Employer’s choice – Selection through job advertisements in the nineteenth and twentieth centuries

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Abstract

Dominant theories in stratification research suppose modernization processes to have caused societies to become more open. Employers are assumed to have increasingly selected from among applicants on the basis of job-related characteristics, such as their skills, rather than on characteristics unrelated to the job, such as social origin. We address this issue by studying employers’ selection criteria in job advertisements. We do so for the heyday of modernization, the nineteenth and twentieth centuries. Employers are found to have selected more on job-related than on other characteristics even at the start of the period, but the extent to which they did so did not increase over time. Job-related characteristics were no more important as selection criteria in modern occupations, or in modern municipalities. Despite what modernization theories suggest, employers were no more and no less inclined to select their personnel through job advertisements. Employers did, however, select more on job-related characteristics for occupations with a high status.

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1. Introduction

How individuals are allocated to social positions in society is one of the core topics of social inequality research. Compared with past societies, modern societies are thought to be “open societies”, characterized by selection into social positions based on an individual’s efforts and talents (job-related characteristics) rather than their status at birth (job-unrelated characteristics). According to the more influential theories of industrialism,¹ variations in the openness of societies can

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¹ The logic of industrialism comes in several forms, with multiple labels: for example the liberal theory (Erikson & Goldthorpe, 1992), the
be ascribed to how advanced they were in modernization processes (Davis & Moore, 1945; Parsons & Bales, 1955; Treiman, 1970). Numerous studies have followed this lead by studying the relationship between modernization processes and openness, focusing on the twentieth century, mostly after World War II (Ganzeboom, Treiman, & Ultee, 1991; Grusky, 1983; Jackson, Goldthorpe, & Mills, 2005; Sieben, 2001). Though it is expected that modernization processes in the nineteenth and early twentieth centuries will have had the most fundamental influence on the opportunities available to individuals to move within and across generations, few studies actually focus on that period. The few studies conducted so far have not provided conclusive evidence on whether societies became more open and whether changes in openness can be ascribed to modernization processes (Knigge, Maas, van Leeuwen, & Mandemakers, in press; Schulz, 2013; van Leeuwen & Maas 2010).

This article takes a different approach to address the question whether modernization processes have led to more openness. Instead of looking at individual status attainment or social mobility, we address the role of the employer in the occupational allocation process. One of the central mechanisms thought to have been responsible for increasing opportunities for social mobility across social strata is the change in the hiring preferences of employers. Theories of industrialism suggest that the increased opportunity for mobility lies in the functional necessities that force industrial and industrializing societies to make efficient use of human resources (Erikson & Goldthorpe, 1992; Kerr, Dunlop, Harbison, & Myers, 1960; Treiman, 1970). Or, to put it simply, employers in modern economies increasingly select on job-related characteristics because this is efficient and profitable. At first, this is likely to be especially true for high-status and modern occupations – rapidly growing in number – but in later stages of industrialization efficient recruitment is hypothesized to be a feature of the whole labour market.

So far, employers, whose hiring preferences are supposed to have shifted, have been largely ignored in empirical research. Some studies exist on the role of the employer in the allocation to jobs in industrial and post-industrial labour markets. Jackson (2007) studied class differentials in requirements by analysing job advertisements and found that across the social strata both ascribed and achieved characteristics were requested by employers. Other studies use requirements stipulated by employers in job advertisements to examine variations in job opportunities and to study transitions to self-employment (Buchmann, Kriesi, & Sacchi, 2009; Kriesi, Buchmann, & Sacchi, 2010). A number of studies focus on ethnic discrimination by employers in the job selection process (for a review see Pager, 2007).

Studies addressing selection processes in industrial and post-industrial labour markets cannot, however, assess the role of modernization processes such as industrialization. Research on the role of the employer in employee selection during modernization is scarce, and most of it deals with modern bureaucratic companies with internal labour markets (ILMs). In their study of Lloyds Bank in Britain, Stovel, Savage, and Bearman (1996) found several indications suggesting a shift towards achievement-based careers, but at the same time processes of ascription were still at work. Jacoby (1984, 1985) describes the development of more systematic hiring practices in US companies in the twentieth century. Personnel departments were introduced to reduce turnover and to increase satisfaction with the employees selected. Economic theories emphasize that on-the-job training became more common and employers selected the most promising workers and offered lifetime jobs to recoup investments in their training (Owen, 2004). The focus on modern company settings, however, makes a generalization of the findings to the general population difficult.

In this study we address the role of the employer by analysing a large long-term dataset on job advertisements from five Dutch newspapers in the period 1870–1939. As the job advertisement from the Rotterdamse Nieuwsblad mentioned at the beginning of this article illustrates, job advertisements are a compelling historical source that document what characteristics employers looked for when selecting personnel. In the 70 years covered by our study, the Netherlands changed from being a non-industrialized to an industrialized country. If theories of industrialism are true, employers’ recruitment behaviour will have changed especially in this period. Since our data cover 70 years, we should be able to detect any changes, even if they were slow. The broad coverage of the sample of newspaper advertisements allows us to study not only temporal but also regional variations in modernization processes. We complement the job advertisement data with yearly measures of modernization processes at the municipal level. In this way we provide, for the first time, an adequate empirical historical test of one of the central mechanisms of the logic of industrialism: the shifting recruitment patterns of employers.
We begin by asking: What job-related and job-unrelated characteristics were used by employers to recruit employees through job advertisements in the Netherlands between 1870 and 1939? And did employers in the Netherlands increasingly select on job-unrelated characteristics between 1870 and 1939?

In order to investigate the changes in the hiring preferences of employers in response to structural labour market changes, we ask: Were employers seeking employees for modern or for higher-status occupations less likely to select on job-unrelated characteristics? If there was a trend towards selecting less on job-unrelated characteristics, was this due to the increase in the proportion of these occupations in the labour market?

Further, we study the hiring preferences of employers against the background of the general modernization processes that took place during the nineteenth and twentieth centuries: Were employers in more modernized regions and periods less likely to select on job-unrelated characteristics, and did this cause a trend towards more openness?

The reader may have noticed that the research questions have been formulated in terms of job-related and job-unrelated characteristics, whereas much of the literature cited uses the terms “achievement” and “ascription” (e.g. Blau & Duncan, 1967; Treiman, 1970). It is not always the case, however, that characteristics related to on-the-job performance are “achieved”. Which characteristics are seen as achieved partly depends on the specific context (Jackson, 2007). An example in the context of nineteenth-century job advertisements in which the label does not cover the content is physical strength. Though to a large extent ascribed, in the absence of home appliances strength was an important prerequisite for a maid in a nineteenth-century household. And some characteristics, though definitely achieved, are not related to job performance at all. One example is marital status. This was a requirement sometimes mentioned in job advertisements, but it was not directly related to carrying out an occupation. As modernization theories are relevant to our problem, we continue to draw inspiration from them, while rephrasing hypotheses in terms better suited to our research.

