

Everything Anyone Wanted to Know About the Census and Occupations 1901, 1926 and 1936

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This report outlines the methodology used to construct a national occupation structure for early twentieth century New Zealand using census data. The aim of the project was to enable a comparative analysis of the national and Caversham occupation structures. We chose the 1901, 1926 and 1936 censuses to get a spread over the Caversham study period and because they provided the most suitable presentation of data. Entering the census data into spreadsheet and coding each occupation according to the Caversham occupational scheme was a multi-stage process undertaken over the course of two and a half years. Inevitably the methodology used developed as each census was entered. This report attempts to capture that process and outline the final result.¹

Using Census Data on Occupations

Censuses have been internationally recognised as an invaluable source of national occupational data, but it is also universally recognised that this type of data presents some difficulties for the historical researcher.² One of the main limitations of the New Zealand census data became obvious at the first stage of the process - developing a list of all occupations and the number employed in each occupation for each year. Ideally we would have used the census enumerators' returns but as these have all been destroyed we had to work within the bounds of the various occupation tables provided in the published census

¹For progress reports, especially for the 1901 Census, written during the data entry and coding process see 'Using the 1901 Census' and 'Caversham Occupational Scheme and the 1901 Census' in the Caversham Research reports. **check this**

²On the use of census occupational data in Britain see Catherine Hakim, 'Census Reports as Documentary Evidence: The Census Commentaries 1801-1951', *Sociological Review* (**check**), Vol. 28, No. 3, 1980, pp. 551-580; Edward Higgs, *A Clearer Sense of the Census: the Victorian censuses and historical research*, London, 1996, especially chapter 11 and chapter 13; Richard Lawton (ed) *The Census and Social Structure. An Interpretative Guide to the Nineteenth Century Censuses for England and Wales*, London, 1979, especially chapter 5, Joyce M. Bellamy, 'Occupation Statistics in the Nineteenth Century Censuses', pp. 165-178; K. Schurer, 'Understanding and coding the occupations of the past: the experience of analysing the censuses of 1891-1921', in K Schurer and H Diederiks (eds), *The Use of Occupations in Historical Analysis*, St Katharinen, 1993, pp. 101-62. On the American census see M.A. Conk, 'Occupational Classification in the United States Census 1870-1940', *Journal of Interdisciplinary History*, Vol. 9, No. 1, 1978, pp. 111-130. For a discussion of the limitations of the Australia census see F. Lancaster Jones, 'Occupational Change in Australia, 1911-66', *Indian Journal of Sociology*, Vol 2,

results. Although the occupation questions in the Census remained basically the same between 1901 and 1936, the presentation of the data varies considerably between the 1901 and the 1926 and 1936 censuses.³ The most noticeable difference is the more detailed occupation titles in the 1901 census which meant that there were approximately twice the occupation titles for that year as for 1926 or 1936. A description of the published tables for each census is given below.

Aside from difficulties associated with continual changes in the presentation of data the main drawback to relying on the published occupation tables is our comparatively scant knowledge of enumerators' practices in New Zealand.⁴ The available evidence suggests that the original census coding process was not entirely objective. It seems, for example, that it was standard practice for the coders to adjust the answers of youths suspected of inflating their occupational status by assigning them, where practicable, as apprentices or assistants.⁵ Further, a contemporary review of the construction and analysis of the 1936 Census indicated the classification processes were problematic.⁶ The published census tables '...are not, therefore, simple 'facts', or pieces of 'data' given to users unproblematically; they are culturally mediated texts which need to be interpreted in the same manner as any other historical source'.⁷ The first step to coding the census occupation data was discovering how each census was constructed.

1901 Census:

The 1901 Census was the first to be entered and choosing which occupational table to derive a list of occupations from set the project off to a difficult start. In our first attempt

³The census asked for the industry worked in, occupation and occupational status.

⁴ By contrast, researchers in the United States can use enumerators' returns to track coding decisions see for instance, 'Occupational Coding in the 1900 Public Use Microdata Sample', Steven Ruggles and Matthew Sobek, *Integrated Public Use Microdata Series: Version 2.0*, Vol. 2, User's Guide Supplement, Historical Census Projects, Minneapolis, 1997, <http://www.ipums.umn.edu>, pp. 2.18.13-2.18.16. For a discussion of the coding of women's occupations see, Margo Conk, 'Accuracy, Efficiency, and Bias: The Interpretation of Women's Work in the U.S. Census Statistics of Occupations, 1890-1940', *Historical Methods*, Vol. 14, May 1981, pp. 65-72.

⁵ 'Industrial and Occupational Distribution.- Introductory Notes', *1926 New Zealand Census*, Vol. 9, Wellington, 1927, p. 1. Interestingly this practice was not unknown internationally. Coders of the 1940 United States census were instructed to 'provide codes for alternative occupations, usually apprenticeships' for children under 18 years of age in some occupations, '1940 Occupation, Industry, and Class of worker Coding and Verification' in Ruggles and Sobek, pp. 2.18.26.

