Digital humanities and the history of working women: a cascade

Marco H.D. van Leeuwen & Richard L. Zijdeman

a Department of Sociology, Utrecht University, Utrecht, Netherlands
b Research Department, International Institute of Social History/Stirling University, Amsterdam, Netherlands

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INTRODUCTION

Digital humanities and the history of working women: a cascade

Marco H.D. van Leeuwen\textsuperscript{a} and Richard L. Zijdeman\textsuperscript{b}

\textsuperscript{a}Department of Sociology, Utrecht University, Utrecht, Netherlands; \textsuperscript{b}Research Department, International Institute of Social History/Stirling University, Amsterdam, Netherlands

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In this introduction to the special issue on ‘Women’s work in changing labour markets’, we argue that a combination of digital advances, notably the digitization of individual- and contextual-level data, the creation of internationally comparable occupation-based classifications, and the development of statistical models allowing for contextually informed analysis, has brought us to the brink of new developments in the field of women’s work. Census and vital registration data contain more information on occupations of women than previously thought, and when used in combination with other digitized sources they allow one to assess the possible under-registration of women’s work, as illustrated by some of the contributions to this special issue. Other contributions show how standardizing occupation-based classifications allows for temporal and regional comparisons of women’s work and makes it feasible to study how community or regional characteristics influence that work. None of these developments – large-scale digitization of individual-level data, standardization of occupational titles and measures of stratification, and contextually informed analyses – is completely new; in some cases they are actually rooted in a venerable research tradition. However, in combination they might well constitute a cascade in the history of working women.

Keywords: female labour force participation; social mobility; occupational classification; micro-macro data; triangulation

1. Introduction

It is often claimed that in many Western countries first industrialization and later the growth of the service sector enhanced women’s opportunities for paid work. In agriculture as well as in industry work became less dependent on physical strength, and the growth of the service sector increased the range of work options for women (Charles & Grusky, 2004). At the same time, some types of work, such as the domestic production of textiles, in which women worked, suffered, and, it has been argued, the rise of a new type of familial and work relationship – the male breadwinner/female homemaker household model – became increasingly prevalent (Becker, 1981; Horrell & Humphries, 1995; Janssens, 1997; Van Poppel, van Dalen, & Walhout, 2009; De Vries, 2008), leading to women retreating from the labour market. Furthermore, while gender equality in certain spheres of life became institutionalized (in education, for example, and suffrage), in other spheres of life differences between women and men were increasingly underpinned by a gender-essentialist perspective. Women were taught different skills at school, periodicals targeted specific audiences (Tinkler, 1995), while the separate organization of women underlined...
the point that women were different from men. Given the existence of both a current opening up the scope for female employment and a countercurrent keeping women at home, the historical path of women’s labour force participation merits empirical scrutiny.

To illuminate these issues, a conference on women in changing labour markets was organized in 2012 by Richard L. Zijdeman, Marco H.D. van Leeuwen, Erik Buyst, and Bart van de Putte. This special issue hosts contributions originally presented at that conference. Our brief introduction here makes no attempt to offer a complete historiographical overview. Instead, it highlights salient features of this collection of articles and places them in the broader context of the history of women at work, paying special attention to the current and the countercurrent with regard to female labour force participation.

We begin by looking at the recent revolution in digital microdata containing occupational information on women’s work in the past. Studying such data from multiple sources in a mixed-methods approach is a relatively recent phenomenon. The sources are many, but two types stand out both in the field at large and in this special issue: historical censuses and vital registers, especially marriage records. We argue that it is now becoming clear that these sources can be used to describe the working lives of women as well as those of men, despite the fact that the sources are less informative about and might under-record the former compared with the latter.

We compare women’s work across time and space because, we argue, occupations are the key indicator of social position. To make occupational information the common coin of comparison, the DNA of the social and economic life of ordinary women and men in the past so to speak, several tools now exist. A fine-grained standard historical international classification of occupations allows us to capture much of the information on work contained in generally available historical sources in a way that allows for valid comparisons over time and across space. Based on this occupational classification, it is now possible to construct indicators of social class and rank, and we will discuss these briefly below.

The historical record is thus more abundant about women’s work – as captured especially by occupation – than previously thought, and several methods exist to test important theoretical notions on the patterns, causes, and consequences of female labour force participation. In addition, the large-scale digitization of sources provides information on the local circumstances in which women did or did not join the labour force. Social science theories on female labour force participation might benefit from such historical contextualization, as it allows for more fine-grained hypotheses and extends the scope, both in temporal and regional terms, within which the hypotheses can be tested. We consider a specific, new way of contextualizing the history of working women, namely using community information, often in a multilevel design.

None of the three approaches to the historical study of women’s work – individual-level data, the standardization of occupational titles and measures of stratification, and contextually informed analyses – is completely new; in some cases they are rooted in a venerable research tradition. We suggest, however, that taken together they constitute a new and promising development in the scholarly analysis of the history of working women.

2. Digital microdata on working women in the past

Microdata on working women in the past have recently become available increasingly rapidly, often digitally. Many types of such data are now accessible: court records (Erickson, 2010), trade directories (Vikström, 2010, and the article by McGeevor (2014) in
this issue), insurance records (Kay, 2004, 2009), interviews (Bras, 2004, 1999), probate inventories (Whittle, 2005), poor relief records (Van Leeuwen, 1993, 2000), household budgets (Horrell & Humphries, 1995), autobiographies (Humphries, 2010; Maynes, 1995), photos (Jacquet-Francillon, Kerroubi, & Cacouault, 1994), newspaper advertisements for jobs (Schulz, Maas, & van Leeuwen, 2014a; see also Franzosi, 1987), and, last but not least, historical censuses and vital registers. These types of data are not new to historians, of course, but due to advances in digitization methods their scope in terms of geographical and temporal coverage as well as their sheer volume have increased enormously in the recent past (Hall, McCaa, & Thorvaldsen, 2000). Furthermore, data on women from various sources are increasingly being used in combination with each other (Bras, 2002, 1999), with such information being drawn from different sources and linked at the individual level, a process made easier by the digital form this information now often takes and by the development of algorithms to link such data on a large scale.

While there is thus a great variety of historical sources with information on women’s work, two stand out in terms of coverage and numbers: historical censuses and population registers (on the latter see, for example, Alter, 1988) on the one hand, and vital registers, especially marriage records but also records of births and deaths, on the other. These sources can be used to describe the working lives of women as well as those of men, although they are less informative about women’s work than about men’s work.

National population censuses for the past abound, in published aggregated form, but also in their microdata form, or even in the shape of the underlying enumerators’ books, which may contain information that did not make it into the published census records. Examples of large historical databases with standardized information on the lives of individual women and men include the harmonized US samples of historical censuses (IPUMS; Ruggles et al., 2009; Sobek et al., 2011), similar national censuses on either side of the Atlantic (NAPP; Ruggles, Roberts, Sarkar, & Sobek, 2011), international censuses of the past half century or more (IPUMS-I; Ruggles, King, Levison, McCaa, & Sobek, 2003), the Victorian Panel Study currently being created (Schürer, 2007), and the collection of mainly European micro census data under the name ‘Mosaic’ (Mosaic: Recovering Surviving Census Records to Reconstruct Population, Economic, and Cultural History, 2011). Other examples are the 1814 Belgium Census used by Devos et al. (2014) in their article in this issue. In addition to censuses, historical micro datasets of vital registers of births, marriages, and deaths have blossomed in digital form. These include the Dutch GenLias dataset (GenLias, 2009; used by Schulz, Maas, & van Leeuwen, 2014b) and the HSN dataset, the Swedish microdata from the Demographic Data Base (DDB) at Umeå and the Scania database, the Historical Population Register for Norway (Thorvaldsen, 2011), the Canadian Century Research Infrastructure (Gaffield, 2007), the Belgian COR sample (Matthijs & Moreels, 2010), and the French TRA sample (Bourdieu, Keszenbaum, & Postel-Vinay, 2014; Dupâquier & Kessler, 1992, also see Zijdeman et al. in this issue). Comparisons between historical micro datasets are still difficult though due not only to differences in what the sources contain, and how to interpret that information, but also to variations in how the information is stored. However, slowly, a consensus is being reached on how databases should be built (Mandemakers & Dillon, 2004) and on how sources should be translated (Alter & Mandemakers, 2014; EHPS). It is still fair to say that most datasets relate to Western Europe and North America, although this is about to change (for Africa, see Zu Selhausen & Weisdorf, 2014; for Egypt, Saleh, 2013; for Turkey, Ergene & Kaygun, 2012; for Asia, Campbell & Kurosu, in press, and Dong et al.; for Latin America, Botelho & van Leeuwen, 2009, 2012a, 2012b;

Census and vital register data appear to contain more information on occupations of women than we previously thought, though as well as being less informative about women’s work than men’s work the census data on women’s work especially are not always easy to interpret owing to the fewer types and range of occupations given, issues of possible under-registration, and frequent omissions in coverage from one census to the next. At present, there are a number of contentious issues regarding (a) whether the omissions in the series from one census to the next are of such significance that they cannot be remedied — especially for women, but also for men (see Desrosières & Thévenot, 1992; Marchand & Thélot, 1991); (b) the nature and extent of under-registration of working women (see, for example, Higgs, 1987, but also the articles by Devos et al. (2014); McGeevor (2014); van Nederveen Meerkerk & Paping (2014), and by Stanfors (2014) in this issue); and (c) the putative causes of such under-registration. As to the latter, one pressing issue concerns whether women’s work was under-recorded simply because the census takers followed instructions that sometimes required them to ignore part-time, seasonal, or auxiliary work (as argued by Shaw-Taylor, 2007, and by McGeevor (2014) in this issue) or because they ignored such work despite their instructions, refusing to accept that such work was work when it was performed by women (Humphries & Sarasúa, 2012). Whatever the cause of the under-registration, the fact that there was under-registration of part-time work, and that the extent of such under-registration varied from census to census (McGeevor, 2014; van Nederveen Meerkerk & Paping, 2014, both in this issue; Schmidt & van Nederveen Meerkerk, 2012), in part because the instructions given to the census takers changed, makes the census a more difficult source in that respect than, for example, marriage records, where occupations were self-declared.

All three questions (a, b, and c) are serious questions to which there might not be any general answer. The nature, extent, and cause of any under-registration might differ according to the specific historical context. In fact, as the under-registration of women working on a farm or in a shop owned by their husband is often regarded as a particularly urgent problem (see, for example, the recent special issue of this journal on households, family workshops, and unpaid work, with contributions by Bessière (2014); Cesaroni and Sentuti (2014); Martini and Bellavitits (2014); Micheletto (2014); Schmidt (2014), and Whittle (2014)), the level of under-registration is likely to have been less of a problem where there were few farms or shops. Comparisons of census data on women’s work with corresponding data from other sources – sometimes called data triangulation – can be both very time consuming and highly illuminative in that respect (Vikström, 2010). The articles by van Nederveen Meerkerk & Paping (2014) and by Devos et al. (2014) in this issue show great ingenuity in triangulation, as well as in finding routines to remedy flaws in the census. As they point out, the fact that they can do this is particularly fortunate, as sometimes the census is the best source available for studying total female labour force participation (see Anderson, 2007; Hill, 1993). The article by McGeevor on Hertfordshire around 1850 in this issue painstakingly compares the total number of women in regular employment, as drawn from a trade directory, with the number found in the census enumerators’ books. Her conclusion is that that over 95% of all women regularly employed were indeed listed in the census. Her findings, and earlier similar findings by Anderson (2007), Goose (2007), McKay (2007), and Saito (2007) lead her to conclude that ‘the evidence in support of the largely accurate enumeration of the census is much stronger than that suggesting the opposite’.
It may also be true that as researchers have gained experience in working with these census microdata they have also become more familiar with their shortcomings and found ways and interpretative approaches to circumvent those shortcomings. The question before us now is, given the limitations of the sources, whether we can nonetheless use them for women’s work in the same way we can for men’s (where the problem is admittedly smaller). The answer given by some recent studies – and the thrust of the argument in this collection of essays – is that we can (for a more guarded view see, however, Humphries & Sarasúa, 2012), as long as we acknowledge the limitations of the data (a concentration, for example, on regular and fixed paid work, and veiled information such as the fact that a farmer’s wife also performed farm work), bear those in mind when evaluating the results, and make use of certain statistical routines (adding, for instance, a working spouse for farmers even if the census is silent; data triangulation). Problems will remain, of course, especially when comparisons are made over long stretches of time, as the article by Stanfors (2014) in this issue demonstrates, in part because, as she observes, data on female labour force participation measured in terms of persons might in the long run diverge considerably from a series measuring the extent of female labour force participation measured in terms of hours, due to the growth or decline in the incidence of part-time labour.

Vital registration data for the past are not entirely devoid of these problems, but as the data are generally self-declared – that is without the additional possible ‘filters’ of the enumerator and the census takers – they appear to suffer less from these problems. The downside is that not only do they not refer to the entire population, there are also a variety of self-declared occupational titles, an issue to which we will return in a moment. As to the former problem, vital registers do not refer to the entire population alive at a certain point in time – the labour force so to speak – but to a segment of the population, in the case of marriage records only those marrying. This excludes those remaining single – which for most of the past is not a very sizeable proportion – but also narrows the population to be studied to women and men of marrying age, i.e., that segment of the population which was relatively new to the labour force, insofar as brides continued to work after marriage.

3. Occupations as key identifier of work and social position

Tens of thousands of self-declared occupational titles have existed in every country in the past, as far as we know. To the historian of work in general and the historian of women’s work in particular, this richness is both a source of joy as well as a potential headache. It has long been impossible to make these occupational titles comparable across time and space (and thus also across languages and cultures). The purpose of the Historical International Standard Classification of Occupations (HISCO) has been to create an occupational classification system that allows comparisons to be made both in international and historical terms (Van Leeuwen, Maas, & Miles, 2002, 2004). HISCO is also the historical sibling of ISCO, in use by statistical agencies across the globe and allowing comparisons with recent periods. In HISCO, 1675 different occupational categories are distinguished and described. Each category is characterized by a five-digit numeral code. The last three digits refer to the ‘unit groups’; of which there are a total of 298. The first two digits refer to the ‘minor groups’ – 76 in all – and the first digit refers to the ‘major groups’ – ten in all. For example, codes 6-xx.xx refer to the primary sector of the economy, with codes 6-2x.xx identifying different types of agricultural and animal husbandry workers. The latter includes the code 6-22.xx for field crop and vegetable farm workers. These, in turn, relate to various more specific occupational categories: general
field crop farm workers (6-22.10), vegetable farm workers (6-22.20), wheat farm workers (6-22.30), etc. Additional information in the occupational titles that is not captured in the HISCO categories sometimes exists, and to retain such information three auxiliary variables were created: STATUS (e.g., for noble titles but also for master artisans), RELATION (e.g., for retired or ‘wife of farmer’), and PRODUCT (when the source mentions a product like tin or copper while the HISCO description does not). Of these, RELATION is of particular importance for the present purposes. If the census or the marriage record or whatever other historical source states ‘wife of farmer’, she receives a code for farmer and a code for wife; this is important because very few farms can be run by a male farmer alone; if married, the farmer’s wife is de facto working on the farm, often involved in doing work in or around the farm building. The researcher is then free to regard the notation ‘farmer’s wife’ as in fact referring to an occupation or not.

While HISCO allows for comparison and reduces complexity, for many purposes its 1675 categories are impracticable (although for some purposes they are needed). For questions on social structure and the effects of social inequalities on lifestyles and life chances, stratification sociologists and historians usually work either with a class scheme or a status scale. Expanding on this research tradition, a HISCO-based measure of social class (HISCLASS; see Van Leeuwen & Maas, 2011; Sobek, 2012) and a measure of stratification based on social interaction (HISCAM; see Lambert, Zijdeman, van Leeuwen, Maas, & Prandy, 2013) have been constructed, as well as a cross-over table to the economic sectors used in the INCHOS project (INCHOS). For comparative studies on work, economists, historians, demographers, and many others need such comparative measures, which can, as best as possible, bridge geographical regions and historical eras.

4. Digital humanities and women’s work: testing theories in a historical setting using mixed methods

The recent surge in the availability of microdata on women’s work and on ways to treat the sources, especially with regard to occupations and related measures of rank and class, seems to be about to lead to a fortuitous flood of studies on women’s work in past societies which might illuminate some of the intriguing questions posed at the beginning of this introduction. In the second decade of the twenty-first century, women throughout almost the entire world worked across the whole spectrum of the labour market (though the labour market remains segregated, and women are still not on equal footing with men with regard to social status or earnings). This has given many women, at least in the West, a (historically speaking) comparatively large (but still often limited) agency to determine their own working lives. For US women, Sobek (1997, p. i) phrased this as follows:

Married female paid labor went from being the last resort of needy families to a means of increasing family consumption. This transformation to paid labor outside the home, spearheaded by wives in lower white-collar families, was integral to women’s increased power in American society.

Goldin (2006, p. 1) termed this development ‘the quiet revolution’ that increased women’s horizon (‘whether at the time of human capital investment a woman perceives that her lifetime labor force involvement will be long and continuous or intermittent and brief’), identity (‘whether a woman finds individuality in her job, occupation, profession, or career’), and decision-making (‘whether labor force decisions are made fully jointly, if a woman is married or in a long-term relationship, or, on the other hand, whether the woman is a “secondary worker” who optimizes her time allocation by taking her husband’s
labor market decisions as given to her’). It is this path, which, even in the West has not yet been fully traversed (Goldin, 2014), that the articles in this special issue closely examine.

Female labour force participation is currently generally both higher and more varied than in, say, the mid-twentieth century, and possibly earlier (see, too, the growth in the level and variation in female labour force participation in France in the second half of the twentieth century as reported in the article by Zijdeman et al. (2014) in this issue). A basic, preliminary question concerns, then, the percentage of women who worked and how much variation there has been across time and space. In particular, we are finally within sight of being able to test whether, at least in the West, the change in female labour force participation over the past two centuries takes the form of a U-shaped curve (Boserup, 1970; Goldin, 1995; Tilly & Scott, 1978; for a more reserved interpretation see Humphries & Sarasúa, 2012). A related issue concerns what happened to the labour market during the downward swing in the U-curve with the women who remained on the labour market. Did they withdraw from all sectors equally, or was there a socially selective withdrawal? The article by Schulz, Maas, and van Leeuwen (2014b) in this issue demonstrates that, initially, the average social status of those women remaining in the labour force fell (due to a selective withdrawal from women from higher social groups); later, however, the status of working women rose again owing to the spread of gender egalitarian values and a general rise in levels of education.

Another fundamental question concerns in which occupations women worked and at what points in their life (Schulz, 2013). The current scope of digitized microdata also allows us to attempt to explain geographical (between regions or countries for instance) and temporal differences across the life course in the timing and type of work that women undertook.

A third set of questions relates to the consequences of female labour force participation in terms of the living standards, life chances, and lifestyles of working women, and those of their partners and children, if any, but also to the consequences for the communities and societies of which they are part. Can some of the divergence in economic prosperity among nations be explained by national and temporal difference in the degree and nature of female labour force participation?

To answer these and other sets of questions currently being debated, questions relating, for example, to gender segregation at work or to the role of mothers in the occupational choices of their children, we might benefit from hypotheses from more contemporary research, while improving upon existing theoretical frameworks. For example, regarding the role of mothers, the classic status attainment model (Blau & Duncan, 1967) predicts the social position of a child (a son, to be precise) by looking at his educational level (which gives him skills to better his position) and that of his father, and by looking at the advantages and disadvantages that the social position of his father brings him. It has become apparent, however, that in contemporary societies a mother’s occupation has an effect independent of that of the father (Beller, 2009; Korupp, 2000). Both parents influence the choice of occupation of their children, through their social connections, for example; their ability to provide financial help, and through cultural resources, if only by exposing them to a certain type of work and in moulding their children’s aspirations. This seems to hold true, too, for earlier societies. In Britain, evidence from autobiographies from the nineteenth and early twentieth centuries suggests that fathers acted as occupational brokers for their sons, and that mothers influenced the work decision of daughters (Miles, 1999). Depending on the institutional context, this might have been very different in other countries (Humphries & Sarasúa, 2012; Kerckhoff, 1995; Müller & Shavit, 1998). Some societies, for example, discriminated against girls and young women by instituting marriage bars (Clark, 1989;
Goldin, 1991; Hart, 2007; Lessor, 1984; Malone, 1996; Penn, 1984), while others encouraged occupational achievement through positive action.

Documenting the social mobility of mothers and daughters over past centuries is an interesting research topic in itself, because (a) women in Europe were part of the labour market and experienced mobility, (b) gender roles are ascribed characteristics and the effect of gender might thus have decreased over past centuries, and (c) many of the general hypotheses on determinants have not been tested for women in the past. The article by Zijdeman et al. (2014) on France in this special issue can be seen as an attempt to integrate gender more firmly into historical social mobility research by formulating a series of hypotheses and putting these to the test using a large-scale individual-level database, broad in geographical and temporal coverage (see also Federspiel, 1999). Other such testing of hypotheses on historical data will show whether, for example, standard neo-classical economic theories (e.g., Becker, 1981) and classical theories from the modernization paradigm (Treiman, 1970, for instance) are sufficient to answer the sets of questions above, or whether a more complex theoretical framework is needed (Horrell & Humphries, 1995; Schulz, 2013).

The advances made in the digitization of sources are enhancing opportunities for a more rigorous assessment of current theories on changes in women’s labour force participation. The larger samples we can now draw upon allow us not only to assess whether there were changes over time, i.e., the U-shape issue, but also whether there were regional differences, and so to identify which mechanisms or characteristics are relevant for explaining patterns in female labour force participation by enabling us to compare a range of characteristics for different time periods or geographical entities (regions, countries). It is no longer impossible to find and compare historical characteristics of communities. The size of a community (and thus the degree of social control), the number of schools and the number or girls attending them, and the degree of geographical isolation can be quantified more easily than in the past, and in a more or less comparable fashion, owing to the existence of historical data sources such as the Historische Databank Nederlandse Gemeenten and other sources consulted by Schulz, Maas, and van Leeuwen (2014b; this issue) and various GIS projects whose content is, by its nature, geographically oriented. For some regions it has also proven feasible to collect data on other community characteristics, such as social and religious composition – some religions could be regarded as more traditional than others – and diversity, or, to give another example, the number of letters sent (an indicator of the degree of communication), inheritance practices, and the level of poor relief. Regional characteristics can also be derived from individual-level data. For example, a regional measure of the degree of ‘ruralness’ can be derived from individual-level census data by relating the number of persons engaged in farming to the total population in that area. Since census data often come with household contexts as well, more advanced measures can be created.

Advances in statistical methods allow us to take advantage of the richness of digitized micro- and macro-level data. For example, the influence of community characteristics on individual-level behaviour can be tested using multilevel regression techniques (Gelman & Hill, 2007; Hox, 2002; Snijders & Bosker, 1999). For some recent historical applications in which context is modelled specifically, see Knigge, Maas, van Leeuwen, & Mandemakers, 2014; Knigge, Maas, & van Leeuwen, 2014; Lippényi, Maas, & van Leeuwen, 2013b; Saatcioglu & Rury, 2012; Zijdeman, 2009, 2010; as well as the articles by Schulz, Maas, and van Leeuwen (2014b) and Zijdeman et al. (2014) in this issue. Of course, there are other methods as well that could be used. Depending on the question, straight counts of events per year might be enough, or one could use straightforward tabulations, chi-square tests, log-linear analysis, cluster-correlated OLS regression,
Heckman models (Heckman, 1979; Horrell & Humphries, 1995; Schulz, Maas, & van Leeuwen, 2014b, this issue), or latent growth models (Schulz, 2013; Schulz & Maas, 2010). The articles in this special issue nicely illustrate some of the options. In addition, other approaches that have become increasingly popular in the digital humanities might lead to new insights. For example, through social network analysis we might learn about the diffusion of the homemaker-breadwinner model within families, whereas text mining historical documents, such as newspapers, could reveal changes in attitudes towards gender roles. It seems likely that a mixed-methods approach – selecting the most appropriate method for the questions and data at hand – will be to the benefit of the history of women’s work.

5. Conclusion

When, how, and why did women, in many parts of the globe, come to work across the entire occupational spectrum? Did the transition from agriculture to industry and services open up occupational opportunities for women? And did the rise of the male breadwinner/female homemaker household model affect these chances adversely?

This special issue argues that we are now on the brink of comparatively testing these and other theories from the social sciences using mixed methods in a historical setting, making good use of recent advances in the digital humanities (e.g., Alves, 2014; Wynne, 2013). And, indeed, that we must often use mixed methods and are well advised to consider historical contexts, particularly by studying communities, with or without multilevel models. We are also in the somewhat fortuitous position of now having a large and growing body of digital data on working women in the past, especially censuses and vital registers, as well as standardized tools to comparably code their occupations and to infer measures of social class and rank. We now have both the tools and the data to bridge the gap between historical and contemporary research on women’s work (see, for example, Goldin, 1995, and the articles by Stanfors (2014) and Zijdeman et al. (2014) in this issue). Using women’s occupational microdata in a comparative fashion, and linking these to the specific historical context, will require more often than before multinational and multidisciplinary collaborative undertakings. In fact, the articles in this special issue borrow from history, sociology, economics, and demography, and are mostly multi-authored and the result of a multinational and multidisciplinary conference. None of this is entirely new. We are following well-established lines of research. Still, owing to the existence of long research traditions, we now have comparable information for the past on the occupations of millions of individual women in many countries, and methods to tease out the details needed to test interesting theories and to carefully interpret the results. Historically informed theories on women’s work in the past, digital microdata on women’s occupations, and methods to analyse these data – each of these components is becoming more and more pervasive, to an unprecedented degree and with an unprecedented degree of interconnectedness, providing materials for grander narratives on women’s work. Perhaps it is the illusion of the present, where one is often inclined to believe that knowledge is expanding more rapidly than in the past, but it might not be entirely illusory to believe that these components are stronger than ever, and mutually supportive. It is, we believe, no coincidence that a number of fine essays (Goose, 2007; Janssens, 1997; Sharpe, 1996) and works of synthesis based on studies processing vital registers as well as census material have recently appeared (Battagliola, 2000; Burnette, 2008; Goldin, 1990; Vikström, 2010). And we will no doubt be seeing more appear in the near future as the
cascade of data, occupation-based measures, and statistical methods we are currently witnessing translates into ever more innovative and wide-ranging studies.

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Note

References


DDB. The Demographic Data Base at Umeå, Retrieved from [http://www.ddb.umu.se/english/](http://www.ddb.umu.se/english/)


