

P A R T I V

THE PATH TO UNIFICATION

THE WICKENS DECADE

CHARLES WICKENS had not disguised his ambition to succeed Knibbs and he was indisputably the most able professional statistician on the Bureau's staff. As Supervisor of the Census since 1912, he was by the end of 1918 being paid a salary of £606. On the basis of merit reflected in a salary differential of £66 and his status as a 'professional' rather than a 'clerical' officer, Wickens had argued unsuccessfully late in 1918 that he rather than John Stonham, the 'Chief Compiler', should act as Commonwealth Statistician during Knibbs' absence overseas.

Atlee Hunt, Secretary of the Department of Home and Territories, formally advised the rivals at that time:

. . . this decision in no way limits my complete freedom of recommendation in case a vacancy should occur in the office of Statistician, as in my judgment, the principles which should guide selection for acting and for permanent appointments are quite different.⁸²

Wickens' appointment as the second Commonwealth Statistician in August 1922 (and the addition of the title 'Actuary' in 1924) was emphatic recognition of the outstanding place he already held in the Australian statistical community. His selection, from a field of seven, brought to the helm of the Bureau a man not only widely respected for his professional attainments, but with gifts of personality which his predecessor had lacked. Fortunately for Wickens, the passage of years had removed some of those State officials whose resistance to change had so frustrated Knibbs. By 1922 the Bureau's role was established and Federal-State co-operation was a habit rather than a novelty. But Wickens' own warmth and tact were now to be key elements in the greater harmony which characterised the 1920s.

A new mood was quickly sensed. As the delighted South Australian Statist put it after meeting Wickens for the first time at a conference in Melbourne in October 1923:

. . . the atmosphere . . . and the results arrived at were an agreeable surprise to myself and I think also to the other delegates judging by after conversations. Whatever the ultimate decision of the States be [on unification] it is quite certain that the Conference was very effective in creating a much clearer and favourable understanding of the proposals of the Commonwealth, thanks largely to the genial personality of the Chairman and his lucid statements and sympathetic recognition of the local points of view.⁸³

Within the Bureau, Wickens moved swiftly to fill consequential vacancies and clarify duties. To his previous position of Supervisor of Census he promoted E. T. McPhee. However, in a reversal of the classification he had argued for a decade earlier when seeking to have his own status made comparable to two of his 'professional' colleagues, Gerald Lightfoot and F. W. Barford, the Supervisor was now graded Clerical (Class 1) rather than professional (Class B). 'As the duties of the position are neither more nor less professional than those of the other senior positions in the Bureau,' Wickens contended, 'the distinction at present existing is undesirable'. For the disappointed Stonham there was the compensation of a new title as Editor, Official Year Book, and

a salary increase of £24 a year. Stonham's position was to be placed in the special 'A' class of the Clerical Division, and he was to be responsible for editing the *Quarterly Summary* and the *Pocket Compendium* as well as the *Year Book*, and for 'general supervision over all matters involving printing and publishing'. With Wickens' own salary £250 less than Knibbs', and McPhee's lower by £158 than his predecessor's, the new Statistician was able to show net savings on Bureau salaries of £484.⁸⁴

Before his promotion, Wickens had already embarked on a campaign to enlarge the Bureau's role as a central tabulating agency for the government. There had been public talk of reducing the cost of the census by £10,000 to £12,000 by the use of leased tabulating equipment. As *The Age* commented on 4 August 1919, 'machines are now in existence that can automatically count, sort, and add, and do other wonderful things, seemingly bordering on the miraculous'. For the analysis of the 1921 Census data, collected by a team of 11 deputy supervisors, 75 enumerators, 979 sub-enumerators, and 9,500 collectors, electrical machinery and 'Hollerith' cards were supplied by the British Tabulating Machine Company. The Commonwealth signed a five year agreement under which, for £1,580 a year, it had the use of three counting machines, three sorting machines, and a counter tabulating machine. A company mechanic was made available for an additional £1,600



C. H. Wickens

a year. So impressed was he with this equipment, and evidence of economies from overseas experience, that Wickens urged its wider use in a series of minutes to his departmental head. Having established the value of machine tabulation on census data, he pointed to trade and customs, and labour and industrial branch activities as promising areas for development. By November 1922 'dual' cards had been produced on which vital statistics could be recorded in the State registration offices both in writing and in punched form. But overtures to other departments and authorities—Postmaster-General's, Railways, Treasury, Trade and Customs, and the Commissioner for Taxation—were all rebuffed.