⁶ Erik Olssen, 'Occupational Classification: What the *Census* Tried to Do and Why It Failed', Caversham Working Paper, Occupational Classification 1, 1996, p. 23

⁷ Edward Higgs, *A Clearer Sense of the Census: the Victorian censuses and historical research*, London,

we entered the seemingly simple Occupations: Alphabetical listing.⁸ We soon discovered that this was full of repetitions and conflations, some of which were inherent in the census's coding scheme but most of which were peculiar to this listing. After a significant amount of time was spent trying to deconstruct this listing we finally resorted to the 'Occupations: Details' table⁹ to develop our list of occupations for 1901. This table revealed the organising principles of the 1901 Census.

The 1901 Census presents occupational data within an industrial classification system. Occupations are listed within eight classes:

- I. Professional
- II. Domestic
- III. Commercial
- IV. Transport and Communication
- V. Industrial
- VI. Agricultural, Pastoral, Mineral and other Primary Producers
- VII. Indefinite
- VIII. Dependents

Within these classes occupations are further grouped within 27 'orders' and numerous 'sub-orders'. Conflations, that is the practice of grouping distinct occupations together such as "railway officer, stationmaster, clerk", still appear in this listing but the problem is small.

Some comments should be made on the 'Occupations: Details' table. As can be seen below, many of the listings in the main text are footnoted. The footnotes give more detailed and accurate descriptions of occupations. So while the main text gives the occupation "woollen manufacturer, spinner, and other workers (all branches)", an occupation title which would be impossible to code according to the Caversham coding scheme, the footnotes clarify the issue. They give 37 more specific occupation titles, including "woollen manufacturer, worker", "clerk", "designer", "engine-driver, fireman", "knitter", "warehouseman" and "yarn-twister". We have included the detail given in the footnotes in our database because the more detailed breakdown of occupations gives us a more accurate snapshot of the occupational structure of New Zealand.

⁸*Census, 1901*, pp. 381-390.

Insert example of 1901 census - Details table

In the original census classification process the statisticians decided that all respondents who gave sufficiently defined occupational information would be classified in the industry they were associated with, especially for the two major classes, Commercial and Industrial.¹⁰ This emphasis on industrial classification of occupations has resulted in an extremely detailed list of occupations. For example, the 1901 Census listing includes 32 listings for "travellers" in various industries, dealerships or agencies, while the 1926 Census has 2 entries: "commercial traveller (employer and own account)" and "commercial traveller". The 1936 Census listing simply has "commercial traveller".

The Census introductory notes do provide us with some clues about classification procedures. It should be kept in mind when using the census that people returning themselves as both producers and dealers were classed as producers only under Class VI (agricultural, pastoral, mineral, and other primary producers). Similarly people stated to be both manufacturers and dealers were grouped as makers under Class V (Industrial). Finally the unemployed were included under their ordinary occupations.¹¹

¹⁰Ibid, p. 324.

1926 Census

The 1921 Census saw the Government Statistician's first attempt to disassociate occupation from industry. This produced an extremely detailed occupational listing and over the next five years the process was fine tuned. The 1926 Census then became the first census in which the occupational classification could '...exist entirely independently of the industrial tabulation'.¹² Some industrial bias is still evident in the presentation of the occupations tables and particularly in the plethora of industrially based analysis. In comparison with the 1901 Census however the 1926 Census provides a relatively straightforward occupational listing.¹³ This is partly because the 'Occupations: Detailed' list is less detailed and is without the cumbersome footnotes used in 1901.¹⁴ For example, where the 1901 Census lists all storemen according to who they worked for, so that we get listings such as "storeman, auctioneer", in 1926 there is just one listing for "storeman" encompassing all industries.

The 'Occupations: Detailed' list has specific occupations listed under 26 sector categories. These are:

1. Fishermen and Trappers
2. Agricultural and Pastoral Occupations
3. Forest Occupations
4. Miners and Quarrymen
5. Workers in Stone, Clay, Earthenware, Lime, Cement, Glass etc
6. Workers in processes relating to Chemicals, Animal and Vegetable Products, n.e.i.
7. Workers in Non-Precious metals, electrical fittings etc
8. Workers in precious Metals, jewellery, scientific instruments etc
9. Workers on ships, boats and conveyances
10. Workers in Fibrous Materials, Textiles etc other than clothing or dress
11. Workers in Clothing or Dress
12. Workers in Harness, Saddlery and Leatherware (excluding boots and shoes)
13. Workers in Food, Drink and Tobacco
14. Workers in Wood, n.e.i.
15. Workers in Paper, Printers, Photographers etc
16. Workers in Other Materials
17. Workers in Building, in Construction, in Maintenance of Roads etc, n.e.i.
18. Workers in Production or Supply of Gas, Water, Electricity, or Power (including Stationery-engine Drivers etc)
19. Workers in Transport and Communication
20. Financial and Commercial Occupations
21. Persons engaged in Public Administration
22. Clerical and Professional Occupations
23. Occupations connected with Entertainment, Sport and Recreation

¹²*Census*, 1926, Vol. 9, p. 1.

¹³An industrial breakdown is provided but is of little interest to us, *Census*, 1926, Vol. 9, p. 2 and pp. 41-43.

¹⁴'Occupations. -Detailed List, 1926', *Census*, Vol. 9, 1926, pp. 44-50. The 1926 listing has 929

24. Personal and Domestic Occupations, Hotelkeeping etc
25. Other or Ill-defined Occupations
26. Persons not actively engaged in Gainful Occupations

Thus under the heading 'Workers in Transport and Communication' is a list of all the forestry occupations. This list differs significantly from the 1901 Census in that 19 of the 26 occupational groupings have listings for "employer", "manager" and "foreman or overseer". 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 'Personal and Domestic Occupations' grouping just has "manager" and "foreman" listed. Six other sector groupings, dealing with the fishing industry, agricultural and pastoral occupations, public administration, clerical and professional occupations, the ill-defined occupations and those not in gainful employment, do not have these classifications separated out. The last listing for all sectors is the residual category, "other occupations". The standard for entering these occupational titles has been to enter the title followed by a description of the sector worked in, for example "employer, workers in transport and communication" and "other, workers in transport and communication". The coding procedure for these occupations is discussed below.

After entering both the 1901 and 1926 censuses into spreadsheets the next step was to ensure that occupation titles were written in a similar format. Generally we followed the Caversham standard, putting the type of work first, followed by the industry worked in or the material worked on. For example, "insurance - manager" in the 1926 listing was changed to "manager, insurance", "penal officer: subordinate" was changed to "officer, penal: subordinate", and "marine surveyor" became "surveyor, marine". The original occupational descriptions have been kept on file.¹⁵

1936 Census

The 1936 Census generally follows the same format as the 1926 Census, with occupations listed under 26 industrial categories. There is no Detailed List of Occupations in the printed tables of the 1936 Census. Instead we have used the total column from the

¹⁵The files 'Census 1901 Coded' and 'Census 1926 Original' have two columns for occupational title.

'Occupations by Age-Groups and Marital Status' table.¹⁶ The results are presented separately by sex which makes it rather cumbersome to use. The only other significant innovation in the presentation of the occupational data is that the "managers" and "foremen or overseers" occupation titles, presented separately in the earlier Census, are presented together in 1936, generally as "manager, foreman or overseer".¹⁷

To sum up, the main differences between the censuses are the more detailed occupation titles in the 1901 Census and the listing of "employers", "managers", "foreman" and the residual "other occupations" as distinct occupational titles in the latter censuses. It is also worth noting that over the three censuses changing occupational titles give an indication of the increasingly mechanized nature of some industries. This can be seen in industries like boot manufacturing, where by 1926 and 1936 the distinction is made between bootmakers working in a factory and those not. In the more domestic occupations this is evident by 1936 in the occupational titles like "office cleaner, vacuum cleaner, charwoman".

Coding Methodology

The Census coding followed the same principles as the Caversham nine point occupational coding scheme. The codes are:

- 01 Major Employer, Higher Managerial
- 02 Professional
- 03 Semi-Professional
- 04 Petty-Proprietor
- 05 Officials and Supervisory Personnel
- 06 White Collar
- 07 Skilled
- 08 Semi-skilled
- 09 Unskilled

We also used two other codes. The code '15' was used for all obviously juvenile occupations such as "message boy", "student" etc. Apprentices did not come under this code. Secondly, all distinctly rural occupations were coded '16'. This enabled us to exclude from our analysis those working in rural areas and juveniles. The rationale was that

¹⁶*Census*, 1936, pp. 38-51 (males), pp. 52-59 (females)

¹⁷The title is adjusted to reflect the sector in two instances. The 'Miners and Quarryman' sector uses the title 'manager, foreman, overseer, underviewer, shift boss, or mine deputy'. Similarly the 'Financial and Commercial Occupations' sector has 'manager, director, superintendent' etc. *Census*, 1936, p. 39 and p.

Caversham is an example of an urban occupational structure and the electoral rolls used to construct the Caversham database excluded all workers under 21.

