Titel/Title: **Studying Career Success—the Role of Resources and Norms for Occupational Status Attainment in The Netherlands, 1865–1940**

Autor*innen/Author(s): Wiebke Schulz and Ineke Maas

Zusätzliche Informationen/Additional information:
The author can be contacted at: wschulz@uni-bremen.de

Studying Career Success—the Role of Resources and Norms for Occupational Status Attainment in The Netherlands, 1865–1940

Wiebke Schulz and Ineke Maas

Abstract

This article presents a study of the occupational careers of men and women born between 1850 and 1922. First, we test the claim that since the mid-19th century individuals increasingly had successful careers. Second, we test hypotheses on differential career success derived from resource theory as well as from a norms and societal expectations framework. Successful careers are defined as starting at a higher level of occupational status and as growing in status at a faster rate. We consider (i) the influence of time-constant as well as time-varying characteristics on individual careers; and (ii) whether these effects changed over time. The Historical Sample of the Netherlands provides multiple measurements of the occupational status for 1,407 men and 824 women. The results show that there is hardly any trend towards increasing career success. For men, resources played the most important role for career success (e.g. basic schooling, father's class and being married), whereas for women the findings were more mixed. Over time, sons of skilled workers had less successful careers. This suggests that it came to a reshuffling of advantages in the labour market rather than an improvement of occupational chances for all social classes.

Introduction

What is nowadays understood as a 'modern career' is assumed to have its breeding grounds in the mid- to late-19th century (Mitch, Brown and van Leeuwen, 2004). Since then, individuals are assumed to have had increasingly more successful careers, with higher levels of status and income, and to have been more often upwardly mobile (Wilensky, 1960). However, empirical knowledge about occupational careers and the conditions that influenced them for the pre-1940s period is surprisingly scarce and scattered. To our knowledge, systematic reviews of careers exclusively refer to the time on post World War II era (e.g. Rosenfeld, 1992). The research on careers in the periods before World War II is often based on specific occupations (e.g. Mitch, 2004, on agricultural workers in Norfolk), a comparison between one or more organizations (e.g. Miles and Savage, 2004, on case studies on the post office and Great Western Railways, and Stovel, Savage and Bearman, 1996, on careers at Lloyds Bank), or small regional samples (e.g. Van Dijk, Visser and Wolst, 1984, on regions in the Netherlands). However, this restriction to small regions, specific occupational groups or few organizations does not permit sound generalization from the findings. Exceptions worth **(← p. 220)** mentioning are Kaelble's work on social mobility in the nineteenth and twentieth century in Europe and in the USA (1985), Maas and van Leeuwen's study on Sweden (2004), and Van Heek's work on the Netherlands (1958).

Research and theory development have been hampered by the ambiguity of the concept of 'career'. It carries numerous connotations, ranging from the view that only upwardly mobile people have careers, in which case a large part of the population does not have a career at all (Wilensky, 1960; Spilerman, 1977; Bühlmann, 2008), to a more comprehensive understanding of career as entire working lives that can be more or less successful (Brown, van Leeuwen and Mitch, 2004). In this article, we employ the latter, more comprehensive view of career; thus, we study any kind of working life history, any succession of occupations held by an individual. We define successful careers as characterized by two dimensions. First, they start at a higher level of occupational status, and second, the occupational status of individuals having successful careers increases faster over the life course. We ask the following research questions:

(i) To what extent did individuals in the Netherlands, between 1865 and 1940, increasingly have more successful careers over time?
(ii) How can we explain individual differences in career success?

(iii) Did the mechanisms that cause occupational success change over time?

We aim at contributing to previous research in the following four ways. First, most research on careers in industrial societies makes an assumption (often implicit) that since the mid- to late-19th century, individuals have increasingly had successful careers. Indeed, individual mobility outcomes are often connected to macro societal developments such as industrialization, bureaucratization, and meritocratization, all of which started in the mid to late 19th century. These developments are assumed to have raised the average occupational status of the population, leading to more people having successful careers (Brown, van Leeuwen and Mitch, 2004). However, there is a lack of conclusive evidence to support this assumption. Therefore, our first research question asks whether it is actually true that people increasingly had successful careers in the period before 1940.

Second, we develop a new approach for studying historical occupational careers. Most research on occupational careers focuses on upward, downward, and sometimes lateral mobility (Sørensen, 1975; Blossfeld, 1986; Carrol and Mayer, 1986; Blossfeld and Mayer, 1988; Almendinger, 1989). Yet, the criticism of this line of research is that by focusing on mobility moves the occupational success over the course an individual's whole life gets out of sight. Moreover the focus on mobility moves is less applicable to historical data, in which the exact dates of changes in occupational status are often not known.

Thus, we choose another approach. We study the growth in occupational status over an individual's life course. We assume that occupational status is affected by three types of determinants. First, the more work experience someone has, the higher their occupational status, with the increase in status expected to level off towards the end of a career. How successful a career develops is further affected by time-constant characteristics (e.g. basic schooling) and time-varying characteristics (e.g. marital status). The working of these three determinants is illustrated in Figures 1 and 2.

In Figure 1, all careers develop in parallel to one another, meaning that the determinants have their effects only at the start of a career (in the case of time-constant characteristics) or at the moment they occur (time-varying characteristics), but the speed of growth is not itself affected. Figure 2 shows what happens if this assumption is relaxed. Now careers can develop at different rates: people who have basic schooling not only start their careers at a higher level but their occupational status also grows faster. By studying careers in this way (i.e. by means of growth models), our approach is analogous to studies of wage growth or total income over

the life course (c.f. F. E. Mincer, 1958). Like wage growth and total income, changes in occupational status over the life course,

Figure 1. Effects of time constant and time-varying characteristics on occupational status at the start of a career and at the time of change in the time varying variable. **(← p. 221)**

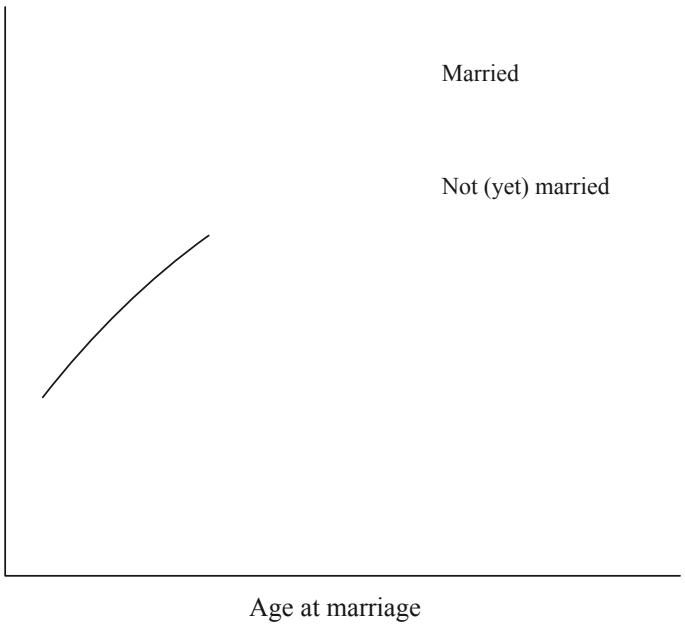

Figure 2. Effects of time constant and time varying characteristics on rate of growth of occupational status.

offers a more complete picture of individual economic success than single mobility moves or the change in income at any one point in time.

Third, whereas most research on long-term developments in occupational careers is rather descriptive, we will employ a theoretical framework that addresses two important influences on careers. On the one hand, we derive hypotheses on the role of resources for careers by considering, amongst other aspects, the influence of human capital and parental status. On the other hand, we study the impact of norms and social expectations on careers by considering role models such as the male breadwinner and the female housewife model. In this study, theories of differential career success with respect to firms and segments of the labour market [e.g. internal labour market theory and segmentation theory (Sørensen and Tuma, 1981; Stovel, Savage and Bearman, 1996)] will not be tested. Our data do not include information on firms. However, we will employ theory on changing labour markets to derive hypotheses on the changing impacts of human capital and on social expectations within the context of our period of study.

Finally, we employ an excellent database, the Historical Sample of the Netherlands (HSN), to study careers in a long-term perspective (HSN release life courses 2008_01). In comparison to data sources based on specific occupations or regions, this dataset is relatively large, containing information on the occupational careers of 1,407 men and 824 women who were in the labour market between 1865 and 1940. Since the data are a sample of all birth certificates from this period, complemented with information from marriage and population registers, we have been able to include a broad diversity of occupations. Every individual in the data is represented from anywhere between 1 and 22 measurements of occupational status. Since the data stem from official registers, problems common to collecting retrospective information on occupational careers and family backgrounds are avoided (De Vries, 2006). The data include birth cohorts from two predominantly rural provinces (Zeeland and Friesland), one from a province that was both urban and rural (e.g. Utrecht) as well as the city of Rotterdam. Compared to other European countries, the Netherlands underwent industrialization late (i.e. during the late 19th and early 20th centuries). Therefore, the time period we study, from 1865 onwards, is especially interesting as it was characterized by rapid transformations of the labour market. Van Zanden and Van Riel (2000) argue that forces at work in this period compelled some groups of workers to lose their otherwise steady positions, whereas new chances to improve one's occupational status emerged for other groups.

