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**Reconsidering Women's Role in the Professionalisation of the
Economy: Evidence from the Australian Census 1881–1947**

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Abstract:

Scholarly histories of the professions have generally ignored the role of women in most professional work. This article uses data from the Australian Census to analyse patterns as the professions grew to occupy a significant portion of the labour force. The article discusses the strengths and limitations of the Census, especially for women. It finds a relatively high proportion of women professionals as a percentage of the female labour force throughout the period. Much of the professional work done by women was derived from social, household-based work. This suggests a need to reconsider the role of women in the professionalisation of the wider economy.

Keywords: Australia; Labour Force; Occupations; Women; Gender; middle-class; professions

JEL Classification Codes: N37; O15; Y10; Z13; B54

Reconsidering women's role in the professionalisation of the economy: evidence from the Australian Census 1881-1947

INTRODUCTION

In the twentieth century, white-collar, educated and professional work grew to dominate the labour market of most Western economies. When Australia federated as a nation in 1901, less than three per cent of working Australians were defined as professionals. In 2001, this was 18 per cent, narrowly defined. If we allow for a more capacious definition and include managers and what the Australian Bureau of Statistics (ABS) defined as 'associate professionals', at the end of the twentieth century professional work constituted more than 50 per cent of the national workforce (ABS 2001). This professionalisation of the economy was caused, economists and sociologists have broadly claimed, by a combination of the specialisation of expertise in occupational areas and the institutionalisation of key areas of the service sector (Lipartito and Miranti 1998; Abbott 1988).

The shift in Australia has not been described in any real numerical detail. From the mid-nineteenth century onwards, economic historians have given sequences of estimates of the structure and character of the Australian workforce over the long run, though with inadequate detail to be able to identify the pattern of the growth of the professions separate from the remainder of the service sector (Butlin 1972; Butlin and Dowie 1969; Dowie 1970; Keating 1973; Keneley 2014; Hatton and Withers 2014). In his history of Melbourne, Graeme Davison gives figures for some professions in the late nineteenth century, though only for metropolitan Victoria (Davison 2004).

Scholarship internationally would suggest that this professionalisation was a highly gendered, perhaps even patriarchal process, systematically excluding women. Book titles alone sometimes assert a universal masculinity – for example, W.J. Reader's *Professional Men* and Gidney and Millar's *Professional Gentlemen* (Reader 1966; Gidney and Millar 1994). Feminist economists and historians have described the segregation of women from elite occupations, observing that when women *were* included in certain professions, the work that they were assigned generally re-affirmed traditional gender norms (Kingston 1975; Booth and Kee 2011; Yohn 2006; Adams and Nelson 2009; Humphries and Sarasúa 2012). As this article will show, evidence from the Australian Census requires us to re-think some of the assumptions regarding the participation of women in the professions. This in turn suggests a need for a more gendered inflection to the key issues in the economic history and sociology of the professions, including scholarly analyses of regulation and professional organisation as the labour force became more specialised (Lipartito and Miranti 1998; Law and Kim 2005; Buchanan 1985; Edelstein 1987; Poullaos 1994; Wilkinson 1996; Matthews, Anderson and Edwards 1997; Boyce 1999) and the effect of the professions on

twentieth century class distinctions and modern political organisation (Perkin 1989; Kocka 1995; Braverman 1974; Starr 1982; Ehrenreich and Ehrenreich 1979; Ehrenreich and English 1978).

This article makes three key contributions to this scholarship. Firstly, it provides detailed data from the Australian Census to consider the growth (or otherwise, in certain occupations) of the professions, by gender, from their emergence in the late nineteenth century to the Census taken just after the Second World War, in 1947. In so doing, it secondly analyses trends in the participation of professional women in the female labour force and within individual professions. Finally, the article considers, as a consequence, the role of women in the professionalisation of the economy.

Scholars who have sought to use Australian and British Empire Census occupation data have regularly described its limitations, not least that Australian statisticians have not retained the records of individual households so that we must work from statisticians' reports (Deacon 1985; Higgs 1988; Christopher 2010; Maddison 2007). Despite the limitations of these reports, as this article will demonstrate, the Australian Census provides the best source of data to chart and compare the patterns of change in the professions in Australia.

DATA AND METHOD

Professional work, like the service sector more broadly, has been remarkably resistant to definitions that adequately include all of the occupations that have successfully made a claim to professional status (Keneley 2014). Most scholars have defined the professions by characteristics that are primarily borrowed from medicine and law (Mills 1951). These characteristics normally include (1) a claim to authority over a certain area of work; (2) learned expertise; (3) recognition by others, perhaps through formal means, such as legislation and/or registration. These attributes are also known to function as a mechanism for excluding rival practitioners from a given market for services and may constitute a monopoly (Law and Kim 2005; Wilensky 1964). Some scholars add more abstract characteristics, including (4) self-regulation of standards and ethics; (5) the application of an abstract and transferrable body of knowledge; and (6) a shared identity, grounded in a common purpose, which may be used to assert economic, political and social power (Lipartito and Miranti 1998; Lawrence 1965; Ehrenreich and Ehrenreich 1978).

Sociologist of the professions Andrew Abbott demonstrated that, while this collection of attributes is necessary to understand the character of the professions, it does not adequately capture the professions across time. Professionalisation refers to the process by which increasing segments of the labour force were acknowledged as professions. Abbott recognises this process as real, but suggests it presents a problem for scholarly

understanding. He demonstrates that the concept of professionalisation assumes consistently duplicated patterns of change for all occupations. This, he argues, does not hold up to close scrutiny, when comparing the detailed mechanisms by which a wide range of occupations came to be acknowledged as professions. Abbott suggested that, in addition to accepting that some or most of the above attributes will define them, understanding the professions requires us to see them as a 'system', rather than a process. Such a system, he argued, consists of members of occupational groups vying for authority over shifting jurisdictions – there is a history of competing claims to authority over childbirth between midwives and medical doctors, for example; and over childhood behaviour between education, psychology, the clergy and medicine (Abbott 1988; Starr 1982).

This article follows Abbott (1988) by utilising these two definitions. On one hand, it defines professions by their collection of attributes outlined above, which are mostly shared across the occupations. On the other hand, the paper also utilises Abbott's definition of the professions as a system, acknowledging jurisdictional shifts over time. The Census proves to be a good source of data from this perspective, as occupations were self-reported, and thus both definitions are implicitly incorporated into the data.¹

While self-reporting helps in this sense, it is also the source of a key limitation of the Census. Self-reporting may inflate the numbers of elite professionals, as has been shown for Great Britain (Perkin 1960). There is also reason to suspect that enumerators and sub-enumerators (the hundreds of workers responsible for collecting the data) did not always correctly record the claims householders made regarding their occupations and, even if they did, the government statistician may have made his own judgement (Higgs 1987).