While the coding principles were generally the same as those used to code the Caversham electoral rolls, the more general nature of the census data imposed some limitations. Coding electoral rolls involves working out whether an individual who listed themselves as a builder was a major employer (01), a petty proprietor (04) or a skilled worker (07). With the census it was necessary to make more arbitrary decisions and some general guidelines were established during the first attempt to code the 1901 Census. Originally our primary coding criteria was to allocate by occupational title eg. agent, dealer, contractor. Agents were initially all coded as 01, dealers as 04, contractors as 04, makers as 04, managers as 05, clerks as 06, travellers as 06 and assistants as 08, labourers as 09. In many cases however closer examination revealed that these 'rules' did not fit the data and it was sometimes necessary to employ subordinate criteria - using the "status" tables provided in each census, what we knew of the industry and also making inferences from the numbers involved.

Using the "Status" Tables¹⁸:

During the process of entering and coding the 1936 Census we decided to do "status" checks i.e. cross-reference the occupational listings with information on employment status. This had already been undertaken in a limited form (concentrating on the industrial occupations) for the 1901 Census but was extended to include all occupations in all years, where the information was available. The level of detail in these tables varies over the years. It is most comprehensive and thus most useful for 1901 and least comprehensive for 1936.

For 1901 we derived status information from the 'Employers and Employed: Details' table.¹⁹ This table uses the listings from the main text of the 'Occupations: Details' table, showing the employment status separately for males and females, for each occupational listing. Five "grades" of employment are given: "Employer", "In business on own account, but not employing others", "Working for wages or salaries", "Wage-earners unemployed", "Relative assisting but not receiving wages and others undescribed".

¹⁸The title of the tables giving data on employment status changed over time. Full references for the tables are given below but for ease of reference I will refer to them simply as the status tables in the text.

Using these tables is somewhat complicated for 1901 because they only use the main titles in the 'Occupations: Details' table, and do not give the footnoted detail. Thus while our 1901 database has the listings "sailmaker, 175 males, 3 females", "assistant, 22 males and 7 females" and "relative assisting, 2 males", all derived from the Occupations: Details table, the status table simply lists "sailmaker, 199 males, 10 females". In this instance because we can presume that the assistants and the relatives assisting are not employers or self employed, using the status table to calculate how many sailmakers should be coded 04 and how many should be coded 07 is relatively simple.

However the listing "furniture-manufacturer, cabinetmaker, bedstead maker" proved more complicated. The detailed footnotes provided us with the listing "furniture-manufacturer, cabinetmaker", "apprentice", "assistant", "chairmaker" and "french-polisher". The apprentices were easily coded 07 and the assistants 08. The remaining three listings, that is "furniture-manufacturer, cabinetmaker", "chairmaker" and "french-polisher" could all include employers, self-employed and employees. It was decided to add these three categories together under the listing "cabinetmaker, furniture-manufacturer, chairmaker and french-polisher". We then used the status table to disaggregate the total into the 01, 04 and 07 classifications. Similarly the listing 'ship owner, agent, manager, clerk' has been disaggregated into 01, 04 and 06 codes. The whole occupation title is retained for the 01 and 04 codes, for 06 it is shortened to 'ship agent, manager, clerk'.

Finally it is worth noting that the 1901 listing has a few examples of very ill-defined occupations, often potentially covering more than one code, for example "contractor, manager, apprentice, foreman (so defined)", "parcel-delivery agent, forwarding agent, clerk and driver" and "building-society, savings institute director, manager, officer, clerk". The first step in coding these occupations has been to disaggregate by status and then assign codes accordingly. Where this has not worked, eg for "building-society, savings institute director, manager, officer, clerk", because they all would be "workers for wage or salary", we have used the code which seems most applicable and least troublesome, in this instance 06.

The 1926 occupational status data is presented over several tables, each further separated for sex.²⁰ The options are augmented by a "Not Applicable" category. The disassociation

²⁰We used Table 10 for 'employers', pp. 62-64 (males), p. 65 (females); Table 11 for 'workers on own account', pp. 66-69 (males), pp. 70-71 (females); Table 12 for 'relatives assisting', pp. 72-73 (males), p. 74 (females); Table 13 for 'wage earners and wage-earners unemployed', pp. 75-84 (males), pp. 85-88 (females).

of occupation from industry means that the focus shifts off status for specific occupations. Consequently the tables only give status information for the principal occupations. By 1936 the status codes had been refined further, to reflect the concerns of the times, with the addition of "Apprentice", "Partly Employed" and a code for "Wholly on Relief" categories.²¹ Both the 1926 and 1936 censuses also have a "not specified" category in the published tables. The limited usefulness of the 1926 and 1936 status tables is mediated by the use of the occupational titles "employer" (which have been coded 01, probably inflating the 01 category for 1926 and 1936), "manager" and "foreman" (both of which have been coded 05).

The standard procedure has been to use status information where it is available. For the 1926 and 1936 censuses, which only provide status information for 'principal occupations' in many cases the data is only available for males. The procedure in these cases has generally been to disaggregate the male employees into "employer", "own account" and "employee" and assign the females to the "employee" category where this seemed likely to be accurate. In cases where there was no secondary material to suggest female employees should be assigned to a particular status, the occupation was not disaggregated by status.