2. Theory and hypotheses

The logic of industrialism thesis states that during the nineteenth and twentieth centuries a number of socio-economic changes impacted individual occupational attainment and the logic of the workplace in general (Inkeles, 1960; Kerr et al., 1960; Mitch, Brown, & van Leeuwen, 2004; Treiman, 1970). It predicts that industrialization, the emergence of internal labour market structures, educational expansion, mass transport, mass communication and value changes compelled employers to select employees increasingly based on job-related characteristics such as skills, education and experience. Job-unrelated characteristics, such as social background, marital status and religious affiliation, became less important hiring criteria.

Two ways by which modernization processes increased job-related recruitment are presented in the literature (Inkeles, 1960; Kerr et al., 1960; Mitch et al., 2004; Treiman, 1970). The first relates to changes in the occupational structure, i.e. the emergence of modern types of work and the growth in the number of higher-status occupations. The second addresses the effect of modernization processes on the hiring behaviour of employers. We start by discussing the role of structural labour market changes. Industrialization, taken to mean the use of mechanical equipment and mechanized energy (Davis, 1955), caused a growth in the number of modern and higher-status occupations. During industrialization the mode of production and organization of work changed, with mass production and mechanized production becoming more widespread. Increasingly, mechanized mass production often took place in large enterprises (Bloemers, Kok, & van Zanden, 1993; Chandler, 1990). These enterprises invested in research and development to satisfy the need for continuous technological change and advancement, creating a demand for employees in research and development occupations (Jerome, 1934; Thomson, 1993). The specific configurations of machinery required workers with firm-specific skills and the ability to adjust to continuous developments (Owen, 2004). In addition, the more complex organization of work demanded more workers able to assume supervisory positions. Furthermore, the organization of work demanded administrative staff, to organize recruitment and personnel management. We call these occupations related directly or indirectly to the mechanization of work modern occupations. These positions were often, but not always, of a higher status compared with positions with fewer responsibilities.

Following the logic of industrialism, we expect employers to have recruited employees in modern and higher-status occupations more efficiently, based on job-related characteristics such as schooling and job experience, than employees in other occupations. This way, employers reduced the risk of incurring losses in terms of the quality of the goods produced or damage to costly machinery. Thus for the growing number of modern and higher-status jobs employers are expected to have recruited on characteristics directly related to
performance in these jobs, such as skills, education or experience, and less so on job-unrelated characteristics such as social background and marital status. We formulate two hypotheses:

**H1a.** Employers hiring for modern occupations as opposed to traditional occupations selected less often on job-unrelated characteristics; and, combined with the increase in the number of modern occupations over time, this led to a decrease in job-unrelated selection.

**H1b.** Employers hiring for higher-status occupations as opposed to lower-status occupations selected less often on job-unrelated characteristics; and, combined with the increase in the number of higher-status occupations over time, this led to a decrease in job-unrelated selection.

It is also possible that employers increasingly selected on job-related characteristics not just for modern occupations but also for many more occupations. This is the second way in which modernization influenced job selection. Industrialization and the structural changes in the labour market were accompanied by a number of socioeconomic processes, such as changes in the organization of work, educational expansion, mass communication, mass transport and value changes. In the following we will discuss how these processes might have motivated employers to recruit their workforce more efficiently. Job-unrelated characteristics on the one hand lost their informative character, according to the logic of industrialism, while value changes caused people to believe that job-related characteristics should be more important determinants than job-unrelated characteristics of an individual’s position in society.

The mechanization of industrial production decreased job-unrelated selection by changing the organization of work in the corporate setting. Capital intensification and managerial capitalism caused an increasing number of large enterprises to emerge (Bloemen et al., 1993). Enterprises such as Shell (founded in 1890) and Philips (founded in 1891) were established, as were many more medium-sized enterprises (van Gerwen & de Goey, 2008). Specific configurations of machinery required firm-specific skills (Owen, 2004). Companies therefore aimed to hire a trainable workforce willing and able to learn those firm-specific skills and to adjust to the continual, rapid and widespread changes in production methods and products.

To secure such a workforce, internal labour market structures (Doeringer & Piore, 1971; Mitch et al., 2004) were established. Companies invested more in the selection of employees in order to be able to compete in the marketplace. Hiring was organized more systematically and more bureaucratically. Often, unified rules and standards for hiring employees were applied. Typically, for firms with internal labour market structures recruitment into the firm was very selective. In return, employees with the potential to be trained and retrained during their career were offered the prospect of a permanent position. Job-unrelated characteristics were not particularly revealing indicators of trainability and long-term performance and therefore lost their importance in the selection of employees.

Educational expansion offered employers a wider choice of educational qualifications in the labour force to choose from in order to hire the best-qualified worker for the job. An increasing proportion of the population attended secondary and even tertiary education. From 1860 onwards, specialized artisan schools, commercial schools, domestic service training and many other types of vocational school emerged (Boekholt & de Booy, 1987: 182). In order to decrease the costs of firm-specific training, employers were expected increasingly to use educational qualifications as selection criteria.

Educational expansion is also expected to have contributed to the development of a shared culture that would make the cultural characteristics of potential employees less efficient as selection criteria. A larger proportion of the population spent more time together in schooling, which caused an assimilation of basic knowledge, skills and behaviour. The diminution of regional, ethnic and class differences in attitudes and behaviour made it less necessary and informative for employers to select based on these criteria (Treiman, 1970).

The rise of mass communication and mass transportation contributed to what Treiman would call the weakening of the ascriptive factor in hiring by enabling employers and employees to access information about job applicants and job opportunities respectively outside their social networks (Treiman, 1970). Mass communication increased rapidly, and post offices began to distribute newspapers carrying jobs advertisements to a wider geographical area (Zijdeman, 2010). The rise of mass transportation is also assumed to have weakened the influence of job-unrelated characteristics by enabling greater geographical mobility. In mobile societies more people are able to live and work outside their own community, and are thus less easily judged by their social background or religious affiliation. Social background became less informative to employers and, due to the increase in the size of the pool of potential employees, an applicant’s own talents and skills became more important for selection into an occupation.
According to Treiman (1970), industrialization, educational expansion and other processes were accompanied by a dissemination of universalistic values. Such values stress that all individuals are equally worthy and should be judged on their efforts, skills and talents rather than in terms of social background. In industrial societies, employers (and employees) are believed to have embraced universalistic values, and the spread of universalistic values is thought to have decreased the importance of social background for selection into occupations (Form, 1979; Inkeles, 1960; Kerr et al., 1960).

To summarize,

H2. Employers hiring in contexts in which modernization was more advanced selected on job-unrelated characteristics less often, and this led to a decrease over time in job-unrelated selection.

