HISTORICAL LIFE COURSE STUDIES

VOLUME 3 2016



MISSION STATEMENT

HISTORICAL LIFE COURSE STUDIES

Historical Life Course Studies is the electronic journal of the European Historical Population Samples Network (EHPS-Net). The journal is the primary publishing outlet for research involved in the conversion of existing European and non-European large historical demographic databases into a common format, the Intermediate Data Structure, and for studies based on these databases. The journal publishes both methodological and substantive research articles.

Methodological Articles

This section includes methodological articles that describe all forms of data handling involving large historical databases, including extensive descriptions of new or existing databases, syntax, algorithms and extraction programs. Authors are encouraged to share their syntaxes, applications and other forms of software presented in their article, if pertinent, on the EHPS-Net website.

Research articles

This section includes substantive articles reporting the results of comparative longitudinal studies that are demographic and historical in nature, and that are based on micro-data from large historical databases.

Historical Life Course Studies is a no-fee double-blind, peer-reviewed open-access journal supported by the European Science Foundation (ESF, http://www.esf.org), the Scientific Research Network of Historical Demography (FWO Flanders, http://www.historicaldemography.be) and the International Institute of Social History Amsterdam (IISH, http://socialhistory.org/). Manuscripts are reviewed by the editors, members of the editorial and scientific boards, and by external reviewers. All journal content is freely available on the internet at http://www.ehps-net.eu/journal.

Editors: Koen Matthijs & Paul Puschmann Family and Population Studies KU Leuven, Belgium hislives@kuleuven.be

The European Science Foundation (ESF) provides a platform for its Member Organisations to advance science and explore new directions for research at the European level. Established in 1974 as an independent non-governmental organisation, the ESF currently serves 78 Member Organisations across 30 countries. EHPS-Net is an ESF Research Networking Programme.



The European Historical Population Samples Network (EHPS-net) brings together scholars to create a common format for databases containing non-aggregated information on persons, families and households. The aim is to form an integrated and joint interface between many European and non-European databases to stimulate comparative research on the micro-level. Visit: http://www.ehps-net.eu.



HISTORICAL LIFE COURSE STUDIES VOLUME 3 (2016), 66-84 published 10-05-2016

Students from all Layers of Society. Study Grants, Parents and the Education of their Children, 1815-2015.

Wouter Marchand Utrecht University

ABSTRACT

This paper investigates how the system of government grants affected individual life chances for students in the Netherlands from 1815 to today, focusing on the accessibility of academic education and opportunities for social mobility. Study grants for adolescents from lower class or low-income families can promote upward intergenerational social mobility, since they remove the financial barriers of continuing education and can lead to occupations of a higher standing. By investigating the social background and careers of a sample of grant students compared to the overall student populations, this paper uncovers to what extent study grants had an effect on an individual and societal scale. During the two centuries under study the aims and size of the grant system changed, causing concerns about the effectiveness of the grants. In the entire nineteenth century grants for university students were restricted to those already enrolled, minimizing the appeal for newcomers from low-income families. The limited number of grants available prevented the system from influencing the composition of the student population fundamentally. However, this changed when the grant system was extended in 1919, and again after 1945 when grant allocation was connected to parental income level. The rapid increase of educational participation and connected democratisation from the 1960s made the grant system influential, however costly. The grant system has been a subject of ongoing political debate during the last few decades, since the grants' effect on upward social mobility has been called into question.

Keywords: Study financing schemes; higher education; status attainment; the Netherlands; 19th and 20th centuries

e-ISSN: 2352-6343

PID article: http://hdl.handle.net/10622/23526343-2016-0004?locatt=view:master

The article can be downloaded from here.

© 2016, Wouter Marchand.

This open-access work is licensed under a <u>Creative Commons Attribution 4.0 International License</u>, which permits use, reproduction & distribution in any medium for non-commercial purposes, provided the original author(s) and source are given credit. See http://creativecommons.org/licenses/

1 INTRODUCTION

This paper investigates the influence of study grants on the accessibility of education for individuals from lower-income households between 1815 and 2015, using the Netherlands as a case study. The relationship between study allowances and educational accessibility is an example of the influence public policy can have on individual life chances (Mayer 2005). The sum of money flowing from the state to the student can increase the educational attainment of the latter, thereby providing him or her with increased chances of a higher income level, an occupation with higher prestige, and possibly even a better health and a longer life expectancy (Deaton & Paxson 2001). Grant policies have a moderating effect on the associations in the status attainment model, understood as the process by which individuals attain a socioeconomic position in a stratified society. If achieved occupational status is determined by transmission of family status, on the one hand, and personal achievements, on the other (Blau & Duncan 1967), study grants potentially influence status attainment. By reducing the net costs of education and removing financial barriers toward a prolonged school career, they have an impact on the transmission of status (cf. Grusky 1983; Treiman 1970).

The Dutch state has provided study grants since 1815.¹ An Education Act established 70 grants for students of the three universities in the northern Netherlands. With these grants provided by the state, a provision was initiated that continues to exist up to today. This article seeks to answer the question: what have been the aims and effects of the study grant system with regard to accessibility of academic education, between 1815 and today? A study grant system can have several motivations: a general increase of participation in education; modifying the composition of the student population; or equalizing opportunities for all. In the course of two centuries, a variety of motivations have played a role, resulting in various effects for the involved parties. Did it aim to give incentives to youngsters with a lower-income background to continue to study in higher education, thereby contributing to the shift from ascription to achievement (Blau & Duncan 1967; Treiman 1970)? Or was it indeed an instrument to maintain privileged status, by favouring students of a higher status (Collins 1971)?

It is appropriate to highlight the development of the grant policy in the period at hand, since both quantitatively and qualitatively the provision was repeatedly revised. First of all, until 1986 only a limited share of the student population received grants. The earliest system distributed 70 grants among 559 students.² However, the available number of allowances was not adjusted when university attendance changed. Therefore, the share of supported students decreased when the student population expanded. Furthermore, budget constraints in the 1840s urged the downsizing of the system. Around the turn of the twentieth century about 1 per cent of all university students received government support. The system was extended in 1919, providing 1 in 20 students with a grant, and in subsequent steps after the 1950s. In 1983 40 per cent of all students was supported (Marchand 2014b). A selection among requesting candidates was therefore necessary. This selection process, carried out by the university boards until 1920 and by an independent administrative committee thereafter, made the grant system subject to biases. The real amount of the grant varied over time, but was never sufficient to cover the full expenses (Caljé 2006; Heringa 1952; Thio & Buijs 1968). Grants therefore only eliminated the influence of financial resources on educational attainment to a limited extent.

The current paper aims to evaluate the grant system by narrowing in on the selection process. The impact of the grant system depends strongly on the students targeted and those excluded. Even though the exact motivations for conceding or rejecting grant requests were often left implicit in the documents, the available information, combined with the outcome of the selection process, enable us to answer the research question. To this end the paper combines a qualitative survey on the aims and ambitions of the grant system between 1815 and today, with a quantitative investigation of the application of the system. For the latter purpose, the social background of students with a study grant will be compared to students without such support. The occupation of the father will be used as indicator of social origin. To this end a dataset of 1,074 bursary students of the universities of Groningen, Leiden, Utrecht and Nijmegen is composed, containing information about parental and achieved social status. These data can be compared with existing datasets about academic students at a particular

Although study grants have been provided as long as academic schooling has been around, this article focuses on grant provisions provided by the state. Local governments, church parishes and wealthy inhabitants bore responsibility for earlier grant systems. Cf. Slaman, Marchand & Schalk (2016), Kalma (1985) and Habets (1881).

In addition 87 grants were available for students in the Southern Netherlands studying at the universities of Ghent, Leuven and Liège. Cf. Slaman, Marchand & Schalk (2016).

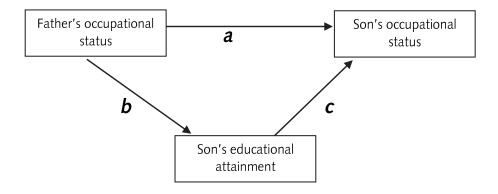
university (most notably Caljé 2006) or in the Netherlands as a whole (CBS 1938, 1949, 1973, 1986). More information on the data collection will follow in section 4.

This paper will proceed as follows. In the next section several theoretical notions on study grants, status transmission and life chances will be discussed. Section 3 will discuss the historiography on student population and social stratification in the period at hand. The fourth section will introduce the data used, and the methodology applied. The empirical results will follow in section 5. Section 6 is the conclusion.

2 EDUCATION AND THE TRANSMISSION OF PARENTAL SOCIOECONOMIC STATUS

Theoretically, study grants have an influence on life chances by enhancing the opportunities to prolong the school career and reach a higher level of education. A cost reduction brings higher education within reach of lower-income adolescents, giving them an incentive to invest in human capital, with positive returns for the individual as well as the economy as a whole (Becker 1962; Vries 2013). The relevance of study grants for status attainment follows from the Blau and Duncan's theoretical status attainment model, which is depicted in figure 1. This model formulates two ways of social reproduction: a direct influence of the family background on achieved status (a) and an indirect one through education (bc). The current paper does not aim to test the exact strengths of these relations and the development thereof (for research that does this, cf. Schulz et al. 2015; Knigge et al. 2014; Zijdeman 2010), but uses the model and its interpretations as a theoretical foundation of the potential impact of grants on status positions.

Figure 1. Status attainment model



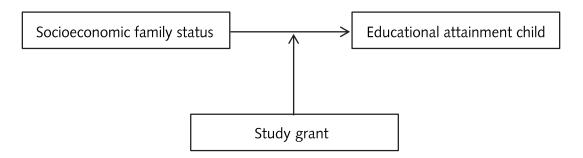
Source: based on Blau & Duncan (1967).

Two conflicting theories exist about the strength of the relations in the status attainment model and the changes over time as a result of modernisation. *Modernisation* is understood as a concept containing such phenomena as industrialization, educational expansion, mass communication, mass transport, urbanization and migration (Zijdeman 2010). On the one hand, the *industrialism thesis* expects the direct influence of father's status on his son's (path *a* in the model) to decrease in modernising societies. Occupational inheritance decreased and formal educational training was required to achieve a position on the labour market. The value of higher education increased because, as a result of the complexity of the labour market, the demand for non-manual workers such as managers and civil servants increased (Zijdeman 2009). The remaining influence of father's on son's status was therefore predominantly indirect and ran through education (path *bc*) (Kerr 1962; Treiman 1970). On the other hand, the *status maintenance thesis* expects that the influence of father's position on son's status attainment will persist. Once the direct association between father's and son's occupation decreases, parents invest in alternative ways to maintain family status. Status reproduction would than occur through indirect ways, most notably through education (Collins 1971). As a result the total association between the status of parents and that of their children persisted despite the processes of modernisation. In terms of the

status attainment model in figure 1: the increased strength of path **b** compensates the loss of influence through path **a**. As the curriculum in schools matched the cultural capital of pupils of a higher-status background, education reproduced existing inequality (Bourdieu & Passeron 1990).

These two schools of thought disagree about the association between family's socioeconomic status and child's educational achievement. This is exactly the relationship to which the present article draws attention (see figure 2).

Figure 2 Status transmission and study grants



Study grants potentially give an incentive to adolescents to continue to study in higher education, reducing the importance of financial considerations (De Graaf 1987). Compensation for the costs of education weakens the association between social background and educational attainment and contributes to the shift from ascription to achievement predicted by the industrialism thesis (Treiman 1970). This is especially the case when the officials provide students from lower-income backgrounds with these grants. After all, the financial constraints are largest for them and hinder their educational career to a greater extent than their counterparts from wealthier backgrounds. This situation occurs if parental income is taken into account when grants are distributed. However, the process of selection allows for the use of the grant system as an instrument of social reproduction (Bourdieu & Passeron 1990). The responsible officials can favour candidates from higher social groups, who are in possession of the right cultural capital, whether deliberately or not. In practice, access for students from lower strata can be impeded by excluding first-year students from receiving grants, thus necessitating students to pay for at least one year of education themselves.

The very limited historiography on historical grant provisions justifies the expectation that grants were used to maintain status, instead of increasing social mobility chances. Caljé (2006) posed the thesis that the government grants provided the state an opportunity to create a loyal elite, which was necessary to govern the young state of 1815. It therefore preferably supported higher-class students. With regard to grant distribution for pastors to be, Van Rooden (1996) hypothesized that the protestant church used grants to modify the recruitment to the profession (cf. Marchand 2014a). To connect more social prestige to the profession of pastor, students from higher classes, instead of the middle and lower classes, ought to be recruited. Especially recruitment among preachers' sons was stimulated by the application of study grants. Moes (2012) found evidence of traditional aristocracy upholding their status and influence through academic education after losing many of their privileges in 1848. Jarausch (1983) recognized the possible applications of government policy towards higher educational attainment. In a comparative review of the transformation of higher education he stated that "only after World War One did conscious attempts to create equality of educational opportunity begin to have an impact on enrolments" (p. 10). Jensma and De Vries (1997) posed a similar hypothesis for the Dutch context, stating that the increase in the participation in education reflected the demographic development until 1915. After that year an actual broadening of recruitment in social terms took place. This paper will evaluate to what extent the grant system contributed to this process.

3 HIGHER EDUCATION AND SOCIAL CHANGE

In the two centuries studied in this paper, the social recruitment of students in higher education has expanded both in the Netherlands and in surrounding countries (Orr, Gwosć & Netz 2011; Windolf 1992). Small and socially homogenous universities developed into large centers of higher learning, diversified in terms of social background and gender (Goldin, Katz & Kuziemko 2006; Merens, Hartgens & Van den Brakel 2012). In the early nineteenth century the Dutch student population was dominated by members of the local elite (Caljé 2006; Otterspeer 1992). The social exclusiveness was secured by the preservation of Latin as *lingua franca*. The high education costs and the foregone earnings during the years of educational training made enrolment very difficult for the offspring of lower- or middle-income families. Student numbers were low and stable for a long time during the 19th century: student numbers fluctuated between 1,000 and 1,500 without showing structural growth until the last decades of the 19th century (Jensma & De Vries 1997).

The social recruitment at the universities broadened from the middle of the 19th century, although it is difficult to pinpoint a starting point. Caljé (2006) reports that in 1865 about 40 per cent of the students at Groningen university originated from the non-academic bourgeoisie. In 1890 these groups exceeded the traditional academic elite in numbers. Figure 3 shows the social background of university students for a number of years between 1815 and 1986. The data are classified in a high-middle-low distribution, as applied in the reports by the Central Bureau of Statistics covering the years between 1936 and 1971. This distribution was based on a classification of occupations, on the basis of required education and occupational prestige (CBS 1959; cf. Marchand 2014b). Even though this classification of students is a crude measure and might even be said to be anachronistic because of its 20th-century character, using it enables us to compare the social characteristics of university students over a long period of time. Conversely, it was impossible to classify the CBS data into classifications designed for the 19th century, such as HISCLASS. The graph shows the gradual decline of elite dominance in higher education and the increasing attendance of middle-class students.

100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% 1815 1865 1890 1936 1947 1950 1958 1964 1970 1986 ☑ Higher occupations ☐ Middle occupations Lower occupations

Figure 3 Occupations of fathers of enrolled students in higher education, classified by CBS standards, 1815-1986

Source: Caljé (2006); CBS (1938, 1959, 1973, 1986).

Note: data on 1967-68 and 1970-71 reflect first year students, instead of students from all years. Data on 1986 contain both university and higher professional education (HBO).

An important stimulus for students from lower and middle social groups was the establishment of the *Hogere Burger School* HBS in 1864, a type of secondary education which was more practically oriented and recruited among middle-class pupils to a larger extent than the traditional *Gymnasium*, which traditionally prepared students for university. Mandemakers (1996) showed that HBS-education attracted middle-class students to a larger extent than the *Gymnasia* did. Together with Zijdeman he showed that middle-class students profited most from the expansion of secondary education between 1880 and 1920 (Zijdeman & Mandemakers 2008). In a succession of steps HBS-graduates were allowed entry into university education. Between 1877 and 1907 on average 20 per cent of HBS-graduates continued their educational careers in universities (Jensma & De Vries 1997). The increasing share of middle-class students was partly a result of expansion of higher education, with enrolment rates for the highest groups reaching a saturation point (Raftery & Hout 1993; Mandemakers 1996). This increased relative opportunities for lower groups. The attendance increased steadily to about 12 per 1000 18-25 year olds in 1940 (Mandemakers 1999). Jensma and De Vries (1997) stated that the rise in university attendance was a result of demographic growth until 1915, and a result of broadening social recruitment of universities after 1915.

In the interwar period the developments in the social composition of the student body did not go unnoticed. A fierce debate on the desirability of the broadening of the access to university education was unveiled. Not only could the "notable increase of impecunious students" break up the perceived homogeneity of the student population (Blok 1907, p. 448), the gloomy labour market perspective of academics during the depression of the 1930s ignited some hostility towards academic newcomers, both to middle-class and to female students. A special commission of inquiry investigated the economic perspective for academic graduates and foresaw rising unemployment among the highly educated. It however advised against the reduction of the grant system and barriers for female students. The committee argued that grants were attributed to the most talented students and should therefore not be limited (Limburg 1936). Female participation did not influence the employment possibilities much, since the majority of educated women never entered the labour market or withdrew from it after marriage, the committee stated (Limburg 1936).

After the Second World War the attitude towards academic newcomers was completely different (Harbers 1986). In the years of reconstruction after the war and the economic expansion more higher educated personnel was needed (VNO 1951). Youngsters from lower-class backgrounds were now encouraged to enrol. This shift can be illustrated by two inaugural lectures by the sociologist and statistician, Philip Idenburg. In 1934 he accepted the position of professor at the University of Amsterdam, during which occasion he warned for academic overproduction, in accordance with the conclusions of the commission-Limburg, of which he was a member. In 1956 however, when he was appointed as endowed professor at the same university, the title of his his lecture translates as *People wanted!* His message was that many pupils with the appropriate skills for university education failed to enrol because of social and economic constraints (Idenburg 1956).

The people Idenburg wanted to encourage, increasingly enrolled. Educational participation in 1985 had grown six-fold compared to 1950, from 50 to over 300 thousand students. In 1985 104 men per thousand of the relevant age group, and 63 women out of 1,000 18 to 25 year old females followed academic education (Van der Ploeg 1993). This expansion had a demographic context, as the *baby boom generation*, born shortly after the ending of the war, reached the age of enrolment in the early 1960s. But attendance relative to the size of the age group likewise increased. An ever-increasing share of the 18 to 25-year olds continued towards higher education. Tertiary education came within reach of lower-income families because of economic well-being of Dutch households in the 1950s and 1960s (Liefbroer & Dykstra 2000). Public governance contributed with a set of adjustments to the costs of education, such as the expansion of the grant system and a reduction of enrolment costs (Marchand 2014b). In a later stage the expansion of education increased with every generation, because higher-educated parents value the education of their children and therefore encourage them to enrol (Windolf 1992).

The more important growth of middle- and lower-class participation occurred from the 1960s on-wards. Nevertheless, the chances of enrolment in higher education remained skewed across social groups. They did remain unequal in the context of the 19th century, when members of the highest status groups had a chance of enrolling 33 times higher than members of middle groups around 1820,

and 10 times higher in 1890.³ Based on the pupils' enrolments in universities followed in the so-called *Sociaal milieu en voortgezet onderwijs* dataset that contained information on about 250 thousand respondents leaving primary education in 1977, chances of enrolment can be calculated by dividing the share of enrolments per social group, by the size of the corresponding stratum in the population. Higher strata had a chance of 3 of enrolling, middle strata a chance of 1 and lower groups were underrepresented: their chance of enrolment in 1986 was 0.4 (Koppen 1991).

These calculations are based on the social background of students in relation to the social stratification in the same year. The changes in the occupational structure of the Dutch population are thus taken into account. This is a crucial step, in a period in which the primary sector as well as the old middle-class shrunk and the service sector grew. The share of higher-schooled managers quickly grew after 1945 (Mandemakers 2001). This period arguably witnessed a shift to a more open society in which movement between the strata increased and status attainment depended on family status to a lesser extent (Knigge et al. 2014). Educational expansion is one of the modernisation processes associated with this shift, although other processes, such as increased transportation and communication opportunities, showed larger effects (Maas 2014).

4 DATA AND METHODOLOGY

The influence study grants had on the transmission of social status between parents and their children is the central theme of this article. This influence is primarily tested by comparing the social characteristics of students with a study grant with those of students without such a grant, or of students in general. If improvement in accessibility for lower class students was the main objective behind the grant system, the share of lower class students among grant students is expected to be higher than among students in general.

Information about grant receiving students between 1815 and 1939 from the universities of Groningen (n=331), Leiden (n=492), Nijmegen (n=27) and Utrecht (n=224) was collected and entered into a dataset of 1,074 observations. Groningen, Leiden and Utrecht were the three universities existing in 1815, allowing for an analysis of grant application on these institutions over the course of two centuries. The University of Nijmegen, founded as a Catholic university in 1923 (Brabers 1998) was also incorporated, because of its religious character. In the first decades of its existence, the student population in Nijmegen was characterized by a larger share of middle-class students and a higher amount of first-generation students (Brabers 1998), but this was not the result of a different application of the grant system, as was shown in an earlier publication (Marchand 2014b). Grant students, both male and female, from the faculties of Law, Medicine, Physics and Theology were all included in the dataset. Students from the faculty of the Humanities were excluded, because for an important part of the period at hand this faculty served as preparation for the faculties of Theology and Law (Baggen 1998), causing an overlap in the data. The names of students with grants were collected from university archives, deposited in the National Archive in The Hague, regional archives in Groningen, Nijmegen and Utrecht and the university archive in Leiden. 4.5 Post-World War II students are analysed using records gathered by the Central Bureau of Statistics.

The main indicator of social background of the grant students in the dataset is the occupational title of their father. Measuring social background by parental occupational title is common for historians interested in social stratifications of the past, however it is not without problems. It has been criticised for theoretical and practical reasons (De Belder 1976). Practical issues concern the supposed loss of information while classifying titles into a stratification scheme, and the neglect of contextual factors equally

Calculated by dividing the share of the respective HISCLASS status groups among students at the University of Groningen, by the share of these corresponding groups among bride grooms in the Groningen area (Marchand 2014b).

⁴ National Archives The Hague (NL-HaNA), 2.04.11: 111-117; 2.14.16: 139-148; Regional Archive Groningen (GA) 47: 93, 104, 108, 113, 131-147, 432-436; 52: 533-564, 1296; Regional Archive Utrecht (HUA) 59: 1-14, 36-172, 2616-2621; Regional Archive Nijmegen (KDC) 750: 381-397; University Archive Leiden (SCL) AC2: 4-35, 283-289; AC3: 1869-1872, 2297-2301.

⁵ The dataset is in the possession of the author and can be consulted upon request.

important to an individual's life chances (Van de Putte & Buyst 2010). Furthermore the occupational titles in the sources can be difficult to place, because of the lack of information. Notorious occupations are merchants, which can refer to peddlers as well as wealthy wholesalers, and farmers, whose relative position strongly differs per regional context (Paping 2010). In this research, occupations are classified using the Historical International Social Class Scheme HISCLASS (Van Leeuwen & Maas 2011), which in turn is based on the classification proposed in the Historical International Standard Classification of Occupations HISCO (Van Leeuwen, Maas & Miles 2002). Occupations of fathers are well documented and therefore 'easy to catch', an important advantage for research covering two centuries.

The information on the occupations of the students' fathers was derived from university records that contained the occupation of grant requesting students in about 30 per cent of the cases. The missing occupations were predominantly found using marriage certificates. Because the moment of marriage was on average ten years after graduation, these certificates provided occupational information as close to enrolment as possible. The risk of over- or underestimation of occupational status as a result of intragenerational mobility of the father in the period between enrolment and marriage (cf. Delger & Kok 1998) was minimised by using information from a point in time as close to university enrolment as possible. The use of marriage certificates forms a potential bias in the data, because some remain unmarried. But the percentage of men marrying in the 19th century was as high as 86 per cent according to Ekamper et al. (2003), and the relationship between celibacy and social characteristics weak (Engelen & Kok 2003; Schulz 2013). When marriage certificates failed to mention parental occupation, or no certificate was present, biographical accounts were used. In that case, an attempt was made to gather information from about twenty years after graduation, in order to be able to find father's occupation reasonably close to the student's enrolment.

Of 121 students no parental occupation was found (11.3 per cent), lowering the population size to 953. The share of unknown titles was relatively evenly distributed over the years and institutions, with the exception of Leiden University between 1919 and 1939, where 22 per cent was found to be missing. This high percentage can be explained by the fact that marriage certificates were only available until 1933, making it more difficult to obtain parental occupations for the younger students in the cohort. This particular problem was circumvented for Groningen University, as that institution recorded the occupations of fathers of grant students in a special document. A chi-squared test based on fathers' HISCLASS of Groningen and Leiden grant students (χ^2 =8,89, df=7, n.s. α =0,05) indicated that the share of unknown titles did not impact the data much. Still, the missing occupations form a potential bias, for instance when the occupation is missing because of the early death of the father, since life expectancy is positively correlated with social status. In that case the majority of the missing occupations would belong to individuals from lower strata. However, Van Poppel and Van Gaalen (2008) did not find a strong relationship between mortality and social status after 1850. Neither did Zijdeman (2010) and Maas et al. (2011) in their large datasets. Additionally, it is disputable whether unequal mortality would have much impact on this particular set of data. After all, despite developments in the social recruitment of universities, the dataset remains biased towards middle- and higher social groups.

Modern sociological literature points out that besides parental *occupation* parental *level of education* is an important predictor of achieved social status (Blau & Duncan 1967; Dronkers & De Graaf 1995). Therefore, the educational level of parents of bursary students is taken into account. For this purpose the educational level of the father was derived from his occupational title, understood as a dichotomous variable: academic or lower than academic education. For most occupations this was easy to do: the classical intellectual professions such as doctor, preacher, lawyer, professor and teacher in secondary schools. Professions in government administration and office clerks were more challenging. In 1915 only 8 per cent of civil servants working in the state departments in The Hague carried an academic degree, while 30 per cent of the highest officers did (Randeraad 1994). I have therefore labelled one-third of the highest officers in the dataset as academically-schooled, and used Bolmeijer's hierarchy (1954; cf. also Van den Berg & Hartog 1999) to stratify the bureaucratic positions. The result was that out of all civil servants in the dataset 7 per cent was labelled academically-schooled, which is reasonably close to the share reported in 1915.

The openness of academic education to offspring of non-academic families is presented using a ratio between students without and students with an academically educated father: the academic renewal ratio. This measure is inspired by the *Educational Equity Index* (Usher 2004), used in current comparative research on education. This Index presents the share of students from non-academic families in relation to the share of people with less than academic education in the entire population. The

academic renewal ratio presents the degree of accessibility for academic newcomers, by dividing the number of students without an academically educated father by the number of students whose father did graduate from a university. It can easily be calculated for all investigated periods for the bursary students in the dataset. Furthermore, the ratio can be compared with the same measure for students in general, based on the dataset of Caljé (2006) covering the years 1815-1890, and the national bureau of statistics that gathered information about the social background of students from 1936 onwards (CBS 1938, 1949, 1973, 1986).

The social background of the grant students was compared with a number of control groups. Ideally such a control group would contain identical information on students without a study grant, and have a population size comparable to the grant student dataset. For this article the best data available have been used, but their characteristics were less ideal than described above. First, the dataset composed by Caljé (2006) has been used. He collected data about nineteenth-century students in Groningen, in four sample years: 1815, 1820, 1865 and 1890. Although the population sizes are rather small (N=317, 282 known occupations) these are the best quantitative data on social origin of university students in the Netherlands.⁶ These occupations have been coded using HISCLASS. Furthermore, consecutive reports from the Dutch Bureau of Statistics were used, containing information about the student population in the twentieth century (CBS 1938, 1949, 1973, 1986). In these reports several methods of stratification were applied, mainly a division in high-middle-low, based on supervision and level of education and the classification scheme composed by Erikson, Goldthorpe and Portocarero (1979) and Erikson & Goldthorpe (1992). The latter class scheme was composed in 1979 for an international comparison of stratifications and is regularly used for research on social stratification in modern societies, often in collapsed versions of 7 or 10 groups.

5 AIMS AND EFFECTS OF THE GRANT SYSTEM BETWEEN 1815 AND 2015

In this paragraph the legislation with regard to the study grant provision will be discussed, as well as the practical application of it. Instead of an exhaustive survey of considerations, debates and policy measures, this paragraph will pinpoint continuities and changes loosely focusing on four reference years: 1820, 1890, 1936 and 1986. These reference years are evenly distributed throughout the period at hand and information on the student population is available to use as controls groups.

The first national grant system was established in the decree describing the organisation of education in the new united kingdom of the Netherlands. It established 70 grants for university students. Such a facility was not a novelty. Ever since the establishment of the first universities, grants had been attributed to students for whom the costs of education was a challenge. Whereas these grants were provided by regional governments, parishes or wealthy citizens, the grant system of 1815 was presided over by the central state. Students with good academic capabilities, but unfortunate financial circumstances could request a grant to cover part of their expenses. Hence, the formulated criteria for receiving a grant were twofold: talent and inability to cover the costs. The grants were allocated in a fixed distribution, favouring the faculties of Theology and Arts. This indicates a presumed role in the process of nation building in the young united kingdom of the northern and southern Netherlands. Teachers and pastors were ideal middlemen to educate the nation. Bijleveld (2007) gives many interesting examples of the way pastors presented a national discourse from the pulpit.

The established amount was 200 guilders per annum for students of Utrecht and Groningen University, and 300 guilders for students in Leiden, where the price level was higher. Contemporary accounts of the costs of higher education indicate that such a study grant was not sufficient to cover the entire sum. Professor of law Hendrik Willem Tydeman (1828) estimated a year's cost of university education at 1,000 guilders per annum including tuition and costs of living. Caljé (2006) considered this estimation too high and supposed the costs for a university student in Groningen was closer to 600 guilders. Either way, it is clear that the study grant was only a compensation for a part of the study costs, indicating that the student's family needed a relatively high income or capital position in order to allow him –before 1871 only men- to study. The student population consisted of higher strata adolescents

Courtesy of Pieter Caljé for allowing me to use his data on social status of students from the university in Groningen in the 19th century (Caljé 2006).

and the grant system did not attempt to change the social recruitment of universities. In effect the early grant system functioned to secure the social profile of the student population instead of changing it. The board of Groningen University did not try to conceal its intentions. In 1828 the board members responded with disdain to a request to lower the study costs. They stated it was difficult to imagine students from the layers of society that they were usually from to be unable to bear the costs. On a different occasion -but in the same year- it explained their considerations for rejecting or rewarding grant requests. It took into account "not only the needy circumstances of the applicant, but especially his diligence and capability."

The university boards had an important influence on the allocations of grants. Student sent their application to the university, which advised the ministry of the interior. The universities had their own preferences as to which students deserved financial backing and used the grant provision to favour students from honourable families. Universities had had the possibility of inscribing students free of charge ever since their establishments in the 16th and 17th centuries. Sometimes students with limited financial resources were relieved of their obligations to pay (Van Berkel 2014), but more often the free admittance served to honour the family of the student involved (Zoeteman 2011). Sons and nephews of former professors, members of the university board or local elite entered the university for free. After 1815, the grant system served a similar purpose. This allowed Jeremias Frederik Thiens Abresch to be awarded with a study grant in Groningen in 1830. His father Frans Izak was the mayor and notary of the nearby village of Zuidhorn. He received free education at the Groningen University because his father in turn was rector magnificus, that is, president of the university. Jeremias received his grant in honerem patris or honoris causa, as the notations in the student registration books read: in honour of his father, for reasons of honour. One-third of the grant students in Groningen received their grants due to family honour. In Leiden the same happened to student of medicine Reinier Regenbogen, son of the renowned professor in theology Johannes Henricus Regenbogen. For Regenbogen an additional motivation was the passing away of his father shortly before his academic career began. In his case the grant functioned as a security against unwanted downward mobility. For both the students Thiens Abresch and Regenbogen the study grants never changed their already eminent life chances. The same is true for Marinus Altheer, grant student from Utrecht University. His father was the wealthy publisher Johannes Altheer who belonged to the hundred wealthiest tax payers in the city of Utrecht (Wingelaar 1996).

Table 1 shows that study grants did not serve to offer low-income high potentials the opportunity to enrol in university education. It presents the share of students with and without study grants from the two highest HISCLASS groups, broadly speaking the academic and political elite. The data for 1820 involve only students from Groningen, but the available information justifies the assumptions that other universities approached matters in a similar way. Both among students with and without grants, the large majority stems from the academic and political elite. The grant system did nothing to enhance the opportunities for lower- or middle-class newcomers. The most frequent occupation of fathers of grant students was pastor (107 out of 334 students in Groningen, Leiden and Utrecht between 1815 and 1850). More than half of all grant holders studied in the faculty of theology. The minority of scholarship students from middle-class backgrounds were sons of schoolteachers, civil servants and merchants. Table 2 gives comparable information focusing on the level of education of students' fathers. It presents the academic renewal ratio, introduced earlier. Again, the grant system did not influence the schooling opportunities for academic newcomers. On the contrary, it served academic reproduction. Both among students with and without grants the large majority stems from academic milieux.

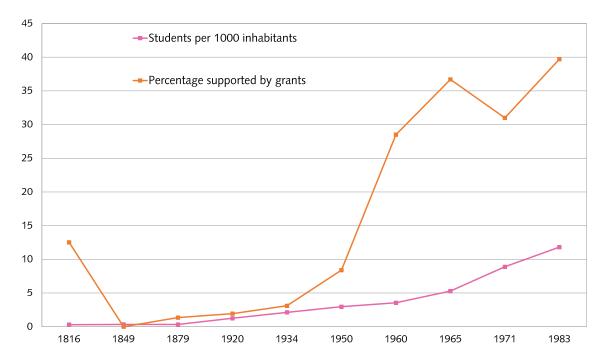
In 1890 the grant system had become both more generous and increasingly limited at the same time. The Education Act of 1876 had increased the amount of the study grants to 800 guilders, but provided support to 18 students, that is less than 1 per cent of all students (see figure 4). These measures made the grant system a provision for a lucky few, which was supposed to cover a larger share of their expenses. The grant of an annual 800 guilders could cover the tuition, established at 200 guilders, plus additional costs of living. Theoretically the criteria for allocation were unchanged: talented students, unable to cover the costs. But clearly universities and the government alike primarily focused on the academic skills of the applicants. The presidents of the universities of Groningen, Leiden and Utrecht composed a joint report on the progress of supported students in 1898.8 It gave information on the names, faculties and career paths of former grant holders. It furthermore compared the percentages of defended dissertations, *cum laude* graduation and failed students between grant holders and 'nor-

⁷ Regional Archives Groningen (RHC-GA) 46-346.

⁸ National Archives (NA-HaNL) 2.14.16 -139.

mal' students. The results were somewhat disappointing. For instance, the percentage of *cum laude* graduations was only slightly higher than the share of non-grantees graduating with distinction. Grant requests were now explicitly rejected when the applicant was a first-year student. This measure only makes sense when the intellectual capabilities and diligence of the requesting students are the primary criteria. It however minimised the attractive power of the grant policy for adolescents with financial constraints. When making the decision whether or not to enrol in the university, many insecurities about receiving an allowance existed. At least the student had to pay for the first year of education from his own resources.

Figure 4 Relative number of university students (per 1000 inhabitants) and percentages of them supported by a state grant, 1815-1983



Source: Jensma & De Vries (1997); Limburg (1936); CBS Statline; www.volkstellingen.nl.

The result was a grant provision that hardly enhanced the schooling opportunities of students from lower social strata. Their growing attendance was the result of other factors, such as the establishment of HBS-education and the increase in real income per capita (Smits, Horlings & Van Zanden 1999). The few study grants were awarded to talented students such as Willem Henri Julius, who later became a professor of Physics at the Amsterdam University. His father was principle of the HBS institution in the city of Gouda. His uncle Victor August, however, was professor in Mathematics and appointed his nephew to the position of assistant in 1882. Willem Julius accepted the position of professor in Amsterdam in 1890 (Snelders 1985). Among the grant holders of these years many reached academic careers, giving a further indication that the grants were mainly targeted at intellectual high potentials.

The first female grant student, the medical student Catharina van Tussenbroek from Utrecht University, fits this same profile. She passed her first- and third-year exams with distinction and in 1882 the university board rewarded her with an allowance. Van Tussenbroek specialised in gynaecology, published in several academic journals and became an important spokesperson for the position of women in higher education (Bosch 1994). Universities nor the government used the grant system to promote female attendance. Women were not barred from receiving grants, but the number of female grant holders remained limited until far into the 20th century. Dronkers (2007) stated that the educational participation of women developed without public policy measures and initially even against the will of policy makers. The allocation of grants to women around the turn of the century supports his statement.

Table 1 Percentage students with grants versus all students, from the highest status groups (i.e. HISCLASS 1+2 1820, 1890, 1936-1937) and EGP 1 (1986).

Year	Students with grants	General student population
1820	82.5	79.2
1890	45.2	50.8
1936-1937	19.2	34.8
1986	7.1	31.0

Table 2 Academic renewal ratio among grant holders and general student population (i.e. number from non-academic milieu ÷ number from academic milieu)

Period	Students with grants	General student population
1815-1850	0.55	0.53
1876-1919	1.55	1.56
1919-1945	6.71	2.76
1986	4.38	3.44

Sources: Marchand (2014b); Caljé (2006); CBS (1938; 1986).

Note: Data about the years 1815 and 1890, as well as the period 1815-1850 and 1876-1919 refer to students of the university of Groningen only. Data for 1936 and 1919-1945 refer to students from all universities. Data for 1986 include both university and higher professional education. In all cases the same choices have been made for grant holders.

Tables 1 and 2 convincingly show the limited accessibility effects of the system around 1890. The schooling opportunities of lower- and middle-class youngsters importantly improved since 1820 as is evident from the decreased share of students from the highest HISCLASS groups. But the grant provision barely contributed and followed, rather than set in motion, developments in the social composition of the student population. The renewal ratio (table 2) shows that a majority of students' fathers were lower than academically schooled now: the ratio is higher than 1. But this is true for both grant holders and other students in the same proportion. In a situation in which the grant system contributed to the chances of academic newcomers, the ratio would be much higher among grant students than among their counterparts without support.

In 1919, a new grant system integrated the grants for various types of education, besides universities, into only one provision, and also extended the number of available grants at the same time. The risen attendance made extension of the grant system inevitable. Utrecht University requested such an extension in 1919, stating that "the number [of grants, WJM] has not been adjusted in 40 years, whilst the number of students at Utrecht University became five times as large in the same period." Apart from the scope of the system, its function was a topic of debate. The fear of a socialist uproar after revolutions in Russia and Germany and a failed attempt in the Netherlands brought about a widely felt urgency for social welfare (Hoogeboom 2004). The senate of Leiden University urged the government to make higher education accessible for all layers of society. The adjustments to the study grant system can be seen as an element in the extension of various social provisions, such as unemployment insurance and the introduction of an eight-hour work day. These provisions, a first preliminary extension of the welfare state, structurally increased the government expenditure and led to budget constraints in the twenties and during the depression of the thirties (Van Zanden 1997).

More than beforehand, the grants system was now a *social* provision, aimed at enlarging the educational opportunities of youngsters from low-income families. One important adjustment was the availability of grants for first-year students. In order to enlarge the impact on these academic newcomers, study grants came available for first year students. This measure came to the sheer discontent of universities, who claimed that grants were now supporting unfit students (Savornin Lohman 1931).

⁹ Het Utrechts Archief (HUA) 59-2616

¹⁰ *De Telegraaf*, 19 maart 1919.

The system that was presented with great ambition and was meant to present all students in need of financial support with a grant, never grew to its desired proportions because of financial constraints in the twenties and thirties. About 5 per cent of university students received a study grant in the interwar period (Marchand 2014b). Constrainedly, grants were transformed into loans in 1924, in order to reduce the long-term pressure on the budget for education. This conversion was much against the will of the responsible secretary, and of the universities who feared negative effects for bursary students.

Still the ambition to make an impact on accessibility for lower-strata students was successful, as tables 1 and 2 show. Among the occupations of students' fathers, there are many more manual labourers, bakers, barbers, painters and postmen. For the first time a different social profile appears among grant holders than among students without grants. Several examples of individuals can support these quantitative data. In Groningen Willem Hindrik Mook received a grant of 800 guilders for his study of chemistry. His father was deliverer working for the co-operative bakery named *The Future*, a socialist initiative. After graduation Willem worked as a teacher of chemistry and biology on the local HBS earning a salary of approximately 2,000 guilders. He married his fellow student Herodina de Zaaijer, a pharmacist's daughter. Willem ended up in a higher status group than his family, both as a result of his occupational career and his marriage.

After World War II the grant system was extended on the same premises. The system of grants and loans persisted, although the government had adjusted the balance between grants and loans in order to avoid students from building up large debts. When economic circumstances improved, the share of grants increased at the expense of the share of loans. One of the motivations for the extension of the grant system was the desired expansion of educational participation for economic reasons. In the years of reconstruction after the war, the demand for higher educated personnel exceeded supply, especially in the case of technical engineers (Idenburg 1956). Furthermore, there was increasing attention on unequal opportunities in education and the transition of lower class pupils to higher forms of education, that was believed to be too low for their presumed abilities. A large sociological research was conducted to activate this so-called hidden talent (Van Heek 1968). Several policy solutions were proposed to stimulate youngsters from lower-class families to pursue their educational career to the best of their abilities, such as improved information, attention for housing and feeding of students, and an increased availability of study grants. As can be seen in figure 4, the share of supported students rapidly rose at a higher pace than educational participation. The average annual growth of the number of supported students was 13.6 per cent between 1950 and 1970, against a compound growth rate of 6.7 of the student population.

The social composition of the student population changed as a result of this. The percentage of lower and middle-class students grew. From 1963 onwards, the criteria for receiving a grant were disconnected from study performance. From then on, students qualified for a grant when parental taxable income stayed below a set level. At the same time, requirements on study success, measured by average grades, were abolished. Before that year candidates were required to have a minimum average grade of 7 out of 10 in their final year in secondary school (Van den Bosch & Zuydgeest 1987). From 1963 onwards a secondary school diploma was deemed sufficient proof of the study appropriateness of the student. A further crucial change in the allocation process was the further professionalisation, objectified by an administrative department that judged grant requests by fixed income criteria. The responsibility of the universities in supplying study grants was abolished and the allocation process was converted into an administrative procedure performed by government officials.

A new type of financial support for students was the supplement parents could receive on the amount of child benefits for a studying child from 1953 onwards. Parents received a supplement on child benefits dependent on the extent to which they financially supported their studying child. These study subsidies introduced a long-running controversy over student dependency of their parents and the role of study grants. Firstly, this support restricted the financial independence of students. Secondly, the child benefits were higher for parents with higher salaries, so the provision increased income differences. Socialist-oriented student interest groups opted for a fixed subsidy for all students, independent of the income position of their parents (Thio & Buijs 1968). Such an integral subsidy, or student wage, would guarantee the *independent* position of students as adults and recognise studying as an appreciated contribution to society. The decision to prolong the educational career would no longer be perceived as postponement of one's entry into the labour market and that would remove an important psychological barrier towards higher education for academic newcomers. The issue of student independency and the coherent form of study grants as fixed wages was not supported by the government coali-

tions. Conservative denominational parties played an important role in the coalition governments of the 1960s and 1970s, and they perceived the parental responsibility for studying children as a matter of principle. Subsequent commissions of inquiry therefore advised against an adjustment of the grant system towards a system of fixed student wage, leading to massive protests in 1966.