Comparing the Census to a sample of other sources shows that, these limitations notwithstanding, the Census is the most reliable source of data to understand the professionalisation of the Australian labour force as a whole. The New South Wales statistical yearbook, for example, shows a close correlation between the numbers of lawyers, dentists and teachers registered in the state, and reported in the Census. In 1911, the NSW yearbook reported 1,152 lawyers and the Census, 1,191; in 1933 the difference was even smaller. It recorded 6,262 teachers in state schools and the Census state school figure was 6,350. Based on these occupations, the Census data is accurate, with variations

¹ This approach provides a contrast to the occasional tendency amongst economic historians to establish a single definition, consistently applied across time. Michael Edelstein, for example, used a contemporary definition of 'engineer', as given by the Australian Institute of Engineers, to identify the number of engineers, so defined, throughout Australian history, ensuring like-to-like comparisons over time (Edelstein 1987). While this is understandable, such flattening of the definition of 'engineer' fails to capture the kind of jurisdictional shifts that Abbott exposed. It also risks reinforcing propaganda claims made by professional groups in the process of negotiating jurisdiction (Law and Kim 2005; Boyce 1999).

of between around 1 per cent and 6 per cent (Official Year Book of New South Wales, 1911, 1933, 1947).

There are larger discrepancies between formal registration lists and Census data for some professions. While there is little doubting the accuracy of registration records, these in fact reveal the Census to be a more useful source than registration data for understanding the actually-practising profession. In NSW, for example, which has the best published and longest-running records, there were many more medical practitioners and nurses registered than were recorded in the Census – between 24 per cent and 77 per cent more than the Census figure between 1911 and 1947. Published lists of the names and addresses of practitioners registered with the medical and nursing boards show that large numbers were registered in NSW but did not in fact live (or, more importantly, work) there (Register of Medical Practitioners 1881, 1891, 1901, 1911; NSW Nurses Registration Board 1933).² These registration records would inflate the numbers of professionals in the labour force well above those actually working. Similarly, while the Census figures for pharmacists, chemists and druggists, by combining these occupations, generally exceeded the pharmacy registration figures by around 20-30 per cent in most Census years, during the Great Depression this was reversed – many more pharmacists were registered than were working in that field during the economic downturn. Unlike Census data, registration data in pharmacy in NSW conceals the very high rates of unemployment experienced in the profession during the downturn (Haines 1988). The requirement to register, moreover, was extremely patchy across the professions and over the period that is the subject of this article. Acts and registers regulating professions varied considerably both between professions and by state and colony. Consistent with other historians who have used the Australian Census, it is evident that the Census has limitations, but nevertheless offers reasonably reliable data with which to understand the patterns that were at work in individual Census years, and over time (Higgs 1988; Higgs and Wilkinson 2016; Deacon 1985).

Using Census data requires an understanding of its particular complexities. Prior to the 1950s, occupation categories were not standardised (for a discussion of the problem, see Christopher 2010). Furthermore, before 1911, the Australian colonies did not all use the same occupation categories as one another. The occupation categories used in the 1911 and 1921 Censuses were the same across the states and were, further, similar to those used in Victoria and South Australia in 1881, and in those colonies as well as NSW and Tasmania 1891 (in 1901, despite Federation, the Census was still taken as though they were separate colonies. It nevertheless consistently reported all the states, but not the territories). This means that the statistical figures given in this paper are only for the colonies whose reports

² The sign-up fee for registration with the Medical and Nursing Boards was high, while (except for midwives) the ongoing cost was low. Practitioners may have preferred to stay on the register rather than face the cost of re-registering upon their return to NSW (see McGrath 1988).

were commensurable (ie. 1881: Victoria and South Australia; 1891 NSW, Victoria, Tasmania and South Australia; 1901: NSW, Victoria, Tasmania and South Australia, and some occupations in Queensland). The figures for most professions were very small, however, and so was the population of most of the missing colonies, so that their exclusion, while regrettable, has a limited effect on the aggregate figures. Given historian Graeme Davison's evidence that the professions grew remarkably in Melbourne in the 1870s, it would also have been desirable to begin this study with the 1871 Census, but data on professional occupations was too patchy across the other colonies, and figures were too insignificant compared to the long run, to report (Davison 2004).

Categories shifted along with the labour market for the 1933 and 1947 Censuses, though still bearing a recognisable resemblance to earlier reports. The analysis contained in this article ends at 1947, when both the labour market and the Australian Census occupation categories shifted considerably and which arguably also marks the end of the initial growth of the professions in the Australian labour force. In this period, the broader service sector remained relatively stable as a percentage of the labour force, though there was higher growth among 'producer services', which included some of the professions (Keneley 2014). Classification shifts contribute to problems in the commensurability of the data in the period covered by this article too, most obviously when, in 1947, managers were finally counted as a coherent occupation. While this risks skewing our understanding of the contribution of managers to the economy, which most certainly did not just suddenly appear in 1947 (Pearse 2010), changes in classification also indicate a shift in the occupations recognised by the government statistician. These changes in categorisation will be discussed throughout this article.

The method used for this analysis combines two components of the Census reports. The article begins by using the Census top-level description of 'professionals', though as the article explains, this includes several occupations we would not consider to be professional in the sense the sociologists have defined – for example, in 1881 it includes the government executioner and all police and prison wardens – and excludes many that we would include, such as accountants. Nevertheless, the top-level figures are helpful in identifying trends in the proportion of male and female professionals as a percentage of the male and female labour force, which, as this paper will argue, helps us to identify surprising gender attributes as the Australian economy professionalised.

The data have been collected for each colonial and Australian Census, and coded separately by state and gender for each of the following professions:

- Magistrates (until 1933, non-stipendiary magistrates were upper-class Justices of the Peace)
- Judges (from 1933 onwards, these are legitimately combined with magistrates)
- Lawyers (barristers and solicitors combined, as they were in most Censuses)

- Articled clerks, often performing a great deal of the work of the lawyers (in some Censuses these were combined with lawyers)
- Clergy
- Charity workers and, from 1933 when they appeared in the Census, social workers
- Journalists
- University and technical college lecturers, tutors, governesses and music teachers
- School teachers (the variables for grammar schools, state schools, private schools, denominational schools etc. were combined, though they were listed separately in many of the Census reports and have separate variables in the SPSS file)
- Midwives
- Nurses
- Medical doctors
- Irregular and allied medical professionals, which usually include homeopaths, chiropodists, herbalists and masseurs (later physiotherapists)
- Pharmacists, chemists and druggists
- Veterinarians
- Civil engineers, consulting engineers, other engineers and architects
- Applied scientists (including metallurgists, biologists, geologists, meteorologists etc)
- Managers, which first appeared in the 1947 Census as a category separate to their industry (e.g. 'factory floor manager').
- Accountants
- Finance workers, including bankers, financiers, capitalists and share traders

Since each occupation requires 18 variables (male and female, for each state and for the national aggregate), the resulting data file contains more than 1200 variables. For the purposes of this article, state figures have been aggregated to give the national level only, clustering them into groupings that mostly reflect those used in the Census records themselves. These groupings are (1) Law (2) Medicine and Health (3) Clergy, Charity and Social Work (4) Education (5) Engineering, science and commerce and (6) Journalism. The analysis focuses on gender, for the statistics tell quite different stories about professional men and women. Because of this, marriage data would have been useful; however, only the 1911 Census reports occupation categories and grades alongside 'conjugal condition'. This 1911 data on marital status, conveniently bisecting the period covered by this article, helps to explicate some aspects of women's participation in the professions and the labour force early in the twentieth century and is also provided here.