Wickens restated his case in July 1923 in the hope that the newly created Public Service Board might be moved to act under Section 17 (1) (a) of the Public Service Act which empowered it to 'advise means for effecting economies and promoting efficiency in the management and working of Departments'. 'I am convinced,' he pronounced:

that any one who has had practical experience of the efficiency, economy, and adaptability of the tabulating machinery would as little decline to use it as he would decline to use a typewriter or a comptometer after having become acquainted with their respective capabilities . . .

The following are the principal advantages of a central tabulating bureau as compared with a number of small installations:

- (i) Regular supply of data; ensuring continuous working.
- (ii) Continuous running; enabling expert staff of operators to be organised.
- (iii) Concentration of plant, facilitating effective and economical supervision of operators and plant.
- (iv) Derangement of work due to temporary incapacitation of a machine minimized when other machines are on the spot to take up the running.

Notwithstanding the cogency of this classic argument for the centralised provision of tabulating services, Wickens met the resistance to be expected from public service barons jealously patrolling their ramparts. In the U.S.A., South Africa, and Egypt, staff savings of at least one-third had been made in tabulating trade and customs data, the statistician reported enticingly. 'The machinery method is as far ahead of the hand method as the motor car is ahead of the bullock dray' he affirmed unavailingly for those of his colleagues who were better at images than figures. Two years later, after an experiment on Victorian trade for February 1925, E. T. McPhee submitted a comprehensive proposal for centralisation of all machine processes of purchasing and tabulating trade statistics which Wickens estimated would produce cost savings of 15 per cent within three months. Trade and Customs was predictably unmoved. In a somewhat mischievous re-opening of the dialogue in 1927, the Comptroller-General of Customs passed on a suggestion from the Tasmanian Collector of Customs that if State statistical organisations were progressively to come under the aegis of the federal government there might be salary savings if the State organisations were placed 'under the control of the Customs Department'. It was the Bureau's turn to repel boarders. Responding to the Customs proposal on the basis of briefing from the Deputy Statistician, L. F. Giblin, and the Acting Statistician, McPhee, the Secretary of Home and Territories returned a chilly reply on 26 May 1927:

. . . I am directed to state that it does not appear that any appreciable saving in money or staffs would be effected . . . However, if definite evidence of overlapping or duplication in specific cases is supplied, consideration will be given to the best means of obviating such overlapping or duplication.⁸⁵

What had given some plausibility to the Customs gambit was the successful negotiation of arrangements for the transfer of the Tasmanian statistical bureau to the Commonwealth. The Prime Minister, Stanley Bruce, had persuaded a conference of Premiers and Ministers in May 1923 that it was 'desirable that one statistical authority shall be established' and that a statisticians' conference should be convened to make recommendations. Under Wickens' chairmanship, a conference was held in October 1923 and produced a scheme designed to lead to 'the greatest attainable uniformity, efficiency, and economy in whatever arrangements might be made eventually by the several Governments'. Although Queensland showed some inclinations towards unification, and Victoria entered into comprehensive negotiations, it was Tasmania which took the lead. Realising that there was no prospect of the State ever being able to provide adequately for the necessary statistical work, L. F. Giblin (who had succeeded R. M. Johnston late in 1919 and had the confidence of his government) was a strong advocate of a federal takeover. 'At present,' Giblin had confided to Wickens early in 1924, 'we have three [temporary staff] . . . and at that can barely keep up—and are in fact all the time behind hand in most things'. Supplying agricultural statistics was a particular problem in Tasmania, Giblin noted, because:

- (1) The farmers supplying the statistics are often without education and indifferent or hostile to giving the facts.

- (2) The data are not given direct but are collected by Police Officers who may be indifferent or careless . . . collection of these statistics can be a pure farce, and has been in many cases.⁸⁶

Unification of the Tasmanian and Commonwealth bureaus would assist in bringing down the curtain on the farce. It would also end the undesirable necessity to vote 'considerable sums' to enable the compilation of Tasmanian statistics to be, as Wickens put it to J. G. McLaren, his departmental head, brought up 'to the level required for Commonwealth purposes'. It took only a day of discussions between Wickens and Giblin to reach an understanding that proved acceptable to their respective governments. The agreement, which had been reached before the 1923 conference of statisticians, was embodied in legislation by both the federal and State parliaments and came into effect from 13 November 1924.⁸⁷

In addition to the formidable Major Giblin—soldier, sportsman, adventurer, politician, and adviser to the Tasmanian Premier, J. A. Lyons—the merger of the two bureaus brought into the Commonwealth service a team of talented and uniquely qualified young men. Giblin had encouraged and supervised the Commerce degree courses of four Class 5 officers: C. L. Steele, K. F. Andrews, S. E. Solomon, and K. M. Archer. The agreement with the Commonwealth incorporated provisions under which each could continue his studies and receive a refund of fees in return for undertaking to remain in the public service for five years after graduation. The indentured junior officers were a precious resource, and Giblin and Wickens subsequently pressed for financial incentives (through reclassification of positions) to retain their services. As Giblin commented in 1927:

The experiment in the appointing and training of officers for the Statistical Service has, in my considered opinion, abundantly justified itself. They have all four reached a high degree of competence for difficult statistical work—a very high degree considering the comparatively few years they have been engaged in it. This competence is combined with a keen interest in the work, and the growth of a strong professional spirit which has made this office the very antithesis of the popular conception of a Government Department.⁸⁸

Wickens needed no convincing. He had himself lamented to Giblin some years earlier: 'Here in Victoria the entrance to the Commonwealth Service is still choked with returned soldiers who passed a relatively light examination in 1920 and have not yet been all absorbed'. While particularly solicitous for the four young men whom Giblin commended for having 'equipped themselves by a long and severe University training, undergone at great sacrifice of their leisure and recreations, . . . showing daily an exceptional capacity to deal with problems which the ordinary clerical officer could not touch', Wickens was also a strong advocate of the claims of the Bureau clerical staff generally for a review of their status and salaries. The staff themselves drew attention to the growing complexity and wider scope of their duties resulting in part from the removal of their headquarters to Canberra in 1928:

Since the transfer of the Bureau to Canberra it has been brought into closer official proximity to other Departments than was formerly the case in Melbourne, with the result that the central staffs are now availing themselves more and more of the services of the Bureau. In fact there are very few questions of political or of other importance which arise without the Bureau being asked to prepare and submit some matter on the subject.⁸⁹

In a memorandum to the Secretary of the Department of Home Affairs in January 1930 supporting renewed representations by his staff, Wickens alluded incidentally to the progress towards unification of statistics under his stewardship:

. . . it cannot be too strongly stressed that this Bureau, being recognised universally as the coordinating, interpreting and publishing authority in respect of statistics for the whole of

Australia, the responsibility for accurate and comparable information is very great. It is in this regard that the work of the Annual Statistical Conferences has its origin, the Bureau in the majority of cases taking the initiative towards securing uniformity in collection and presentation.⁹⁰

In regularly bringing together the statistical fraternity, Wickens reversed the practice of Knibbs who eschewed conferences after 1906. Those statisticians who were most resistant to what they saw as Commonwealth incursions believed, as H. A. Smith of New South Wales advised his government, that 'All desirable uniformity can be obtained readily through periodic conferences of Statisticians'. While conceding that there was some apparent duplication in the collection of vital statistics, and information on wages, prices, banking, and insurance, the overlap was more nominal than real, Smith contended.⁹¹ In the event, a succession of annual conferences (interrupted in 1927 by several overseas absences) had brought increasing co-operation and rationalisation.⁹² Although the Victorian Government offered to transfer its bureau to the Commonwealth in 1925, Treasury insisted that the federal financial program made it impossible for the Victorian offer to be accepted. Wickens had to admit by February 1930 that, notwithstanding the stalling of unification, the conferences had been 'effective in greatly improving the statistical work of Australia and in bringing about certain of the improvements aimed at in the proposals for unification'. He remained convinced of the desirability of unification but realised that there was no prospect of a national government voluntarily assuming the additional £40,000 a year he estimated as the cost of performing the work being done by the States.⁹³

Forty permanent officers of the Bureau and four temporary staff were transferred from the Rialto Building in Collins Street, Melbourne to Canberra in July and August 1928. Accommodated initially in the Commonwealth offices at 'West Block', they made detailed plans to move to the Hotel Acton only to be informed at the end of June 1930 that this supposedly cost-saving relocation could not proceed because of 'the present financial situation'.⁹⁴ A more serious problem was the scarcity of housing for single officers of whom 23 were placed in boarding houses or private billets. Wickens was particularly concerned about the female staff. It was desirable, he submitted that they be housed together:

. . . so that the elder girls may be able to look after the younger girls to some extent, and in the majority of cases the parents have made it a condition of the girls coming to Canberra that Miss Paterson or Miss Miller will look after them. If they are to be housed in different hostels this will be impossible . . . There is also a strong objection by all the girls to sharing a room, and this condition may preclude some from coming to Canberra. It will be seen, therefore, that apart from the wishes of the girls, the position in its effect on the work of the Bureau may be very serious as trained Hollerith Machine Operators are extremely difficult to get owing to the limited use of the machines in Australia.⁹⁵

Anticipating further difficulties in assembling in Canberra the army of temporary staff that would be needed for the 1931 Census, Wickens had warned in March 1928 that it might be necessary to establish a census branch in either Melbourne or Sydney. The prospect of additional expense as well as the practical problems of attracting and housing an influx of census workers to the bush capital contributed to the misgivings of the Scullin Government about proceeding with the 1931 Census. As the financial situation deteriorated, fears that the Ministry contemplated abandoning Canberra altogether were reflected in a specially written article in the 1931 *Year Book* on 'Canberra, Past and Present', a plea for the viability of the national capital.

Planning for the Census had begun in 1928 and Wickens recommended that the date be set by proclamation for midnight, 30 June 1931. In advice to his permanent head, he outlined the additional questions which had been agreed at a conference of statisticians in September 1929:

- (i) Race, (particularly whether of European race or not).
- (ii) Whether on active service abroad during the war of 1914–18.
- (iii) Income group in the case of persons with annual incomes of £300 or less.
- (iv) Unemployment, time lost and cause.
- (v) Number of dependent children.
- (vi) Number of horses and poultry.

The question on income was modelled upon one included in the New Zealand censuses of 1921 and 1926. Because information was already available on incomes greater than £300 through income tax statistics—which Wickens argued should be tabulated annually by the Bureau—the question was limited to income of £300 and below. Nevertheless, the introduction of any inquiry into income in an ordinary census was, Wickens believed, unique 'in any part of the world except New Zealand'.

Compared with Britain and most of the Dominions, however, Australia was deficient in orphanhood data. The draft 1931 schedule therefore required all persons under fifteen years old to state whether their parents were living or dead. This useful additional information was, to the chagrin of later generations of demographers, gained in substitution for fertility data—the question on children from existing or previous marriages being dropped 'owing to the labour and expense involved'. One of Wickens' major preoccupations after the 1921 Census had been classification of industry, occupation, and grade of labour. Paying tribute to what Wickens (and his successors) had achieved, Giblin concluded in 1936:

We shall henceforward be able . . . to compute accurate birth rates, death rates, and marriage rates by industries and occupations, and so get for the first time information about different fertility and reproduction rates in respect to occupation.

Unfortunately, the wording of the relevant question blurred the intended sharpness of distinction between industry and occupation. Nevertheless the Census was to yield fuller information on economic condition and status by industry and occupation than ever before.

For the administration of the census it was intended to follow the practice introduced in 1921 of using electoral office staff as collectors. In order to ensure proper supervision, Wickens first proposed that 'the whole work of coding, punching and tabulating the data' should be carried out in Canberra. But the realisation that sufficient temporary staff could not be found in Canberra, combined with the knowledge that the whole census exercise was expected to cost £316,000, was enough to convince the government that postponement of the census had to be considered. With the financial crisis deepening, the Minister for Home Affairs, Arthur Blakely broke the news personally to Wickens on 6 February 1930. 'I very greatly regret the necessity which has arisen for even considering such a proposal,' Wickens responded, 'but I realize that when a position arises which is as serious as the present every possible sacrifice must be made to balance our budget'. (On the same day, the Prime Minister and Treasurer issued a joint statement denying rumours that Australia was about to postpone interest payments on its overseas loans.)

Amending legislation was passed in time to allow for a later census. While sharing the sentiments of his State colleagues, who moved a mild remonstrance at their meeting in Brisbane in May 1930, Wickens admitted to being impressed with the view expressed by the Prime Minister 'that the owner of starving stock would be better advised to spend existing funds in feeding them than in counting them'.⁹⁶ It was the newly elected Lyons Government which perceived that it was possible to feed at least some of the starving stock by counting the others. On 1 July 1931, the Labor Ministry had decided to further defer the census from 1933 to 1935. But in January 1932, Archdale Parkhill took the question to Cabinet with the strong recommendation of the

Acting Commonwealth Statistician in favour of the earlier date. Revised estimates suggested a total expenditure of £275,000 mostly over the period 1932–36, with the possibility of off-setting revenue from 'advertising on the census schedules'. A more compelling argument was that 'approximately 80% or £220,000 would be disbursed directly as wages'. When the statisticians met in conference in Sydney in August 1932, they pressed in addition for the allocation of some unemployment relief funds to 'the employment of clerical workers for working up valuable material which lies unused in the offices of Statisticians'. The statisticians did, however, agree to omit questions on loss of limb or eye, ability to read and write English, materials of roof, and horses and poultry (except in Victoria).

In inviting the federal government to be represented at the Sydney conference, the New South Wales Premier, J. T. Lang, had written:

As no conference has been held since May, 1930, the need for a general meeting has become urgent since, in addition to the old problems which are awaiting a definite decision, and consequent action, a great variety of new difficulties now confront the statistician owing to the great divergence of the Australian pound from the pound sterling and of sterling from gold.

In 1930, it had been resolved that each State would supply the Commonwealth with as much information as possible 'in respect of the existence of unemployment and of the results of efforts to relieve it'. By August 1930, it was agreed that monthly reports 'embodying any information available from State sources on unemployment' should be circulated. But, in resigned recognition of the inadequacy of their statistical endeavours in the face of the economic catastrophe, it was noted that 'unemployment registrations were of very doubtful significance, but that expenditure on unemployed relief would often give useful information'.⁹⁷

Pressure to hold the census in 1933 came from a variety of groups including the Australian Association for the Advancement of Science and the Federated Clerks' Union, the latter sending a deputation to the Minister on 14 April 1932. The clerks pointed out that their members were often the first to be laid off in hard times. They were also unsuited for the manual labour available under the State governments' relief schemes. With '10,000 unemployed clerks' awaiting his decision, the Minister capitulated. In spite of early hopes to employ cheaper female staff, the Bureau was bound by government policy to give preference to returned servicemen. Of the many applications and recommendations none is more poignant than the war historian C. E. W. Bean's letter on behalf of a former captain of his old school, