as an umbrella for a number of expectations towards (married) males and females.

According to the male breadwinner role model an increase in occupational success is to be expected after men get married, for two reasons (Kalmijn & Neumark 1991). First, once men get married and have children they have the full financial responsibility and society expects them to function as the (often only) family provider. Consequently, they invest more time and effort in their work and become more productive. Second, according to the employer discrimination hypothesis employers react positively towards married men. Married men are favored by employers since they are believed to be more committed to their jobs. Employers are also less prone to fire married men as this is considered less fair than firing a man with less responsibilities. On ground of these ideas married men can be expected to have more successful careers than non-married men.

The male bread winner model as described above is not static; it is assumed to change over time. Often a three-stage historical development of the economic integration of women (and therewith the dominance of the bread winner model) is assumed. In pre-modern societies an extensive integration into societal production is assumed, in industrial societies it came to a wide exclusion of women and during later stages of modernization women were re-integrated into paid work (for a discussion and critique of this model see: Pfau-Effinger 2004). If this idea of a historical evolution holds it is to be expected that in industrial societies the male breadwinner idea was most pronounced and less so in pre-industrial and modernizing times. For the period under study, the second half 19th century and the first half of the 20th century, which was characterized by tremendous societal change due to industrialization we therefore assume that the positive effect of marriage for men increased.

Equivalent to the male breadwinner model the expectations towards married women can be headed under the housewife model. Van Poppel et al. (2006) describe the long term development of this norm and argue that in the mid to late 19th century urban Dutch bourgeois women demonstrated their financial independence by abstaining from work once they got married. Those higher class examples led to an attachment of societal appreciation to household production, not to mention reputational benefits which women could gain. Though lower class families could financially not afford to follow this example, they withdrew from paid labor, but did not drop out of the labor market entirely, they concentrated their activities on cottage industry, family farm labor, serving and personal services, thus on areas in which informal, less organized and less successful careers took place (Leydesdorff 1970; van Poppel, van Dalen & Walhout 2006). In both cases, for high and low status women that would mean a disappearance from the formal labor market and therewith leave almost no chance of a successful career as under study here.

Employers

Probably as a consequence of the previously described normative expectations employed women faced considerable restrictions - implemented by employers - to enter certain job ladders. They were more often assigned to dead-end positions (Goldin 1994) or so called “marriage-bars” kept women from being employed once their got married (Thurow 1975, Leydesdorff 1977).

This discriminatory behavior of the employers has even been reinforced by strategies of women to financially survive. Because they were badly paid while working

in the official labor market² they had to work in the unofficial market as well. That helped them to finance their living and at the same time enabled the employers to say that they are obviously paying enough.

Figure 1 summarizes the theoretical arguments that will be empirically tested.

Figure 1: Summary of Hypotheses

Hypotheses on	Male			Female		
	Resources	Norms	Time	Resources	Norms	Time
Experience	+			+		
Literacy	+		-	+		-
Father's class	+		-	+		-
Married	+	+	+	+	-	-

+ indicates a positive effect on the occupational career (or a strengthening of the effect in the case of a change over time)

- indicates a negative effect on the occupational career (or a decrease of the effect in the case of a change over time)

² One argument of employees to pay working women so little was that “women working in a fabric can not be good” and therewith also did not deserve better (See chapter 6, Leydesdorff 1977)

Data & Methods

Sample

The Historical Sample of the Netherlands (HSN) provides us with information on occupational careers of individuals representative of the Dutch population of the nineteenth and twentieth century's (<http://www.iisg.nl/~hsn/>). The HSN is a newly available and excellent data base to study male and female careers, in different regions, and over time.

The HSN starts from a sample of birth registers from the period 1812-1922 (n=78.000). The main data sources for individual life histories are birth certificates, death certificates, marriage certificates and the population registers, which were introduced to obtain a continuous registration of the composition of households and the place of residence of each individual in the Netherlands. Every time a vital event occurred (e.g. marriage, birth of a child, move to another municipality) information on the individual and if applicable his/her family was recorded and updated respectively.

The collection of the data is still underway, therefore we will use a sub-sample of the data (HSN release life courses 2007_01) which consists of life courses of individuals born between 1850 and 1922 in the provinces of Friesland, Zeeland, Utrecht and the city of Rotterdam (see Mandemakers 2008). The data comprise information on someone's date of birth, marital status literacy, father's occupation as well as information about the occupations of the respondents.

Methods

Which individual characteristics explain whether people had successful occupational careers and how does this influence changes during the 19th and 20th century? To answer this question we estimated several multilevel models. Multilevel models are needed here because we deal with time varying information nested in individuals (e.g. occupational status and marital status) whom we study over time. Multilevel modeling enables us to take into account the fact that on some individuals we have more points of measurements and therewith information than on others (Snijders & Bosker 1999). Furthermore, we are able to analyze whether there is more difference in occupational status during a life course or between working life histories of different individuals. More specifically, the models estimated here are models in which the effects of different predictors (e.g. father's class or basic schooling) on a successful career are estimated. We study whole careers, without distinguishing early, mid or late careers in the life of an individual. Considering as example the effect of father's status on occupational attainment we interpret our findings as follows: over a whole career people with higher status fathers have more successful careers. For time varying predictors such as marital status we can likewise only say that for instance those who got married at some point are having on average more successful careers than those who did not get married (yet).

On the basis of the theoretical discussion we expect quite some differences for female and male careers. Therefore we estimated separate models for men and women.

Variables

Dependent variable

Assigning social positions to individuals (at different times in a persons' life) is a difficult task in itself. Doing so over two centuries and across different regions (national or international) is even more so. Differing occupational terminology hindered international and over time comparisons of occupational status for a long time (van Leeuwen et al. 2002). The development of the Historical International Standard Classification of Occupations (HISCO) is based on International Standard Classification of Occupations 1968 van het International Labour Office (ISCO68, 1969) and has made over time and international comparison possible (van Leeuwen, Maas & Miles 2004). All occupational information we use has already been classified in HISCO. Furthermore a continuous historical occupational stratification scale was developed, HIS-CAM (v0.1). In order to analyze occupational status, we will make use of the recently developed historical status scale HISCAM (Lambert, Zijdemans, Maas, Prandy, van Leeuwen 2008). CAMSIS scales assume that patterns of social interaction between people from different occupational strata (e.g. marriages) are representative of the overall occupational stratification structure. The HIS-CAM scale is an estimation of the occupational stratification structure, based on 1.5 million marriage records from 6 different countries (Britain, Canada, France, Germany, the Netherlands and Sweden) covering the period 1800-1938. The dependent variable is the occupational status of the respondent³ over the life course,

³ The term "respondent" may be misleading here as the HSN are not collected by means of a survey. However, for the sake of simplicity we shall refer to all individuals we have information about as respondents.

measured on a HIS-CAM scale which ranges from 1 to 100, where a higher value indicates a higher occupational prestige.

Independent variables

Experience: Occupational experience will be indicated by the age of the respondent. Every time information has been updated in the before mentioned original sources (e.g. marriage or death certificates) also the age of the respondent has been noted. Thus, for every measurement of occupational information we also have information on the age of an individual. Because we aim at studying occupational careers we restricted our analysis to people who are at least 15 years old without any maximum age, thus a life span in which people in the period under study were belonging to the working population. Moreover, age was divided by ten and additionally a quadratic term of age was added in the analysis. Note that age is a better indicator for men's occupational experience than for women's, as female careers are more likely to be interrupted by giving birth and taking care of children.

Basic schooling: As a proxy for whether the respondent attended basic schooling information on whether the respondent was able to sign the marriage certificate was used. When there was a signature the value 1 was assigned, if not the value 0. A drawback of this variable is however, that we only know of married people whether they are literates. This information is added in the data as time invariant, i.e. it is added as stable characteristic of a respondent.

Father's class: In order to test to what extent the social status of parents played a role for one's own career father's class is considered as predictor. A four class scheme which is a collapsed version of HISCLASS (<http://historyofwork.iisg.nl/>) is used, grouping fathers into 1) white collar 2) skilled worker 3) farmers and 4) unskilled workers. This variable is likewise time invariant. If more than one occupation of the father is known the occupational information about the father which is closest to the respondents birth was chosen.