3. Data, method and measures

3.1. Data collection and sample strategy

In 2006 the Dutch Royal Library (http://kranten.delpher.nl) embarked on a large-scale project to digitize newspapers from 1618 to the present; this project is still in progress. From the selection so far made available by the Royal Library we chose three newspapers: Het Nieuws van den Dag: de kleine Courant, Nieuwe Rotterdamsche Courant and the Nieuwe Tilburgsche Courant. In addition, we selected the Leeuwarder Courant and Het Rotterdamsch Nieuwsblad. The Leeuwarder Courant is a general newspaper for a large region in the north of the Netherlands and has been digitized and published by the Stichting Digitaal Archief Noord-Nederland [Digital Archive North-Netherlands Foundation] (SDANN). These newspapers covered a variety of religious and social subgroups within Dutch society. The selected newspapers included liberal, socialist and Catholic papers, as well as newspapers for the general public. Furthermore, the readership of the newspapers included higher and lower social classes, while different geographical regions were covered too. Table 1 presents the political and religious orientation as well as information on the social class and geographical spread of the readership of the selected newspapers.

Our research period starts in 1870 and ends just before World War II. In 1869 a tax on newspapers was abolished, and newspapers became a more important medium in people’s lives, for information, entertainment and job searching (van Vree & Broersma, 2009).

We aimed to collect a sample of advertisements from each newspaper for every tenth year, but we were only partly successful. Because the Royal Library’s digitization and publication project is still underway, not all years for which a newspaper was selected for inclusion in the sample of the Royal Library have actually been published on its website yet. The sample of newspaper issues we collected is based on the issues digitally available to us in the period September 2011 to December 2011. The number of issues of a newspaper varied, because some newspapers were published daily, others once or twice a week. Also, the number of advertisements differed across newspapers and also fluctuated across issues of the same newspaper.

To avoid oversampling or undersampling job advertisements from specific months, periods or days of the week, we took a stratified sample of newspaper issues to produce a week for a given newspaper in which the seven days of the week were all selected from different months. The first day of the week could be a Wednesday in week 7, the following randomly chosen day a Friday in week 14 of the same year. In principle, all advertisements of a selected issue are included in the sample. To avoid an issue contributing proportionally too many advertisements to the sample, we chose to restrict the maximum number of advertisements from a single newspaper issue to 60. The only newspaper with issues publishing more than 60 advertisements was Het Rotterdamsch Nieuwsblad. For issues with more than 60 advertisements, we chose a random sample of 60 advertisements. Table 2 provides an overview of the number of advertisements collected from the different newspapers over the research period.

Because of the varying number of issues per newspaper and the differing availability of newspapers per time period, in the next section we will compare the occupations mentioned in the newspapers with the occupational structure of the Netherlands. Moreover, in the results section we provide detailed descriptions of the use of job-related and job-unrelated characteristics per newspaper. In the explanatory analyses we include a control
variable for the newspaper in which the advertisements were published.

3.2. Comparison of occupations mentioned in the newspapers with the occupational structure of the Netherlands

As in contemporary labour markets, in industrializing labour markets employers and employees used a range of channels to recruit employees or find employment. Job seekers consulted advertisements in newspapers or asked family, friends and acquaintances about vacancies (van Gerwen, 2000). Vacancies in larger companies were sometimes filled by job seekers who came directly to the factory gates. After 1910, the use of employment agencies became more common. A study of the role of placement services in the period 1870–1940 (de Kort, 1940) estimated that in the late 1930s around 15% of placements were arranged through commercial employment agencies and 20% through public employment agencies. Commercial agencies charged both the employer and the employee for their services. Moreover, commercial and public service agencies focused on urban centres.

Throughout the whole period, advertisements and social networks remained important channels for finding a job. de Kort noted an increase in the number of job advertisements between 1930 and 1940 (de Kort, 1940: 182). One reason for the popularity of advertisements was that they were a direct and affordable medium for both employees and employers. In the Netherlands basic schooling, and thus the ability to read and write, were already widespread in the period being studied here. By 1900 more than 90% of girls and boys participated in basic schooling, and this proportion rose further in the following years (Boekholt & de Booy, 1987). Newspaper advertisements were thus accessible for the vast majority of the population. Moreover, newspapers also reached rural areas and were therefore a means for employers there to find employees.

A comparison of the occupations in the job advertisements with the occupational structure of the Netherlands provides clues to the coverage of our source. We selected the 20 most frequent occupations in the Historical Sample of the Netherlands (HSN) and the 20 most frequent occupations in job advertisements. The HSN is a sample of individuals representative of the Dutch population born between 1850 and 1922 (Data Set Life Courses Release 2010.01). To assess to what extent the jobs advertised in our sample correspond to the occupational structure of the Netherlands in the period being studied, we compare the distribution of occupational groups in the HSN with that in the job advertisements.5

The occupational titles given in the advertisements have been coded in accordance with the Historical International Standard Classification of Occupations (HISCO) (van Leeuwen, Maas, & Miles, 2004). This taxonomy is based on the 1968 International Standard Classification of Occupations created by the International Labour Office (ISCO-68, 1969). The most detailed version of HISCO utilizes a five-digit code, but for comparison with the HSN data we grouped all occupations into the more general three-digit HISCO code. In the HISCO scheme, clusters of similar occupational groups are organized into 298 occupational three-digit groups. For example, occupational group 8–95.30 refers to Ceramic Painter and 8–95.60 to Ceramics Dippers. They are part of the three-digit group 8–95 Glass and Ceramics Painters and Decorators (van Leeuwen, Maas, & Miles, 2002).

Fig. 1 presents a comparison of the 20 most frequently appearing HISCO three-digit groups in the job advertisements and in the HSN data. The most frequent occupations in both the HSN and job advertisements are maids and domestic service occupations. In both sources this group accounts for between 20% and 25% of occupations. Most occupations covered between 1% and 3% of the total in both sources. There are some exceptions. Farming occupations were hardly ever advertised in

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5 The HSN data include multiple measurements of an individual’s occupational status throughout their life course. Only the first occupational measurement of individuals was selected for the comparison with the job advertisements.
newspapers, but they accounted for about 8% of the occupations in the HSN. Family networks and occupational associations were probably the main channels through which vacancies in the agricultural sector were filled (de Kort, 1940). Unskilled workers comprised around 12% of the HSN data, but they were represented hardly at all in the job advertisements. It may be that they were easy to find through social contacts. Bakers, cooks and salesmen were represented to a larger extent in the newspaper advertisements than in the HSN. On a scale ranging from 10 to 99, the average occupational status for both the advertised occupations and the occupations in the HSN data is around 50. The sample includes occupations from the whole range of status. Lower-status occupations include, for example, domestic servants (10.60) and coachmen (46.40). Higher-status occupations include secondary education teachers (91.90) and notaries (92.10).

In conclusion, with just a few exceptions, the most common occupations among the population from a broad range of social status were well represented in the advertisements.