In short, this is a rich dataset; it is representative of the labour force, covering the conditions of both the rural and the urban areas of the Netherlands, enabling us to study the development of careers over close to 100 years.

Theory

In general, there are two theoretical approaches to studying occupational achievements. On the one hand, they are attributed to differences in resources and on the other to the influence of norms and social expectations (Collins, 1979). The main assumption of resource-based approaches is that people with more resources have more successful careers. We will discuss the importance of human capital and social capital as well as the intergenerational transmission of resources.

The second theoretical approach focuses on the influence of social norms and expectations, on how people pursue their occupational hopes and dreams, how they seek to comply with norms, or how they are made objects of discrimination. During the 19th and 20th centuries, gender played an important role in the work sphere (e.g. Leydesdorff, 1977; Lown, 1990, for the UK; and Pott-Butter, 1993, for the Netherlands). Our discussion about the influence of norms focuses on the male breadwinner and the female housewife models as well as the general societal expectations and the discriminatory behaviour of employers associated with them. These models mainly refer not only to societal expectations towards married people but they **(← p. 222)** also entail information about the perspectives of young women and men on their occupational lives. Young people anticipated that they would eventually be married then adjusted their occupational behaviour according to this expectation. We used both theoretical approaches to derive hypotheses about the influence of an individual's characteristics on their careers. In particular, we examine the following characteristics: work experience, basic schooling, parental status, marital status, and migration.

Work experience

The most basic approach for relating individual characteristics to career success is human capital theory. Human capital refers both to formal and to informal education and to work experience, both general and specific (Mincer and Polachek, 1974). It's been argued that those with more human capital are more likely to get ahead (Becker, 1975). Over the course of a

life, individuals gain experience specifically with regard to their job or in general with respect to their occupation. Work experience makes employees more productive and signals to the employer that less training costs are needed in comparison to a worker with less experience. Experienced workers are also the last persons to be fired because they are the most valuable to an employer (Mincer and Polachek, 1974). Because the novelty of an employee's additional experiences are finite, we expect that the effect of work experience to decline with increasing age.

H1: Occupational status increased with working experience, but it did so to a lesser extent as the individual gained more experience.

We do not expect any changes regarding the positive effect of experience on occupational status over time. And while the occupational and educational structures changed considerably, experience remained an important influence on productivity and thus occupational status.

Basic Schooling

Another sort of human capital which is assumed to influence occupational success is education. In industrial societies, more educated employees more often tend to have successful careers (Sicherman and Galor, 1990; Kerckhoff, 1995). In the first instance, this is because of their generally higher productivity, and second, this is because education serves as a signal for less training costs compared to unschooled workers.
During the period under study, participation in basic schooling was the most relevant indicator of educational achievement. Even before the first mandatory schooling law was introduced in 1901, participation in basic schooling was high in the Netherlands. Basic schooling enabled people to be more productive and to carry out a wider range of tasks compared to those who lacked any basic schooling (Knippenberg, 1986; Boonstra, 1993). That said, participation in secondary education was still very rare during this period (Mandemakers, 1996). Therefore, we expect

H2a: People without basic schooling started their career at a lower occupational status level compared to those with basic schooling.

The lack of basic education not only made it more difficult for people to find a high status first job, it also probably led to a slower increase in success. Alternatively, people with some schooling increased their productivity faster and employers expected them to be more easily trainable. Research on human capital also found that jobs with higher complexity allow for further growth among employees compared to low-complexity jobs (Mincer, 1958). In sum, we
expect,

H2b: People without basic schooling had a slower increase in occupational status than those with basic schooling.

The importance of basic schooling very likely decreased during the late 19th and early 20th centuries. In the Netherlands, by the end of the 19th century, the levels of schooling increased and the number of people without at least some schooling decreased. Around 1900, there were hardly any people left who had not obtained basic schooling. Because education can be considered a positional advantage, the returns to a given level of education decline when the educational system expands (Hannan, Scho¨nmann and Blossfeld, 1990; Wolbers, 1998). In line with this argument, Boonstra (1993) found that, after 1850, being able to read and write (as a consequence of basic schooling) became less important for people's occupational status. All in all, it seems likely that basic schooling became a matter of course and no longer served as a resource that fostered career success.

H2c: Over time, the negative effect of lacking basic schooling on occupational status at the start of an occupational career, decreased.[1] **(← p. 223)**

Parental Status

In addition to such achieved characteristics as education, ascribed characteristics are also known to influence occupational attainment (Blau and Duncan, 1967; Ganzeboom, Treiman and Ultee, 1991). This was especially true in pre-industrial and industrializing societies where the occupational status of the father was considered to be one of the most important personal resources (Kerr *et al.*, 1960; Kaelbe, 1985; Maas and Van Leeuwen, 2002; Zijdeman, 2008). Fathers with a higher occupational status could help their children to attain an occupational training or some education so that they could embark on their occupational career at a high

level. Father's could offer their advice or use their social capital to facilitate the upward mobility of their children. If children followed in their parent's occupation, the parents could provide them with the necessary training, and the children might inherit a family run shop, a company, a farm, or financial capital (Treiman, 1970). Likewise someone's social background could play a role in their recruitment to higher status jobs. People from higher status families are more likely to have incorporated upper class manners. Such manners signal the social background of an applicant enabling an employer to select someone from their own social class (Collins, 1971). By influencing a child's starting position, parents could provide a good base for future success (Shavit and Blossfeld, 1993; Kerckhoff, 1995).

H3a: The higher the occupational status of the parents, the higher the occupational status level at which the children started their career.

We expect that parents not only gave their children an initial advantage but could also influence the pace at which their careers progressed. Parents could give work-related advice (e.g. information concerning certain occupations or job opportunities), or reproduce their social capital for their children. Therefore, we expect,

H3b: The higher the occupational status of parents, the faster the rate at which the occupational status of their children increases.

While the influence of parent's status on children's occupational status is rather well supported by empirical research (see Ganzeboom, Treiman and Ultee, 1991, for a review) there is no conclusive evidence on how this relation changed over time (i.e. in the time before the Second World War) (e.g. Kaelble, 1985). However, according to theory, the influence of a father on his children's social background became less important over the course of industrialization.

According to the Logic of Industrialism thesis, a number of related mechanisms have been proposed which restricted parent's ability to have a direct influence on the occupational success of their offspring (Kerr *et al*., 1960; Blau and Duncan, 1967; Treiman, 1970). First, on account of modernization and industrialization processes, a diversification of jobs and occupations emerges. It was no longer possible for parents to pass their skills and occupations on to their children. Second, in the course of industrialization, employers are assumed to have

been increasingly forced to choose their employees on the basis of their merits, rather than on basis of their social background. Third, due to the increasing specialization of labour, a greater number of jobs required specialized and longer training periods which families could not provide. In sum, these mechanisms suggest that

H3c: Over time, the occupational status of parents had an increasingly smaller influence on the occupational status of their children at the start of their careers.

Marital Status

Whereas basic schooling and parental status have been discussed from a resource perspective, being married also has an effect on career success according to the normative approach. Consequently, we derived a number of our hypotheses using the resource perspective. According to the social capital literature, a spouse can provide information, or knowledge, just like other network members (Bernasco, 1994; Bian, 1997; Verbakel and de Graaf, 2008). However, a partner is special, as the link to a spouse is one of the strongest it makes willingness to support very likely consequence. Thus we expect that people who had a spouse benefited from his or her resources.

H4a: People had a higher occupational status after marriage, than before.

Based on the social capital literature, we do not expect changes over time in the importance of partner's support.

In addition, according to the male breadwinner role model, men can expect to increase their occupational status after marriage, for two reasons. First, once men get married and have children they assume greater responsibility and society expects them to function as **(← p. 224)** the (and of the only) family provider. Due to this increased responsibility, men are assumed to invest more time and effort in their work becoming even more productive (Horrell and Humphries, 1995; Lewis, 2001; Kalmijn and Luijkx, 2005).

Second, employers would positively discriminate married men: employers favour married men because they are believed to be more committed to their jobs. Employers are also less prone to fire married men, as this is understood to be less fair than firing men with fewer

responsibilities. It is on of these grounds that married men could be expected to have more successful careers than non-married men (Korenman and Neumark, 1991).

Similar to the male breadwinner model, the housewife model frames societal expectations towards married women and women with children. Van Poppel, Van Dalen, and Walhout (2009) describe this role model for women in the 19th and 20th centuries. They argue that Dutch urban bourgeois women demonstrated their financial independence by stopping their paid or registered work upon getting married. These women served as examples which in turn fuelled a societal appreciation for household production. Lower class families could not financially afford to follow this example. Women from these classes did not drop out of the labour market entirely. Rather they often simply stopped being visible components of the labour market, concentrating their activities on cottage industry, family farm labour, serving and personal services, thus on areas in which informal, less organized, and less successful careers took place (Leydesdorff, 1977; Van Poppel *et al*., 2008).

Besides self-selection into less successful careers, women also faced considerable restrictions from employers. They were more often assigned to dead-end positions (Goldin, 1994) or so-called 'marriage-bars' that excluded women from employment once they got married (Thurow, 1975; Leydesdorff, 1977). In the Netherlands, occupational restrictions towards married women were abandoned only after the 1920s. Because of social expectations and labour market discrimination, we expect married women to have less successful careers than women who did not marry (yet). The particular hypothesis in the case of women is opposite to the more general one derived from social capital theory.