Student independency, as a much-debated motivation behind a system of study grants, conflicted with the accessibility motivation. It put emancipation between generations to the forefront, at the expense of emancipation of lower social classes. A grant system that supported student independency would be universalistic and provide subsidies for all students, whereas the aim of enhanced accessibility would require a grant provision targeted at lower-income students. Universalistic support would not have an equalising effect on income distribution. On the contrary, as a result of the higher participation rate of higher-income family offspring the largest share of a student wage system would come to the benefit of higher-income students, creating important Matthew-effects (Deleeck 2008).

The 1960s and 1970s witnessed rapid democratisation of higher education. Even though the uproar and fierce debates might suggest otherwise, the grant system contributed greatly to this increased accessibility. The available financial support for students diminished the importance of financial resources (cf. De Graaf 1987). The grant allocation was connected to parental income level and performed by a bureaucratic department. In effect the majority of grants was awarded to students of lower income groups, and there was a negative correlation between income level and the received amount: the highest amounts were available for lowest income groups. We can see this effect in the report of the grant allocation in the year 1967-1968, presented in table 3. Three-fourths of the grants awarded to students from the income group below 15 thousand, and the average received amount was highest for the lower incomes.

Table 3. Grant allocation in the year 1967-1968.

Parental taxable income in guilders	Number of grants	Percentage	Total amount in million guilders	Average amount of grant in guilders per annum
< 10.000	6,602	34.1	22.1	3,353.07
10.000-15.000	7,312	37.8	17.2	2,346.28
15.000-20.000	3,575	18.5	6.3	1,767.55
20.000-25.000	1,317	6.8	1.9	1,414.58
> 25.000	536	2.8	0.6	1,171.64
Total	19,342	100	48.1	2,933.08

Source: Dekker & Van der Leeuw (1972, p. 32).

The study grants allowed many academic newcomers to enrol in university education, by minimizing the influence of financial resources on the educational decision. De Graaf (1987) posed that study financing schemes were partly responsible for this shift and boldly stated that "money does not matter anymore" with regard to status attainment (p. 160-161). In 1986, just before a new system was introduced, 40 per cent of all higher education students received study support. Typically this support was partly a loan, partly a grant. On average, students with support had a lower social background, both in terms of parental occupation and level of education (CBS 1986). After long parliamentary deliberation and several failed attempts, in 1986 a new grant system was introduced that covered direct student support and indirect support via child benefits in one Study Finance Act (Wet op de Studiefinanciering). This Act finally resolved the issue of the two conflicting motivations behind a grant system by way of compromise. Both the student independency and accessibility for lower income groups were served: the first by a basic grant for each student over 18 years of age; the latter by a supplementary sum for lower-income students (Hupe & Van Solm 1998). Initially, the amounts of the grants were comparatively high in relation to student financing schemes in other countries (Vossensteyn 1999). Adjustments to the study financing scheme in the 1990s reduced the emphasis on the independency motivation by lowering the basic grant. These cuts were compensated for in the supplementary support, that is, for lower-income students (Slaman, Marchand & Schalk 2016; Spee & Bruggert 1996). The result was that in the year 2000 a larger share of the amount of money involved accrued to students of lower-income families compared to the situation in 1990 (Marchand 2014b; Van den Broek et al. 2011). These measures diminished the Matthew-effects that appeared because the basic support transferred money to students from higher-income families.

6 CONCLUDING REMARKS

In this paper the aims and effects of study grants with regards to accessibility of education and social mobility, in the period from 1815 until today, have been the subject of study. The result can be divided into two periods, separated by a clear caesura. This division mirrors the development of the Dutch welfare state, with sudden extensions after the two World Wars (Hoogenboom 2004; Van der Steen, Peeters & Pen 2010). The grant system in the long nineteenth century served the preservation of the privileged status of a relatively small elite. The application of the instrument in service of status reproduction is an example of the mechanism described by status maintenance theory. Selection practices, such as the exclusion of first-year students, worked to the disadvantage of lower-income groups. Discussion in university boards suggested that the officials pursued other goals than improving lower-class chances of enrolment.

This changed after 1919, when the system's social character was explicated. More than before it aimed at providing equal schooling opportunities for all social strata, and the application of the study grant system contributed to the shift from ascription to achievement much more than beforehand. The system made an important contribution to the democratisation of access to universities in the 1960s and 1970s. Furthermore, the bureaucratisation of the system contributed to its accessibility effects, minimising the influence of the universities. We have seen the results of this shift both on a macro and a micro level. A larger share of the grant holders had a middle- or lower-class background, contributing to the growing access of these social groups to the university. This clearly made an impact on individual life courses, as a number of cases presented in this article have shown.

In 2015, the Dutch study financing scheme underwent an important transformation, as the largest share of financial support to students is converted into loans. This measure fits in an international tendency towards cost sharing between the state and the student (Johnstone 2004). It has, however, led critics to predict falling influx of students and the return of elite education (CPB 2013). This fear seems unjustified, because the element of support that is reduced is precisely the element which transfers money to all students, bringing about large Matthew-effects. The maintenance of grants for lower-income groups on the contrary, guarantees a more efficient influence on accessibility of these groups. Furthermore, the new system reminds the attentive reader of the present article of the grant system in the first decades after World War II. This was exactly the period in which the student financing schemes proved to make a valuable impact on student democratisation.

REFERENCES

- Baggen, P.A.E. (1998). *Vorming door wetenschap. Universitair onderwijs Nederland 1815-1960.*Delft: Eburon.
- Becker, G.S. (1962). Investment in human capital. A theoretical analysis. *Journal of political economy*, 70(5), 9-49.
- Blau, P.M. & Duncan, O.D. (1967). *The American occupational structure*. New York: The University of Chicago Press.
- Blok, P.J. (1907). Vrouwelijke studenten. Onze eeuw 7, 447-462.
- Bolmeijer, B. (1954). Het reële inkomen van rijksfunctionarissen. *Economisch-statistische berichten*, 39, 87-90.
- Bosch, C.W. (1994). Het geslacht van de wetenschap. Vrouwen en hoger onderwijs in Nederland 1878-1948. Amsterdam: SUA.
- Bourdieu, P. & Passeron, J.C. (1990). *Reproduction in education, society and culture.* London: Newbury Park.
- Brabers, J.B.A.M. (1998). Proeven van eigen cultuur. Vijfenzeventig jaar Katholieke Universiteit Nijmegen 1923-1998. Deel I 1923-1960. Nijmegen: Valkhof Pers.