Historical and sociological studies of the Census in recent decades have displayed a consciousness of the discursive categories that statistical records embody and which, in recounting them, this article risks reinforcing (e.g. Waring 1988; Poovey 1998). Gender as a binary category is one of these, which is relevant to this article's findings on women professionals. In recent decades, gender historians and theorists, most notably Judith

Butler, have pointed out the power asserted by the Census in reinforcing ideas about gender in a way that, among other problems, have been harmful to people whose lived experience requires more diverse gender definitions (Butler 2004). In addition to unfortunate definitional limitations, there may also be reason to suspect occupation figures for women in particular. In his 1987 article on women in the British Census, Edward Higgs drew on chief statisticians' work and enumerator records to show that interpretations of what constitutes an occupation for women at all were highly variable. The decision to record women's occupations rested in part on whether the enumerator collecting household information had been told, or believed, that women's work must be recorded if it contributed to the economy – this is the division between 'breadwinners' as the Census defined them and 'dependents' (or as the 1871 Queensland Census described them 'bread-eaters'), information that government managers of empire and economy alike believed they needed, in order to govern. Even when women's work did contribute to the economy, Higgs showed, some enumerators decided that because it was women's work, it did not count – and so, nor did they count it (Higgs 1987). While enumerators in Australia were given detailed instructions and, although a small number of sub-enumerators from 1891 were women themselves (1891 Victoria Census, p.10), as Desley Deacon has persuasively argued, the Australian Census records have been affected by similar prejudices (Deacon 1985). Since the original Australian records have been destroyed, we are unable to undertake a study like Higgs' to investigate similarly specific absences in the record.

PROFESSIONALS IN THE AUSTRALIAN CENSUS 1881-1947

The top-level Census data (meaning the aggregate figures the Census reports have clustered as 'professionals'), indicating the number of people in Australia reporting that they worked in professional occupations, gives a rough indication of labour force trends and Census classifications. This aggregate is approximate, for in most Census reports the category included all government employees (including police, prison wardens etc), all people employed by the courts, including clerks, all working in health, including street cleaners and refuse collectors, and everyone employed in educational institutions. The category included civil engineers, surveyors and architects, but not accountants, applied scientists or managers.

Of particular note is the apparent decline in the number of professionals (aggregated) reported in the 1947 Census, from 377,231 to 162,756, a drop of 57 per cent on 1933 figures. Military figures in the 1947 Census are too small to explain this decline, which suggests such a reduction is implausible given the overall trend. Figure 1 thus includes administrative occupations (including managers), as aggregated in the Census, which totals 345,943, or 89 per cent of the total number of professionals listed in 1933. It is possible that the 11 per cent decline in reported professionals in 1947 could be explained by the inclusion of some other clerical workers in aggregates in previous Censuses (whereas they were

included in a separate 'commercial' category in 1947) or by a tightening of the definitions of certain professions. As will be seen later in this article, the total number of lawyers, dentists and charity workers reported in the Census declined between the 1933 and 1947 Censuses. Other professions, however, increased in number over the same period, including nurses, medical doctors, pharmacists, social workers, engineers, accountants and managers.

Using these rough aggregates of professionals, considered against the total numbers of 'breadwinners', as the Census described them, the total percentage of professionals increased from 2.73 per cent of the labour force in 1881 to 13.46 per cent in 1933, reducing to 10.51 per cent of the labour force in 1947 (see Figure 1).

Across the period 1881-1947, males constituted around 63 per cent of professionals reported in the aggregate in the Censuses, (with a brief rise to 68 per cent in 1891), declining to 58 per cent in 1933. By the narrow count, described above, male professionals declined still further, to 51 per cent in 1947, but increased to 67 per cent when administrative occupations are included. Despite the dominance of males as a proportion of all professionals, it is evident that professional women had an important role throughout the period. Indeed, there is a striking gender difference in the percentages of professionals reported in the Censuses. While male professionals constituted a very small percentage (between 2.13 per cent and 10.11 per cent) of male breadwinners, professional women were a relatively high proportion of female breadwinners, between 5.18 per cent and 25.05 per cent, over the period. One partial explanation for this might be that while, as already discussed, some types of women's work (although probably not professional work) were probably systematically under-reported.

[insert figure 1]

Figure 1 Professionals as percentage of labour force by gender and total, 1881-1947
Data sources: Australian Data Archive, Australian Bureau of Statistics, Butlin 1972

Only the 1911 Census report gives the marital status of women by occupation. This shows that the marital status of women professionals was similar to that of the labour force as a whole – 90 percent of women in the labour force were unmarried, regardless of whether they worked in professional occupations. There were important distinctions in the 'grade' of work among women professionals, however. Professional women were much less likely to be graded as 'assisting, no wages', a grade that was often attributed to women farmers and those running a business (a hotel, for example) with their spouse (Deacon 1985). Professional women were more than twice as likely to be working on their own account than the average of women in the labour force – and therefore less likely than other women to be paid a wage or salary by an employer. This was not, however, limited to married

women – that is, professional women working on their own account were not (at least statistically) using their independence to find a way around marriage bars.

[insert figure 2]

Figure 2: Women by marital status and work grade as percentage of female labour force, 1911

Data source: Australian Bureau of Statistics

Feminists in this period complained about ‘marriage bars’, arguing that requirements to resign upon marriage were impeding work for some, and marriage for others (Newcastle Morning Herald 3 June 1914; Morley 1914). They were responding to a fairly recent development, which historian Desley Deacon traces to the NSW Public Service Act of 1895. The Act itself did not ban married women from government employment. This was proposed, and strongly supported by the men of the ‘new middle class’, including the influential government statistician T.A. Coghlan, but was opposed by the political majority who thought that a marriage bar undermined the meritocratic basis of the emerging modern state. The failure to secure a marriage bar in the Act did not mean that it failed ultimately, however. Within a few years, most segments of the public service sustained a policy of not recruiting married women. Some, like the Post and Telegraph service, also dismissed all married women already employed, though the Department of Public Instruction did not. This move by the public service, while surprising in the 1890s, became increasingly common in the rest of the labour market in the succeeding decades (Deacon 1989). These marriage bars were not technically legally enforceable, however, until the Great Depression, when married women were sufficiently desperate for employment that stricter instruments were necessary to exclude them (Theobald and Dwyer 1999; Proctor and Driscoll 2017). Hospitals applied a marriage bar to trainee nurses and required some nurses to resign on marriage, but by the 1940s there was such a shortage that the Federal government explicitly pronounced that the public service marriage bar did not apply to nurses (McGrath 1988; Barrier Miner 1947). Restrictions on married women in government employment were not repealed until the 1960s, nor was the bar for trainee nurses, who were required to ‘live-in’ (Sheridan and Stretton 2004; Russell 1990).

The 1911 ‘conjugal condition’ data suggests that, in the aggregate, married women wishing to work were neither particularly protected nor especially vulnerable based on their professional status. 18 per cent of women were in the labour force in 1911, six per cent of married women and 24 per cent of unmarried women. Of the whole population of women in Australia in 1911, two per cent were professionals, according to the Census aggregate. As Figure 1 also shows, 13 per cent of women in the labour force were professionals in 1911. These figures suggest that, in 1911 at least, profession-specific bans on employment of married women were no more effective than other labour ‘protections’ for women, in

keeping married women out of paid work (Howe 1995). Widowed and divorced women were welcomed back into the labour force: they constituted six per cent of the female population and eight per cent of the female labour force, and seven per cent of professional women.

[insert Table 1]

Table 1: Women and professional women in the labour force by marital status 1911

Data source: Australian Bureau of Statistics

The relatively high number of professional women as a percentage of the female labour force is in part explained by the growth, in the twentieth century, of teaching and nursing – though by mid-century this trend is offset by men in engineering, accounting and management (from the 1947 Census, the first year for which there are recorded figures for managers as a discrete category). This is shown in Figure 3.

[insert figure 3]

Figure 3 Comparison of key professions 1881-1947

Data sources: Australian Data Archive, Australian Bureau of Statistics

A comparison of growth rates across key professions, beginning in 1901 when the data is consistent across the states, shows that all major professions grew at a rate that exceeded population growth, which averaged 15 per cent across the period, peaking at 20.79 per cent in 1933. It also exceeded labour force growth, which followed a similar pattern, averaging 16 per cent across the period. Service sector growth ranged between 15 per cent and 23 per cent over the period, though was higher – averaging 26 per cent - for producer services (Keneley 2014). Figures for managers are not available until the 1947 Census report, though as Malcolm Pearse has shown, their importance escalated during the Second World War (Pearse 2010). This suggests new growth was likely just prior to the 1947 Census. It is also significant that the government statistician now identified them as a discrete occupation, rather than listing managers with their industry, as before (e.g. factory floor manager).

[insert Table 2]

Table 2: Growth rates of major professions, labour market and population growth rates 1901-1947

Data sources: Australian Data Archive, Australian Bureau of Statistics

Even taking categorical shifts into account, it is nevertheless evident from Table 1 that the professions were not all increasing at the same rate, though a connection between doctors

and nurses is apparent. Nor was their growth rate steady or connected to the rate of population growth. This suggests that, while understanding the professions collectively is an important enterprise, it is also necessary to consider each professional area separately. Some show remarkable growth rates – for example, engineering increased 458 per cent from 1,704 listed in the 1921 Census to 9,510 in 1933 (see Table 3).

Women professionals were concentrated in particular areas. Between 91 per cent and 100 per cent of nurses were women over the period, while (except for a single male listed in 1947) midwives were always women. Between 58 per cent and 68 per cent of teachers were women, as were between 60 per cent and 72 per cent of charity workers, a figure which increased to 81 per cent and 94 per cent by the end of the period when charity work transformed into the profession of social work (see Table 4).

[insert Table 3]

Table 3 Selected Professionals in the Australian Census, 1881-1947

Data sources: Australian Data Archive, Australian Bureau of Statistics

[insert Table 4]

Table 4 Percentage of Women in selected Professions in the Australian Census, 1881-1947

Data sources: Australian Data Archive, Australian Bureau of Statistics

LAW

The professional component of ‘law and order’ in the Census consists of magistrates, judges, solicitors, barristers and (until 1947) articled clerks. Although they constitute a small percentage, the presence of women lawyers, especially in the 1911-1933 Censuses, is striking (see Table 4). A considerable increase in lawyers, including women, reported in the 1921 Census could be due to the inclusion of articled clerks in the total in the Census report. Moreover, in this count, it is plausible that many ‘law clerks’ – usually listed separately to ‘articled’ clerks (who were in training to become solicitors and were often performing a majority of a legal practice’s work) – have also been included, also artificially boosting the number of women in the count. Female admission to legal practice was too recent to explain an increase of this magnitude. Women were first admitted to legal practice in Victoria 1903, Tasmania 1904, Queensland 1905, South Australia 1911, NSW 1918 and Western Australia in 1923. The decline in practising lawyers in 1947 is due to the re-categorisation of articled clerks as students, rather than, as was previously the case, as practising professionals in their own right (Lamb, Littrich and Murray 2015).

The very slow incursion of women medical doctors into Census records of the profession (see Table 4) suggest that while the annual growth as a percentage of the previous year among women doctors was often very high, averaging more than 250 per cent increases between Census report intervals between 1911 and 1947, the absolute number of women doctors was so low that these large increases had little effect on their place in the profession (Pringle 1998). The protection of the market for medical services had already been applied against herbalists and other 'irregular' medical practitioners by the 1881 Census. In the late nineteenth century, 'irregulars' referred to homeopaths, primarily, but increasingly also 'untrained' (Starr 1982). I have included alternative and allied health professionals in table 4, in order to understand the long-run numbers of health practitioners outside of 'regular' medicine.

While newspaper reports reveal a medical profession seeking to protect both their business interests and their professional standards, the separation of formal medical practitioners from 'irregulars' and others also acted as a defensive barrier against intrusion into the profession by women practitioners, in Australia as in the United States (Starr 1982; e.g. Newcastle Morning Herald 23 November 1897). The number of women irregular medical practitioners fluctuated over the period, but in 1947 the category contained nearly three times as many women as men (see Table 4).

In 1881 most women health workers were midwives. The category of 'nurse' as a profession, separate from other forms of domestic service (as sick and monthly nurses were understood) had not yet even entered the Census. Nursing professionalised quickly, however. By 1891 the number of female nurses already approached the number of midwives. The trajectory of the growth of nursing shows the importance of the profession as the twentieth century progressed and as hospitals grew to become large institutions, evidently escalating the growth of the nursing profession (Durdin 1991). The profession was quickly dominated by hospital nurses, which increased at a steady rate from 27 per cent of nurses in 1891 to 98 per cent in 1947. Midwifery, by contrast, became decreasingly important. While the number of midwives exceeded other nurses by 15 per cent in 1891, they constituted just four per cent of the sum of midwives and other nurses by the end of the period.

Professionalisation had a significant effect on the widespread practice of dentistry, as the profession was 'elevated' by the requirement for university training (Pietsch 2016). In the wake of inter-war debates on the regulation of dentistry, the number of dentists listed in the Australian Census declined by 41 per cent. The effect of closure was even more dramatic for women dentists, however. Women dentists declined by 90 per cent between 1921 and 1933. By the 1947 Census, only 77 women were described as dentists, down from 1403 in

1921. Even prior to that peak, in 1911, 668 women were categorised as dentists in the Census – and more than 100 as early as 1901 (see Table 4).

CLERGY, CHARITY AND SOCIAL WORK

Clergy were overwhelmingly male and their numbers progressed on a trajectory very similar to medical doctors (see Figure 3). There was a spike in female clergy in 1911 and 1921, dropping to absolute zero before increasing to 1132 in 1947, suggesting categorical rather than actual shifts (see Table 4). Female religious vocations (Catholic nuns, predominantly) were listed elsewhere in the Census and theoretically should not have affected the clergy figures, though it is possible that in some Census years some nuns may have nevertheless been included under 'clergy'.

Charity workers were overwhelmingly – and increasingly – female over the period, between 1.5 and 3.6 times the number of male charity workers between 1891 and 1933. Given the government statisticians' focus on breadwinners as productive labour, the inclusion of women charity workers in the Census at all seems remarkable. Their years were numbered, however. Although institutions like the Charity Organisation Society sought to shift from benevolence to 'scientific' social casework, social work as a professional category increasingly replaced charity work. While charity work certainly continued after 1933, by 1947, charity workers appear to have been replaced by social workers in the Census (Peel 2005). Social workers formed the Association of Hospital Almoners in the 1930s, becoming the present Australian Association of Social Workers in 1946, with university training available from 1949 (Miller and Nicholls 2014).

Women social workers constituted 94 per cent of all social workers in 1947. The increase in the number of social workers to 1947 is almost double the charity workers 'lost' (no longer enumerated) since the previous Census. It is plausible that some of those charity workers may have already described themselves as social workers, but that their claims were reinterpreted by the government statistician as charity work. By the 1930s social workers sought to distance themselves from charity work, though as Shurlee Swain has shown, their work was not always separate in fact (Swain 2010). Regardless, the Census figures confirm that professionalisation appears to have coincided with rapid growth in the field, especially for women. Post-war reconstruction and the introduction of the 'welfare state' established institutions that also enhanced the demand for social work (Lawrence 1965; O'Brien and Turner 1979; Miller and Nicholls 2014; Macintyre 2015).

EDUCATION

School teachers were markedly more numerous than other professions throughout this period (see Figure 3), though as that figure also shows, management, engineering and accounting were catching up (and in the case of management, exceeding it) by 1947. Education was dominated by women professionals over the period, except for university teaching. Women comprised between 58 per cent and 68 per cent of school teachers in the Census between 1881 and 1947.

The growth of compulsory institutionalised schooling evidently supplanted education at home by tutors and governesses, as expressed in the figures here (see Table 3). Early in the period, when education more often took place in the 'domestic sphere' (Campbell and Proctor 2014), women dominated even more, constituting between 74 per cent and 93 per cent of tutors or governesses listed in the Census. This form of education peaked in 1901 with 3169 tutors and governesses, declining to 991 by 1947 (see Table 3).

As a middle-class women's occupation, music teaching has been included in this analysis as a comparator; and indeed women constituted between 80 per cent and 94 per cent of music teachers reported in each Census in the period. The number of music teachers peaked in 1911 at 6779, a figure approaching 29 per cent of the total number of school teachers in that year, up from 18 per cent of school teachers in 1881. By 1947, however, the total number of music teachers declined to 2530, just five per cent of the total number of school teachers. The number of women school teachers increased at a much greater rate than the decline in governesses and music teachers, however (see Table 4).

ENGINEERING, SCIENCE AND COMMERCE

The number of engineers listed in the Census increased rapidly after 1921, so that by 1947 the total number of engineers exceeded nurses (see Figure 3). Early in the period, civil engineers outnumbered 'consulting' or 'other' engineers by a factor of 16 and 18; in the late nineteenth century, the latter were considered less prestigious (Buchanan 1985). This multiple declined so that in 1901 and 1911 there were nine and then 4.5 times the number of civil engineers than other types of engineer listed in the Census. The dominance of civil engineering was reversed from 1933. Women engineers, when they appeared in the Census at all, tended to be "other" engineers.

By contrast, the number of architects appears to have flattened by 1911. Applied sciences were steady until increasing rapidly in 1933, when new sciences, such as meteorology, began to be counted. Accountancy increased at a rate similar to engineers after 1921. From the late nineteenth century, accountants sought jurisdiction over audit and reporting tasks that were increasingly important, largely as a result of the growth of share trading. They achieved this through examination-based entry to professional associations, either

established British institutions, or home-grown ones (Poullaos 1994). The success of professional associations for the accountancy profession helps explain its growth, which was further propelled by increasing formal requirements for company reporting in the 1920s and 1930s (Carnegie 2009). Managers outnumbered all of the other professions in 1947, the first year in which it was included in the Census as a separate occupation. As already mentioned, Malcolm Pearse's study suggests that this may well be a result of rapid growth during the Second World War (Pearse 2010).

Only very small numbers of women were recorded as engineers, scientists and managers over most of the period. Women engineers peaked at 63 in 1921, the same year that they also recorded the largest number of architects – 130. The figures fluctuate considerably, however, raising questions about their accuracy. The number of women accountants rose relatively steadily, reaching approximately 30 per cent of the reported accountants in 1947.

JOURNALISM

The trends for male and female journalists recorded in the Census were markedly different. The numbers of male journalists recorded in the Census fluctuated more than most professions. The number of male journalists slightly decreased between 1891 and 1901, but then almost doubled in number by the 1911 Census. They decreased slightly again between 1911 and 1921, but then increased by almost 68 per cent by the next Census, decreasing slightly again by 1947. These decreases could reflect fatalities among journalists during the First and Second World Wars, or the movement of journalists into other fields of work when there was no longer a war to report, though secondary literature provides little illumination on the subject. The records of women journalists in the Census do not show the same fluctuations as for male journalists. Women were an average of 11 per cent of all journalists recorded in the Census, ranging between four per cent (1891) and 17 per cent (1881) of the total. Setting aside an unlikely 1881 percentage (which involves just 15 individuals), the proportion of women journalists grew quite steadily against the total – from four per cent in 1891 to 14 per cent in 1947 (see Table 4).

DISCUSSION

The limitations of the data notwithstanding, this study of professions in the Australian Census demonstrates that the professionalisation of the economy between 1881 and 1947 was not driven, or even dominated, by the traditional professions of law, medicine and the clergy. Those occupations, along with journalism, did grow at a rate that exceeded population growth and the larger labour force, but the professionalisation of the economy was driven, for most of the period, by the growth of hospitals and schools.

Since women dominated both nursing and teaching, a much higher percentage of women who participated in the labour force (as the government statistician defined it) were professionals, than men. This had the effect of turning a growing proportion of women's work into something the government statistician recognised as 'breadwinning'. This was sometimes the *same* work that women had been traditionally performing in the domestic sphere, but represents a shift from informal, social patterns of work to institutionalised ones. Women may have been teaching children or caring for unwell family members unpaid in their own home, or paid, in other peoples'. But the growth of schools to cater for compulsory primary education, and hospitals to increasingly cater for the sick beyond the desperately poor, increasingly supplanted work in the domestic sphere (Campbell and Proctor 2014; Durdin 1991; Starr 1982).

This institutionalisation of women's work suggests a transitioning of residual (as Raymond Williams defined the transfer of meaning from one economic environment to its successor) gender norms into the emergent professional sphere (Williams 1977). Nurses, as Mary Poovey showed, brought middle-class women's traditional authority over the domestic sphere into the public, now professionalising space, of the hospital. A similar pattern is evident in the other 'women's professions', too (Poovey 1988). Women were teaching children even before the dame schools gave them a way to be paid for their labour; and now for many it was their salaried job (Campbell and Proctor 2014). Middle-class women were also at the forefront of nineteenth century charity movements. The growth of the hospital helped professionalise that work too, encouraging many social workers – soon to be university-trained – to work in tandem with medical professionals, and offering those who worked both in and outside of hospitals a new, professional status (Lawrence 1965; Brown 1986; Warne et al 2003; Swain 2010; Miller and Nicholls 2014).

The data does not allow us to trace women's marital status across the period, but the 1911 Census, bisecting the period, suggests that professional women were most often unmarried. Their marital status was not significantly different to the rest of the labour force, suggesting that despite the movement of some traditional women's labour away from the home into a professional sphere, marriage still structured the work of most women, uncounted by the government statistician. Professional women, however, seem to have been better positioned to be working on their own account than women in other types of occupation. There is no suggestion in the data that this was a way around marriage bars, either formal or informal. Married women professionals working on their own account exceeded those in the labour force by the same percentage as all women professionals – marital status does not explain this trend. The tendency to work on her own account may be related to women professionals' class status, or the type of work. Regardless of their marital status, music teachers, for example, were presumably all working on their own account. The same may have applied to certain types of nurses (nearly one-third of nurses in 1911 were 'sick nurses')

who could have worked on their own account), as well as doctors, dentists, journalists and governesses.

Historians have long argued that women's labour was often obscured by government instruments like the Census (Waring 1988). The household and social economies of food production, care for the sick, care for the needy, education of children and domestic labour were all concealed, they have argued, by the category of 'dependence' as 'bread eaters', positioning women and children as consumers of male market production (Deacon 1985; Waring 1988; Grimshaw et al, 1994; Higgs 1987; Higgs and Wilkinson 2016; Humphries and Sarasúa 2012; Maddison 2007). Historians' criticisms of the offensiveness of such forms of statistical categorisation are fair. But in light of the data on professionals in the Australian Census outlined in this article, our long-held assessment requires some reconsideration. If we move our thinking about the economy from male breadwinners to the domestic economy dominated by women – which this data surely demands we do – a different, but important, picture of the effect of the growth of the professions emerges. As the Australian economy developed, it appropriated some elements of female work, institutionalising aspects of what was once a household and social (rather than market and financial) economy (Tilly and Scott 1978; Snooks 1994; Goldin 1990).

Although many of the women in the labour force were also in fact paid for domestic labour, many hours of women's work in the domestic sphere remained uncategorised, relegating women to the 'dependent' side of the government statistician's abacus. And yet, while unrecognised domestic labour remained an important component of many (perhaps even most) women's work, the shift evident in the Census data also demonstrates the distinct move away from the household as the key economic unit for an increasing amount of women's work (Tilly and Scott 1978).

The movement of women's work from the home to the institution is not the only story to be told from the record of professionals in the Australian Census, however, as the high rate of growth for engineering, accountancy and management attests, which may predict a masculinisation of the professions in subsequent Censuses. These professions gesture to growing industrialisation, increased complexity of both technological and corporate systems and the impact of the growth of the finance sector (Forsyth 2018). There are some similarities nevertheless. Accountancy and management moved, in this period, from specialised aspects of a wide range of commercial enterprises, to become distinctive professions in their own right, categorised independently from the factory, shop or industry to which they provided their services (Pearse 2010; Matthews, Anderson and Edwards 1997; Poullaos 1994; Carnegie 2009). It is a similar move to the shift from home to institution; from the local, specific workplace to professionalised space. Earlier economic developments established the pattern, as manufacturing moved from crafts, conducted in the home and the workshop, to the factory. Now, the professions made an analogous shift (Goldin 1990).

Over the whole of the period under consideration, the professions were dominated by health and education. The pattern these two fields exemplify is key to the broad growth of the professions in this period: a shift of work from family and community networks to institutions in the public arena. This is what Max Weber defined as a movement from communal (meaning personal ties) to associative (meaning transactional) relationships, as the dominant form of social and economic organisation (Weber 1947). Informal, social customs for managing health, education and even business, often based in or near the domestic home, were progressively replaced by formally accredited professions, increasingly housed in institutions that were perceived to have broader social and economic utility (Hofstadter 1955; Starr 1982).

CONCLUSIONS

In line with Abbott (1988), considering the professions as a system in which there were competing claims to authority changing over time, enables us to identify new gender attributes in the professionalisation of the economy. Census records yield surprising results, in unexpected areas. Traditional professions like medicine, law and the clergy grew far slower than the emerging professions of engineering, accountancy and management, which is perhaps not surprising, for they flourished with industrialisation. Their growth, moreover, was less constrained than the traditional professions, by elites wishing to sustain a lucrative dominance over an important market – though this impulse surely applied less to the clergy than to lawyers and doctors. The real surprise is in the participation of women in this segment of the labour force all together. Women, we have traditionally been told, were deliberately excluded from the professions (Zimmeck 1988). It is not that we have been misinformed, exactly – for women were certainly excluded from the elite professions (though so were most men, in fact) and the ‘elevation’ of dentistry to its elite status severely damaged women’s previously significant participation in that field of work more than it did men’s (see Table 4). Nevertheless, instead of defining and investigating the professions on the basis of attributes defined by a number of small, if powerful, male-dominated occupations, this study of the professions in the Census as a system helps us see that women were central, rather than peripheral, to this process.

The high proportion of women professionals as a percentage of women in the labour force shows that the system of professions not only consisted of individual occupations encroaching on one another. Rather, the system also encroached on the household economy and traditional women’s labour. The growth of the professions succeeded in professionalising (some might say commodifying) aspects of women’s traditional work (Maddison 2006). Care for the sick moved increasingly from the home to the hospital, requiring paid nurses; care for the needy moved from community to charity and then to the

new profession of social work; and the education of children moved from women's domestic spaces to schools, with formally trained teachers. This asks us to reconsider the role of women in the growth of the professions, certainly. But it also requires a reconsideration of professionalisation itself, for it suggests that the growth of the professions was not only driven by the specialisation of labour as the economy industrialised and became increasingly complex, as economic historians have long claimed. Rather, the growth of the professions in the late nineteenth and first-half of the twentieth century also represents an appropriation of women's work by institutions, which helped industrial capitalism develop.

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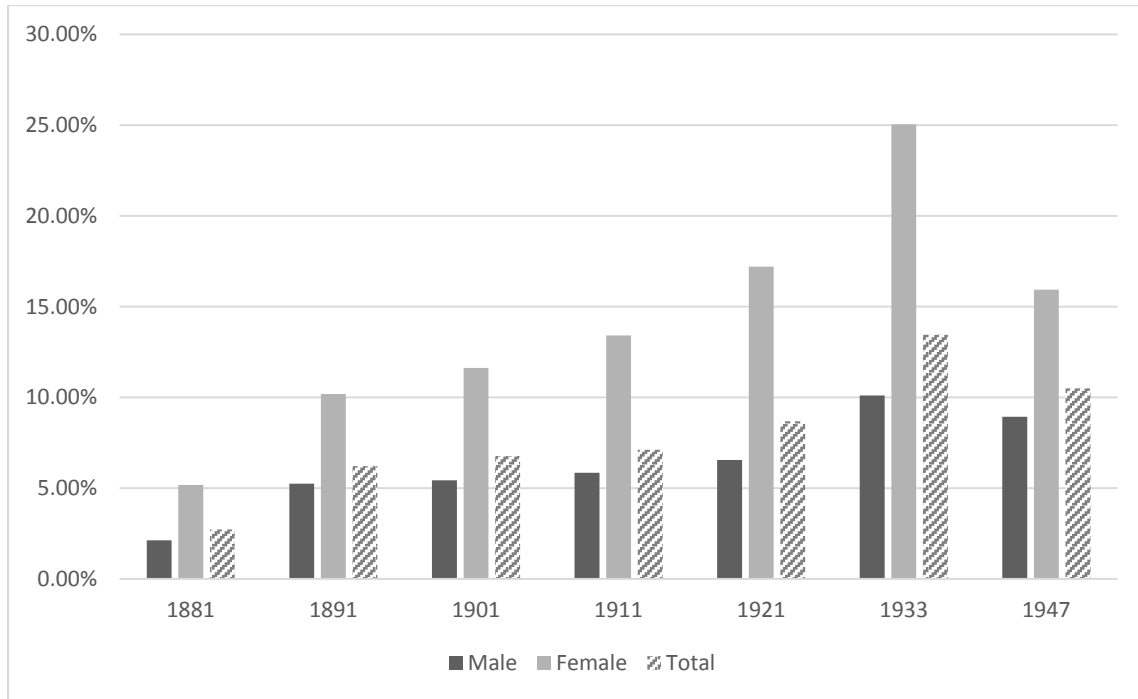


Figure 1 Professionals as percentage of labour force by gender, 1881-1947

Data sources: Australian Data Archive, Australian Bureau of Statistics, Butlin 1972

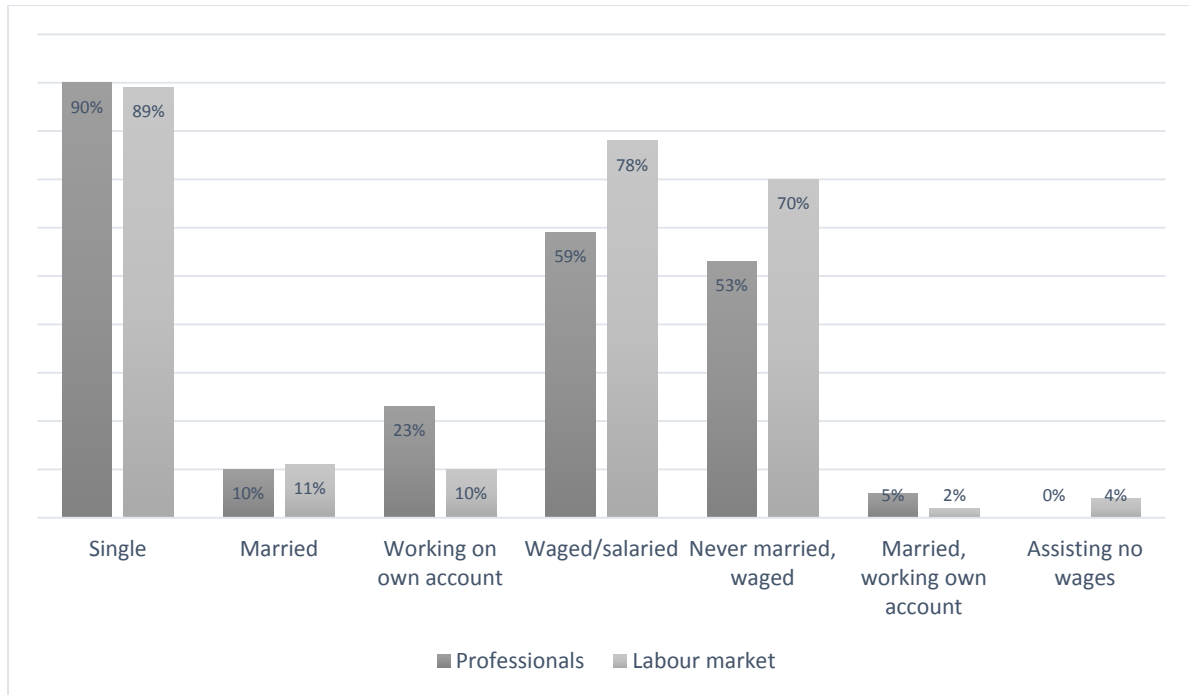


Figure 2: Women by marital status and work grade as percentage of female labour force, 1911

Data source: Australian Bureau of Statistics

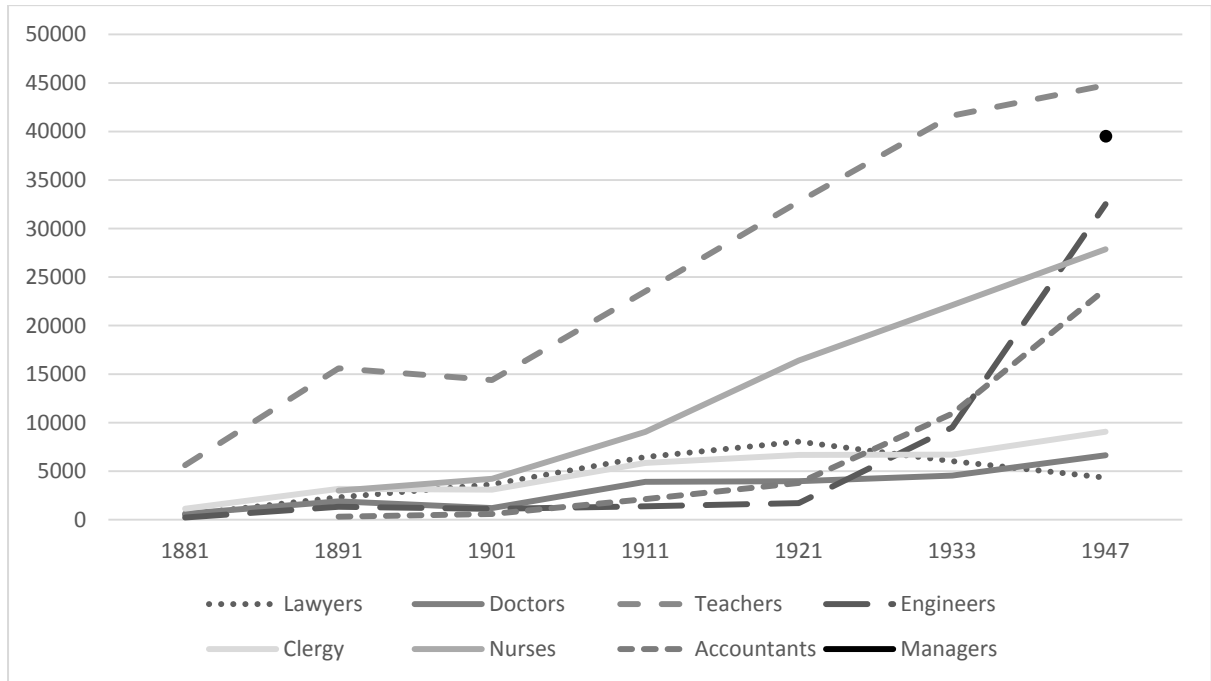


Figure 3 Comparison of key professions 1881-1947

Data sources: Australian Data Archive, Australian Bureau of Statistics

Married women total	733,773
Married women in labour force	40,453
% Married women in labour force	6%
Never married total	1,276,666
Widowed total	128,068
Divorced	2,140
Unmarried women total	1,406,874
Unmarried women in labour force	331,861
% Unmarried women in labour force	24%
Women total (including conjugal condition not stated)	2,141,970
Women in labour force (including conjugal condition not stated)	394,716
% Women in labour force	18%
Professional women total	52,973
Married professional women	5,160
Unmarried professional women	47,756
Professional women conjugal condition not stated	57
% Women professionals in labour force	13%
% Women professionals in population	2%

Table 1: Women in the labour force by marital status 1911

Data source: Australian Bureau of Statistics

	<i>Lawyer</i>	<i>Doctor</i>	<i>Teacher</i>	<i>Engineer</i>	<i>Clergy</i>	<i>Nurse</i>	<i>Accountant</i>	<i>Labour force</i>	<i>Pop</i>
<i>1901</i>	58%	-36%	-8%	-16%	-3%	41%	89%	21%	12%
<i>1911</i>	77%	225%	63%	23%	88%	115%	267%	24%	20%
<i>1921</i>	24%	1%	39%	24%	14%	81%	78%	14%	20%
<i>1933</i>	-25%	15%	27%	458%	1%	35%	189%	21%	21%
<i>1947</i>	-28%	46%	8%	242%	35%	26%	117%	14%	15%
<i>Average</i>	18%	42%	22%	122%	23%	50%	123%	16%	15%

Table 2: Percentage change in key professions, labour force and population between Censuses

Data sources: Australian Data Archive, Australian Bureau of Statistics

	1881 [^]	1891 ^{^^}	1901	1911	1921	1933	1947
MAGISTRATES	23	79	102	155	153	N/A	N/A
JUDGES	8	43	31	54	75	212	247
LAWYERS	513	2307	1596	2955	8036**	4345	4329
ARTICLE CLERKS	N/A	2	2044	3501	N/A	1678	N/A
DOCTORS	615	1886	1202	3905	3959	4536	6644
MIDWIVES	492	3446	2292	4487	2830	710	1250
NURSES	N/A	2991	4212	9049	16395	22107	27859
DENTISTS	131	550	1275	3647	5390	3139	2902
PHARMACISTS	949	2552	2377	4187	5575	2793	9729
ALLIED HEALTH	69	258	232	731	412	445	1005
VETERINARIANS	0	162	132	412	419	277	384
CLERGY	1123	3183	3101	5843	6672	6708	9070
CHARITY	0	1038	319	573	583	997	0
SOCIAL WORK	N/A	N/A	N/A	N/A	N/A	136	2121
LECTURERS	4	121	111	297	737	514	861
TEACHERS	5620	15599	14390	23525	32760	41632	44768
TUTORS	429	3935	3169	2168	1485	1299	991
MUSIC TEACH	1040	3409	3597	6779	5084	4540	2530
JOURNALISTS	86	1280	1164	2375	2138	3522	3074
CIVIL ENGINEER	216	1249	1058	1239	1395	1882	12773
OTH ENGINEER	N/A	76	57	135	309	7628	19749
APP SCIENCE	N/A	264	565	686	510	2231	N/A
ARCHITECT	N/A	1179	651	1568	1907	1555	1843
MANAGER	N/A	N/A	N/A	N/A	N/A	N/A	45409
ACCOUNTANT	N/A	306	578	2119	3779	10932	23750
BANKER	-*	-*	-*	19	85	-*	-*
BANK CLERK	-*	-*	-*	9435	14853	14833	-*
SHARE TRADER	-*	-*	-*	1261	1348	416	-*
FINANCIER	-*	-*	-*	3043	523	248#	-*
FINANCE	N/A	N/A	N/A	N/A	N/A	19916	-*
AGGREGATE	24060	84367	111134	144611	201319	377231	335943

Notes: [^] South Australia and Victoria only. ^{^^}excludes Western Australia. *data is reported inconsistently in the Census. **includes articulated clerks #1933 money lender, pawnbroker (previously financier, capitalist – not included in 1933 report).

Table 3: Selected Professionals in the Australian Census, 1881-1947

Data sources: Australian Data Archive, Australian Bureau of Statistics

	1881	1891	1901	1911	1921	1933	1947
MAGISTRATES	0.00%	0.00%	0.00%	0.00%	0.00%	N/A	N/A
JUDGES	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
LAWYERS	0.00%	0.00%	0.00%	0.20%	N/A	1.13%	2.52%
ARTICLE CLERKS	N/A	50.00%	1.13%	18.57%	N/A	32.54%	N/A
DOCTORS	0.00%	0.05%	2.16%	7.04%	9.75%	6.61%	8.71%
MIDWIVES	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.92%
NURSES	N/A	99.23%	99.43%	99.56%	99.37%	99.42%	90.71%
DENTISTS	1.53%	1.64%	9.10%	18.32%	26.03%	4.30%	2.65%
PHARMACISTS	0.63%	2.27%	4.38%	9.00%	17.90%	14.43%	13.40%
ALLIED HEALTH	2.90%	11.24%	37.07%	52.12%	17.96%	8.09%	71.34%
VETERINARIANS	0.00%	0.00%	2.27%	1.46%	2.15%	0.00%	2.60%
CLERGY	0.00%	0.03%	0.00%	10.77%	10.76%	0.00%	12.48%
CHARITY	N/A	60.31%	68.34%	67.71%	78.39%	71.92%	N/A
SOCIAL WORK	N/A	N/A	N/A	N/A	N/A	80.88%	94.11%
LECTURERS	0.00%	12.40%	3.60%	21.55%	36.77%	18.48%	21.49%
TEACHERS	58.35%	61.02%	62.13%	62.41%	68.41%	62.88%	59.40%
TUTORS	74.13%	74.61%	93.15%	91.56%	92.26%	90.22%	74.77%
MUSIC TEACH	81.73%	84.10%	86.96%	89.16%	94.79%	85.66%	80.36%
JOURNALISTS	17.44%	4.30%	7.90%	10.27%	12.91%	11.33%	13.76%
CIVIL ENGINEER	0.00%	0.00%	0.57%	0.89%	1.36%	0.00%	0.11%
OTH ENGINEER	N/A	0.00%	0.00%	8.89%	20.39%	0.00%	0.11%
APP SCIENCE	N/A	0.00%	0.88%	1.17%	6.47%	4.93%	N/A
ARCHITECT	N/A	0.00%	0.00%	3.38%	6.82%	1.74%	2.71%
MANAGER	N/A	N/A	N/A	N/A	N/A	N/A	9.92%
ACCOUNTANT	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BANKER	N/A	N/A	N/A	0.00%	0.00%	N/A	N/A
BANK CLERK	N/A	N/A	N/A	0.48%	0.25%	8.87%	N/A
SHARE TRADER	N/A	N/A	N/A	4%	0.22%	0.00%	N/A
FINANCIER	N/A	N/A	N/A	36%	1.15%	N/A	N/A
FINANCE	N/A	N/A	N/A	N/A	N/A	4.69%	N/A
AGGREGATE	37.12%	32.25%	37.10%	36.63%	39.66%	41.78%	34.03%

Table 4: Percentage of Women in selected Professionals in the Australian Census, 1881-1947

Data sources: Australian Data Archive, Australian Bureau of Statistics