H4b: After marriage, men have higher occupational status than before marriage.

H4c: After marriage and the birth of the first child, women have lower occupational status than before.

Although based on different mechanisms, similar expectations can be derived from economic theory (Becker, 1981, but see Humphries, 1998, for a critical discussion of this theory).

The male breadwinner model and the housewife model changed over time (Horrell and Humphries, 1995). Often a three-stage historical development is assumed: In pre-modern societies an extensive integration of female manpower into the household economy is assumed; in industrial societies this developed into an extensive exclusion of women from

official work, and by the later stages of modernization, women were re-integrated into paid work (for a discussion and critique of this model see: Pfau-Effinger, 2004). To some extent, The Netherlands presents a special case, as the male breadwinner model was already an important family model before the transition to industrialization (Pfau-Effinger, 2004: 385). Van Poppel *et al.* (2009) show that from the 1820s onwards increasingly fewer Dutch women registered their occupations in official documents such as marriage certificates. Until the 1950s the male breadwinner model was deeply rooted in Dutch society. We therefore expect that

H4d: Over time, the positive effect of marriage on men's occupational status increased. H4e: Over time, the negative effect of marriage on women's occupational status increased.

Migration

Whereas the previous sections focused on individual and social resources, an alternative set of resources are connected to the region. Examples of such resources include the quality of the soil as well as the presence of factories. A large body of research shows that an individual's opportunities and chances for occupational success are influenced by the region in which they live, or by the region to which they migrate (e.g. Wagner, 1989; Smits, 2001). By migrating from a region with few opportunities to one with ample, people would be able invest in their occupational careers. Thus, migration has been studied from an economic perspective (Sjaastad, 1962).

In the period under study, migration was probably an important strategy for increasing ones chances for occupational success (Kok, 1997). Initially, modernization and industrialization processes widened the gap between the rural and the urban occupational structures (Kerr *et al.*, 1960; Treiman, 1970). Regional differences in steam capacity of the industries ranged **(← p. 225)** from 9 to 26 horsepower per 1,000 inhabitants in 1871 (Knippenberg, 2003: 11). These regional differences in industrial development might have been an incentive to move from rural to urban areas (Kok, 1997). Urbanized areas typically offered better prospects to individuals, especially in terms of local industries and the diversification of occupational structures (Wagner, 1987). Because of contextual advantages afforded in urban areas we expect that, compared to any other move or to no move at all) moving from a rural to an urban place likely increases career success.

Independent of the more favourable opportunity structure at their destination, it is nonetheless also possible that these migrants were successful because they were a self-selected group of people with special traits or ambitions and thus more prone to success (Kok, 1995; Bras, 2003).

H5a: After rural to urban migration people had higher occupational status than before.

Over time, we expect that the positive influence of moving from a rural to an urban area on the likelihood of a successful occupational career to have decreased. In the course of industrialization, rural and urban occupational structures were converging again (Treiman, 1970) so that the appeal of urban areas in terms of occupational opportunities decreased.

H5b: Over time, the positive effect of rural to urban migration on occupational status decreased.

Data, Methods, and Variables

Data

The HSN provides us with information not only on the occupational careers of individuals in the 19th and 20th centuries, but it is representative of the Dutch population. The HSN is an excellent newly available data base for the longitudinal study of male and female careers, in different regions.

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 a place of residence for each individual). 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. Thus, the amount of occupational information we have about an individual is dependent on the number of vital events such as moving and birth of a child that they underwent and not on their occupational career per se (e.g. number of different occupations).

The collection of the data is still ongoing, therefore we use but a sub-sample (HSN release life courses 2008_01) that consists of life courses of individuals born between 1850 and 1882 in the provinces of Friesland, Zeeland, Utrecht, and the city of Rotterdam (see Mandemakers, 2004). These four regions represent different conditions in the Netherlands with respect to soil types, urbanization, and industrialization (see Knippenberg, 1995).

The data comprise information on the respondents' date of birth, marital status, literacy, father's occupation, all migrations, as well as the occupations of the respondents. Because our objective was to study occupational careers, we restricted the sample to the ages in which most people belonged to the working population (i.e. people who are at least 15-years old). We studied the period 1865–1940. In 1940 a change in the population registers made them less useful for studying occupational careers. By 1940, most of the birth cohorts in our study had finished their active occupational life. Complete information (i.e. information on at least one occupation and on all independent variables) was available for 5,544 occupations of 1,407 men and 2,431 occupations of 824 women.

Some critics of this type of data argue that the information on women's occupations is less complete than that on men because household heads would not always provide information about the occupations of their female household members. This may indeed be the case, but it is difficult to verify because the lack of information on women's occupations may also indicate their lower rates of participation in the labour force. In any case, information on female occupational careers, in general, is not lacking in the data. In the HSN, there is extensive information on the careers of large numbers of women.

Figure 3 presents the number of occupational measurement per 5-year age group for men and women. For both men and women, most measurements occurred around the age of marriage. In the case of men, the decrease in the number of occupational measurements begins at the age of 30 years, yet there are at least 300 measurements per age group until the age of 60 years. In contrast, for women the amount of occupational information decreases steeply after the age of 25 years. In addition, between the ages of 25 and 50 years there are around 100 occupational

(← p. 226)

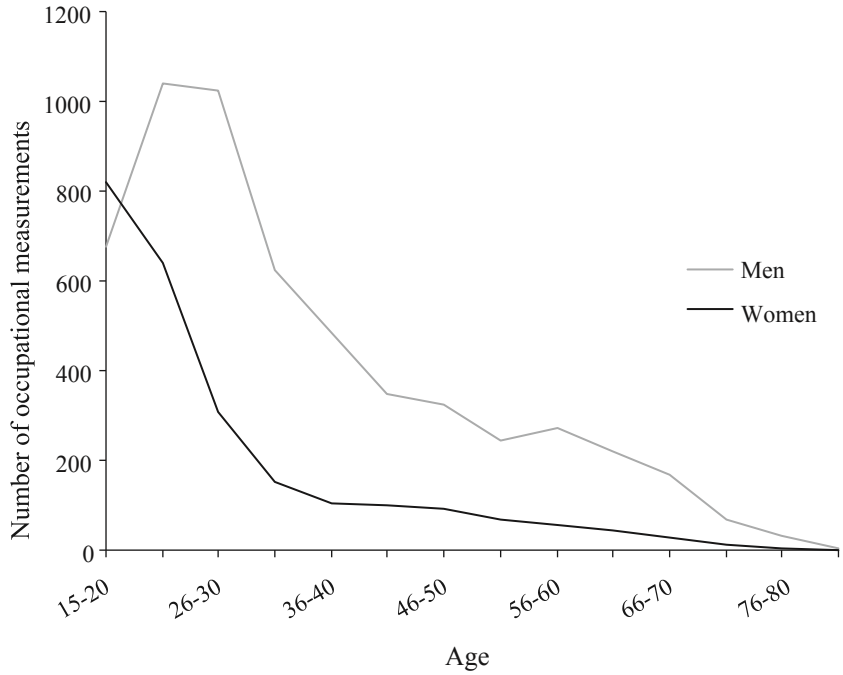

Figure 3. Number of occupational measurements for men and women per age group.

measurements per 5 years. In the discussion that follows, we will come back to this when interpreting our results.

Methods

The most common approach to studying quantitative career data is using event history analysis. Less common methods are optimal matching techniques and loglinear analysis. That said, we propose a different method here for several reasons. First, both event history analysis and optimal matching place very high requirements on the data. To examine a complete career (or that part of the career that is studied), all occupational moves must be known, including the exact timing for each of them. Yet, historical data based on official registers are different. They provide information on the occupation of individuals at certain points in time, but do not reveal when exactly people entered these occupations. The time points at which occupational information can be observed differ in number and timing among the individual subjects. Consequently we propose an alternative method: multilevel growth models. This method does not require complete information, and has been developed especially for analysing different numbers of observations within groups [e.g. pupils in schools of different size, the population of small and large countries, or differential numbers of measurements within individuals (compare Snijders and Bosker, 1999)].

Alternatively, log-linear models are designed to compare two occupations (e.g. first and second occupation or first and last occupation). Hence, they are better suited for analysing datasets with limited data on careers. In addition, they require a clear definition of the two occupations to be compared (we should be sure which occupation is the first occupation of the career and which is the last of the career). Because the measures of occupational status in our data simply occur at different points in an individual's career, we cannot be sure that the first occupation observed is not in reality preceded by still an earlier occupation.

The use of multilevel growth models is not only driven by data restrictions. These models have the advantage of elegantly modelling the basic dimensions of career success (i.e. the starting level of a career and the amount of status growth over the course of a life). They are able to do so, on the one hand, by abstracting from individual career moves, and on the other hand, by using all available information to estimate a status growth curve for each individual. We can also test whether a linear increase in status fits the data better than a curvilinear development (for example) and whether certain characteristics of individuals cause the career to start a higher level or grow faster rate over time. Along with the optimal matching method, growth models have the advantage of being able to analyse the complete career at once. Alternatively, along with event history models, they are able to easily model the effects of both time-varying and time-constant variables on a career.