There are other problems with using the status tables. The census definition of employer is anyone who employed another person, a much broader definition than the Caversham 01 category, which is specifically major employers and higher managerial. In addition, the "In business on own account but not employing others" category in the census includes those we would code as 04, that is petty proprietor, but the 04 code would also include some of those listed as employers on the Census. Some examples of how this was dealt with follow.

Generally those revealed as "In business on own account" were coded 04 and "Employers" were coded 01. This seems the best solution because it at least maintains comparability with "Employer" category in the 1926 and 1936 censuses. For example the 1901 listing "share and stock broker, dealer, jobber, speculator" was originally coded 01, however cross referencing with the status tables enabled us to split the category into employers (coded 01), self employed (coded 04) and employees (coded 06).

available for those who used the 'not applicable' code, pp. 91-93, which consisted mainly of dependents, but this table was not useful for our purposes.

²¹We used Table 9. 'Occupational Groups and Principal Occupations.- Occupational status', pp. 69-71 (males) and pp. 72-73 (females). Interestingly although information was gathered on the 'wholly on relief'

Some exceptions were made, where the evidence warranted it. Size of the industry and the number of people employed were taken into account. The one taxidermist, for example, listed as an employer in the 1901 Census was grouped with the 8 'in business on own account, not employing others' under the 04 or petty proprietor code. This decision seems relatively straightforward because with only 2 others listed as working for wages or salary under the taxidermy classification; it is unlikely that the taxidermist was a major employer. Not all decisions were as straight forward as the taxidermist example but generally the 01 code was used for employers unless the occupational title suggested a small-scale industry. For the 1901 census, the first coded, our decisions were influenced by the information contained in the 1901 'Details of the Principal Industries' table²², which lists both the total number of a given industry and the total number of hands employed. While there is likely to be some blurring of the boundary between the 01 and 04 categories it must be noted that 01 also includes those considered to be higher managerial.

Occupations which have been amended by status usually have (employer) (own account - or sometimes-1901 self employed) or (employee) after the occupational title. Where a status check revealed that an occupation included employers but they did not belong in the '01' ogroup we combined the 'employer' and 'in business on own account' categories and coded the occupation '04', with (employer and own account) after the occupational title, eg. "hairdresser, barber (employer and own account), 04" in 1936. This affects a limited number of occupations in the 1926 and 1936 Censuses because of the blanket "employer" occupational title.

Status tables also helped us check some of our assumptions from occupational title. Arbitrarily enforcing our guideline that all agents were to be coded as 01 would have led us to code a category such as "house agent, rent collector" as a major employer when checking with the status table showed that 04 (petty proprietor) or 06 (white collar) is more fitting. Likewise inaccurate and conflated occupational titles can also lead us astray. At first glance it appeared that the 1901 listing "graving dock, patent slip proprietor, manager" would best be coded as 04, but a check of the status table revealed that the two males listed under this title were both wage or salary earners.

²² C. 1901, 1901, 1901, 1901

More generally, protocols were established for coding Professions (02) and Semi-professions (03). Where a dual occupational locality existed, for example in the case of an accountant who could either be described as 02 or 04, the professional code (02) was chosen. Distinguishing between professional and semi-professional was less clear cut. Generally a profession was defined by three factors - an educational qualification, a professional association and the ability of that professional association to establish controls over that profession. Thus chemists were coded as 02 while nurses and teachers having achieved only some of the above criteria, were coded as 03. As a rule we have assumed that if an occupation could be described as professional by 1926, the professionalising process would have started by 1901 and we have coded accordingly. The exception to this rule is dentistry, where the coding reflects the changing status of the occupation over the period.²³

Both the 05 (petty official) and the 06 (white collar) codes presented no significant coding difficulties. One notable exception was the conflated listing 'railway officer, stationmaster, clerk' in the 1901 Census. After some discussion we eventually decided it was more suitable to code it 05 than 06.

Decisions about the 07 (skilled), 08 (semi-skilled) and 09 (unskilled) classifications required some guidelines. Without descriptions such as 'journeyman' to aid us we have assumed that any occupation which had an apprenticeship system and indeed the apprentices within that occupation should be coded 07. Assistants have generally been coded as 08, although some fit the 06 definition and have been coded accordingly. Labourers have been coded as 09. We also referred to the Arbitration Board classifications and the 1917 Efficiency Board classification to clarify skill levels involved in particular occupations and industries. They proved especially useful for coding occupations within woollen mills, iron trades and leather industries. Where possible other sources, such as long essays, theses, and books were referred to.

Specific Coding Decisions

²³ For a detailed discussion of the coding of dentistry see the Appendix to the 1901 Census.

This section discusses the coding of occupation titles which Miles Fairburn has described as the '...vague occupational labels each of which could cover a wide variety of actual pursuits'.²⁴

Agents (excluding Commission Agents):

Agents have been coded 01, 04, 06 and 05.

