

CHANGING OCCUPATIONAL STRUCTURE OF NZ 1901-1926

An analysis of the industrial and occupational statistics from the 1901 and 1926 censuses illustrates and clarifies the assertion that the first two decades of the twentieth century were 'the decisive period in the creation of New Zealand's occupational structure'.¹ The broad trends of occupational change in the period have been explained elsewhere but can be briefly summarised as a rapid expansion of white-collar occupations, steady growth in semi-professional and petty official occupations and a slight shift in the balance of power in the manual working classes from the unskilled to the skilled.² Further, the urbanisation process was reflected in the sharp decline in rural occupations as a proportion of the labour force over the period. This working paper examines these trends in more detail.

The censuses are a useful but problematic source of occupational data. Without the benefit of enumerator's returns from which occupational details could be reconstructed the historian is forced to grapple with the published occupational tables. For 1901 a detailed occupational listing was constructed from the 'Occupations - Details' table and cross referenced, where possible, with data from the employment status tables.³ Efforts to distinguish employers, those working on their own account and employees within a given occupation had limited success because this information was provided for broad occupational groupings presented within the class and sub-class groupings developed for the industrial classification scheme rather than for specific occupations. Malcolm Fraser, the Government statistician recognised the problem in a later census when he warned that 'the classification of occupations used throughout [the census] classifies a person according to the industry with which he is connected rather than according to his personal occupation'.⁴ In effect this meant that the 'administrative, clerical, transport, etc, sections of industries are classed with the

¹E. Olssen and M Hickey, *Towards an Occupational Classification for Urban New Zealand 1901-1926*, Working Paper, NZ Occupational Structure II, 1996, p. 37.

²Ibid, pp.33-38.

³*Population Census, 1901*, Table IX, pp. 324-341. The presentation of the 1901 'Occupations-Details' table is particularly unwieldy because most of the data on numbers employed in specific occupations are given in the footnotes which augment the main table.

⁴Malcolm Fraser, *Government Statistics*, 1954, p. 10.

associated industry, equally with workers on the production side. Personal occupation within an industry has for these tables no significance'.⁵

The presentation of census data was continually modified in this period. From 1921 government statisticians attempted to follow the recommendation of a London conference of statisticians of the British empire that official statistics should disassociate '...industries from occupations' and publish statistics '...on both an industrial and an occupational basis'.⁶ Attempts to comply with this edict in the 1926 census were only partially successful. The industrial schema infiltrated the occupational statistics because occupations were still grouped by industry. Consequently for nineteen of the twenty-five industrial groupings 'employers', 'managers' and 'foremen or overseers' were differentiated by industry rather than specific occupation. To illustrate, the first three occupations listed under 'workers in transport and communication', an industrial grouping which includes such diverse occupations as marine engineers, tram conductors, taxi-drivers, locomotive cleaners, draymen, milkmen, postmasters and radio operators, were 'employer', 'manager' and 'foreman or overseer'. The changing level and type of occupational detail provided in the census tables over the period is reflected in the number of occupational titles in each census. Our 1901 census listing has 1,824 occupation titles for 332,795 people compared with just 929 occupation titles for a working population of 517,078 in 1926.⁷

So like Jones and Broom, in the Australian context, we discovered '...some limitations to the statistics and constraints on the analysis of historical changes in ... occupational structure'.⁸ Analysing occupational change and the occupational structure of Australia between 1911 and 1966 using census data they also encountered a census classification system which evolved over their study period.⁹ They solved the problem by reclassifying earlier census data into a common framework based on the 1961 census, presenting the results within sixteen hierarchical occupational groupings.¹⁰ Our methodology was similar;

⁵ *Population Census, 1921*, p.134.

⁶ 'Industrial and Occupational Distribution. - Introductory Notes. *New Zealand Census 1926*, p. 1.

⁷ Much of the greater detail of the 1901 census can be attributed to the practice of listing apprentices, assistants, and 'relatives assisting' separately for each relevant occupation.

⁸ Broom, Leonard and F. Lancaster Jones, *Opportunity and Attainment in Australia*, ANU Press, Canberra 1976, p.28.

⁹ Jones and Broom used the 1911, 1921, 1933, 1947, 1961, 1966 Censuses.

¹⁰ Their categories were: upper professional, graziers, lower professional, managerial, shop proprietors, farmers, clerical workers, armed services, police, craftsmen, shop assistants, operatives, drivers, service workers, miners, farm workers and labourers. Broom and

each occupation was coded according to the nominal, non hierarchical coding scheme developed for the Caversham Project.¹¹ This provided nine groupings: large employer/higher managerial (01), professional (02), semi-professional (03), small employers/self employed (04), officials/supervisory personnel (05), white collar (06), skilled (07), semi-skilled (08), unskilled (09). Three additional categories, juvenile(15), relative dependents (13) and rural (16) were necessary for the census analysis.

Within the nine occupational groups the growth of new occupations and decline of others warrants attention. In order to track these changes we attached a second code, signifying the sector worked in, to each occupation.¹² Seventeen sector groupings were developed: agriculture, forestry and fishing (A), construction (C), cultural and recreational services (CR), communication services (CS), education (ED), electrical, gas and water supply (EG), finance and insurance (F), government operation and defence (G), general (GEN), health and community services (H), manufacturing (MA), mining (MI), personal and other services (P), property and business service (PB), retail trade (RT), transport and storage (TS) and wholesale trade (WT). Coding each of the 2753 occupational titles twice made the data more manageable and allowed us to analyse the changes within each occupational class by sector. The impact of sectoral change on occupations was also analysed.

The first section of this paper outlines changes in workforce participation between 1901 and 1926 and discusses contemporary census explanations of industrial progression. The implications for specific occupations of expansion in some sectors of the economy and decline in others, based on the results of our sector coding, is discussed in the second section of the paper. This precedes a detailed analysis of occupational change within the Caversham coding scheme's nine occupational classes in the final section.

¹¹ Olssen and Hickey, *Towards an Occupational Classification for Urban New Zealand 1901-1926*, includes a discussion of some of the difficulties of coding census data.

¹² Sixteen of the sector codes were derived from the 1997 ACC activity classification system. An additional 'General (GEN)' code was devised for occupations such as 'labourer, n.e.i.'

I.