### 3.3. Data structure and method

Job advertisements generally included, in addition to information on the vacancy, information on the place of work. The information on the place of work allows us to study the effect of regional modernization on recruitment. Fig. 2 provides an overview of the municipalities for which jobs were advertised in the advertisements included in our sample. It shows that the advertisements in the sample cover many regions of the Netherlands. Most of the advertised vacancies are for the four largest Dutch cities: Amsterdam, Rotterdam, The Hague and Utrecht and surrounding areas. In addition, due to the inclusion of the Leeuwarder Courant many jobs advertisements were for the northern province of Friesland. With demand for labour higher in more populated places, many vacancies were in cities. Nevertheless, for all provinces, the sample includes many vacancies in small and medium-sized municipalities.

The data structure is complex because we distinguish three levels of analysis. We explain the use of job-unrelated requirements in terms of differences between contexts for which the job is advertised, differences between occupations and differences between the advertisements themselves. Fig. 3 illustrates a simplified version of our data structure. We will use cross-classified multilevel models to analyse our data, because our individual advertisements are nested both in occupations (HISCO codes) and in varying contexts. We cannot...
employ a classic hierarchical nesting structure because not all advertisements for a given occupation are necessarily nested within the same “context”.

Strictly speaking, the nesting of job advertisements within municipalities and across years constitutes a cross-classified structure in itself. Advertisements in one municipality in different years are more similar to one another than advertisements in two different municipalities taken from the same year. In addition, two measurements of modernization taken in

Fig. 1. Comparison of the distribution of occupational groups (HISCO three-digit) across the population (HSN, N=13730) and across the job advertisements (N=2194), 1870–1939.

Fig. 2. Geographical distribution of municipalities for which one or more jobs were advertised, 1870–1939.

Fig. 3. Nesting structure of the data.
two succeeding years have more in common than two measurements of modernization processes taken ten years apart. However, software limitations make it difficult to estimate models that take this structure into account.

3.4. Dependent variable

The dependent variable is operationalized as the proportion of job-unrelated requirements in a job advertisement. All requirements mentioned in the advertisements were coded in accordance with the following categories: experience, effort, formal/professional/vocational qualifications, numeracy and literacy, languages and physical features. These are treated as job-related requirements. Job-unrelated requirements include the following: religious affiliation, morals, marital status, social background, appearance and age.

There are two requirements for which a distinction is not that easily made, namely age and experience. Employers asking for an older employee might well in fact have been looking for experience. In the literature experience is sometimes approximated by age. However, we distinguish between the two and classify experience as a job-related and age as a job-unrelated characteristic. In advertisements age requirements do not seem to imply experience. The age requirements are formulated rather vaguely, as the examples in Table 3 illustrate (“between 16 and 30 years old”, “younger than 16” or “around 40–50 years old”). Employers requesting experience formulated their requirements rather specifically by referring to skills or to how many years an applicant should have worked in an occupation.6

Although some advertisements seem to include information on the required gender of an applicant, it is not always clear whether there was a genuine preference for a male applicant or whether the term male was being used as a generic term and women were equally welcome to apply. In additional analyses we analysed specifications of the dependent variable with gender as a job-unrelated characteristic. The results are substantively very similar; we do not therefore treat gender as a job-unrelated characteristic, but we include it as a control variable in the analyses.

Table 3 provides an overview of the job-related and job-unrelated characteristics and the percentage of all

requirements they accounted for. It also provides three examples for each category of requirements from the job advertisement database. Of all the advertisements, 461 included neither job-related nor job-unrelated characteristics. They simply asked for a “baker” or a similar term without providing additional information. These are treated as advertisements including no job-unrelated characteristics.

3.5. Explanatory variables at the level of the occupation

Modern occupations: The advertised occupations were divided into modern and non-modern occupations (1/0). For each of the 244 occupations included in the sample we checked whether they at least fulfil one of the following characteristics (examples of occupations are included in brackets). Workers in modern occupations make use of mechanized labour, using new sources of energy such as steam, gas and electricity (Sewing-Machine Operator). They supervise unskilled manual assembly line production and other processes of mass production (Manager, Supervisor, Foreman or Inspector). Incumbents of modern occupations execute tasks for which specialized training is required (Draughtsman). Also, occupations in the field of research and development belong to modern occupations (Engineer, Technician). Finally, occupations in the administrative divisions of corporate capitalism, i.e. in accountancy and the administration of mass production (Clerical Worker, Manager), are counted as modern. Table 4 presents the ten most prevalent modern occupations in the sample. These ten occupations cover 43% of all modern occupations.

Status of the advertised occupation: The status of the advertised occupations is measured using HISCAM, a recently developed historical status scale (Lambert, Zijdeman, van Leeuwen, Maas, & Prandy, 2013). The same estimation techniques used for the contemporary CAMSIS scales (Prandy, 1999) were used, too, to develop the HISCAM scale. These scales were developed based on the assumption that patterns of social interaction (marriages for instance) between people from different occupational strata are representative of the overall structure of occupational stratification. The HISCAM scale estimated the occupational stratification structure using 1.5 million marriage records from six different countries (Britain, Canada, France, Germany, the Netherlands and Sweden) from 1800 to 1938. The scale ranges from 1 to 99, with higher values indicating higher occupational status. Servants, for example, are assigned a HISCAM score of 10.6. Lawyers receive the highest

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6 As a control, we also ran the analyses with age as a job-related characteristic. The results were very similar.
Table 3
Job-related and job-unrelated requirements in job advertisements: examples and percentages of all requirements (\(N = 2194\)).