We will estimate several growth models with each one defined by one of the following constraints: (i) occupational status is expected to 'grow' with experience in the labour market, (ii) time-invariant characteristics cause the growth curve to start on a higher (or lower) level and/or to grow at a different speed, and (iii) time-variant characteristics cause the growth curve to jump to a higher (or lower) level at the point when this characteristic changes, and/or there is change in the speed of growth. Finally, separate models will be estimated for men and women.

Dependent Variable

Occupational status

Assigning social positions to individuals is a difficult task in itself. Doing so over two centuries and across different national and international regions is even more so. Differing occupational terminologies have hindered international and longitudinal comparisons of

occupational status for a long time (Van Leeuwen, Maas and Miles, 2004). However, such comparisons became possible after the development of the Historical International Standard Classification of Occupations (HISCO) (Van Leeuwen *et al.*, 2004), **(← p. 227)** based on the International Standard Classification of Occupations 1968 of the International Labour Office (ISCO68 1969). All occupational information we used was classified according to the HISCO. To analyse occupational status, we made use of the recently developed historical status scale HISCAM (Lambert *et al.*, 2008). In developing the HISCAM scale, the same scale estimation techniques employed in the contemporary-focused version, the so-called CAMSIS scales, were used. These scales are premised on the assumption that patterns of social interaction (e.g. marriages) between people from different occupational strata are representative of the overall structure of occupational stratification. The HISCAM 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) and covers the period 1800–1938.[2] In our analyses, the dependent variable is the respondent's occupational status, which on the HISCAM scale ranges between 1 and 99, with higher values indicating a higher occupational status. A servant, for example, has a HISCAM-score of 10.6, a lawyer a score of 99.0, and a tailor takes a middle position with a score of 49.7.

Independent Variables

Experience

Occupational experience will be approximated using the age of the respondent. Every time information was updated in the original sources (e.g. marriage or death certificates) the age of the respondent was also noted. We assumed that occupational careers occur from the age of 15 years onwards, thus 15 was subtracted from the age of the respondent. The result was divided by 10. A quadratic term for experience was added to the analyses to test the hypothesis that the effect of experience declines over the occupational career. Note that this variable was a better indicator of men's occupational experience than of women's, as female careers were more likely to be interrupted by giving birth and the care of children.

Basic schooling

As a proxy for whether the respondent attended basic schooling we used information on whether the respondent was able to sign the marriage certificate (1) or not (0). A drawback to

this variable is that it was only defined for people who were ever married. In order not to lose those cases where individuals were never married, we added a dummy variable to the analyses that indicated those who had never been married. Information on the signature is added to the analyses as a time-invariant characteristic.

Father's class

The father's occupational class measured the social status of the parents. The HISCLASS classification system (http://historyofwork.iisg.nl/) was collapsed into four-category version. Fathers were grouped into one of the following categories: (i) white-collar workers, (ii) skilled workers, (iii) farmers, and (iv) unskilled workers. This variable is also time invariant. If more than one occupation for the father was known, the occupational information closest to the respondent's birth was chosen.

Marital status

Using wedding certificates we were able to reconstruct who married when. Being married was treated as a time-variant characteristic. To all time points at which an occupation was observed, those before marriage were assigned a value of 0 and all points after marriage a 1. We do not consider divorce or widowhood because the theories we relied on do not clearly predict how these states would affect the occupational careers.

Children

For an indication of whether there was a child in the household a value of 1 was given from the birth of the first child onwards.

Rural–urban move

The data provide us with information on the whereabouts of the respondents, including the dates of registration at a new address. This information was used to create two variables that represented migration.

The dummy variable*, rural–urban move*, received a value 1 for all occupations measured after a move from a rural to an urban area. All other moves as well as no moves at all received a value of 0. Whether a community was rural or urban was obtained from the Dutch Census of

1859. All places registered as cities, for the purposes of our study, were treated as urban (Volkstellingen, 1859). The dummy variable, *different move*, received a value of 1 for all occupations assessed after a respondent moved from a rural to a rural area, an urban to a rural area, or an urban to an urban area. A value 0 was assigned in those cases where he or she moved from a rural to an urban area or they did not move at all. **(← p. 228)**

Urban

The urban variable was a control variable indicating whether the place of residence was urban or rural when the respondent's occupation was registered.

Year

The year variable measures the number of years since 1865 divided by 10. Moreover, the year-interaction term was also centred, adjusting the null point to the year 1900.

Gender

The respondents' gender was taken into account by performing separate analyses for both men and women.

Descriptive information on all variables is provided in Tables 1 and 2.

Tables 3 and 4 present career lengths and average numbers of measurements of occupational status for men and women by the independent variables. Not surprisingly, the observed length of a career is longer for men than for women (on average 22.5 compared 9.4 years, respectively). Many women were probably only observed between their entrance into the labour market and their marriages. Nevertheless, some women were observed for most of their life (64 years). In addition, some men and women had a career length of 0; this meant that they were only observed once.

Men who had ever married had on average longer observation periods, namely 24 years in comparison to 18 years for men who never got married. Also, the number of occupational measurements for men who married was slightly higher, 4.2 compared to the 3.3 for those who did not. This difference may have been caused by observations of men who were married at the birth of their children. Sons of farmers have the highest average observed career length and white-collar sons have the highest mean number of occupational measurements.

Women who were never married, were observed to have had longer occupational careers, on average, than women who married (12 years compared to 8 years). Although we observed them for a shorter period of time, women who got married had more occupational measurements, on average, than women who did not (4 versus 3). Daughters of farmers were observed for the shortest periods; however, daughters of skilled workers had the fewest occupational measurements.

With the exception of the difference in the careers between men and women, we conclude that any differences in the quality of the data between the subgroups are relatively small.

Table 1. Descriptives of time invariant and varying variables, male respondents.

	Min	Max	Mean/%	SD
Time invariant variables (*n* = 1,406)				
No. of occupational measurements	1	22	3.9	2.8
Basic schooling				
No			2.6	
Yes			68.1	
Not known (never married)			29.3	
Father's class				
White collar			16.2	
Skilled worker			14.4	
Farmer			13.2	
Unskilled worker			56.2	
Time varying variables (*n* = 5,544)				
Occupational status (HISCAM)	10.6	99.0	47.3	15.8
Experience/10	0.0	7.5	2.0	1.5
$(\text{Experience}/10)^2$	0.0	56.3	6.4	8.4
Married			55.5	
Child			40.1	
Urban			14.6	
Rural urban move			18.2	
Different move			16.0	
Year (from 1865)/10	0.0	7.5	3.6	17.1
(← p. 229)				

Table 2. Descriptives of time invariant and varying variables, female respondents.

	Min	Max	Mean/%	SD
Time invariant variables (*n* = 824)				
No. of occupational measurements	1	17	2.9	2.4

Basic schooling				
No			4.5	
Yes			61.4	
Not known (never married)			34.1	
Father's class				
White collar			18.6	
Skilled worker			16.5	
Farmer			6.8	
Unskilled worker			58.1	
Time varying variables (*n* = 2,431)				
Occupational status (HISCAM)	10.6	98.4	23.6	20.1
Experience/10	0.0	7.2	1.3	1.3
$(\text{Experience}/10)^2$	0.0	51.8	3.4	6.3
Married			17.6	
Child			16.2	
Urban			14.6	
Rural urban move			22.0	
Different move			18.5	
Year (from 1865)/10	0.0	7.5	2.9	15.0

Table 3. Career trajectory lengths (in years) and number of occupations for male respondents.

Individual characteristic	***n***	**Min**	**Max**	**Mean**	**SD**	**Average no. of occupations**
All male respondents	1,407	0	64	22.5	18.1	3.9
Marriage						
Ever married	997	0	64	24.3	18.9	4.2
Never married	410	0	59	18.1	17.4	3.4
Basic schooling						
Yes	958	0	64	24.2	18.1	4.2
No	39	0	58	25.7	19.4	4.3
Child (at least one)	174	0	60	26.1	16.9	4.1
Migrant (at least one move)	237	0	60	18.6	17.8	2.7
Father's class						
White collar	229	0	60	21.2	17.5	4.0
Skilled worker	203	0	58	20.4	17.4	3.9
Farmer	184	0	60	24.7	18.1	3.7
Unskilled worker	791	0	64	22.9	18.4	3.8

Descriptive Results

The three careers described in Figure 4 exemplify how diverse the careers recorded in the HSN database actually were. They differ in length of observation period, number of

observations, and in the richness of information provided. They range from a career which starts in the lower part of the status scale ('worker') and continues without any change in occupational status, to one which shows upward mobility ('teacher'). That said, both worker and teacher were sons of agricultural workers. While they both started from the same point of origin, the career of the teacher was characterized by success, starting as a schoolteacher and ending in his last occupation as head of school. The worker, on the contrary, remains in the same **(← p. 230)**

Table 4. Career trajectory lengths (in years) and number of occupations for female respondents

Individual characteristic	***N***	**Min**	**Max**	**Mean**	**SD**	**Average no. occupations**
All female respondents	824	0	64	9.4	12.9	2.9
Marriage						
Ever married	543	0	64	8.2	11.8	4.2
Never married	281	0	58	11.7	14.7	3.2
Basic schooling						
Yes	506	0	55	7.7	10.9	2.8
No	37	0	40	8.1	13.2	2.1
Child (at least one)	52	0	45	12.4	12.9	2.5
Migrant (at least one move)	175	0	49	9.1	12.1	2.9
Father's class						
White collar	153	0	57	9.8	16.7	2.9
Skilled worker	136	0	47	10.1	13.3	2.3
Farmer	56	0	42	7.3	10.1	2.8
Unskilled worker	479	0	64	9.4	13.2	2.9

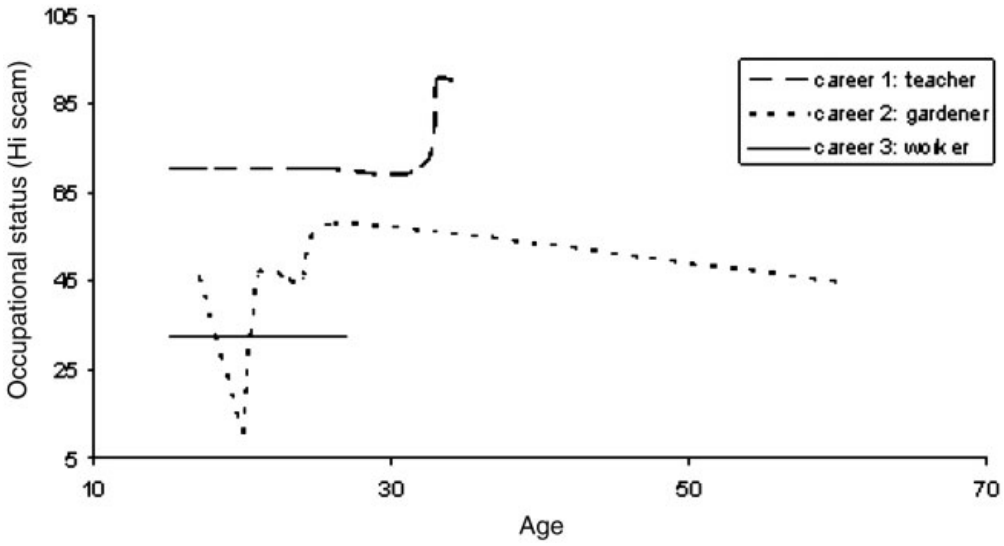

Figure 4. Three careers from the HSN data.

occupation most of his life (at least during the period of his life that we observed). The career of the 'gardener' displays the most fluctuation in occupational status: this son of a carpenter started as a coachman, became a servant then worked again as coachman. After a period in which he worked as a gardener, he finished his career as a tree grower and finally as tree grower assistant.

Research question 1 asks to what extent people in the Netherlands had more successful careers over time between 1865 and 1940. To answer this question we compare the occupational careers of three cohorts. For each of three birth cohorts, Figures 5 and 6 relate the average occupational status scores to age for both men and women. To smooth these curves, 5-year moving averages are presented.

The occupational careers of men show only a few signs of increasing success over time (Figure 5). The first born cohort (born between 1850 and 1860) shows a decrease of occupational status during their life courses, though accompanied with many fluctuations. The second and third cohort seems to start their careers on a somewhat higher level than the first cohort. The second cohort (born between 1860 and 1870) shows a slight increase in career success after the age of 40 years. The last cohort (born between 1871 and 1882) shows a small peak in occupational status between the age of 35 and 55 years. A clear increase in **(← p. 231)**

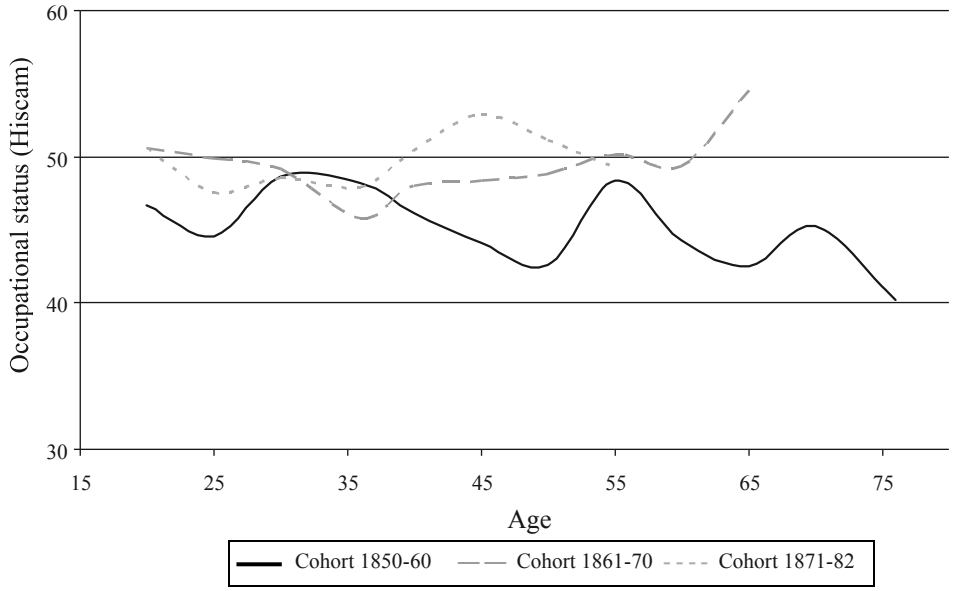

Figure 5. Average occupational status of men over the life course by birth-cohort (5-years moving averages).

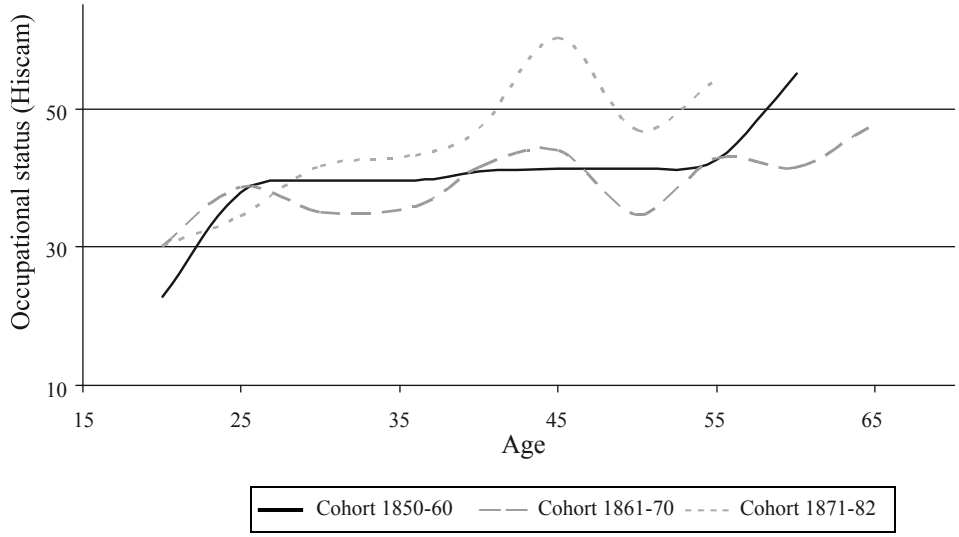

Figure 6. Average occupational status of women over the life course by birth-cohort (5-years moving averages).

occupational status over the life course, or over time is not visible. The only finding that lends supports to the expectation of increasing career success is the better career starts of the two later cohorts.

The female careers (Figure 6) in general show a much wider range in occupational status than the male careers. For all cohorts, between age 15 and 25 years, an increase in occupational status was visible. For cohort 1 (born between 1850 and 1860) this increase is followed by a long period of hardly any change between the ages of 25 and 55 years. At the end of the career a very steep increase is visible, but this is based on only very few cases. Cohort 2 (born between 1861 and 1870) is comparable to the first one, but shows much greater fluctuations. The last cohort shows a steep rise in status until the age of 45 years and subsequent fluctuations at a high status level. As in the case of men, the two later cohorts start their career at higher levels than the first. The finding that the occupational status over the life course of the last cohort is at a higher level (on average) than the preceding ones, lends support to the expectation of an increasing status over time.

Test of the Hypotheses

First, the models for male respondents will be discussed, followed by a discussion of the models **(← p. 232)** for women. The first model estimated (Model 0) was the null model (Table 5). This model indicated how much variation in occupational status was found both between and within individuals (i.e. between the different measurements of occupational status of a single respondent). There was more variation in occupational status between among men than within men's careers: 82 per cent [191.80 / (191.80 + 41.94)] of the variance in occupational status is between men. Model 1 includes all of the main effects of variables measuring norms and resources. If we take the characteristics of men into account, there is some evidence for an overall movement towards more successful careers. With the passing of every 10 years, the average occupational status increased by 1.25 status points.

While hypothesis 1 had expected work experience to increase the occupational status of men, Model 1 revealed no such effect. There was only a small negative effect of experience squared: occupational status declined with experience at an increasing rate. Analyses conducted without the other individual characteristics (data not shown) showed that experience, and experience squared, both yielded the effects on occupational status that had be anticipated. Thus, we can conclude that the (small) increase of status associated with greater experience can be explained by the other characteristics of men, (e.g. marrying); however, the decrease in status later in life cannot.