Table 1: A functional classification of the non-Maori New Zealand population 1901-1926¹³

Workforce Status and Census Year	Column Percentages		
	Males	Females	Persons
1901			
Total Breadwinners	66.42	17.19	43.06
Employers	8.37	0.55	4.66
Working on own account	11.06	1.93	6.72
Wage/salary earner	40.99	13.11	27.76
Unemployed	1.79	0.37	1.12
Relative assisting	4.20	1.23	2.79
Total Non breadwinners*	33.58	82.81	56.94
Under 15	30.62	34.10	32.27
65 and over	0.94	2.98	1.91
Total Population in 000s (100%)	406	367	773
1926			
Total Breadwinners	63.91	17.22	41.06
Employer	7.03	0.51	3.84
Working on own account	9.07	1.17	5.20
Wage/salary earner	44.45	14.65	29.87
Unemployed	1.56	0.37	0.98
Relative assisting	1.40	0.16	0.79
Not specified/not applicable	0.41	0.35	0.38
Non breadwinners*	36.09	82.78	58.94
Under 16	30.45	31.19	30.81
65 and over**	2.92	4.60	3.74
Total Population in 000s (100%)	686	658	1,344

Source: 1901 and 1926 New Zealand Censuses

*The non breadwinner figures denote those not in the workforce¹⁴

** Includes all people 65 and over not classified as working in a specific industry

Changes in the occupational structure were intrinsically linked with changes in workforce participation, underpinned by shifts in the industrial base of the

¹³The 1901 figures are from 'Occupations - Employers and Employed', *Population Census, 1901*, p. 59 and 1926 figures are derived from 'Grade of Occupation in Industrial Groups', *Population Census, 1926*, pp. 9-10.

¹⁴The 1926 census attempted to preserve continuity with previous censuses in the classification of breadwinners and dependents by including people of 'independent means' in the breadwinner statistics. Unfortunately unless pensioners specifically stated their source of income on the census return, men were enumerated as retired or of no occupation and classified as breadwinners while women were enumerated under "domestic duties" and classified as dependent. More precise breadwinner and non breadwinner figures for 1926 were arrived at by amending the Industrial Status and Grade of Occupation in Industrial Groups tables to exclude those listed in the 'other' industrial group whose grade of occupation was 'not applicable' because this group denotes those not in the workforce but receiving an independent income. G.T. Bloomfield arrived at the same figures for the 1926 labour force in *New Zealand, a handbook of historical statistics*, Boston, 1984, p.129. The breadwinner figures have been made as comparable as possible by excluding those listed as being of independent means from the 1901 figures. Age figures are from *Population Census, 1901* and *Population Census, 1926*.

economy. Table 1 shows New Zealand's broad workforce participation trends between 1901 and 1926. The proportion of breadwinners to dependents decreased slightly over the period reflecting the aging of the population and a trend for earlier retirement amongst the working population. The trend was gendered; female participation in the paid workforce was steady over the period while the proportion of males describing themselves as breadwinners declined. Within the breadwinner category the employment status of workers shifted. More workers were employees in 1926 than in 1901 as the proportion of relatives assisting, self employed workers and employers declined. These shifts hint at broader industrial changes; the decline of family capitalism, a drop in the labour requirements of the rural sector and the increasing importance of the tertiary sector of the economy.

The proportion of the workforce in each sector of the economy changed considerably as New Zealand industrialised and the population moved to the urban centres. Brendan Thompson added to debate about the speed and size of the change by constructing an 'estimated broad industrial structure' for New Zealand between 1839 and 1936 using the 1966 Census classifications to determine the composition of each sector.¹⁵ His findings for 1901-1926, presented in Table 2, show that 'dominance passed, in the early years of the twentieth century, straight from the primary sector to the tertiary sector'.¹⁶

Table 2. Estimated Industrial Structure 1901-1926

<i>Year</i>	<i>Primary</i>	<i>Secondary</i>	<i>Tertiary</i>
1901	36%	28%	36%
1906	33%	29%	38%
1911	32%	28%	40%
1916	32%	26%	42%
1921	30%	27%	43%
1926	29%	30%	41%

Source: Brendan Thompson, 'Industrial Structure of the Workforce', in Economic and Social Committee for Asia and the Pacific, Country Monograph Series No. 12, *The Population of New Zealand*, 2 vols., New York, 1985, vol 2, table 257.

Contemporary statisticians were particularly interested in the industrial progression of the nation and adjusted earlier census data on the basis of the 1926 industrial classification to enable comparative analysis. The general

¹⁵See T. Brooking, 'Economic Transformation' in W. H. Oliver and B. R. Williams (eds), *The Oxford History of New Zealand*, Oxford University Press, Auckland, 1991, p. 228.

¹⁶Brendan Thompson, 'Industrial Structure of the Workforce', in Economic and Social Committee for Asia and the Pacific, Country Monograph Series No. 12, *The Population of*

trends, a significant decline in the proportion employed in primary production, a slight decline in the industrial sector and the expansion of the service industries, confirm Thompson's conclusions.

While Table 2 gives a broad overview of the industrial structure of New Zealand the impact of the relative decline in primary sector employment and the development of the tertiary sector on the occupational structure is not clear. Traditionally as employment in the primary sector declines and the tertiary sector becomes more important shifts occur in the occupational structure. Specifically craft work is deskilled and there is a relative increase in professional, research, technical, managerial and supervisory personnel.¹⁷ The extent to which the New Zealand occupational structure reflected this process between 1901 and 1926 is outlined below.

II.

Table 3. Detailed Sector Analysis of the Census 1901-1926

<i>Sector</i>	<i>Males</i>		<i>Females</i>	
	% 1901	% 1926	% 1901	% 1926
(A) Agriculture, Forestry & Fishing	34.80	23.60	6.09	2.88
(C) Construction	5.18	6.04	0.02	0.01
(CR) Cultural and Recreational Services	0.67	0.90	0.93	0.85
(CS) Communication Services	0.97	1.34	0.60	0.51
(ED) Education	0.81	1.01	8.00	7.17
(EG) Electrical, Gas and Water Supply	0.36	1.66	0.00	0.02
(F) Finance and Insurance	1.10	1.34	0.18	0.87
(G) Government Operation and Defence	1.14	2.62	0.12	0.60
(GEN) General	4.80	7.44	0.07	0.05
(H) Health and Community Services	0.73	1.03	4.71	6.97
(MA) Manufacturing	21.69	20.71	25.90	17.37
(MI) Mining	5.41	1.88	0.01	0.00
(P) Personal and Other Services	1.91	2.31	34.16	29.26
(PB) Property and Business Services	3.53	7.15	1.90	14.55
(RT) Retail Trade	7.20	10.52	16.95	18.41
(TS) Transport and Storage	7.51	8.90	0.17	0.16
(WT) Wholesale Trade	2.17	1.56	0.19	0.30
TOTAL	100.00	100.00	100.00	100.00
Number of People	269675	405231	63121	111847

Studying the sectoral development of the workforce, as shown in Table 3, suggests the contextual background for changes in the occupational structure. The decline in the significance of the primary sector for male workers was

significant; the proportion of the male workforce employed in the 'agriculture, forestry and fishing' and 'mining sectors' fell from 40% in 1901 to just 25% in 1926. Employment in the manufacturing sector held steady while employment in public service, health services and the business sector grew. Technological advancements in electric, gas and water supply and the spread of the telephone system offered new employment opportunities in those fields for men. Sectoral analysis highlights the gendered nature of employment in this period. Women increasingly moved out, or were perhaps being shut out, of the rural and manufacturing sectors but found new opportunities in the 'property and business', or commercial sector. This expansion was at the expense of domestic work as shown by the drop in the 'personal and other services' sector, heightening concern amongst the upper middle classes about the prospects of finding reliable domestic servants.¹⁸ More detailed analysis of sectoral changes illuminates the broad trends.

Although the proportion of the workforce in the 'agriculture, forestry and fishing' sector dropped significantly over the period the actual number of people employed in the sector recorded a slight increase from 97,691 in 1901 to 98,863 in 1926. Attempts to analyse change within the farming sector are complicated by the mixed farming and respondents failure to specify the type of farming they were engaged in. The available data suggests that employment in dairy farming expanded between 1901 and 1926 for males and contracted for females. The number of women in the primary sector listed as 'relative assisting' declined markedly between 1901 and 1926, supporting Thompson's assertion that female labour was essential on dairy farms during the establishment phase. From 1921 the availability of male labour and milking machines rendered female labour less important.¹⁹ Male labour remained important; statistically the proportion of the total male workforce involved in dairy farming was 2.79% in 1901 and 4.48% in 1926. Generally, mechanisation increased the productivity of the primary sector and reduced the amount of labour required on farms.²⁰ Fencing work was the exception with 1,332 men listing themselves as some type of fencer or post-splitter in 1926 compared with 290 in 1901. Employment in the fishing industry held steady over the period while forestry employment increased in absolute terms from 2,773 in 1901 to 4,042 in 1926, a slight decline

¹⁸Erik Olssen, 'Truby King and the Plunket Society. An Analysis of a Prescriptive Ideology', *New Zealand Journal of History*, Vol. 15, No. 1, 1981, p. 8

¹⁹Brendan Thompson, 'Industrial Structure of the Workforce', p. 123 and 'Industrial and Occupational Distribution. - Introductory Notes.' *New Zealand Census 1926*, p. 5.

²⁰Brooking, 'Economic Transformation', pp. 229-233; Broom and Lancaster Jones,

relative to the total workforce. The kauri-gum industry almost disappeared between 1901 and 1926, closing one avenue of employment for unskilled agricultural workers.

Mining declined significantly between 1901 and 1926, both numerically (from 14,599 in 1901 to 7,635 in 1926) and as a proportion of the total workforce (from 4.39% in 1901 to 1.48% in 1926). The vagueness of the 1926 occupational data makes it difficult to ascertain where the decline in mining happened - whether it was gold, coal or other types of mining. The 1926 Census notes shed some light with the comments that 'numbers employed in gold-mining are falling each census' and 'coal mining continues to employ increasing numbers'.²¹ We can assert with more certainty that quarrying was growing - 247 men worked in that field in 1901 by 1926 this had increased to 1,206.

The growth of the government bureaucracy during this period was marked. The sector employed 0.95% of the total workforce in 1901 (or 3,160 people), increasing to 2.18% (or 11,286 people) in 1926. The increase was not in the defence area which grew in absolute terms from 1,033 men in 1901 to 1,413 men in 1926, but decreased proportionately. Rather, at least some of the increase can be attributed to the growing number of clerks and cadets listed in the public service accounts as government departments expanded.

Health workers also increased significantly from 4,941 (1.48% of the total workforce) in 1901 to 11,968 (2.31% of the total workforce) in 1926. The growing number of women in the sector (2,970 in 1901, 7,793 in 1926) can be attributed to increased employment opportunities in nursing and growth in administrative positions such as matrons and hospital probationers.²² Often women were employed in auxiliary roles, for example significantly more women were working as dentist's assistants (531 in 1926 compared to 25 in 1901) but few women actually became dentists. Specialisation and the expansion of the public health system introduced new occupations such as pathologists and radiologists²³ and the number of doctors more than doubled numerically over the period from 432 men and 6 women in 1901 to 910 men and 63 women in 1926. Pharmaceutical chemists also increased numerically from 398 men and 11 women in 1901 to

²¹Industrial and Occupational Distribution. - Introductory Notes.' *New Zealand Census 1926*, pp. 4-5.

²²The term hospital probationer is not used in the 1901 census, by 1926 702 women are engaged in this occupation.

²³The new health occupations included 3 pathologists, 23 radiologists, 17 chiropodists, 44

1,041 men and 91 women in 1926. The 1901 figure excludes the 111 men and 8 women who listed themselves as apprentice chemists, an occupational title which disappeared by 1926. New occupations were appearing as traditional family based welfare systems fragmented and health care was formalised; by 1926 there are 117 welfare or social workers in the country.

The education sector also increased as a proportion of the total workforce, growing from 2.17% to 2.34% (this sector includes those who administered education but not those working directly for the Education Dept) over the period. A gender breakdown shows that although the number of women involved in education increased from 5,051 to 8,023, the education sector accounted for 7.17% of the female workforce in 1926, down slightly from 8% in 1901. For men the trend went the other way - as a proportion of the total male workforce the education sector accounted for 0.81% in 1901, increasing to 1.01% in 1926 (an absolute increase from 2,179 to 4,084 men).

The property and business sector became more important over the period. In 1901 10,713 (or 3.22% of the workforce) were employed in the sector, by 1926 this had increased to 45,237 (8.75%). The growth in the property and business sector for men was predominantly in the '05' petty official, '02' professional' and '01' major employers, higher managerial occupational groups (ocgroups). The growth in the '01' and '05' ocgroups can be explained by the occupational titles 'employer (commercial operations) and 'manager (commercial occupations)' respectively while the increase in the professional ocgroup reflects the growing number of lawyers, accountants and professional engineers. The number of women employed in the property and business sector rose from 1,198 in 1901 to 16,276 in 1926. The growth can almost totally be accounted for by the large increase in the '06' white collar ocgroup. Within that most of the growth is in 'clerks, n.o.d' and 'typist, stenographers' who accounted for 13,078 of the 15,410 female white collar workers in this sector. The sources do not provide sufficient detail to ascertain the specific areas these women were working in but the general growth of public administration and professional industries was noted in the 1926 Census.²⁴ A marked decrease in the female '04' petty proprietors, for this sector, can be accounted for by the absence in 1926 of the 427 women listed as 'house proprietor' in 1901.

²⁴Industrial and Occupational Distribution. - Introductory Notes.' *New Zealand Census 1926*,

Employment in the finance and insurance sector doubled in absolute terms (from 3,073 people in 1901 to 6,409 in 1926), accounting for 0.92% of the total workforce in 1901 and 1.24% in 1926. Occupations specifically listed as insurance related employ 922 people in 1901 and 2,610 people in 1926, mostly in white collar occupations. Women gained employment in the sector as insurance clerks (322 in 1926 compared to 7 in 1901) and bank clerks, tellers or cashiers (640 in 1926 compared to 1 in 1901). An apparent decline in independent financiers, finance capitalists, sharebrokers and stockbrokers between 1901 and 1926 could be attributed to changing terminology between the censuses or may indicate the appearance or consolidation of larger financial institutions.

Increased prosperity and consumerism impacted on the retail and wholesale trade sectors. Employment in retail related occupations more than doubled numerically, from 30,117 to 63,231 between 1901 and 1926, accounting for a growing proportion of the total workforce (9.05% in 1901, 12.23% in 1926). Although the wholesale trade sector grew numerically over the period it decreased as a proportion of the total workforce from 1.8% in 1901 to 1.29% in 1926. The significance of this trend is not clear as the inference has to be made from the sources as to whether a particular occupation fell within the wholesale or retail sector; the boundaries are blurred.

The proportion of the total workforce in personal and other services was steady between 1901 and 1926 at around 8%. The majority of workers in this sector were women, mostly employed as domestic servants (19,189 in 1901 accounting for 89% of the women in the sector that year and 23,396 in 1926 accounting for 71%). The 1926 figure does not include the 2,598 women listed as housekeepers. The decline in domestic servants was countered by growth in other domestic occupations such as pantry maids, housekeepers and cooks. The number of women working as cooks/caterers increased disproportionately from 399 in 1901 to 1,834 in 1926 (the number of male cooks/caterers also increased from 824 in 1901 to 1,903 in 1926). Male employment in this sector grew in areas relating to law and order. Firebrigadesmen, in particular, increased and the appearance of traffic controllers in 1926 signified changes wrought by growth in motorised transport.

The growth of utility services over the period is noticeable and had an impact on the certain occupations. Communication services employed more men and

fewer women proportionately in 1926 compared to 1901. Much of the employment growth for men was in telegraph services with over 900 more men working as telegraph messengers or operators in 1926. Some areas of the postal service were opening to women by 1926 when almost as many women (396) as men (409) were postmasters. New technologies were bringing new opportunities; 96 men were employed as 'wireless, radio operators' in 1926.

The electrical, gas and water supply sector gained importance over the period, employing 6,741 people in 1926 (1.30% of the total workforce) compared to 986 people (or 0.30%) in 1901. Changing terminology over the period makes it difficult to disaggregate this sector into the separate supply of water, gas and electricity. It can, however, be confidently asserted that there was a marked increase in linesmen, electricians and electrical engineers. By 1926 electrical engineers are split into professionals and non professionals and 'engineer, hydraulic or waterworks' also appears, showing the diversity of engineering occupations and an increasing degree of specialisation. The spread of electricity across the period is noticeable - there were 22 lamplighters in 1901, none in 1926.

The transport and storage sector grew slightly as a proportion of the total population from 6.12% in 1901 to 7.01% in 1926 (an absolute increase from 20,358 to 36,228). Significant growth came from the development of motor transport and trams (in 1901 381 people were employed on the trams compared with 1,856 in 1926). Rail workers increased numerically but not in proportion to the total workforce and employment in the shipping industry does not appear to grow.

The level and speed of expansion in the service sectors lends credence to Thompson's assertion that the secondary sector had not achieved the importance of the tertiary sector by 1926. Employment in the manufacturing sector was slowly declining over the period. The proportion of the total male workforce engaged in the manufacturing sector also declined slightly from 21.69% (or 54,483 men) in 1901 to 20.71% (or 83,938 men) in 1926. These figures are probably under enumerated because they exclude the 12,836 men in 1901 and 29,909 men in 1926 who listed themselves as labourers without specifying an industry. These men were coded 'general' for sector. An absolute increase in women in manufacturing from 16,348 in 1901 to 19,432 in 1926

correlates to a significant fall in the proportion of the total female workforce engaged in the sector over the period, from 25.90% to 17.37%.

The number of men involved in construction increased from 13,978 in 1901 to 24,468 in 1926, growing from 5.18% of the male workforce in 1901 to 6.04% in 1926. The low number of women in this category (12 in 1901 and 14 in 1926) justifies concentrating the analysis on men. The construction sector was disaggregated into two categories - building and road building. The number of men employed in building (i.e. bricklayers, painters, plumbers, plasterers and navvys) grew in proportion to the total workforce, from 12,291 men in 1901 to 18,387 men in 1926. Most noticeable was the large number described as 'navvy, labourer, platelayer' in the 1901 census compared to the 'navvy' category in the 1926 census, a manifestation of the changing categorisation of occupations between the censuses. Employment in roading construction grew markedly as the government implemented a policy of road improvements (from 787 or 0.3% of the total male workforce in 1901 to 5,325 or 1.3% in 1926).

The decreasing importance of the manufacturing sector for women workers can be at least partially attributed to stagnation in clothing manufacturing and the growth of less labour intensive factory work. In 1901 the 12,470 women employed in the clothing industry accounted for 76% of the female workforce in the manufacturing sector and 20% of the total female workforce. By 1926 the number of women employed in the manufacture of clothing had risen slightly to 12,719, accounting for only 65% of the female workforce in the manufacturing sector and 11% of the total female workforce. Unfortunately the differing detail about occupations in the clothing industry between the censuses does not allow us to comment further.²⁵

Employment in woollen mills and skin factories declined for men in absolute terms from 2,145 in 1901 to 1,601 in 1926 and increased for women from 855 in 1901 to 1,288 in 1926. The decrease for men was most significant amongst tanners and curriers, reflecting a general decline in fellmongery.²⁶ More women were employed in woollen mills in 1926 as that industry experienced steady growth. The 1926 census provides less occupational detail than the 1901

²⁵The 1901 Census provides more detail but groups the most numerically significant occupations dressmakers, tailors and clothing manufacturers together while the 1926 census lists them separately. Distinctions between the occupations are not clear.

²⁶In 1901 there were 119 fellmongery works employing 1,963 people, by 1926 the number of works had dropped to 59, employing 1,179 people. *New Zealand Yearbook 1902*, p.139;

census but most women in woollen mills were employed as machinists, darners, weavers and winders. Women were also beginning to work as spinners, the largest single occupation for men in woollen mills in 1926, aside from those listed as 'woollen-mill hand, n.e.i.'.

Work in bootmaking occupations fell over the period. In 1901 3,688 men and 735 women were engaged in boot manufacturing compared to 2,001 men and 654 women in 1926. By 1926 the Census distinguishes between bootmakers in factories and those presumably working in smaller workshops. Especially noticeable is the changing composition of apprentices from 123 males and 22 females in 1901 to 90 males and 46 females in 1926. By 1926 female apprentices were more likely to get apprenticeships in factories than from bootmakers outside the factories, the opposite held true for males.²⁷

The total number of people engaged in leather related manufacturing also declined over the period. In 1901 1,452 men and 24 women worked in this area compared to 969 men and 92 women in 1926. Again the differing occupational detail offered over the two censuses hampers analysis but the decline in harness and saddlery makers, reflecting increases in motorised transport, accounted for much of the drop in male employment. More women were involved in leather work, but this trend may be a result of different occupational categories being used for 1901 and 1926, in this case allowing us to code women more specifically.²⁸ The proportion of workers involved in fibre manufacturing (rope making, furriers, dyers, bag makers, sailmakers etc) stayed constant but employment in flax manufacturing showed an overall decline as a proportion of the population although it stayed stable numerically.

An increase in those listing themselves as 'glass bevellers' accounts for the growth of those coded as being in the manufacturing sector and working in glass. Workers in stone and clay increased in absolute terms but only in proportion with growth in the manufacturing sector over the period. Comparisons of specific occupations in this industry are complicated by the 1926 decision to group the employers, managers and foremen of each industrial category together.

²⁷*New Zealand Census 1926*, p. 60

²⁸Some new categories appear in the 1926 census including 'leather machinist', 'stitcher

Occupations we coded as being in the manufacturing sector and involving working with wood increased numerically over the period, accounting for 14,375 men and 300 women in 1901 and 24,908 men and 185 women in 1926. This was a slight increase as a proportion of the manufacturing sector. Growth in sawmilling and a corresponding growth in people describing themselves as carpenters was responsible.

The development of motorised transport was reflected in an increase in motor body makers and a decrease in wheelwrights and coachsmiths. Between the censuses more detailed occupational descriptions are offered for engine-drivers in 1901 but the impression is that the number employed stays relatively stable. Mechanical engineers and engine fitters seem to become more numerous and there was a marked increase in men calling themselves mechanics in 1926.

The metal trades grew in proportion to the population, with some internal redistribution. Blacksmiths declined (the number of apprentices declined from 261 in 1901 to 84 in 1926) and the number of fitters increased. Again the trend in the 1926 census of listing employers, managers and foremen separately from specific occupations hides occupational detail for 2,198 of those engaged in work with non-precious metals and electrical fittings.

People employed in occupations related to the manufacture of general foodstuffs (baking, condiments, flourmill, sugarmills, jam factories, confectioners, biscuit makers, tobacco manufacturers) grew from 3,002 males and 301 females in 1901 to 5,202 males and 729 females in 1926, a slight increase as a proportion of the total manufacturing sector. Meat manufacturing was considered separately and also showed a growth trend, partially because the number of men listed as working at freezing works doubled over the period. The total involved in meat manufacturing grew from 3,997 males and 22 females in 1901 to 7,762 males and 24 females in 1926, partly due to an increase in the number of butchers.

Finally, workers employed in dairy manufacturing increased from 786 males and 28 females 1901 to 1,906 males and 31 females in 1926, reflecting growth in dairying in the primary sector. The 1926 figures are understated because employers, managers and foremen are not represented. The growth is spread between buttermakers, cheesemakers and those listed more generally as 'assistant, dairy-factory, n.e.i.'. In other food related manufacturing, employment

in beverage making declined because of a drop in brewing and aerated-water manufacturing; the number of wine-makers also dropped proportionately.

The impact of the growth of certain sectors and decline of others on the occupational structure, as ordered by the Caversham coding scheme, is described below.

III.

DISAGGREGATING THE 1901 AND 1926 CENSUSES USING THE CAVERSHAM CODING SYSTEM

Table 4. Census by Occupational Group 1901-1926

<i>Ocgroup</i>	<i>Female</i>		<i>Male</i>		<i>Total</i>	
	<i>1901</i>	<i>1926</i>	<i>1901</i>	<i>1926</i>	<i>1901</i>	<i>1926</i>
Employer (O1)	0.86%	0.58%	1.45%	4.08%	1.33%	3.32%
Professional (O2)	0.06%	0.51%	1.32%	2.93%	1.08%	2.41%
Semi-professional (O3)	12.79%	15.43%	2.07%	2.16%	4.10%	5.03%
Petty Proprietor (O4)	8.19%	8.40%	10.50%	10.18%	10.06%	9.79%
Official (O5)	1.75%	1.68%	3.25%	4.44%	2.97%	3.84%
White collar (O6)	4.92%	26.19%	7.05%	13.04%	6.65%	15.88%
Skilled (O7)	15.09%	7.89%	17.26%	18.46%	16.85%	16.17%
Semi-skilled (O8)	7.79%	4.26%	5.79%	5.48%	6.17%	5.22%
Unskilled (O9)	39.27%	32.14%	18.45%	17.67%	22.40%	20.80%
Relative Assisting (13)	4.86%	n/a	1.60%	n/a	2.22%	n/a
Juvenile (15)	0.39%	0.18%	0.63%	0.74%	0.59%	0.62%
Rural (16)	4.04%	2.76%	30.62%	20.82%	25.58%	16.92%
Number of people	63121	111847	269674	405231	332795	517078

The occupational structure, shown in Table 4, underwent some significant shifts between 1901 and 1926. The growth of the professional, semi-professional, white collar and official occupation groups were offset by declines in the manual working classes and the rural occupation groups. These trends are examined in more depth below. Three ocgroups, relative assisting, juveniles and rural are not discussed in any detail in this section. By 1926 'relatives assisting' had declined in importance and were not listed separately by occupation, hindering analysis. The juvenile category is insignificant and the decline in rural occupations has been discussed sufficiently in the sector analysis above. For analytical purposes the sector analysis has been cross referenced with our disaggregation of the skilled, semi-skilled and unskilled occupation groups.

Employers (01)

Broadly, this ogroup increased as a proportion of the total workforce, from 1.33% in 1901 to 3.32% in 1926. There was a gender difference - while the gross number of women in the 01 group increased from 540 to 651, this represented a decline as a proportion of the female workforce from 0.86% to 0.58%; the male figures show a numerical increase from 3,901 to 16,538, or from 1.45% to 4.08% of the total male workforce.

At least some of the increase can be attributed to the use of a broad 'employer' category for industry in the 1926 census.²⁹ This category eluded classification into large employers and petty proprietors and all 'employer' entries for 1926 are coded '01' although we are aware that a proportion of the 'employers' listed in the 1926 Census belong in our 04 grouping (the greater detail in the 1901 Census also allowed us to attempt to be more exact). An attempt to achieve comparability between the censuses was made by grouping the 01's in the 1901 census using the 'employer' categories given in the 1926 census, with limited success. Looking at an example illustrates the difficulty of drawing firm conclusions from the available data.

Employers in building and construction increased numerically and as a proportion of the 01's over the period. In 1901 there were 15 male employers in fields relating to building and construction (all road metal contractors), or 0.38% of the 01 male total. The 1926 Census lists 3,816 men or 23.07% of the 01 male total for that year and 7 women or 1.08% of the female total under the broad description 'employers'. Some of the 1926 men were probably self-employed builders or contractors but it is also likely that as concrete construction and roading developed the number of larger employers/higher managerial in this area increased.

The 01 occupational group defied disaggregation because of the incomparability of the sources. The only conclusion that can be reached is that the trend, shown in Table 1, of an increasing proportion of employees in the workforce suggests that the growth in the 01 ogroup should be treated with caution.

²⁹Grouping of employers by industry in the 1926 Census presents one of the major

Professionals (02)

The professional grouping increased from 3,607 in 1901 (or 1.08% of the 1901 total) to 12,442 in 1926 (or 2.41% of the 1926 total). Breaking the figures down by sex shows that the 3,567 male professionals in 1901 (1.32% of the male 1901 total) increased to 11,873 in 1926 (2.93% of the male 1926 total) and the 40 female professionals in 1901 (0.06% of the 1901 female total) increased to 569 in 1926 (0.51% of the 1926 female total).