<table>
<thead>
<tr>
<th>Job-unrelated requirements</th>
<th>%</th>
<th>Job-related requirements</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>18</td>
<td><strong>Experience</strong></td>
<td>46</td>
</tr>
<tr>
<td>16–30 jaar – between 16 and 30 years old</td>
<td></td>
<td>reeds als zoodanig gewerkt hebben – experience in such work</td>
<td></td>
</tr>
<tr>
<td>beneden 16 jaar – younger than 16</td>
<td></td>
<td>bekend met dergelijke werkzaamheden om leiding te geven – experience in such work and able to assume supervisory role</td>
<td></td>
</tr>
<tr>
<td>omstreeks 40 à 50 jaar – around 40–50 years old</td>
<td></td>
<td>1 a 2 jaar bij het vak – 1–2 years’ experience in the profession</td>
<td></td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td>13</td>
<td><strong>Effort</strong></td>
<td>20</td>
</tr>
<tr>
<td>PG – Protestant</td>
<td></td>
<td>geschikt – suitable</td>
<td></td>
</tr>
<tr>
<td>RC – Catholic</td>
<td></td>
<td>ijverig – eager</td>
<td></td>
</tr>
<tr>
<td>Lib. protestant – Liberal Protestant</td>
<td></td>
<td>degelijk – hard-working</td>
<td></td>
</tr>
<tr>
<td><strong>Morals</strong></td>
<td>4</td>
<td><strong>Physical features</strong></td>
<td>12</td>
</tr>
<tr>
<td>fatsoenlijk – respectable</td>
<td></td>
<td>flik – well-built</td>
<td></td>
</tr>
<tr>
<td>beschaafd – well-mannered</td>
<td></td>
<td>sterk – strong</td>
<td></td>
</tr>
<tr>
<td>taktvol optreden – tactful manners</td>
<td></td>
<td>energiek – energetic</td>
<td></td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td>2</td>
<td><strong>Languages</strong></td>
<td>5</td>
</tr>
<tr>
<td>gehuwd – married</td>
<td></td>
<td>Frans, Duits, Engels – French, German English</td>
<td></td>
</tr>
<tr>
<td>alleenstaand – single</td>
<td></td>
<td>moderne talen strekt tot aanbeveling – modern languages would be an advantage</td>
<td></td>
</tr>
<tr>
<td>weduwe zonder kinderen – widow without children</td>
<td></td>
<td>oude talen – classical languages</td>
<td></td>
</tr>
<tr>
<td><strong>Other personal characteristics</strong></td>
<td>2</td>
<td><strong>Formal, vocational, professional qualifications</strong></td>
<td>4</td>
</tr>
<tr>
<td>uit de provincie – from the province</td>
<td></td>
<td>5-j HBS OHS en of HHS – 5 years of secondary schooling</td>
<td></td>
</tr>
<tr>
<td>zacht humeur – even temper</td>
<td></td>
<td>diploma Ambachtschool – craft school diploma</td>
<td></td>
</tr>
<tr>
<td>vrij van ziekten – free of disease</td>
<td></td>
<td>diploma boekhouden M.O. – secondary schooling, accountancy diploma</td>
<td></td>
</tr>
<tr>
<td><strong>Social background</strong></td>
<td>1</td>
<td><strong>Literacy, numeracy</strong></td>
<td>2</td>
</tr>
<tr>
<td>beschaafden stand – from the educated classes</td>
<td></td>
<td>goed kunnen schrijven – good writing skills</td>
<td></td>
</tr>
<tr>
<td>van nette familie – from a respectable family</td>
<td></td>
<td>accuraat rekenen – good arithmetic skills</td>
<td></td>
</tr>
<tr>
<td>goede afkomst – of good parentage</td>
<td></td>
<td>net handschrift – neat handwriting</td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>0.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>flik uiterlijk – tidy appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>goed uiterlijk– attractive appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>beschaafd uiterlijk – refined appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

possible score, 99.0, and tailors are assigned a position in the middle, with a score of 49.7.\(^7\)

Control variables at the job advertisement level:

**Newspaper:** This variable indicates in which newspaper the advertisement was published. The reference category is *Het Nieuws van den Dag*.

**Gender:** Employers often indicate whether they are looking for (1) a female applicant, (2) a male applicant or whether (3) both sexes can apply. Of the advertisements, 439 included no clear indication of the sex of potential applicants (4). The variable “gender” is included in selected models. Category 1, female, is the reference category.

**Year/10:** We controlled for year in all our models. The variable “year” starts in 1870 and is divided by 10.

3.6. Explanatory variables at the context level

Of the 2194 advertisements in our sample, 622 included no information on place of work. In 195 of these advertisements, the address of an agency or the

\(^7\) HISCAM assumes that the relative status positions of occupational groups do not change over time. A test of this assumption showed that changes in status are relatively small and unsystematic. See Lambert et al. (2013).
office of the newspaper was given. In these cases, the addresses provided were taken as the place of work. The remaining 427 advertisements gave no indication of the place of work. Of these, 321 advertisements were published in newspapers that had a local focus on the cities of Rotterdam, Tilburg or Amsterdam, and in those cases the place of publication of the newspapers was taken to be the place of work. The Leeuwarder Courant is a regional, Frisian newspaper and also includes many advertisements for the rural areas in the vicinity of the city of Leeuwarden. For the vast majority of advertisements in this newspaper, location information is provided. For 106 advertisements, information on the place of work is missing, though it was most likely somewhere in the province of Friesland. It is likely, furthermore, that when they sought personnel in rural areas employers would have stated that clearly. Therefore, for this newspaper too, with its more regional focus, we assign the city of Leeuwarden as the place of work for advertisements unless a different place was specifically given.

Post office: We approached mass communication in our analysis using a variable reflecting whether (1) or not (0) there was a post office in a given municipality in a given year. Post offices held special importance in the Netherlands in the late nineteenth and early twentieth centuries. Letters, telegrams, fashion brochures and newspapers were distributed through post offices. We derived data on post office locations from the annual reports of the Staatsbedrijf der Postdienst, Telegrafie en Telefonie (PTT) [State Post Office, Telegraph and Telephone Company] (see also Zijdeman, 2008).8

Train station: We retrieved data on the years that each train station in the Netherlands opened and closed from the website http://www.stationsweb.nl/. The data cover the period 1870–1939. Using this information, we created a variable that indicates whether there was a train station (1) or not (0) in any given year.

Educational expansion: To capture educational expansion, we used the number of students in a municipality enrolled in secondary education per 100 inhabitants. Even before the first mandatory schooling law in 1901, participation in basic schooling was high in the Netherlands. Rates of participation in secondary education are therefore a better indicator of educational expansion than participation in elementary schooling. We consulted the annual reviews Verslagen voor het hoger, middelbaar en lager onderwijs of Dutch education for the period 1860–1930 to obtain information on educational expansion. Every five years, the number of students registered for any type of secondary education was recorded at the municipal level. Although gymnasia (secondary school) students are registered in the reviews of higher education, we included them here because the gymnasia in practice merely prepared students for higher education (Mandemakers, 1996). For 1939 no information on the number of secondary school pupils is available. Therefore in the results section models including this variable are presented for the period 1860–1930.

Secularization: We measured the spread of universalistic values by the number of people per 1000 inhabitants who indicated that they had no religious affiliation. This is only an indirect measure. However, it can be argued that religious – in this case Christian – values are not universalistic in at least two ways: they distinguish people of their own religion from others, and they place great emphasis on traditional family life (Wilson & Sandumirsky, 1991). Both aspects may affect the relevance of job-unrelated characteristics such as marital status and religious affiliation. During the period being studied, religion was highly important to many people in the Netherlands. But as early as the second half of the nineteenth century a process of secularization started which continued after 1939, the end of the period being studied here. Knippenberg (1999) describes the steady increase in secularization as a trend even in its progression and attributes it to a number of modernization processes. He argues that institutional differentiation, educational expansion, poor relief and the rise of the modern welfare state all contributed to the decrease in religious affiliation across Dutch society. We derived our secularization variable from the Historical Ecological Database (HED) for Dutch municipalities for every tenth year. For a description of the data, see Beekink, Boonstra, and Engelen (2003). For the years for which no data were available we obtained the values for municipalities with similar characteristics.