Each "agent" occupation has been checked on the status tables. The 01 code has been used where the status tables indicated "employer" and where the industry or sector worked in indicated a higher managerial or large employer status. This includes "agent, public company", "agent, stock and station", "export agent, exporter", "financial agent" etc.

The 04 code has been used for those described in the status tables as "in business on own account" and those working in industries or businesses which were small-scale. This includes "agent, patent, trade-mark", "house agent, rent collector", "agent, advertising, bill poster, distributor". The 1926 Census listing also include "financial agent (own account)".

The 06 code has only been used where the status tables indicated wage or salary workers. Each occupational title has been disaggregated accordingly. Thus the 1926 listing also has "financial agent (employee). Other examples are "customhouse and labour agent" "news vendor, agent (employee), "broker agent (undefined) (employee)".

The 05 code has only be used twice, for "native agent" in 1926 and 1936.

Apprentices:

Apprentices have been coded 07.

Assistants:

Assistants have generally been coded 06 or 08, depending on the type of work they're engaged in. So "assistant mercer" and "assistant, business (not specified)" are coded 06 because they are associated with white collar occupations. "Assistant, agricultural-

²⁴Miles Fairburn, 'Social Mobility and Opportunity in Nineteenth-Century New Zealand', *New Zealand*

machinery maker" and "assistant, builder" are coded 08 because they are associated with skilled occupations. The 06 and 08 codes have been used for the majority of those describing themselves as assistants.

The 09 code has been used twice for the 1901 listing. "Assistant, flax-mill" which involved 6 males was coded 09 because it was considered an unskilled occupation. The status tables showed the despite the impression created by the uses of the word "manufacturer" in the title, "explosive manufacturer and assistant" the 2 males and 21 females it covered were all employees. They were subsequently coded 09 because of the unskilled nature of the occupation.

There are some other exceptions to the 06/08 rule. In some cases it proved impossible to separate the "assistants" from those they were assisting. Thus in the 1901 listing "engineer, directing or consulting & assistant" has been coded 02, "librarian and assistant" and "medical galvanist and assistant" have been coded 03, "sexton and assistant" 05, "dressmaker, tailor and assistant" and "fiddle-string maker and assistant" 07. In the 1936 listing "caretaker or assistant, swimming baths" has been coded 05.

The other exceptions are "museum assistant" in 1901 which was coded 05, because it was considered that it was an occupation of some minor authority. "Dentist's assistant" was coded 03 in 1926, following Tom Brooking's advice on how to code the dental occupations. "Laboratory assistant" in the 1936 listing was coded 03, because of the skills involved.

Clerks:

Clerks have usually been coded 06. The exceptions are when "clerk" appears in conflated occupation titles in the 1901 listing, such as "manager, clerk, foreman (builder, contractor)", "post office: postmaster, clerk, sorter", "officer, clerk (tramway)", all of which have been coded 05. Similarly, conflated occupations which were checked against the status tables were coded according to employment status. Thus "printer, manager, clerk (employee)" was coded 07, while "quarry proprietor, manager, clerk (self employed)" was coded 04.

In the 1926 and 1936 listings the "clerk of works" and "town, country clerk" were coded 03. While the 1901 Census provides very detailed listings of clerks such as "clerk, bookseller", "clerk, hotel", the 1926 and 1936 Censuses are far less detailed. Most clerks

in these listings fall within the "clerk, bank", "clerk, insurance", "clerk, public service" and "clerk, n.o.d" or "clerk, n.e.i.". ²⁵

Commercial Travellers:

The 1901 Census provides 32 listings for "travellers" all of which have been coded 06 (white collar). After being status checked the occupational title "commercial traveller" has been split into two listings for 1926, one coded 04, the other 06. Status tables provided no information for 1936 so they have all been coded 06.

Commission Agents:

For the 1901 and 1926 listings commission agents have been disaggregated into 01, 04 and 06 codes. The 1901 title is "commission agent, hotel agent, manufacturer's agent" while 1926 simply has "commission agent". The 1936 status tables did not give any information and "commission agent" is coded 01.

Contractor:

Again the 1901 listing is the most detailed. In this listing "contractor, road-metal (employer)" and "proprietor, contractor (sawmill)" have been coded 01. Another 14 "contractor" occupations are coded 04, including the two largest occupations "builder, contractor" and "contractor, manager, apprentice, foreman (so defined)". All contractor occupations were disaggregated by status and in 4 instances, where the status tables indicated employee status, they were coded 09. These are "contractor, stone-breaker, road metal (employee)", "contractor, mail (employee)", "nightman, sanitary (employee)" and "road, railway, bridge, telegraph, wharf contractor (employee)". Two conflated occupational titles, "manager, clerk, foreman (builder, contractor)" and "contractor, manager, apprentice, foreman (undefined) (employee)" have been coded 05.