Both time-constant predictors of basic schooling and father's social class affected occupational status of mean at the beginning their careers. Men who were able to sign the

marriage certificate had an occupational status that was nine points higher than those who were not able to sign. This finding supports hypothesis 2a. In addition, the effect of a father's social class on his son's occupational status at the beginning of his career was supported (hypothesis 3a); however, sons of farmers appeared to be an exception. Sons of white collar and skilled workers had an occupational status that was 14 and close to 9 points higher, respectively, than the sons of unskilled workers who were starting their own careers. Finally, the sons of farmers did not significantly differ from the sons of unskilled workers.

The expected increase in occupational status after marriage was found (hypotheses 4a and b). After marriage, men's occupational status is on average 2 points higher than before; however, men who did not marry at all during the observation period also had a relatively high status (12 points higher than those who married without basic schooling and 3 points higher than those who married with basic schooling).

None of the remaining time-varying variables (having children and the migration variables) yielded significant effects. While we expected that having children would not have an effect, the absence of an effect from the migration variables offers no support for hypothesis 5a.

Nonetheless, adding these predictors reduces the unexplained variance within men from 41.94 (the null model) to 39.52 and the unexplained variance between men from 191.8 to 156.40. According to the misfit indicator (–2restricted loglikelihood), the model performs significantly better (40,267.02 to 39,737.50) than the null model.

Whether the father's social class and/or basic schooling influenced the rate at which occupational status grew was tested in Model 2. The rate of growth was expressed by the effect of the experience variable (divided by 10). The main effect of experience was not significant. However, in the case of the sons of skilled workers, the interaction of experience and father's class showed a significant negative effect. Thus for every additional 10 years of experience, the status of these sons decreased by close to one point more than the sons from other classes. Thus hypothesis 3b was not supported. Basic schooling had no significant effect on the rate of growth of occupational status. Therefore, Hypotheses 2b is also not supported.

Model 3 includes over time interactions instead of interactions with experience. We expected the effects of father's class and basic schooling to decrease and the effect of marriage to increase over time. Again we found a significant interaction for sons of skilled workers. With the passing of every 10 years, the positive (main) effect of having a skilled worker for a father (which was around 9 status points in 1900) was reduced by almost 1 point. This is congruent

with our hypothesis, although it remains unclear why only the sons of skilled workers lose their advantaged position. The increase in the advantage of married men that we had expected was not found. Indeed contrary to our expectations, there was a small negative interaction effect of getting married with the year. For each additional 10-year increments, the main positive effect of getting married (which was 3.46 in 1900) reduces by 0.52 points.

In Model 4, interactions with experience and with the year were included. Both interactions of father's class with year and with experience were insignificant in this model. Unfortunately, due to the high correlation between experience and year ($r = 0.85$) we were unable to determine whether the effect of father's class changes over time or whether the effect of experience differs between classes of origin. **(← p. 233)**

Table 5. Multilevel analyses of the occupational status of men (coefficients and levels of significance) (n = 1,407).

	Model 0	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Intercept	47.62**	29.24**	29.36**	28.49**	26.62**
Experience/10		0.15	–0.16	–0.13	–0.23
(Experience/10)^2		–0.11*	–0.15*	–0.06	–0.07
Year (since 1865)/10		1.25*	1.27*	1.52*	1.88**
Basic schooling[a]					
Yes		9.00**	9.42**	8.10*	9.03**
Unknown (never married)		12.00**	14.17**	11.26**	11.86*
Father's class[b]					
White collar		14.29**	14.00**	14.45**	14.91**
Skilled worker		8.84**	7.52**	8.93**	9.69**
Farmer		1.67	1.31	1.73	–1.00
Married		2.01**	2.34**	3.46**	3.25**
Child		–0.71			
Migration[c]					
Rural–urban move		–0.63			
Different move		0.68			
Urban		0.58			
Over life course					
Experience/10* father's class[b]					
White collar			–0.31		–0.27
Skilled worker			–0.98**		–0.44
Farmer			–0.26		1.57
Experience/10* basic schooling[a]					
Yes			0.28		
Unknown (never married)			1.22		
Over time					
Year (since 1865)/10* father's class[b]					
White collar				–0.28	–0.00
Skilled worker				–0.92**	–0.05
Farmer				–0.30	–0.18
Year (since 1865)/10* basic schooling[a]					
Yes				0.34	
Unknown (never married)				0.22	
Year (since 1865)/10*married				–0.52*	–0.43*

Variation between individuals	191.80	156.40	158.15	157.99	156.03
Variation within individuals	41.94	39.52	39.02	39.24	39.23
–2Restricted Log Likelihood	40,267.02	39,737.50	39,702.39	39,738.56	39,730.23

[a]Reference category: no basic schooling (unable to sign the marriage certificate).

[b]Reference category: unskilled workers.

[c]Reference category: no move.

Note: Year starts to count at 1865, and in the interactions year is centred around 1900.

**P<0.05; **P<0.01.*

The same sequence of models was estimated for women (Table 6). The first model was the null model. Similar to men, there was more variation in occupational status between women than within female careers: 73 per cent of the variance in occupational status was between women (which was about 10 per cent less compared to men). This was congruent with Figures 5 and 6, which also indicated larger variations within women's careers than within men's careers.

Model 1 included the main effects of variables measuring resources and norms. Adding these predictors to the model reduced the unexplained variance within women from 106.32 (in the null model) to **(← p. 234)**

Table 6. Multilevel analyses of the occupational status of women (coefficients and levels of significance) (n = 824).

	Model 0	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Intercept	23.50**	11.36**	9.14*	9.15*	10.83*
Experience/10		5.13**	5.44*	4.63**	5.86**
(Experience/10)^2		– 0.41*	–0.44*	–0.39*	–0.38*
Year (since 1865)/10		1.11*	0.98	2.35*	0.16
Basic schooling[a]					
Yes		–0.39	1.13	4.16	1.15
Unknown (never married)		2.68	–5.98	2.11	2.09
Father's class[b]					
White collar		10.71**	10.43**	10.78**	10.69**
Skilled worker		5.84**	5.66*	5.80**	5.89**
Farmer		4.52*	3.92	4.95*	5.04*
Married		3.14*	5.51**	5.32*	5.75**
Child		1.26			
Migration[c]					
Rural–urban move		–0.23			
Different move		–1.11			
Urban		–0.51			
Over life course					
Experience/10* father's class[b]					
White collar			–0.11		

Skilled worker			–0.06		
Farmer			–0.52		
Experience/10* basic schooling[a]					
Yes			–1.16		–2.16
Unknown (never married)			0.69		1.02
Over time					
Year (since 1865)/10* father's class					
White collar				0.03	
Skilled worker				–0.01	
Farmer				–0.01	
Year (since 1865)/10* basic schooling[a]					
Yes				–2.15*	0.85
Unknown (never married)				–0.21	0.85
Year (since 1865)/10*married				0.06	
Variation between individuals	299.87	211.78	211.82	211.78	212.96
Variation within individuals	106.32	89.70	89.26	89.17	88.84
–2Restricted Log Likelihood	19,912.40	19,343.77	19,334.92	19,344.38	19,325.14

[a]Reference category: no basic schooling (unable to sign the marriage certificate).

[b]Reference category: unskilled workers.

[c]Reference category: no move.

Note: Year starts to count at 1865, and in the interactions year is centred around 1900.

**P<0.05; **P<0.01.*

from 299.87 to 211.78. Over time, with each additional 10 years, the average occupational status of women increased by 1.11 points. This suggests that when we take the individual characteristics of men and women into account, their average status increases by approximately the same amount over time. As expected according to hypothesis 1, work experience increased the occupational status of women by approximately 5 points for every 10 years. Likewise, there was a small negative effect of experience squared; thus over a life time, the amount that occupational status increased slowed down at older ages, as more experience had been accumulated. The effect of a father's social class on his daughter's occupational status at the start of her career (Hypothesis 3a) was supported. Daughters of white-collar workers, skilled workers, and farmers had **(← p. 235)** an occupational status at the start of their career which was almost 11, 6, and 4.5 points higher, respectively, than the occupational status of daughters of unskilled workers.

Less support was found still for hypotheses 2a, 4c, 5a, and 5b. Whether a woman had basic schooling did not significantly affect her occupational status at the start of her career. Contrary to our expectations, we found an increase in occupational status after marriage. After marriage women had occupations that were on average of 3 points higher status than those from before marriage. In addition, having a child did not significantly decrease a woman's occupational

status. Finally, as was true in the case of men, migrating did not affect the occupational status of women.

The next model (Model 2) included interactions with the respondent's experience; more specifically, we tested for an interaction between father's class and experience, as well as between basic schooling and experience. However, none of these interactions yielded significant results.

In Model 3, the over time interactions of a father's class, signature, and being married were added. The interaction terms with father's class were not significant. Thus, the effect of father's class remained equally strong over time, which does not support hypothesis 3c. The interaction between year and basic schooling indicated that the positive main effect of being able to sign the marriage document (not significant) decreases by 2.15 points every 10 years. Since the variable year was centred around 1900, the main effect of being able to sign the marriage document (4.16) applies to the year 1900.

The over time interaction with getting married did not yield significant results. All other variables had effects that were similar to the ones described in model 1.

In the final model (Model 4), both the experience and the over time interactions with basic schooling were added. As was true for male careers, for women, experience and year were highly correlated making all interaction terms insignificant.