Marital status: Through information from wedding certificates we are able to reconstruct who married and when. Being married is treated as a time variant characteristic. To all measurements of the occupational status the value 1 was assigned in case someone had been married and 0 if that had not been the case (yet). That means for someone who got married in 1890 a value of 0 is assigned to his or her marital status in 1885 and a value of 1 in 1892. For the time being we don't consider divorce or widowhood.

Gender: Respondents gender was taken into account by performing separate analysis for males and females. Because the theoretical ideas we testing expect very different outcomes and also mechanisms for female careers than for male careers we perform.

Year: We add the variable year which is an indication for each calendrical year since 1865. Therewith we acknowledge the fact that there have been overall changes in the occupational structure.

*****Table 1 and 2 about here*****

Descriptives

We analyze the birth cohort 1850-82. By 1940 these cohorts have finished their active occupational life. Table 1 provides information on the male (N=1194) and table 2 female (N=667) respondents. On average we have 4 measurements of occupational status of male respondents and 6 for female respondents. The average occupational status is 48 for male and for females.

Results

First, a null model has been estimated. This is a model without predictors which indicates how much variation in the dependent variable “occupational status” is to be found between individuals and within individuals, i.e. between the different measurements of occupational status of one respondent. There is more variation in occupational status between men than within a men’s career. The intraclass correlation states that 71% of the variance in the dependent variable can be explained by differences between individuals. For females the picture is very similar, here the intraclass correlation is 70%.

*****Table 3 about here*****

In the following first the models for male respondents will be discussed, followed by a discussion of the models for women.

Model 2 includes the variables “age”, a quadratic term of “age”, “literacy”, “marital status” and “year”. With increasing age the occupational status of people increases, however, as indicated by the quadratic age term this effect levels off at a certain level of experience. In comparison to the reference group (unable to sign) both groups, those who were able to sign and those about whom this information is lacking those who stay unmarried, have a higher occupational status, more specifically 12.20 and 13.87 points respectively. The next model includes additionally the effect of father’s occupational class on son’s occupational status. For sons from white collar and skilled worker background there is a strong positive effect on occupational status, that is to say 13.87 points for the white collars and 9.44 point for the skilled workers fathers. For sons from farmers there is no significant effect on their occupational status. In comparison to the first model, the second reduces the variance between men from 156.32 to 124.83. Moreover, according to the misfit indicator -2restricted loglikelihood the model performs significantly better (22852.728 to 20739.452). The last model also includes interaction of the variables “marital status” and “father’s class” with “year”. Note that the hypothesis formulated on the over time development of the effect of literacy could for technical reasons not tested. There are too few respondents which were not able to write, most likely are these respondents all from earlier birth cohorts⁴. Therefore no estimation of effects could be achieved. Over time only for sons of skilled workers there is a small

⁴ In due time an additional analysis on how the information concerning respondent’s literacy is distributed over the sample will be performed.

decrease in the positive effect on their occupational status. With every additional year (since 1900 due to mean centering) the effect of father's status decreases by 0.12. Meaning all other effects hardly change. Subsequently is to say that model 3 including all individual level predictors without interaction terms with year, performs best.

The same sequence of models was estimated for women. The effects are partly very different from those of the male respondents. Experience has a strong positive effect on women's occupational status and likewise the quadratic term is significant, meaning that also for women the positive effect of experience levels off. There are no significant effects of literacy on the dependent variable, whereas being married has a rather strong positive effect on occupational status, it increases by 4.26 points. Year is significant but the effect is very small, thus with every additional year from 1865 onwards the occupational status of women increases by 0.16 points. Both, the variance between and within individuals significantly decrease in comparison to model 1. The second model estimated includes additionally father's occupational status as predictors for female careers. Women having a white collar father in comparison to those whose father is unskilled workers have a higher occupational status. The occupational status seen over a life course is higher by almost 10 points, for skilled workers daughters (same reference category) by around 7 points. This model performs significantly better than model 2. - 2restricted log likelihood decreases from 13858.987 to 12353.412. Likewise for female respondents the last model includes interaction of the variables marital status and father's class with the year variable. An interaction of time and literacy is neither done for female careers, as there are even less female respondents who could not sign their marriage certificate. None of the interactions terms with "year" yield significant effects.

Subsequently is to say that model 3 including all individual level predictors without interaction terms with year, performs best also for females.