Table 4
Most prevalent modern occupations as percentage of all occupations.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td>10.70</td>
</tr>
<tr>
<td>Clerical Worker</td>
<td>5.88</td>
</tr>
<tr>
<td>Sewing-Machine Operator</td>
<td>4.81</td>
</tr>
<tr>
<td>Draughtsman</td>
<td>4.28</td>
</tr>
<tr>
<td>Engineer</td>
<td>3.21</td>
</tr>
<tr>
<td>Supervisor, Foremen or Inspector</td>
<td>3.21</td>
</tr>
<tr>
<td>Machinery Fitter or Machine Assembler</td>
<td>3.21</td>
</tr>
<tr>
<td>Technician</td>
<td>2.67</td>
</tr>
<tr>
<td>Toolmaker, Metal Pattern Maker, Metal Maker</td>
<td>2.67</td>
</tr>
</tbody>
</table>

8 The data on the presence of post offices cover the period up to 1918. By then, almost all municipalities had a post office; it was only after 1930 that some post offices were closed (Hogesteeger & Kramer, 1995).
available, we estimated the degree of secularization so that we could analyse the job advertisements from these years as well. Our estimates are the weighted means of the number of secularized inhabitants for the years for which information on the number of secularized inhabitants was retrieved. For example, our estimate of the number of secularized inhabitants in 1919 is equivalent to the sum of the number of secularized inhabitants in 1910 and nine times the number of secularized inhabitants in 1920, divided by ten.

**Top 100 companies:** To capture the presence of enterprises which probably had internal labour market arrangements we use information on the locations of the top 100 Dutch companies. Top 100 companies are enterprises which in terms of total assets are the 100 most successful companies in the Netherlands. Ideally, one would like to include a measure of how many companies had ILM structures; however, this information is not available. Bloemen et al. (1993) study of the top 100 Dutch companies provides us with the information we require for the years 1913 and 1930. They argued that not only were the top 100 companies likely to use unified hiring strategies, they also acted as role models for other companies in this respect.

To Bloemen et al. (1993) data we added the founding years and locations of the main establishments of the companies involved. Companies included in the 1913 or 1930 list were included for the respective year. Companies included in the 1913 list and established before 1913 were included as a top 100 company from the year of their foundation. Companies founded after 1913 and included in the 1930 list were included for the years between their foundation and 1930 as well. Where a company was on the list in 1913, it is included in the top 100 from the year of its foundation onwards. If it was on the list in 1930 and founded before 1913 but not on the list in 1913, the variable is coded 1 for 1930 only.

For the advertisements from 1939 no information on the existence of top 100 companies is available. Therefore in the results section separate models including this variable are presented covering the period 1870–1930.

**Contextual control variables:**

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9 Chandler (1990) argues that only after 1880, with the second industrial revolution and its technological innovations, did companies begin to expand and change their form of organization, or new companies emerge with these new hiring strategies. We therefore tried out alternative specifications of this variable, for instance regarding the years prior to 1880 as having no top 100 companies. Analyses with the different variables resulted in substantially very similar results.

---

**Urbanization:** We derived data on urbanization from the Historical Ecological Database and the Historical Database of Dutch Municipalities (HDNG) for the period 1865–1928. In all of our models that include indicators of modernization we control for urbanization. Descriptive information on the variables is provided in Table 5.

4. **Descriptive results**

The first aim of this study is to describe the requirements that employers specified in job advertisements in the Netherlands from 1870 to 1939. Figs. 4 and 5 present the trend in job-related and job-unrelated characteristics in job advertisements over the period 1870–1939. Experience was the characteristic most often required. In the period 1870–1880 almost 60% of all advertisements mentioned experience. This proportion decreased to around 40% (1891–1900), after which it steadily increased to around 54%. Effort was mentioned in very few advertisements (around 1%) in the first period. In the period 1890–1900 this proportion increased to around 23%, and fluctuated, increasing to c. 28% in the last period being researched here. Physical features of applicants were initially (1870–1880) mentioned in around 8% of all advertisements. This proportion increased, levelling off at around 12% by the end of the nineteenth century, a figure at which it remained for the rest of the period. Throughout the whole period, languages, educational qualifications and numeracy/literacy were generally mentioned in less than 10% of the advertisements, with a peak of almost 20% in 1911–1920.

Changes over time in the occurrence of job-unrelated characteristics are presented in Fig. 5. Overall, of the seven job-unrelated characteristics none is mentioned in more than 30% of all advertisements; only religion and age are referred to in more than 10% of the advertisements. Initially, religion was mentioned in around 12% of all advertisements. References to religion increased to 18–19% in the period 1881–1890 and 1891–1900. In subsequent periods religion was mentioned in c. 8% of advertisements, and only in 1931–1939 did the proportion of advertisements mentioning religion again increase, to 11%. Initial age requirements were mentioned in around 11% of all advertisements, and this percentage steadily increased, to 30%, in the last period. Marital status was mentioned in 9% of all advertisements from the first period; that proportion gradually declined to c. 2% over the entire period being studied here. Moral requirements were mentioned in around 4% of advertisements, with a modest increase in the period 1891–1900.
Table 5
Summary statistics for variables in the analyses.

<table>
<thead>
<tr>
<th>Variables at the level of advertisement (N = 2194)</th>
<th>Min</th>
<th>Max</th>
<th>Mean/%</th>
<th>S.d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of job-unrelated characteristics</td>
<td>0</td>
<td>1</td>
<td>0.19</td>
<td>0.32</td>
</tr>
<tr>
<td>Year/10</td>
<td>0</td>
<td>6.90</td>
<td>4.19</td>
<td>1.97</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variables at the level of occupation (N = 244)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Status (HISCAM)</td>
<td>0</td>
<td>99</td>
<td>49.16</td>
<td>22.75</td>
</tr>
<tr>
<td>Modern (1/0)</td>
<td></td>
<td></td>
<td>27.46</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variables at the level of context (N = 365)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population in ’000s</td>
<td>0.60</td>
<td>757.38</td>
<td>48.21</td>
<td>115.55</td>
</tr>
<tr>
<td>Train station (1/0)</td>
<td></td>
<td></td>
<td>60.86</td>
<td></td>
</tr>
<tr>
<td>Post office (1/0)</td>
<td></td>
<td></td>
<td>57.37</td>
<td></td>
</tr>
<tr>
<td>Secularization per 1000 inhabitants</td>
<td>0</td>
<td>436.83</td>
<td>64.28</td>
<td>82.21</td>
</tr>
<tr>
<td>Educational expansion per 100 inhabitants (N = 353)</td>
<td>0</td>
<td>3.93</td>
<td>0.72</td>
<td>0.88</td>
</tr>
<tr>
<td>Top 100 company (1/0) (N = 353)</td>
<td></td>
<td></td>
<td>22.71</td>
<td></td>
</tr>
</tbody>
</table>

Control variables

Gender
Female 41.73
Male 37.12
Both 1.36
Unknown 19.79

Newspaper
Het Nieuws van den Dag 18.82
Leeuwarder Courant 30.36
Nieuwe Rotterdamsche Courant 17.05
Nieuwe Tilburgsche Courant 7.57
Het Rotterdamsch Nieuwsblad 26.21

Fig. 4. Percentage of advertisements including specific job-related characteristics, 1870–1939.
Requirements referring to other personal characteristics, social background and appearance were mentioned in c. 2–3% of all advertisements during the whole research period.