Discussion and Conclusion

In this article, we studied career success over an individual's life course and using a long-term perspective. We sought to answer three research questions.

The first question focused on whether, between 1865 and 1940, individuals' careers became more successful over time. A comparison of the life-course patterns of three cohorts along with a multilevel analysis revealed that this was hardly the case. Men and women who were born in later cohorts started their careers on a higher level than the first cohort. With the exception of the middle cohort of women, they succeeded in maintaining this advantage throughout their occupational career. Taking the average status fluctuations over the life course of the birth cohorts into account, the gain in status between cohorts was not impressive.

The second and third questions concerned possible explanations for individual differences in career success and in their changes over time. It was approached by formulating hypotheses using a resource theory as well as a norms and societal expectations framework. We considered three types of influences on career success. First, based on the human capital literature we assumed that with increasing experience people gained occupational status but that these gains levelled off at the end of an individual's careers. Second, we studied the influence of time-invariant and timevarying characteristics on individual careers. These characteristics may have caused individuals to start their careers at different levels, or they may have caused a differential growth of status. Finally, in an effort to answer the third research question, we tested hypotheses on changes over time for some of the effects.

For men, resources played an important role in career success over the life course: basic schooling and father's social class facilitated the acquisition of occupational status, as did the act of marrying itself. However, contrary to what we expected, men's occupational status did not increase over the life course. Work experience was not an important resource, to the contrary, on average men lost status over the life course. This seemed especially true for the sons of skilled workers. In addition, we also found that the advantage of sons of skilled workers over sons from other classes decreased over time. Early in our observation period we are only observing the careers of young men, while later in the observation period we are observing mainly the careers of older men, thus it is hard to tell whether we are observing a life course or an effect over time. Nonetheless, both findings suggest that societal changes are taking place during this period, ones that have led to a reshuffling of the advantages in the labour market and not so much to an improvement of the labour market chances for all social classes. This is especially true in the case of the sons of skilled workers. Although initially advantaged, over the course of their career they experienced the **(← p. 236)** risk of dropping into a growing class of unskilled labour (whether over their life course or simply over historical time).

For women, the findings are somewhat more mixed: in support of the resource perspective we found positive influences for work experience, father's social class, and being married, on female career success. The career success of women with children did not differ from that of women without children. This contradicted the hypothesis based on the female housewife model, as did the career success of married women mentioned above.

The positive effect of marriage on female careers seems counterintuitive, at least when taking into account the well-established theoretical and empirical knowledge on female careers in the

19th and 20th centuries. The most straightforward explanation for this finding is that after they got married many women simply left the labour market and thus were no longer observed. Hence, our findings may have emerged because women with higher status occupations were more likely to stay in the labour market after marriage than women with less attractive occupations. Pure human capital theory predicts that all women would stay in the labour market. On the contrary, pure household economics predicts that all women would leave the labour market. Indeed our finding is intermediary and suggests that more productive women were more likely to stay in the labour market. Curiously, this is the opposite of what we would have expected from the housewife model. Higher status women did not in fact set the example by leaving the labour market; indeed they were more likely to continue working.

Perhaps less successful women did not in fact leave the labour market but after marriage no longer reported their occupation in the official registers. We do not know to what extent this was the case, but we do know that this problem is smaller for our data than for other data sources (e.g. census data). The sources upon which the HSN data are based are registers in which women had to state their occupation themselves. Other data often have an additional 'filter' (e.g. a census official who had his or her own ideas about whether women's occupations should to be recorded). These other sources are more vulnerable to underreporting the occupations of certain groups deemed by elements of the population as not supposed to participate in the labour market.

Growth models assume that during the periods where women were not observed that they nonetheless behave in the same way as women with similar characteristics who were observed. That said, in reality, many women were not observed simply because they had dropped out of the labour market at, or after, marriage. As a result, the models suggest that getting married increases occupational status. Based on these results we conclude that multilevel growth models presented here are more suitable for explaining male careers than female careers.

Nevertheless, we remain convinced that multilevel growth models can still be used to study female careers. First, almost all women had an occupation until their marriage. One could thus focus on women in general, before they get married and study the influences (e.g. social background) on their pre-marital occupational careers. Second, most of the women who were never married remained in the labour market. Alternatively, one could focus on these women and study their careers. In this way one could study a selective group, but for this group, the model assumptions would be met.

Another interesting finding of this study is that neither the place of residence (whether or not it was urban), nor migrating from rural to urban areas affected career success. Several explanations for this finding can be suggested. Perhaps migrants are a positively self-selected group. Yet migrants are at the same time discriminated at the place of destination. Such counteracting forces may lead to the absence of an overall effect. Another explanation may be that being urban is not a good indicator of the possibilities of the labour market. To better capture differences in the demand for certain labour, future research could include (regional) indicators of macro-societal developments such as industrialization (c.f. Zijdeman, 2008). Finally, it can be that migration and urbanity positively do indeed affect the occupational careers of men and women, but along other dimensions than status. Stovel, Savage, and Bearman (1996) suggest that during this period in the United Kingdom tenure became a more important characteristic of a 'successful' career.

In conclusion, we sought to systematically examine careers longitudinally. We showed that, contrary to what has often been assumed, in the case of the late 19th and early 20th century Netherlands, there was no clear increase in the career success of individuals. Moreover, we showed that a theoretical framework that underscores the importance of resources for careers could explain part of the differences in career success. Future research should focus on obtaining a better understanding of female careers (e.g. examining women who drop out of the official labour market) and of the regional differences in the demand for certain labour. **(← p. 237)**

Notes

1. We refrain from formulating hypotheses on the changing effects on the growth of status. Our data do not allow to estimate the three-way interaction between basic schooling (or another determinant), age and historical time that would be needed to test such hypotheses.
2. In the HISCAM scale, it is assumed that the relative status positions of occupational groups do not change over time. A test of this assumption showed that changes are indeed relatively small (Lambert *et al*., 2006)

Acknowledgements

We are grateful to Marco van Leeuwen, Henk Flap and the members of the Migration and Stratification Seminar at the Department of Sociology at Utrecht University for their comments on earlier versions of this article.

Funding

This project is funded by The Netherlands Organisation for Scientific Research (NWO), Grant # 400-08-230.

References

Allmendinger, J. (1989). Educational systems and labor market outcomes. *European Sociological Review*, **5**, 231–250.

Becker, G. S. (1975). *Human Capital*. New York and London: Columbia University Press.

Becker, G. S. (1981). *A Treatise on Family*. Cambridge, MA: Harvard University Press.

Bernasco, W. (1994). *Coupled Careers: The Effects of Spouse's Resources on Success at Work*. Amsterdam: Thesis Publishers.

Bian, Y. (1997). Bringing strong ties back in: indirect ties, network bridges, and job searches in China. *American Sociological Review*, **62**, 366–385.

Blau, P. M. and 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*, **2**, 208–225.

Blossfeld, H.-P. and 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*, **4**, 123–140.

Boonstra, O. (1993). *De Waardij Van Eene Vroege Opleiding*. Wageningen: Afdeling Agrarische Geschiedenis Landbouwuniversiteit.

Bras, H. (2003). Maids to the city: migration patterns of female domestic servants from the Province of Zeeland, the Netherlands (1850–1950). *The History of the Family*, **8**, 217–246.

Brown, J., van Leeuwen, M. H. D. and Mitch, D. (2004). The history of the modern career: an introduction. In Mitch, D., Brown, J. and Van Leeuwen, M. H. D. (Eds.), *Origins of the Modern Career*. Aldershot: Ashgate, pp. 3–42.

Bühlmann, F. (2008). The corrosion of career? Occupational trajectories of business economists and engineers in Switzerland. *European Sociological Review*, **24**, 601–616.

Collins, R. (1979). *The Credential Society*. New York: Academic Press.

De Vries de, J. (2006). *Measurement Error in Family Background Variables*. ICS Dissertation, Nijmegen.

Volkstellingen, (1859). *Staten Van de Bevolking Der Steden en Gemeenten Van Het Koningrijk Der Nederlanden Op Den 1 Januari 1859, Volkstellingen CBS* [Internet]. Available from: 5http://www.volk-stellingen.nl/nl/volkstelling/jaartellingdeelview/VT185901/4 [accessed July 2009].

Ganzeboom, H. B. G., Treiman, D. J. and Ultee, W. C. (1991). Comparative intergenerational stratification research: three generations and beyond. *Annual Review of Sociology*, **17**, 277–302.

Goldin, C. (1994). Understanding the gender gap: an economic history of American women. In Burston, P. (Ed.), *Equal Employment Opportunity: Labor Market Discrimination and Public Policy*. New York: Aldine de Gruyter.

Hannan, T., Scho¨mann, K. and Blossfeld, H.-P. (1990). Sex and sector differences in the dynamics of wage growth in the Federal Republic of Germany. *American Sociological Review*, **55**, 694–713.

Historical Sample of the Netherlands (HSN) (2008). *Release Life Courses 2008_01* [Internet]. Available from: 5http://www.iisg.nl/hsn/4 [accessed July 2009].

Horrell, S. and Humphries, J. (1995). Women's labour force participation and the transition to the male-breadwinner family, 1790–1865. *The Economic History Review*, **48**, 89–117.