Jones and Broom, in their work on the Australian occupational structure, note that '...for some specific jobs, notably professional, it is possible to produce a continuous time series' and this seems reasonable for the New Zealand census data between 1901 and 1926.³⁰ There was little change in occupational title over the period and our decision that any occupation which could be described as professional in 1926 would also be coded as professional in 1901 makes this occupational group relatively easy to disaggregate.³¹

In 1901 accountants made up 0.11% of the total workforce, by 1926 they made up 0.53%. The number of male accountants increased from 358 in 1901 (making 10.04% of the male professionals in the 1901 Census accountants) to 2,465 in 1926 (or 20.76% of the 1926 male professionals). The increase was equally dramatic for women, rising from 10 (25% of the total female professionals) in 1901 to 273 in 1926 (47.98% of the total female professionals for that year). The occupation 'public accountant, auditor' was not included in this analysis because it is possible to compare this occupation directly. In 1901 170 people called themselves public accountants or auditors (all male), by 1926 this had increased to 939 (905 male, 34 female). 'Public accountants, auditors' were becoming more important within the professional ogroup, accounting for 4.71% of the 02's in 1901 and 7.55% in 1926.

While the number of 'barrister, solicitor, lawyers' increased from 635 males and 1 female in 1901 to 1,631 males and 4 females in 1926, this profession declined in importance as a proportion of the total professional ogroup. In 1926 13.74% of male professionals were lawyers in 1901 compared to 17.80% in 1901. Other professions opened more quickly for women as law accounted for 2.50% of female professionals in 1901 and 0.70% in 1926.

³⁰Broom and Lancaster Jones, *Opportunity and Attainment in Australia*, p. 28.

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Doctors increased numerically but declined as a proportion of the total professional population from 12.14% in 1901 to 7.82% in 1926. Pharmaceutical chemists also decreased as a proportion of the professional ocgroup from 11.34% in 1901 to 9.10% in 1926. This can partially be attributed to the development of health and scientific specialisations; by 1926 when bacteriologists, balneologists, pathologists, radiologists, entomologists and meteorologists appear in the census.³²

Engineers (all types coded as professional), on the other hand, increased in absolute and relative terms between 1901 (334 men or 9.26% of the total 1901 professionals) and 1926 (2,012 men or 16.17% of the total 1926 professionals). The development of new occupational titles reflected changes in the type of work and increased professionalisation and specialisation. In the professional ocgroup for 1901 were: 'engineer, agricultural machinery maker', 'engineer, civil', 'engineer, directing or consulting, & assistant', 'engineer, mechanical (freezing works)', 'engineer, mining (coal mine)' and 'engineer, Torpedo Corps'. The 1926 census lists: 'engineer, civil, consulting or local body', 'engineer, electrical (professional)', 'engineer, hydraulic or waterworks', 'engineer, marine', 'engineer, mechanical (professional)', 'engineer, mining', 'engineer, structural (professional)'. Note that while there was an 'engineer, electric light' listing in the 1901 Census, we concluded that they were probably skilled rather than professional and coded them accordingly. Even allowing for the vagaries for our coding system it seems that engineering was expanding both numerically and in terms of specialisations within the industry.

Semi-professionals (03)

The semi-professional ocgroup increased from 12,656 (4.10% of the 1901 total) in 1901 to 25,998 (5.03% of the 1926 total) in 1926. It is worth noting that this is the only category in which women outnumber men - the result of the inclusion of largely female occupations such as teaching and nursing. In 1901 there were 5,581 semi-professional men (or 2.07% of the 1901 male total) compared to 8,742 in 1926 (or 2.16% of the 1926 male total). The 8,075 semi-professional (12.79% of the 1901 female total) women in 1901 increased to 17,256 (15.43% of the 1926 female total) in 1926.

³²There were 27 male and 6 female bacteriologists; 3 male balneologists; 2 male and 1 female pathologists; 21 male and 2 female radiologists; 7 male and 1 female entomologists;

Comparing the internal distribution of the semi-professional group over the period gives the impression that New Zealand was a less interesting place in 1926. Present on the occupation listings in 1901 but gone by 1926 are evangelists, faith healers, hypnotist, oculists, palmists, phrenologists and a clairvoyante. Growing interest in science may have been responsible for the appearance of several new occupations in 1926 including metaphysicians, osteopaths, dietitians and an astronomer. The 93 'wireless, radio operators' present at the 1926 Census contribute to the growth in the semi-professions but three main groupings of occupations make up the bulk of the semi-professional group - nurses, religious and teachers. These groups are looked at in more depth.

Grouping all the nurses together shows that they increased numerically from 2,267 women and 8 men in 1901 to 5,406 women and 9 men in 1926. As a proportion of the total female semi-professional workforce nurses increased from 28.07% in 1901 to 31.33% in 1926; the impact of male nurses on the semi-professional group was insignificant. Midwives disappeared, as an occupational title at least by 1926, and were replaced by 'maternity nurses'. It is not entirely clear but the 675 nurses described as 'nurse, maternity' in 1926 may have accounted for those working in hospitals and the 1,470 women described as 'nurse, private (maternity)' may not have been employed within the hospital system. Also of note is the growth in hospital nursing between 1901 and 1926, a reflection of the trend toward nursing as a profession (as the New Zealand Trained Nurses Association sought to restrict usage of the title nurse to those who had some formal training) and of the development of the public health system. The country's interest in child welfare offered nurses the opportunity to specialise in this field after 1907 through Plunket nursing. Women who were interested in child health but did not want to do the three years of nursing training could take a short course and become Karitane nurses.

The proportion of semi-professional men employed in religious occupations increased only slightly from 19.87% (or 1,109 men) in 1901 to 20.18% (or 1,764 men) in 1926. The trend was more dramatic for women. In 1901 3.18% (or 257 women) of semi-professional women were described as religious compared to 9.39% (or 1,621 women) in 1926. Both censuses provide some level of detail about religious occupations in New Zealand but unfortunately the nature of that detail changes over the period. While the 1901 Census gives some information

about missionaries and the Salvation Army, by 1926 it is the Catholic orders (brothers and nuns) who are listed separately to other religious. It is important to note that for the 1901 Census those religious who were engaged in teaching (154 females, 2 males) have been grouped with other teachers for the purpose of analysis. For the 1901 Census the 'Sister of charity' occupational title, involving 31 women, was coded as 05 (petty official) - this is the only religious occupation not in the semi-professional ocgroup. Taking these decisions into account it is still clear that the number of nuns in New Zealand increased significantly between 1901 and 1926.

The number of teachers in all fields excluding music teaching and university lecturing increased from 1,793 men and 3,318 women in 1901 to 3,488 men and 6,312 women in 1926. As a proportion of the semi-professional men this was an increase from 32.13% to 39.90%. As a proportion of the semi-professional women this was a fall from 41.09% to 36.58%, a statistic which tells us more about the growth of the semi-professional ocgroup for women than it does about teachers. A more relevant statistic is that as a proportion of the whole workforce those employed as teachers grows from 1.54% in 1901 to 1.90% in 1926. As a proportion of the total female workforce female teachers increased from 5.26% to 5.64%.

Music teachers were excluded from this analysis because they can be compared across the censuses although we cannot be entirely certain that the census categories are exactly the same (the 1901 census uses the occupational title 'music professor, teacher etc', the 1926 census uses 'music teacher'). Under those titles the 1901 census lists 233 men and 1,163 women and the 1926 census lists 315 men and 1,474 women. Music teaching employed more people in 1926 but was declining in proportion to the total workforce. One area which declined both numerically and proportionately was the group of 11 men and 326 women listed as 'governess, tutor' in 1901. The 1926 Census used the title 'governess' (perhaps indicating that the nature of the job had changed over the period), which accounted for only 190 females. The brevity of detail in the 1926 Census restricts any further analysis.

Petty Proprietors (04)

The total number coded as petty proprietors increased numerically from 33,495 in 1901 to 50,628 in 1926 but these figures represent a slight drop in petty proprietors as a percentage of the workforce from 10.06% in 1901 to 9.79% in 1926. The figures for men show that petty proprietors decreased slightly as a proportion of the total male workforce for the given years from 10.50% (or 28,326 men) in 1901 to 10.18% (or 41,237 men) in 1926. The opposite trend held for women as the number of female petty proprietors increased slightly as a proportion of the total female workforce from 8.19% (or 5169 women) in 1901 to 8.40% (or 9391 women) in 1926.

Retailing, dealing and building appear to have grown, reflecting the increasing importance of the tertiary sector. Unfortunately the problems described for the larger employer, higher managerial (01) occupational group also impact on the 04 occupational group and make it impossible to draw firm conclusions.

Officials (05)

The total number of officials rose from 9,877 (2.97% of the total population) to 19,876 (3.84% of the total population) and again there was a gender split. While the number of male officials increased both numerically and proportionately from 8,773 (3.25%) to 18,002 (4.44%), the number of female officials increased numerically from 1,104 to 1,874 between 1901 and 1926 decreasing from 1.75% of the female population to 1.68%. The overall increase can be partially accounted for by the trend of presenting managers and foremen (both of which we coded '05') by industry and status rather than occupation in 1926. Efforts to analyse the ogroup are frustrated by the different classifications used within the censuses but some impressions can be stated with reasonable confidence. Management tended to grow over the period, particularly in commercial occupations. The growing state bureaucracy contributed to the growth of the petty official ogroup as health, school and stock inspections were regulated. An apparent decline in uniformed white collar workers, employed in railways, trams, the telegraph service and the postal service reflected a census decision to differentiate those workers by specific occupation by 1926.³³

³³For example the 1901 census lists the 1188 men and 3 women working as 'railway officers, stationmasters and clerks' together as an occupational group, by 1926 these occupations

White Collar (06)

The biggest increase both numerically and proportionately over the period was in the white collar ogroup. In 1902 there was a total of 22,115 (6.65% of the total working population) white collar workers, by 1926 this had increased to 82,131 (15.88%). For men this was an increase from 19,011 (7.05% of the total male workforce) to 52,842 (13.04%) and for women it was an increase from 3,104 (4.92% of the total female workforce) to 29,289 (26.19%). The growth in white collar workers reflected the growing importance of the tertiary sector of the economy and the modernisation of the workplace. The increase in clerks in the public service and in banking and insurance was particularly noticeable. Unfortunately a large number of clerks (8,642 men and 6,592 women) did not specify the type of industry worked in, limiting analysis. Women were increasingly able to find work in offices with 6,486 women were employed as either typists or stenographers in 1926. Employment in the retail trade grew, particularly the number of women working as shop assistants, as urbanisation and increased prosperity expanded the sector. Occupations such as storemen and warehousemen gained in importance for men. In 1901 637 men were listed as storemen, by 1926 this had increased to 4,803. Grouping all types of warehousemen for 1901 accounted for 436 men, compared to 1,536 in 1926.

Skilled (07)

Although the total number of skilled workers increased numerically over the 1901-26 period from 56,069 to 83,608 the skilled ogroup actually decreased slightly as a proportion of the total workforce from 16.85% to 16.17%. Again there were quite marked differences in the trends for men and women. Skilled men rose numerically from 46,544 in 1901 to 74,788 in 1926, an increase from 17.26% to 18.46% in terms of proportion of the male workforce. Skilled women, in contrast, decreased both numerically, from 9,525 to 8,820 and as a proportion of the female workforce, from 7.79% to 4.26%, between 1901 and 1926.

Over 90% of skilled women worked in the manufacturing sector between 1901 and 1926, mostly in the clothing industry. The number of skilled women in 1901 may be overstated because of conflated occupation titles that year, eg. 'dressmaker, tailor and assistants' was coded 07 in 1901, while in 1926 the occupational title is simply 'tailor'. Mechanisation impacted on women's

employment in clothing trades and growing opportunities in white collar work undoubtedly contributed to the decline in skilled women workers.³⁴

Table 5 shows that changes in male skilled occupations reflected sector changes. The development of the electricity, gas and water sector prompted an increase in electricians and linesmen. Fewer skilled men worked in mining, reflecting the decline of that sector generally while the growth of skilled men in retailing was caused by the appearance of motor-mechanics in 1926.³⁵ The number of skilled men working in manufacturing reflects the general growth in that sector over the period; the main trends within the manufacturing sector have been described above. An apparent drop in the proportion of workers coded as semi-skilled and employed in manufacturing may also artificially boost the number skilled workers in that sector.³⁶

Table 5. Male Skilled by Sector 1901-1926

<i>Sector</i>	<i>% 1901</i>	<i>% 1926</i>
(A) Agriculture, Forestry & Fishing	5.79	5.60
(C) Construction	6.58	6.76
(CR) Cultural and Recreational Services	0.72	0.70
(EG) Electrical, Gas and Water Supply	0.78	7.86
(G) Government Operation and Defence	1.12	1.43
(GEN) General	0.00	0.28
(H) Health and Community Services	1.24	0.24
(MA) Manufacturing	47.37	58.86
(MI) Mining	26.42	4.68
(PB) Property and Business Services	0.40	0.00
(RT) Retail Trade	1.19	6.44
(TS) Transport and Storage	8.21	7.15
(WT) Wholesale Trade	0.17	0.00
Total	100.00	100.00

Changes within the manual working classes were reflected in contemporary concerns that narrowing wage differentials meant there was less incentive to do apprenticeships. The 1901 and 1926 censuses deal with apprentices differently and while it is possible to make some comparisons both sets of statistics

³⁴Olssen, Erik, *Building the New World. Work, Politics and Society in Caversham 1880s-1920s*, Auckland University Press, Auckland, 1995, p. 88-92.

³⁵It is one of the quirks of applying the ACC coding system to our data that mechanics end up in the retail section when they may also have been coded manufacturing. In any case the growth in mechanics is significant with over 4,000 appearing in 1926.