The fluctuations over time seen in Figs. 4 and 5 may, however, be influenced by the selection of newspapers in the different time periods. Fig. 6a–e indicates that this is to some extent the case, but that the trends in the percentages of job-unrelated characteristics are very similar. Fig. 6a–e presents, for each of the five newspapers, the proportion of job-related and job-unrelated requirements mentioned in job advertisements in a given period. The percentage of job-unrelated characteristics ranges between 10 and 30. The percentage of job-related characteristics ranges between 40 and 70. From this descriptive information it becomes clear that no clear trend towards a reduction in job-unrelated selection can be identified, although in Het Nieuws van den Dag (Fig. 6a), Leeuwarder Courant (Fig. 6b) and Het Rotterdamsch Nieuwsblad (Fig. 6c) a slight reduction (but no linear trend) can be seen between the first and last period.

Figs. 4–6e show that throughout the period job advertisements included more job-related than job-unrelated characteristics. At the start of the research period the proportion of job-unrelated characteristics was already rather low, and there was no clear trend towards a reduction. With regard to particular requirements, the only notable trend was the decrease in how often marital status was specified.

In sum, the descriptive results indicate that the selection of employees through job advertisements tended to be generally job-related throughout the whole period. To study, however, the existence of variation across complex and higher-status occupations and more or less modernized municipalities, we estimated a number of cross-classified multilevel models.

5. Explanatory results

Table 6 shows the results of our cross-classified multilevel models of the proportion of job-unrelated characteristics in job advertisements in the Netherlands from 1870 to 1939. The “null model” (model 0) shows that most of the variance in the proportion of job-unrelated characteristics (88.5%) is found between advertisements [0.092/(0.002 + 0.010 + 0.092)]. Around 2% of the variance is due to differences in the context (year*municipality) for which the vacancy was advertised. The remaining 9.5% of variance is due to differences between occupations (HISCO codes). The constant in model 0 (0.161) indicates that 16% of all requirements are job-unrelated characteristics.10

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10 In additional analyses (not shown) we ran the models with alternatively specified dependent variables. In one version we excluded the
In model 1, year is added to the model. With every decade, the proportion of job-unrelated characteristics decreased by 1%, thus from 1870 to 1939 the proportion of job-unrelated characteristics decreased by 7.7%.

Hypotheses H1a and H1b, which predict that advertisements for higher-status and modern occupations required a lower proportion of job-unrelated characteristics, are tested in model 2. Whether a job is modern has no significant effect on the proportion of job-unrelated characteristics in the advertisement; thus model 2 does not provide additional insights into the relationship between job modernity and the inclusion of job-unrelated characteristics.
### Table 6
Cross-classified multilevel models of the proportion of job-unrelated characteristics.

<table>
<thead>
<tr>
<th>Fixed part</th>
<th>Model 0 S.E.</th>
<th>Model 1 S.E.</th>
<th>Model 2 S.E.</th>
<th>Model 3 S.E.</th>
<th>Model 4 S.E.</th>
<th>Model 5 S.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.161 0.013**</td>
<td>0.204 0.022**</td>
<td>0.324 0.050**</td>
<td>0.417 0.053**</td>
<td>0.389 0.056**</td>
<td>0.368 0.064**</td>
</tr>
<tr>
<td>Year/10</td>
<td>−0.011 0.005*</td>
<td>−0.010 0.005*</td>
<td>−0.010 0.006</td>
<td>−0.006 0.007</td>
<td>−0.008 0.009</td>
<td></td>
</tr>
<tr>
<td>HISCAM</td>
<td>−0.002 0.001*</td>
<td>−0.002 0.001*</td>
<td>−0.002 0.001*</td>
<td>−0.002 0.001*</td>
<td>−0.002 0.001*</td>
<td>−0.002 0.001*</td>
</tr>
<tr>
<td>Modern (1/0)</td>
<td>−0.014 0.031</td>
<td>−0.001 0.032</td>
<td>−0.006 0.031</td>
<td>−0.007 0.034</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Context indicators**
- Population in ’000s
- Train station (1/0)
- Post office (1/0)
- Secularization per 1000 inhabitants
- Top 100 company
  - (1/0)
- Educational expansion

** Random part**
- Context
- Occupation
- Advertisement

<table>
<thead>
<tr>
<th>−2log likelihood</th>
<th>1093.100</th>
<th>1090.426</th>
<th>1088.025</th>
<th>1068.670</th>
<th>1072.799</th>
<th>877.428</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units: context</td>
<td>365</td>
<td>365</td>
<td>365</td>
<td>365</td>
<td>365</td>
<td>352</td>
</tr>
<tr>
<td>Units: occupation</td>
<td>244</td>
<td>244</td>
<td>244</td>
<td>244</td>
<td>244</td>
<td>219</td>
</tr>
<tr>
<td>Units: advertisement</td>
<td>2194</td>
<td>2194</td>
<td>2194</td>
<td>2194</td>
<td>2194</td>
<td>1869</td>
</tr>
</tbody>
</table>

Note: First year is 1870. Models 3–5 include controls for the newspaper in which the advertisement was published and the preferred gender of the applicant (see Appendix A).

* Students in secondary education per 100 inhabitants.

** p < .05 (two-tailed test).

*** p < .01 (two-tailed test).

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not lend support to Hypothesis H1a. Hypothesis H1b is supported, as we find that advertisements for higher-status jobs included proportionally fewer job-unrelated characteristics. Advertisements for jobs with a ten-point higher HISCAM status have a 0.02 lower proportion of job-unrelated characteristics. Adding these predictors to the model reduces the variance at the occupational level from 0.009 to 0.008. The variance at the level of the advertisement and at the context level remains the same. That means that the status of an occupation and whether it is modern explain only a small part of the variance in the proportion of job-unrelated characteristics between occupations. The effect of year becomes slightly smaller when the two variables indicating the occupational composition of the labour force are added to the model. The change is small because only one of the variables – status – has a modest effect on the proportion of job-unrelated characteristics.

In model 3, controls for the newspaper in which an advertisement was published and the gender of the potential job applicant are added. Adding these controls causes the time trend to become insignificant, and the variance at the level of the advertisement decreases slightly.

In model 4 modernization indicators at the context level are added. Population size, the presence of a train station and of a post office and the proportion of secularized inhabitants have no influence on
the proportion of job-unrelated characteristics mentioned in job advertisements. Model 5 includes the two indicators for which we have data only up to 1930. Because these cover a shorter period, the number of observations drops to 1869. Neither indicator, whether or not at least one top 100 company is located in a context and the number of pupils in secondary education per 100 inhabitants, has any significant effect on the proportion of job-unrelated characteristics in job advertisements.\(^\text{13}\)

6. Discussion and conclusion

Classical theories suppose nineteenth- and twentieth-century modernization processes to have caused societies to become more open. An individual’s social position is thought to have been increasingly determined by effort and talents (job-related characteristics) rather than status at birth (job-unrelated characteristics). For the population at large, a shift from “ascription to achievement”-based selection for occupational positions is thought to have occurred. We have addressed this question by studying employers’ selection criteria in job advertisements.