International Standard Classification of Occupations (ISCO): Revised edition 1968 (1969). Geneva: International Labour Office. **(← p. 238)**

Kaelble, H. (1985). *Social Mobility in the 19th and 20th Centuries. Europe and America in Comparative Perspective*. Leamington Spa: Berg Publishers.

Kalmijn, M. and 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. *Population Studies*, **59**, 2, 211–231.

Kerckhoff, A. C. (1995). Institutional arrangements and stratification processes in industrial societies. *Annual Review of Sociology*, **21**, 323–347.

Kerr, C., Dunlop, J. T., Harbison, F. H. and Myers, C. A. (1960). *Industrialism and Industrial Man*. Cambridge, MA: Harvard University Press.

Knippenberg, H. (1986). *Deelname Aan Het Lager Onderwijs in Nederland Gedurende de Negentiende Eeuw*, 9th edn edn. Amsterdam: KNAG.

Knippenberg, H. (1995). Het Hart van Nederland—De Provincie Utrecht in De Periode 1800–1940. In Mandemakers, K. and Boonstra, O. (Eds.), *De Levensloop Van de Utrechtse Bevolking in de 19e Eeuw*. Assen: Van Gorcum, pp. 7–37.

Knippenberg, H. (2003). De Beroepsbevolking in Kaart Gebracht. In Beekink, E., Boonstra, O. and Engelen, Th. L. M. (Eds.), *Nederland in Verandering*. Amsterdam: Aksant, pp. 5–24.

Kok, J. (1995). Komen En Gaan—Migratiepatronen in De Provincie Utrecht. In Mandemakers, K. and Boonstra, O. (Eds.), De Levensloop Van de Utrechtse Bevolking in de 19e Eeuw. Assen: Van Gorcum, pp. 128–156.

Kok, J. (1997). Youth labor migration and its family setting, The Netherlands 1850–1940. *The History of the Family*, **2**, 507–526.

Korenman, S. and Neumark, D. (1991). Does marriage really make men more productive? *The Journal of Human Resources*, **26**, 282–307.

Lambert, P. S., Zijdeman, R., Maas, I. and Prandy, K. (2008). HIS-CAM—Presentation and evaluation of an historical occupational stratification scale based upon the analysis of social interaction. Paper presented at the European Social Science History conference, Lisbon, 26

February to 1 March 2008 [Internet], available from: 5http://www.camsis.stir.ac.uk/hiscam/hiscam_esshc08.pdf4 [last accessed 2 March 2009].

Leeuwen van, M. H. D., Maas, I. and Miles, A. (2004). Creating a historical international standard classification of occupations an exercise in multinational interdisciplinary cooperation. Historical methods. *A Journal of Quantitative and Interdisciplinary History*, **37,** 186–197.

Lewis, J. (2001). The decline of the male breadwinner model: implications for work and care. *Soc. Pol.*, **8**, 152–169.

Leydesdorff, S. (1977). *Verborgen Arbeid, Vergeten Arbeid. Een Verkenning in Degeschiedenis 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.

Maas, I. and vanLeeuwen,M. H. D.(2002). Industrialization and Intergenerational Mobility in Sweden. *Acta Sociologica*, **45**, 179–194.

Maas,I. and vanLeeuwen,M. H. D.(2004). Occupational careers of the total male labor force during industrialization: the example of nineteenth-century Sweden. In Mitch, D., Brown, J. and Van Leeuwen, M. H. D. (Eds.), *Origins of the Modern Career*. Aldershot: Ashgate, pp. 227–258.

Mandemakers, K. (1996).HBS enGymnasium – Ontwikkeling, Structuur, Sociale Achtergrond en Schoolprestaties, Nederland, ca. 1800-1968 (Stichting beheer IISG Amsterdam 1996) IISG studies en essays 24.

Mandemakers, K. (2004). De Historische Steekproef Nederlandse bevolking (HSN) en het project Life Courses in Context. *Bevolking En Gezin*, **33**, 91–114.

Miles, A. and Savage, M. (2004). Constructing the modern career, 1840–1940. In Mitch, D., Brown, J. and van Leeuwen, M. H. D. (Eds.), *Origins of the Modern Career*. Aldershot: Ashgate, pp. 79–101.

Mincer, J. and Polachek, S. (1974). Family investments in human capital: earnings of women. *The Journal of Political Economy*, **82**, 76–108.

Mincer, J. (1958). Investment in human capital and personal income distribution. *Journal of Political Economy*, **66**, 281.

Mitch, D. (2004). Agricultural labour as a career: Norfolk farm workers in the late nineteenth and early twentieth centuries. In Mitch, D., Brown, J. and Van Leeuwen, M. H. D. (Eds.), *Origins of the Modern Career*. Aldershot: Ashgate, pp. 279–302.

Mitch, D., Brown, J. and Van Leeuwen, M. H. D. (Eds.), (2004). *Origins of the Modern Career*. Aldershot: Ashgate.

Pfau-Effinger, B. (2004). Socio-historical paths of the male breadwinner model—an explanation of cross-national differences. *British Journal of Sociology*, **55**, 377–399.

Pott-Butter, H. A. (1993). *Facts and Fairly Tales about Female Labor, Family and Fertility, a Seven Country Comparison,* 1850–1990. Amsterdam: University Press. **(← p. 239)**

Rosenfeld, R. A. (1992). Job mobility and career processes. *Annual Review of Sociology*, **18**, 39–61.

Shavit, Y. and Blossfeld, H.-P. (Eds.), (1993). *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*. Westview Press: Boulder.

Sicherman, N. and Galor, O. (1990). A theory of career mobility. *The Journal of Political Economy*, **98**, 169–192.

Sjaastad, L. A. (1962). The costs and returns of human migration. *The Journal of Political Economy*, **70**, 80–93.

Smits, J. (2001). Career migration, self-selection and the earnings of married men and women in the Netherlands. 1981–1993. *Urban Studies*, **38**, 541–562.

Snijders, T. and Boskers, R. (1999). *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling*. London: Sage Publications.

Sørensen, A. B. (1975). The structure of intragenerational mobility. *American Sociological Review*, **40**, 456–471.

Sørensen, A. B. and Tuma, N. B. (1981). Labor market structures and job mobility. *Research in Social Stratification and Mobility*, **1**, 67–94.

Spilerman, S. (1977). Careers, labor market structure, and socioeconomic achievement. *The American Journal of Sociology*, **83**, 551–593.

Stovel, K., Savage, M. and Bearman, P. (1996). Ascription into achievement: models of career systems of Lloyds Bank, 1890–1970. *The American Journal of Sociology*, *102*, 358–399.

Thurow, L. C. (1975). *Generating Inequality: Mechanisms of Distribution in the U.S. Economy*. New York: Basic Books.

Treiman, D. J. (1970). Industrialization and social stratification. In Laumann, E. O. (Ed.), *Social Stratification: Research and Theory for the 1970s*. New York: Bobbs-Merrill Company, pp. 207–234.

van Dijk, H., Visser, J. and Wolst, E. (1984). Regional differences in social mobility patterns in the Netherlands between 1830 and 1940. *Journal of Social History*, **17**, 435–452.

van Heek, J. (1958). *Sociale Stijging en Daling in Nederland*. Leiden: E.J. Brill.

van Poppel, F., van Dalen, H. P. and Walhout, E. (2008). Diffusion of a social norm: tracing the emergence of the housewife in the Netherlands, 1812–1922. *The Economic History Review*, **62**, 99–127.

Verbakel, E. and de Graaf, P. M. (2008). Resources of the partner: support or restriction in the occupational career? Developments in the Netherlands between 1940 and 2003. *European Sociological Review*, **24**, 81–95.

Wagner, M. (1987). Education and migration. In Mayer, K. U. and Tuma, N. B. (Eds.), *Applications of Event History Analysis in Life Course Research. Materialien Aus Der Bildungsforschung Nr. 30 Education and Migration*. Berlin: Max-Planck-Institut für Bildungsforschung, pp. 486–509.

Wagner, M. (1989). Spatial determinants of social mobility: an analysis with life history data for three West German Cohorts. In Van Dijk, J., Folmer, H., Herzog, H. W. and Schlottmann, A. M. (Eds.), *Migration and Labor Market Adjustment*. Dordrecht: Kluwer Academics, pp. 61–84.

Wilensky, H. L. (1960). Work, careers, and social integration. *International Social Science Journal*, **12**, 543–560.

Wolbers, M. (1998). *Diploma-Inflatie en Verdringing op de Arbeidsmarkt. Een Studie Naar Ontwikkelingen in de Opbrengsten van Diploma's in Nederland*. Nijmegen: PhD Dissertation ICS/University of Nijmegen.

Zijdeman, R. (2008). Intergenerational transfer of occupational status in nineteenth century Zeeland, The Netherlands: a test of the influence of industrialisation, mass communication and urbanisation in 117 municipalities. *International Journal of Sociology and Social Policy*, **28**, 204–216.

Authors' Addresses

Wiebke Schulz (to whom correspondence should be addressed), Department of Sociology/ICS, Heidelberglaan 2, 3584 CS Utrecht, The Netherlands. Email: w.schulz@uu.nl

Ineke Maas, Department of Sociology/ICS, Heidelberglaan 2, 3584 CS Utrecht, The Netherlands. Email: i.maas@uu.nl

Manuscript received: July 2009 **(← p. 240)**