- Bijleveld, H.N. (2007). Voor God, volk en vaderland: de plaats van de hervormde predikant binnen de nationale eenwordingsprocessen in Nederland in de eerste helft van de negentiende eeuw. Groningen: S.N.
- Caljé, P.A.J. (2006). Groningse studenten en hun academie: de inbedding van de universiteit in de samenleving in de negentiende eeuw. (Doctoral dissertation). Groningen: S.N.
- Centraal Bureau voor de Statistiek. (1938). Statistiek van het hooger onderwijs, 1934/35-1936/37. Den Haag: Rijksuitgeverij.
- Centraal Bureau voor de Statistiek. (1949). *Statistiek van de sociale omstandigheden der studenten, studiejaar 1947/'48*. Den Haag: Staatsdrukkerij- en Uitgeverijbedrijf.
- Centraal Bureau voor de Statistiek (1959). *Statistiek van het hoger onderwijs, 1954, 1957*. Den Haag: Staatsdrukkerij- en Uitgeverijbedrijf.
- Centraal Bureau voor de Statistiek (1973). Statistiek van het wetenschappelijk onderwijs, 1967, 1972. Den Haag: Staatsuitgeverij/CBS-Publikaties
- Centraal Bureau voor de Statistiek (1986). Doorlopend Leefstituatieonderzoek 1986. Voorburg: CBS.
- Collins, R. (1971). Functional and conflict theories of educational stratification. *American Sociological Review*, 36(6), 1002-1019.
- Cultureel Planbureau. (2013). Deelname-effecten van de invoering van het sociaal leenstelsel in de bachelor- en de masterfase. Den Haag: CPB.
- Deaton, A. S. & Paxson, C. (2001). Mortality, education, income and inequality among American cohorts. In: D. A. Wise (Ed.), *Themes in the economics of ageing* (pp. 129-165). Chicago: Chicago University Press.
- De Belder, J. (1976). Bezit of beroep als criterium voor de sociale doorsnede. Een aanzet tot uniformering van de reconstructiemethoden. *Tijdschrift voor sociale geschiedenis*, VI, 257-279.
- De Graaf, P.M. (1987). De invloed van financiële en culturele hulpbronnen in onderwijsloopbanen. Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen.
- De Savornin Lohman, B.C. (1931). Verslag van de lotgevallen der Rijks-Universiteit te Utrecht in het studiejaar 1930/31. In: Jaarboek der Rijks-Universiteit te Utrecht 1930-1931 (pp. 263-264). Utrecht: S.N.
- Deleeck, H. (2008). *De architectuur van de welvaartsstaat opnieuw bekeken* (3° geactualiseerde druk). Leuven: Acco.
- Dekker, P.G. & van der Leeuw, J.L. (1972). Rijksstudietoelagenbeleid getoetst: rapport samengesteld op verzoek van de Groninger Studenten Raad door het Instituut voor Economisch Onder zoek van de Rijksuniversiteit te Groningen. Groningen: Rijksuniversiteit Groningen.
- Delger, H.E. & Kok, J. (1998). Bridegrooms and biases. A critical look at the study of intergenerational mobility on the basis of marriage certificates. *Historical methods*, 31(3), 113-121.
 - DOI: 10.1080/01615449809601194
- Dronkers, J. & de Graaf, P.M. (1995). Ouders en het onderwijs van hun kinderen. In: J. Dronkers & W.C. Ultee (Eds.), *Verschuivende ongelijkheid in Nederland. Sociale gelaagdheid en mobiliteit* (pp. 46-66). Assen: Koninklijke Van Gorcum BV.
- Dronkers, J. (2007). Ruggengraat van ongelijkheid: beperkingen en mogelijkheden om ongelijke onderwijskansen te veranderen. Amsterdam: Mets & Schilt/Wiardi Beckman Stichting.
- Ekamper, P. et al. (2003). Bevolkingsatlas van Nederland: demografische ontwikkelingen van 1850 tot heden. Rijswijk: Elmar B.V.
- Engelen, T. & Kok, J. (2003). Permanent celibacy and late marriage in the Netherlands, 1890-1960. Population, 58(1), 67-96.

 DOI: 10.2307/3246645
- Erikson, R., Goldthorpe, J.H. & Portocarero, L. (1979). Intergenerational class mobility in three western European societies. *The British Journal of Sociology*, 30(4), 478-441. DOI: 10.2307/589632
- Erikson, R. & Goldthorpe, J.H. (1992). *The constant flux. A study of class mobility in industrial societies*. Oxford: Clarendon Press.
- Goldin, C., Katz, L.F. & Kuziemko, I. (2006). The homecoming of American college women: the reversal of the college gender gap. *NBER working paper No 12139*. DOI: 10.3386/w12139
- Grusky, D.B. (1983). Industrialization and the status attainment process: the thesis of industrialism reconsidered. *American Sociological Review*, 48, 494-506.

- Habets, J. (1881). De studiebeurzen in Neerlandsch Limburg. Een historisch overzicht der privaatinrichtingen voor onderwijs. Venlo: wed. H.H. Uyttenbroeck
- Harbers, J.A. (1986). Sociale wetenschappen en hun speelruimte: een onderzoek naar de relatie tussen wetenschap en maatschappij aan de hand van ontwikkelingen in de onderwijssociologie en het politieke debat over ongelijke onderwijskansen. Groningen: Wolters-Noordhoff
- Heek, F. van. (1968). *Het verborgen talent. Milieu, schoolkeuze en schoolgeschiktheid*. Amsterdam: Meppel.
- Heringa, G.C. (1952). De sociale status van de student en de efficiëntie van het hoger onderwijs. Amsterdam: Keesing.
- Hoogenboom, M. (2004). *Standenstrijd en zekerheid: een geschiedenis van oude orde en sociale zorg in Nederland*. Amsterdam: Boom.
- Hupe, P.L. & Van Solm, A.I.T. (1998). Het Zoetermeerse labyrint. De veronderstellingen achter het studiefinancieringsbeleid. Zoetermeer: Ministerie van OC&W.
- Idenburg, Ph.J. (1934). Studie, crisis, studie crisis. Openbare les, gehouden bij de aanvaarding van het privaat-docentschap in de geschiedenis, theorie en statistiek van het schoolwezen aan de Universiteit van Amsterdam op 24 april 1934. Amsterdam: Universiteit van Amsterdam.
- Idenburg, Ph.J. (1956). Mensen gevraagd! Rede uitgesproken bij de aanvaarding van het ambt van bijzonder hoogleraar vanwege de Maatschappij tot Nut van 't Algemeen aan de universiteit van Amsterdam op maandag 1 oktober 1956. Groningen: J.B. Wolters.
- Jarausch, K.H. (1983). Higher education and social change: some comparative perspectives. In: K.H. Jarausch (Ed.), *The transformation of higher learning 1860-1930. Expansion, diversification, social opening and professionalization in England, Germany, Russia and the United States* (pp. 9-36). Stuttgart: Klett-Cotta.
- Jensma, G. & de Vries, H. (1997). Veranderingen in het hoger onderwijs in Nederland tussen 1815 en 1940 Hilversum: Verloren.
- Johnstone, D.B. (2004). The economics and politics of cost sharing in higher education: comparative perspectives. Economics of education review, 23, 403-410. DOI: 10.1016/j.econedurev.2003.09.004
- Kalma, J.J. (1985). 's Lands voedsterlingen en de Friese kerk. Het alumniaat in Friesland, studiebeurzen voor predikanten in spe. In: G.T. Jensma, F.R. Smit & F. Westra (Eds.), Universiteit te Franeker 1585-1811. Bijdragen tot de geschiedenis van de Friese hogeschool (pp. 147-160). Leeuwarden: Fryske Akademie.
- Kerr, C. (1962). *Industrialism and industrial man: the problems of labor and management in economic growth*. Cambridge: Harvard University Press.
- Knigge, A., Maas, I., van Leeuwen, M.H.D. & Mandemakers, C.A. (2014). Status attainment of siblings during modernization. *American Sociological Review*, 79(3), 549-579. DOI: 10.1177/0003122414529586
- Koppen, J.K. (1991). Een kwestie van discipline. Over de externe democratisering van het wetenschappelijk onderwijs. Amsterdam: Thesis publishers.
- Liefbroer, A.C. & Dykstra, P.A. (2000). Levenslopen in verandering: een studie naar ontwikkelingen in de levenslopen van Nederlanders geboren tussen 1900 en 1970. Den Haag: SDU Uitgevers.
- Limburg, J. (1936). De toekomst der academisch gegradueerden: rapport van de Commissie ter be studeering van de toenemende bevolking van universiteiten en hoogescholen en de werk gelegenheid voor academisch gevormden. Groningen: Wolters.
- Maas, I., van Leeuwen, M.H.D., Pélissier, J.-P. & Rébaudo, D. (2011). Economic development and parental homogamy: a study of 19th century France. *History of the Family*, 16, 371-386.

 DOI: 10.1016/j.hisfam.2011.07.006
- Maas, I. (2014). Ontwikkelingen in sociale openheid en sociale uitsluiting. *Mens en Maatschappij*, 89(1), 85-100.
- Mandemakers, C.A. (2001). De sociale structuur in Nederland rond 1900. De samenleving in het perspectief van de modernisering 1850-1990. In: J.G.S.J. van Maarseveen & P.K. Doorn (Eds.), Nederland een eeuw geleden geteld: een terugblik op de samenleving rond 1900 (pp. 185-207). Amsterdam: IISG.
- Mandemakers, C.A. (1999). Onderwijsdeelname, 1870-1990. In: R.J. Van der Bie & P. W. N. M. Dehing (Eds.), Nationaal goed: feiten en cijfers over onze samenleving, (ca.) 1800-1999 (pp. 179-197). Voorburg: Centraal Bureau voor de Statistiek.