We collected a sample of 2194 job advertisements from five Dutch newspapers for the period 1870–1939. The data include advertisements for 244 different occupations in more than 154 municipalities over a period of 69 years. These municipalities differed according to modernization processes, such as mass communication, mass transport, value changes and the presence of internal labour markets.

We have shown that in the period 1870–1939 advertisements included more job-related than job-unrelated characteristics. Moreover, there was no clear trend towards less job-unrelated recruiting in any of the five newspapers included in the sample. The descriptive results indicate that, as early as the 1870s, recruitment through job advertisements was to a large extent job-related, and remained so subsequently. Also, the explanatory results show that once we take into account the newspaper in which an advertisement was placed and the gender of applicants there was no time trend.

We examined whether employers who hired employees for more complex and higher-status occupations were less likely to select on job-related characteristics. The same question was asked in relation to employers in more modern municipalities. We found this was indeed the case for higher-status occupations. However, whether the job advertised was modern or not did not matter for the proportion of job-unrelated characteristics. Further, the selection into occupations was not influenced by regional modernization processes.

Our findings provide interesting points for discussion. The consistently high proportion of job-related characteristics and the lack of a reduction in job-unrelated selection is surprising given the theoretical discussion on the shift from “ascription to achievement”-based recruiting. It appears that the shift to job-related selection thought to accompany modernization processes was already under way before that time, at least in those sectors of the economy where employers recruited employees through newspaper advertisements. It is possible though that employers gradually changed the channels by which they recruited employees, so that overall job-unrelated recruiting on the labour market might still have diminished. This could have been so if selection based on job-related characteristics was higher in newspaper advertisements than was the case when hiring in person, and over time a higher proportion of all vacancies were filled through job advertisements. Indeed, Miles (1993) reports that in the nineteenth and early twentieth centuries job seekers increasingly found work through advertisements, but that, at the same time, the most common way of finding a job was through relatives or family.

Future research on the role of employers in selecting personnel might also study recruitment methods other than through newspapers. Recruitment procedures might differ in their job-unrelated requirements (Drentea, 1998). When formal recruitment methods, such as advertisements, are used, job-unrelated factors such as gender and ethnicity play a smaller role in the hiring process than when informal recruitment methods are used (Huffman & Torres, 2001). Newspaper advertisements are “open to anyone” and will thus be used by employers more inclined to select on job-related characteristics. In contrast, informal recruitment methods depend on the use of personal ties, when, for example, employers seek to recruit new employees through the networks of current employees. Future research might assess which employers found employees through other channels, for example through wider kin or family members. Biographical or autobiographical material could help scholars study this question further, potentially

\(^{13}\) Because the sample of newspaper advertisements does not include all newspapers over the whole period, we performed additional checks on whether the absence of a time trend might be due to the composition of our sample. We conducted additional analyses separately analysing advertisements in each newspaper. All additional analyses also revealed the absence of a time trend in the proportion of job-unrelated characteristics (additional analyses available on request).
providing a wealth of detail on individual working lives that was not preserved in official registers or company archives (Humphries, 2010; Miles, 1993).

Our results might indicate that the motives of employers when recruiting employees are not fully captured by the arguments of the logic of industrialism thesis. This school of thought argued that employers hiring for higher-status jobs, for modern jobs and in more modern contexts select less often on the basis of job-unrelated characteristics. This turned out to be the case only when recruiting for high-status jobs. For modern occupations and in modern contexts employers did not select more on job-related characteristics than for traditional occupations and in traditional contexts. One possible explanation might be that in certain situations employers preferred to hire based on trust. Employers might have trusted potential employees more when sharing a social background or religion (Weesie & Raub, 2000). Trust in employment relations might have been generated through homophily.

Modern values have arguably been an important influence on the hiring preferences of employers, yet our measure of modern values – secularization – had no effect, perhaps because secularization is an imperfect measure. Ideally, one would have an indicator that more specifically measures to what extent employers adhered to universalistic values, i.e. to what extent they were convinced that people should not be judged on the basis of characteristics not directly relevant for job performance. That secularization had no effect might also have been due to the processes of pillarization that took place in Dutch society during the same period. Pillarization, the segmentation of Dutch society into “pillars” according to political ideologies and religious denominations, might have strengthened job selection according to particularistic values.

Based on the findings and limitations of this study, we propose a number of directions for further research. The first is to improve the measures for modern occupations, which might have been too broad. Within the group of modern occupations distinguished here, some occupations required new institutionally learned skills, learned for example in technical training schools, and for these occupations employers might increasingly have selected on job-related characteristics. A measure that captures whether an occupation required vocational or professional training could increase our understanding of the role of modern occupations in the selection criteria of employers. In analysing the requirements stipulated in job advertisements, only one stage in the hiring process has been scrutinized. Other stages in the selection process were not considered. For example: Who applied? Who was considered a potential candidate? And who eventually got the job? One possibility would be to systematically collect information on the hiring practices of companies. By linking this information to personnel records, other stages in the selection process could be studied.

Finally, our findings might suggest theoretical implications concerning the logic of industrialism. The logic of industrialism thesis might have focused too much on industrialization as the driving force behind modernization processes. The Dutch economy has been described as modern well before the onset of industrialization. Technological innovations, urbanization, economic growth and merchant capitalism were already developed well before the nineteenth century (de Vries & van der Woude, 1997). Some of the processes that the logic of industrialism claims led to changes in the hiring behaviour of employers might, in fact, have already taken place before the period being studied here. Other processes might have become important only after the period we have studied here. For example, educational participation greatly expanded after World War II (Shavit & Blossfeld, 1993). In this case, it was perhaps not the content of the logic of industrialism thesis that was wrong, just its name.

Acknowledgements

We acknowledge the Netherlands Organization for Scientific Research (NWO) for funding this project (grant: MAGW Open Competition 400-08-230) and the Advanced Investigator Grant from the European Research Council (ERC-2008-AdG 230279-TowardsOpenSocieties) for enabling additional data collection.
Appendix A. Coefficients for control variables
newspaper and gender

<table>
<thead>
<tr>
<th>Newspaper</th>
<th>Model 3</th>
<th>S.E.</th>
<th>Model 4</th>
<th>S.E.</th>
<th>Model 5</th>
<th>S.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Het Nieuws van den Dag</td>
<td>ref.</td>
<td></td>
<td>ref.</td>
<td></td>
<td>ref.</td>
<td></td>
</tr>
<tr>
<td>Leeuwarder Courant</td>
<td>-0.127</td>
<td>0.024**</td>
<td>-0.128</td>
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** p < .01 (two-tailed test).

References


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