There are only 5 occupation titles with contractor in them in the 1936 listing. They have been status checked. "Contractor, bush", "builder, contractor (own account)" and "contractor, mail (own account)" have been coded 04. "Builder, contractor" has been coded 07 and "contractor, mail (employee)" has been coded 09.

²⁵

In the 1936 listing the 3 contracting occupations listed, "ploughing contractor", "mail contractor" and "contractor ("own account" only)", have all been coded 04.

Dealers:

The 1901 listing for dealers has been disaggregated by status and coded into 01, 04 and 06. As a rough indication this put 11% of male dealers into the 01 code, 61% of the males and 60% of the females into the 04 code and 28% of the males and 40% of the females into the 04 code.²⁶

The 1926 listing has "fancy-goods dealer", "second-hand goods dealer", "motor-vehicles dealer", "coal & firewood dealer" and "merchant, dealer, trader, n.o.d.", all of which have been coded 04. A check with the status tables reveals that some of these appear in the employers category, but because they are likely to be small-scale employers and to maintain compatibility with the 1901 Census (in which they are all coded 04), we have used the 04 code.

Again status check were not helpful for the 1936 listing. We followed the protocol established while coding the 1901 and 1926 listings. Thus "agricultural and farm implement dealer" has, as in the 1901 listing, been coded 01. All other dealers, such as "basket and wickerware dealer", "fancy goods dealer" "cycle dealer" have been coded 04. Curiously while the 1926 Census has only 5 listings for dealers, the term seems to come back in 1936 with 19 listings.

Exporters:

This title is not used much in the censuses at all, 1901 has "meat - exporter" and both 1926 and 1936 have "export agent, exporter". They are all coded 01.

Importers:

Again "importer" is not a frequent occupational title and in the 1901 Census only 590 men and 17 women are listed in occupations with importer in the title. It often appears in titles

²⁶Providing percentages is complicated by unclear occupational titles such as "agent, dealer, sewing -

with "dealer" or "merchant". For example "paper, merchant, importer (employer)", which has been coded 01, or "art, photographic requisites importer, dealer" and "merchant - importer (undefined)" which have been coded 04. We have disaggregated the importers by status so that you also get "paper merchant, importer (employee)" coded 06.

The 1926 listing has three "importer" listings - all status disaggregations from "indent agent, importer". They are split into 01 (135 men), 04 (120 men) and 06 (48 men and 5 women). Because the status tables were not helpful for 1936 it has one listing "indent agent, importer", with 210 men and 1 woman, coded 01.

Labourers:

Labourers have usually been coded 09. The exceptions are in the 1901 listing, usually where "labourer" is included in a conflated occupational description. This happened in 4 cases, each of which have been status checked and split into 04 and 09 codes. This gives 250 men described as "bricklayer, hodman, labourer" coded 04 and the other 754 coded 09. For "carpenter, labourer" 1,370 men are coded 04 and 5929 coded 09. Just 16 of the "navvy, labourer, platelayer" men are coded 04, the other 5,477 are 09's. Finally 23 "stevedore, lumper, platelayer" men are coded 04 and 2,125 are coded 09. Interestingly 13 of the "labourer (undefined)" men are also 04's, the other 12,836 are all 09.

In the 1926 and 1936 listings the "labourers" are all coded 09. The largest categories (29,909 men in 1926 and 21,771 men and 20 women in 1936) are "labourer, n.o.d.". Excluding rural occupations puts 19,239 and 15 women in 1901, 31,119 men and 265 women in 1926 and 45,196 men and 398 women in 1936, in to the 16 code.

Makers:

The term "maker" is used frequently in the census occupations. originally it was decided to code all makers 04, but the status tables revealed that it was often used to describe employees. For the 1901 listing we have used the status tables to disaggregate makers into 01, 04, 07 and 09 codes. The 01 and 04 coded were assigned according to the status tables and sometimes the size of the industry. For example 'engine maker, fitter, mechanical engineer (employer)" was coded 01, while "music sting maker" was coded 04.

Whether to assign an 07 or 09 code was decided by whether the occupation was related to a skilled industry. Thus "pattern maker (engineer)" and "surgical instrument maker

(employee)" were coded 07, while "bag and sack maker (employee)" and "manure (chemical) maker (employee)" were coded 09. "Candle maker" was coded 08.

In the 1926 and 1936 listings because "maker" is used in the industrial sectors, all of which have the blanket "employer" code, the 01 code is not used. For 1926 status checks indicated those working "on their own account", who were coded 04. The term "maker" was however mostly used for employees and nearly all are coded 07. The exceptions are "wireworker, wire-mattress maker" which is coded 08 and "bag, sack maker, bag machinist (not paper or leather)" which is coded 09, in keeping with the 1901 listing.