- Mandemakers, C.A. (1996). *Gymnasiaal en middelbaar onderwijs*. *Ontwikkeling, structuur, sociale achtergrond en schoolprestaties, Nederland, ca. 1800-1968*. Amsterdam: Atelier Rijksbouwmeester.
- Marchand, W.J. (2014a). In het belang van kerk, staat en universiteit. De rijksstudiebeurzen voor theologiestudenten en de rekrutering van een nieuwe generatie predikanten, 1815-1918. In: Dorsman, L.J. & Knegtmans, P.J. (Eds.), *Theologie, waarheidsliefde en religiekritiek.*Over geloof en wetenschap aan de Nederlandse universiteiten sedert 1815 (pp. 103-116). Hilversum: Verloren.
- Marchand, W.J. (2014b). Onderwijs mogelijk maken. Twee eeuwen invloed van studiefinanciering op de toegankelijkheid van het onderwijs in Nederland (1815-2015). Groningen: Boom Publishers.
- Mayer, K.U. (2005). Life courses and life chances in a comparative perspective. In: S. Svallfors (Ed.), *Analyzing inequality. Life chances and social mobility in comparative perspective* (pp. 17-55). Stanford: Standford University Press.
- Merens, A., Hartgens, M. & van den Brakel, M. (2012). *Emancipatiemonitor 2012*. Den Haag: Ministerie OC&W.
- Moes, J.K.S. (2012). Onder aristocraten: over hegemonie, welstand en aanzien van adel, patriciaat en andere notabelen in Nederland, 1848-1914. Hilversum: Verloren.
- Orr, D., Gwosć, C. & Netz, N. (2011). Social and economic conditions of student life in Europe. Eurostudent IV 2008-11. Bielefeld: W. Bertelsmann Verlag.
- Otterspeer, W. (1992). De wiekslag van hun geest: de Leidse universiteit in de negentiende eeuw ('s- Den Haag: Hollandse Historisch Reeks.
- Paping, R.F.J. (2010). Taxes, property size, occupations and social structure. The case of 18th- and 19th-century northern Dutch countryside. In: B. Van De Putte, & E. Buyst (Eds.), Measuring social stratification in historical research. An overview of old problems and new methods. Belgisch Tijdschrift voor nieuwste geschiedenis XL:1-2 (pp. 215- 248). Ghent: Foundation Jan Dhondt.
- Raftery A.E, & Hout, M. (1993). Maximally maintained inequality. Expansion, reform, and opportunity in Irish education, 1921-1975. *Sociology of education*, 66(1), 41-62. DOI: 10.2307/2112784
- Randeraad, N. (1994). Ambtenaren in Nederland, 1815-1915. *BMGN Low countries historical review*, 109(2), 209-236.
- Schulz, W. (2013). *Careers of men and women in the 19th and 20th centuries.* (Doctoral dissertation). Utrecht: Utrecht University.
- Schulz, W., Maas, I. & van Leeuwen, M.H.D. (2015). Occupational career attainment during modernization. A study of Dutch men in 841 municipalities between 1865 and 1928. *Acta Sociologica*, 58(1), 5-24.

 DOI: 10.1177/0001699314565795
- Slaman, P.J., Marchand, W.J. & Schalk, R. (2016). *Kansen in het Koninkrijk. Studiebeurzen 1815-2015*. Amsterdam: Boom.
- Smits, J.P., Horlings, E. & Van Zanden, J.L. (1999). Dutch GNP and its components, 1800-1913. Groningen: Groningen Growth and Development Centre.
- Snelders, H.A.M. (1985). Julius, Willem Henri (1860-1925). In: *Biografisch Woordenboek van Nederland 2 (Den Haag 1985*).
 - Via: http://resources.huygens.knaw.nl/bwn1880-2000/lemmata/bwn2/julius
- Spee, A.A.J. & Bruggert, A.M. (1996). Tien jaar studiefinanciering. Zoetermeer: Ministerie van OC&W.
- Thio, K.B.T. & Buijs, F.J. (1968). *Studieloon. Een model voor politieke belangenbehartiging. SVB-cahier* 2. Amsterdam: Stichting SVB-publikatie.
- Treiman, D.J. (1970). Industrialization and social stratification. *Sociological Inquiry*, 40(2), 207-234. Tydeman, H.W. (1828). *Consideratiën van Prof. H.W. Tydeman, over de punten van overweging betrekkelijk het Academisch Onderwijs*. Leiden: S. en J. Luchtmans.
- Usher, A. (2004). A new measuring stick. Is access to higher education in Canada equitable? Toronto: Educational Policy Institute.
- Van Berkel, K. (2014). *Universiteit van het noorden: vier eeuwen academisch leven in Groningen. Deel I.* Groningen: Verloren.
- Van den Berg, A. & Hartog, J. (1999). Honderd jaar ongelijkheid. Inkomensverschillen sinds het einde van de negentiende eeuw, In: R.J. van der Bie & P. W. N. M. Dehing (Eds.), *Nationaal goed:* feiten en cijfers over onze samenleving, (ca.) 1800-1999 (pp. 109-124). Voorburg: Centraal

- Bureau voor de Statistiek.
- Van den Bosch, S. & Zuydgeest, P. (1987). Studiefinanciering 1919-1986: globale beschrijving van de rol van de rijksoverheid in de periode 1919-1986 Zoetermeer: Ministerie van OC&W.
- Van den Broek, A., Wartenbergh, F., Hogeling, L., Kurver, B., Brukx, D., Brink, M. & van Casteren, W. (2011). *Tien jaar studentenmonitor. Studiegedrag en de sociaal-economische positie van de generatie 2001-2010.* Den Haag: Ministerie van OC&W.
- Van De Putte, B., & Buyst, E. (2010). Occupational titles? Hard to eat, easy to catch. In: Idem (Eds.), Measuring social stratification in historical research. An overview of old problems and new methods. Belgisch Tijdschrift voor nieuwste geschiedenis XL:1-2 (pp. 7-13). Ghent: Foundation Jan Dhondt.
- Van Der Ploeg, S.W. (1993). *The expansion of secondary and tertiary education in the Netherlands*. Nijmegen: Instituut voor Toegepaste Sociale Wetenschappen.
- Van der Steen, M., Peeters, R. & Pen, M. (2010). *De weg omhoog. Een analyse van het vertoog over sociale mobiliteit in regeringsbeleid*. Den Haag: Raad voor Maatschappelijke Ontwikkeling.
- Van Heek, F. (1968). *Het verborgen talent. Milieu, schoolkeuze en schoolgeschiktheid.* Meppel: Boom.
- Van Leeuwen, M.H.D. & Maas, I. (2011). *HISCLASS. A Historical International Social Class Scheme*. Leuven: Leuven University Press.
- Van Leeuwen, M.H.D., Maas, I. & Miles, A. (2002). HISCO. Historical International Standard Classification of Occupations. Leuven: Leuven University Press.
- Van Poppel, F.W.A. & Van Gaalen, R. (2008). Sociale klasse, sociale mobiliteit en sterfte in Nederland, 1850-2007. In: I. Maas, M.H.D. Van Leeuwen & C.A. Mandemakers (Eds.), Honderdvijftig jaar levenslopen de Historische Steekproef Nederlandse bevolking (pp. 173-202). Amsterdam: Amsterdam University Press.
- Van Rooden, P.T. (1996). Religieuze regimes. Over godsdienst en maatschappij in Nederland, 1570-1990. Amsterdam: Bert Bakker.
- Van Zanden, J.L. (1997). Een klein land in de 20e eeuw: economische geschiedenis van Nederland 1914-1995. Utrecht: Het Spectrum.
- Verbond van Nederlandse Ondernemingen (1951). Universiteit en bedrijfsleven. Rapport van de conferentie gehouden onder auspiciën van het Nederlands Comité van World University Service op 15 en 16 december 1951 te Woudschoten. Leiden: Nederlands Comité van World University Service.
- Vossensteyn, J.J. (1999). Where in Europe would people like to study? The affordability of higher education in nine Western European countries. *Higher Education*, 37(2), 159-176. DOI: 10.1023/A:1003595031626
- Vries, P. (2013). *Escaping poverty. The origins of modern economic growth*. Göttingen: V&R Unipress.
- Windolf, P. (1992). Cycles of expansion in higher education 1870-1985: An international comparison. *Higher Education*, 23(1), 3-19. DOI: 10.1007/BF00141141
- Wingelaar, K. (1996). Rijksbursalen aan de universiteit van Utrecht, 1815-1843. *Oud-Utrecht*, 69(5), 100-106.
- Zoeteman-Van Pelt, M. (2011). De studentenpopulatie van de Leidse universiteit, 1575-1812: Een volk op zyn Siams gekleet eenige mylen van Den Haag woonende.' (Doctoral dissertation). Leiden: Leiden University Press.
- Zijdeman, R.L. (2010). Status attainment in the Netherlands, 1811-1941: Spatial and temporal variation before and during industrialization. (Doctoral dissertation). Utrecht: Utrecht University.
- Zijdeman, R.L. (2009). Like my father before me: Intergenerational occupational status transfer during industrialization (Zeeland 1811-1915). *Continuity and Change*, 24(3), 455-486. DOI: 10.1017/S0268416009990166
- Zijdeman, R.L. & Mandemakers, C.A. (2008). De rol van het gymnasiaal en middelbaar onderwijs bij de intergenerationele overdracht van status, Nederland 1865-1940. In: I. Maas, M.H.D. van Leeuwen & C.A. Mandemakers (Eds.), Honderdvijftig jaar levenslopen de Historische Steekproef Nederlandse bevolking (pp. 149-173). Amsterdam: Amsterdam University Press.