³⁶The decline in semi-skilled in manufacturing may be a result of the lack of detail in the 1926 Census. For example where the 1901 Census routinely listed assistants, which we coded

should be used with some caution.³⁷ For 1901 adding together everyone categorised as an apprentice gives us the figure of 3,113 male and 604 female apprentices. By 1926 there were 5,669 male and 806 female apprentices according to the Census tabulations. These figures are undoubtedly under-enumerated as 1926 Census introductory notes point out that Dept of Labour records show "...that from returns obtained under the Apprentices Act from employers there were 8,055 apprentices employed at the 31st March, 1926 - ie., some three weeks before the census date".³⁸ Even the Apprentices Act was almost totally concerned with male apprentices so these figures exclude most female apprentices. The Act covered only the "skilled" trades and did not include apprentices in the professional occupations or in occupations such as jockeys. Using the figures above indicates that the proportion of the male workforce listed as apprentices grew between 1901 (1.15%) and 1926 (1.40%), while the proportion of apprentices in the female workforce (0.96% in 1901, 0.72% in 1926) dropped slightly.

Semi-skilled (08)

Overall the semi-skilled decreased slightly as a proportion of the total workforce between 1901 and 1926 from 6.17% to 5.22% although the total number of semi-skilled increased from 20,537 to 26,969. Breaking these figures down by sex we find that the male semi-skilled increased from 15,618 in 1901 to 22,207 in 1926, a decrease as a proportion of the total male workforce from 5.79% to 5.48%. The female semi-skilled actually shrink from 7.79% of the total female workforce (or 4,919 women) to 4.26% (or 4762 women).

³⁷The 1901 Census Detailed listing actually differentiates apprentices from other skilled workers. The 1926 Census does not give us this level of detail but includes a section in the introductory notes on the occupations of apprentices, including a breakdown of apprentices in the main industries.

³⁸Industrial and Occupational Distribution. - Introductory Notes.' *New Zealand Census 1926*,

Table 6. Males Semi-skilled by Sector 1901-1926

<i>Sector</i>	<i>% 1901</i>	<i>% 1926</i>
(A) Agriculture, Forestry & Fishing	16.42	6.07
(C) Construction	4.00	7.19
(CR) Cultural and Recreational Services	0.02	0.00
(EG) Electrical, Gas and Water Supply	0.92	0.00
(H) Health and Community Services	0.39	0.00
(MA) Manufacturing	44.09	33.91
(MI) Mining	1.28	2.69
(P) Personal and Other Services	3.27	10.42
(PB) Property and Business Services	3.97	0.04
(RT) Retail Trade	11.05	0.00
(TS) Transport and Storage	13.30	39.68
(WT) Wholesale Trade	1.29	0.00
Grand Total	100.00	100.00

Table 6 shows the internal redistribution of the semi-skilled ocgroup. The 1901 Census offered detail which allowed specific coding of the semi-skilled, particularly because of the listing of assistants, contributing to the decline in semi-skilled workers within the manufacturing and retail sectors. The increase in construction seems to have been the result of growth in gangers, chainmen and drivers. Cooks accounted for much of the increase in semi-skilled involved in personal services and drivers and firemen were largely responsible for the increase in semi-skilled in the transport sector.

As with the male semi-skilled the lack of detail in the 1926 Census about those working as assistants accounts for the decline in women coded as semi-skilled in the manufacturing and retail sectors. There was some growth in women describing themselves as machinists, particularly in the boot making trades. An increase in semi-skilled women in the personal services sector can be accounted for by an increase in women describing themselves as cooks (coded as 08) rather than the more general domestic servant (coded as 09).

Unskilled (09)

The unskilled proportion of the total workforce decreased from 22.4% in 1901 to 20.8% in 1901 although the number of unskilled rose from 74,538 to 107,566. Men working in unskilled occupations rose from 49,753 to 71,618 representing a decrease as a proportion of the total male workforce from 18.45% to 17.67%. Unskilled women also fell as a proportion of the total female workforce from

39.27% to 32.14% although the number of unskilled women increased from 24,785 to 35,948.

Table 7. Male Unskilled by Sector 1901-1926

<i>Sector</i>	<i>% 1901</i>	<i>% 1926</i>
(A) Agriculture, Forestry & Fishing	3.03	2.58
(C) Construction	15.16	9.39
(CR) Cultural and Recreational Services	0.09	0.04
(CS) Communication Services	0.49	2.19
(EG) Electrical, Gas and Water Supply	0.57	0.31
(GEN) General	0.03	0.05
(H) Health and Community Services	0.04	0.00
(MA) Manufacturing	56.24	59.20
(MI) Mining	2.48	2.40
(P) Personal and Other Services	2.15	1.20
(PB) Property and Business Services	0.25	0.09
(RT) Retail Trade	4.94	3.83
(TS) Transport and Storage	13.56	18.71
(WT) Wholesale Trade	0.97	0.00
Grand Total	100.00	100.00

The disaggregation of the 09 ocgroup by sector for males shown in Table 7 demonstrates the changing composition of the unskilled workforce. A decline in unskilled workers in both the construction sector and the manufacturing sector can be attributed at least in part to the large number of labourers (almost 30,000) who neglected to specify the industry they worked in for 1926. These men have been coded as 'general', accounting for the significant proportion of the unskilled men in this sector. The increase in unskilled in communication services was due to a growing number of deliverymen and messengers coded as unskilled, rather than juvenile.³⁹ In 1926 only 142 men described themselves as domestic servants, compared to 833 in 1901 accounting for the drop in unskilled men in this sector.

³⁹The 1901 Census is more suited to coding workers as juvenile because of its more detailed

Table 8. Female Unskilled by Sector

<i>Sector</i>	<i>% 1901</i>	<i>% 1926</i>
A) Agriculture, Forestry & Fishing	0.00	0.14
(CR) Cultural and Recreational Services	0.02	0.00
(CS) Communication Services	0.00	0.04
(GEN) General	0.02	0.02
(H) Health and Community Services	0.01	0.00
(MA) Manufacturing	2.75	5.80
(P) Personal and Other Services	81.71	77.13
(PB) Property and Business Services	0.00	0.05
(RT) Retail Trade	15.49	16.80
(TS) Transport and Storage	0.00	0.02
Grand Total	100.00	100.00

The disaggregation of the female unskilled ogroup has been included because it demonstrates the extent to which unskilled women were concentrated in the 'personal and other services' sector. Table 8 shows that by 1926 a decline in domestic servants between 1901 and 1926 had begun to impact on the unskilled ogroup. The increase of unskilled women working in the manufacturing sector can be attributed to more women working as factory hands and packers.

CONCLUSION

Despite differing classification systems for the 1901 and 1926 census it is possible, using a variety of analytical techniques, to track the changing occupational structure of New Zealand between 1901 and 1926. The analysis reveals that the significant decline in rural occupations was offset by expansion in white collar, professional and semi professional occupations. The proportion of workers in the manual occupations also fell slightly, although the trend was gendered; manual work retained it's importance for men. It is evident that the most dramatic shifts in the occupational structure were in the employment of women, even though the proportion of the female population in paid work did not increase significantly. Shifts occurred within each occupational group in the types of work done as technological developments and the changing sectoral structure of the economy increased opportunities in some fields and shut off others.

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5/2/98

Appendix 1: Occupations, 1901-1926 by Sector

Appendix 2: Occupations, 1901-1926 by Occupational Group