For the 1936 listing status tables were not helpful, so we followed the 1926 example. Thus "artificial flower maker", "artificial limb maker", "paper bag maker", rubber stamp maker" and "scientific instrument maker, repairer" were coded 04. Some undoubtedly could be coded 07, but in all it only adds 42 men and 56 women to the 04's. Again we coded the rest of the "makers" 07, 08 or 09 depending on what they were making. For some occupations clarification was sought. For instance Jane Malthus advised that "shirt, blouse collar maker, n.e.i" should be coded 08. We also checked that there was consistency between the 1901, 1926 and 1936 coding decisions.

Manager:

Managers have generally been coded 05. This was especially easy for the 1926 "manager" and the 1936 "manager, foreman or overseer" occupational titles. There are, of course, some exceptions. Occupations which can be best described as 'higher managerial' have been coded 01. This includes "bank manager", "manager - public company", "insurance manager" and "manager, financial company (& Secretary)". Where the status tables for 1901 showed that the manager was actually working "on their own account" we coded them 04 - this applied for 7 occupational titles, most of which were conflated eg. "contractor, manager, apprentice, foreman (so defined)". In the 1926 listing "hotel proprietor, manager, publican (own account)" has been coded 04. We were not able to do a status check for "hotel proprietor, manager" in 1936, but the numbers involved are similar to 1926 so we coded it 04 too.

Manufacturer:

We status checked all "manufacturer" listings for 1901 where this was possible. This revealed that the use of the title "manufacturer" on the 'Occupations. - Details' table did not necessarily connote employer status. For instance where the 'Occupations. - Details' table shows the listing "flock manufacturer", the status tables clarifies the title with "flock manufacturer and assistant". Not all "paint manufacturer's" were employers either - 4 of the 7 men listed under this title were employees.

So the first step was to use the status tables to split each title into employers, those "working on own account" and employees. Employers were assigned the 01 code and those working on their own or in small scale industries (such as the flock manufacturers) were coded 04.

The 07, 08 and 09 codes were applied according to the industry worked in, So "wine manufacturer (employee)" was coded 07, "varnish manufacturer" was coded 08 and "bonedust manure manufacturer (employee)" was coded 09.

Both the 1926 and 1936 listings simply have "manufacturer, n.o.d.", employing 63 men and 6 women and 11 men and 1 women respectively. They are coded 01.

Merchants:

Again the status tables have been used to disaggregate the "merchants" in the 1901 and 1926 listings. They are mainly coded 04. The 01 code has been used in the 1901 listing where the status table showed employer status. In the 1926 listing it is used for "ironmonger, hardware merchant" and "merchant, timber". Where the status tables have indicated some merchants are employees they have been coded 06.

The 1936 listing has just "lime and cement merchant" and "timber merchant" coded 01. The remaining merchants are all coded 04.

Other Occupations...:

This category, in the 1926 and 1936 Censuses has been mainly been coded 09. The exceptions are "other (clerical and professional occupations)" coded 06, "other (fisherman/trappers)" coded 04, "other (forestry occupations)" coded 08 and "other (public administration)" coded 06

Storemen:

Like warehousemen, storemen have universally been coded 06 (white collar). In the 1901 Census there are 15 listings for storemen, each denoting the industry they worked on. Both the 1926 and 1936 Censuses simply have one listing "storeman" with no further description.

Warehousemen:

Have been coded 06 (white collar) for all years. In 1901 there were 4 occupational titles for warehousemen: "manchester warehouseman", "warehouseman (ironmonger)", "warehouseman (undefined)" and "warehouseman (woollen factory)". In 1926 there was just one listing: "warehouseman (not employer)", a title which suggests that some warehousemen were included in the catch all "employers, n.e.i." category

Which Census File To Use?

All Censuses: has 1901, 1926 and 1936 together – coded for ogroup and sector.²⁷ The occupation descriptions in column A are the standardised descriptions. The original occupation descriptions are retained in Column A of the Census 1901 Coded and Census 1926 Coded files. This is the main working file.

Census 1901 Coded is the 1901 Census, with 2 columns for occupational description. Column A has the original occupational titles and Column B has the new description, adjusted to ensure compatibility with the 1926 and 1936 censuses. It also has columns for ogroup, sector worked in and material worked on/with.

Census 1926 Original has been retained solely so that adjustments in occupational description to standardise it with the 1901 Census listing can be traced if necessary. It thus has 2 columns for occupational description – Column A had the original occupational titles and Column B has the new description.

²⁷For analytical purposes after the occupational coding was complete each occupation was also given a

Census 1926 Coded also has 1 column for occupational description and columns for ogroup and sector worked in.

Census 1936 Coded has one column for occupational title, because it was not necessary to adjust occupation titles. It also has columns for ogroup and sector.

Finally, if it is intended to try to pull every example of a particular word - such as "agent" out of the census listings, it is easiest to use Filemaker Pro rather than Excel.