*****Table 4 about here*****

In sum the analysis for males and females yielded the following results: Age, and father's class have for both males and females positive effects on occupational status. Moreover, literacy only has for men positive effects, whereas being married only for women.

Discussion & conclusion

The analyses revealed that indeed we have to deal with very different mechanisms for female and male careers. We will first discuss results of the analysis for male careers and thereafter for female careers.

It seems that for male careers in the 19th and 20th century in the Netherlands the resources framework is able to explain best what is going on. The higher the occupational status of the father the more likely it is also that the son would pursue a successful career.

We expected according to the social norms and expectations towards men that after getting married their occupational status would increase as they would function as family provider. That is not the case, contrary we found a small decrease in successfulness of careers after men got married. There might be a more differentiated analysis of the effect of marital status on males careers needed. A rather surprising

finding concerns the over time development of the influence of father's class in case of the skilled workers sons. Whereas the theory expects a decrease in the influence of the father for all societal groups we only find this effect for the skilled workers.

Next to those theoretical ideas discussed before there are other, which additionally expect in times of societal changes such as industrialization a polarization in the occupational structure (Blossfeld & Mayer 1988). Thus it may be the sons of skilled workers which are concerned by changes in the educational and occupational structure in a negative sense. They may for example have more problems than other groups to follow their father's footsteps and therefore on average have less successful.

In comparison to male careers, female careers are much less well explainable by the resource framework. For women there is a rather mingled picture. Whereas literacy seems to have no impact, the father's influence is clearly visible and also being married is increasing the chances of having successful careers. Thus, in contrary to what we expected married women are not showing less successful careers, the contrary is the case. The most probable explanation concerns the composition of our data. Those who leave the labor market after marriage are no longer in our data. It seems to be the case that women with higher status occupations were more likely to stay in the labor market than women with less attractive occupations.

Furthermore, it could be that we simply do not see the careers of many (and maybe also many less successful women) because they officially dropped out of work as described in the literature (Leydesdorff 1977). It might have been the "hidden work" that therewith

got “forgotten”⁵ in so far as women would not note their occupations down in official registers and documents.

⁵ Based on the title of Leydesdorff book about female work is „Verborgen arbeid – vergeten arbeid“.

References

- Becker G. S. 1975 *Human Capital*. New York and London: Columbia University Press.
- Blau, P.M. & Duncan, O.D. 1967. *The American Occupational Structure*. New York: Wiley.
- Blossfeld, H.P. 1986 Career Opportunities in the Federal Republic of Germany: A Dynamic Approach to the Study of Life-Course, Cohort, and Period Effects, *European Sociological Review*, Vol. 2, No. 3. pp. 208-225.
- Blossfeld, H.P. & Mayer, K.U. 1988 Labor Market Segmentation in the Federal Republic of Germany: An Empirical Study of Segmentation Theories from a Life Course Perspective, *European Sociological Review*, Vol. 4, No. 2, pp. 123-140
- Carroll, G.R. & Mayer, K.U. 1986 Job-Shift Patterns in the Federal Republic of Germany: The Effects of Social Class, Industrial Sector, and Organizational Size *American Sociological Review*, Vol. 51, No. 3, pp. 323-341.
- Diewald, M. & Tölke, A. 2003 Insecurities in employment and occupational careers and their impact on the transition to fatherhood in western Germany, *Demographic Research* Vol. 9, Art. 3
- Dijk, H. van, J. Visser & E. Wolst. 1984. Regional differences in social mobility patterns in the Netherlands between 1830 and 1940. *Journal of social history*, 17: 435-452.
- Goldin, C. 1994 Understanding the Gender Gap: An Economic History of American Women. In *Equal Employment Opportunity: Labor Market Discrimination and Public Policy*. Burston P. (ed.) Aldine de Gruyter: New York.
- Ganzeboom, H.B.G., Luijkx, R. & D.J. Treiman. 1989. Intergenerational Class Mobility in Comparative Perspective. *Research in Social Stratification and Mobility*, 8: 3-34.
- Heath, A. 1981 *Social Mobility*, Glasgow: Fontana.
- International Standard Classification of Occupations: Revised edition 1968. (1969). Geneva: International Labour Office.
- Kaelble, H. 1985. *Social Mobility in the 19th and 20th Centuries. Europe and America in Comparative Perspective*. Leamington Spa: Berg Publishers.

- Kalmijn, M. & Luijkx, R. 2005 Has the reciprocal relationship between employment and marriage changed for men? An analysis of the life histories of men born in the Netherlands between 1930 and 1970 in *Population Studies*, Vol. 59, No. 2, pp. 211-231.
- Kerr, C., Dunlop, J.T., Harbison, F.H. & Myers, C.A. 1960. *Industrialism and Industrial Man*. Cam., Mass.: Harvard Uni. Press.
- Kuznets, S. 1957. Quantitative aspects of the economic growth of nations, II, industrial distribution of national product and labor force. *Economic Development and Cultural Change*, 5 (July, supplement): 1-111.
- Lambert, P.S., Zijdeman, R., Maas, I., Prandy, K., and van Leeuwen, M (2008) *HIS-CAM - Presentation and evaluation of an historical occupational stratification scale based upon the analysis of social interaction*. Paper presented to the European Social Science History conference, Lisbon, 26 February - 1 March 2008.
- Leeuwen, M. H.D. van, Maas, I. & Miles, A. 2004 Creating a Historical International Standard Classification of Occupations, *Historical Methods*, Fall 2004, Volume 37, Number 4.
- Leydesdorff, S. 1977 *Verborgen arbeid, vergeten arbeid. Een verkenning in de geschiedenis van de vrouwenarbeid rond negentien-honderd*. Amsterdam: Gorcum Assen
- Lown, J. 1990 *Women and Industrialization: gender at work in nineteenth-century England* Polity Press: Cambridge
- Mandel, H. & Semyonov, M. (2006). A welfare state paradox: state interventions and women's employment opportunities in 22 countries. *American Journal of Sociology*, 111, 1910-49.
- Mincer, J. 1974 *Schooling, Experience and Earnings*. New York: National Bureau of Economic Research.
- Mitch, D., Brown, J. & Van Leeuwen, M.H.D. (eds.) *Origins of the modern career*. Aldershot: Ashgate.
- Poppel, F. & van Dalen, H. & Walhout, E. 2006. Diffusion of a Social Norm: Tracing the Emergence of the Housewife in the Netherlands, 1812-1922, *Tinbergen Institute Discussion Papers* 06-107/1, Tinbergen Institute.
- Rosenfeld, R.A. 1992 Job Mobility and Career Processes in *Annual Review of Sociology* 18 pp. 39-61.

- Snijders, T.A.B. & R.J. Bosker. 1999. *Multilevel Analysis. An introduction to basic and advanced multilevel modelling*. London: Sage Publications.
- Sullerot, E. 1969 *Geschiedenis en sociologie van de vrouwenarbeid*
Paul Brand
- Sørensen, A.B. 1975 The Structure of Intragenerational Mobility, *American Sociological Review*, Vol. 40, No. 4, 456-471.
- Treiman, D.J. 1970. Industrialization and social stratification. Pp. 207-234 in E.O. Laumann (ed.), *Social Stratification: Research and Theory for the 1970s*. Indianapolis: Bobbs-Merrill.
- Thurow, L. 1975 *Generating Inequality: Mechanisms of Distribution in the US Economy*, New York: Basic Books.
- Ultee, W.C. 1983. Het aanzien van beroepen, op andere plaatsen en vooral in andere tijden. Een analyse van een aantal recent historische studies in *Tijdschrift voor Sociale Geschiedenis*, 9: 28-48.
- Vanhaute, E. 2002 Breadwinner Models and Historical Models. Transitions in the Labor Relations and Labor Markets in Belgium, 19th -20th centuries, in: Jensen, H. (ed.) *The Welfare State: Present, Past and Future*, Pisa: Universita di Pisa
- Zijdeman, R. 2007 *Like my father before me. The impact of industrialization, education and other modernization processes on intergenerational status attainment in a Dutch province (Zeeland, 1811 – 1915)*, Paper prepared for the International Sociological Association Research Committee on Social Stratification and Mobility (RC28).
- Zijdeman, R.L. & Mandemakers, K. (2008). De rol van het middelbaar onderwijs bij de intergenerationele overdracht van status, Nederland 1865-1940. In I. Maas, M.H.D. van Leeuwen & K. Mandemakers (Eds.), *Honderdvijftig jaar levenslopen. De Historische Steekproef Nederlandse bevolking*, forthcoming. Amsterdam: Amsterdam University Press.

Appendix

Table 1: Descriptives male respondents

<i>Time variant variables (Level 1)</i>	<i>N</i>	<i>Min.</i>	<i>Mean / %</i>	<i>Max.</i>	<i>s.d.</i>
Occupational status	2714	10.60	48.15	99	15.00
Married (yes=1)	2714	0	0.79	1	
Experience	2714	0	1.67	7.50	1.67
Experience ²	2714	0	5.37	56.25	9.36
<i>Time invariant variables (Level 2)</i>					
# occ. measurements per respondent	1194	1	3.96	12	1.83
Father's class	1194	1			
White collar	193		16.2		
Skilled workers	168		14.1		
Farmers	161		13.5		
Unskilled workers	672		56.3		
Literacy	1194				
Yes	837		70.1		
No	33		27.1		
Unknown	324		2.8		

Table 2: Descriptives female respondents

<i>Time variant variables (Level 1)</i>	<i>N</i>	<i>Min.</i>	<i>Mean / %</i>	<i>Max.</i>	<i>s.d.</i>
Occupational status	1529	10.60	48.03	99	15.00
Married (yes=1)	1529	0	0.64	1	
Experience	1529	0	1.05	7.20	1.21
Experience ²	1529	0	2.51	51.84	5.82
<i>Time invariant variables (Level 2)</i>					
# occ. measurements per respondent	667	1	5.71	26	2.63
Father's class	667				
White collar	119		17.8		
Skilled workers	117		17.5		
Farmers	51		7.6		
Unskilled workers	380		57.0		
Literacy	667				
Yes	423		63.4		
No	230		34.5		
Unknown	14		2.1		

Table 3: Multilevel analyses of the occupational status of men (coefficients and levels of significance) (N= 1194)

	Model 1	Model 2	Model 3	Model 4
Intercept		32.27 **	29.852 **	29.70 **
Age/10		2.75 **	2.64 **	2.63 **
Age/10 ²		-0.37 **	-0.39 **	-0.40 **
Signature ^a				
Yes		12.20 **	10.20 **	10.09 **
Unknown		13.87 **	11.72 **	11.63 **
Married		-1.59 *	-1.72 *	-1.48 *
Year (since 1865)		0.08	0.09 *	0.09
Father's class ^b				
White collar			13.87 **	13.79 **
Skilled workers			9.44 **	8.91 **
Farmers			1.94	1.85
Over time				
Married*Year				0.03
Years (since 1865)*				
Father's class				
White collar				-0.03
Skilled workers				-0.12 **
Farmers				-0.06
Variation between individuals	161.96	156.32	124.83	181.13
Variation within individuals	63.71	59.42	59.51	70.88
-2Restricted Log Likelihood	23024.151	22852.728	20739.452	20744.19

^a reference category: unable to sign document

^b reference category: unskilled workers

** p < 0,01; * p < 0,05

Table 4: Multilevel analyses of the occupational status of women (coefficients and levels of significance) (N= 667)

	Model 1	Model 2		Model 3		Model 4	
Intercept		12.04	*	12.21	*	13.91	*
Age/10		8.71	**	7.58	**	7.49	**
Age/10 ²		-0.91	**	-0.76	**	-0.74	
Signature ^a							
Yes		-2.32		-7.11		-7.00	
Unknown		-0.03		-6.4		-6.21	
Married		4.26	**	4.81	**	5.53	**
Year (since 1865)		0.16	*	0.21	*	0.16	
Father's class ^b							
White collar				9.91	**	10.56	**
Skilled workers				7.15	*	6.48	**
Farmers				4.46		4.64	
Over time							
Married*Year						-0.05	
Years (since 1865)*							
Father's class							
White collar						0.08	
Skilled workers						-0.11	
Farmers						0.05	
Variation between individuals	292.0	219.39		205.57		181.13	
Variation within individuals	124.80	98.35		93.05		70.88	
-2Restricted Log Likelihood	14300.991	13858.987		12353.412		12359.682	

^a reference category: unable to sign document

^b reference category: unskilled workers

** p < 0,01; * p < 0,05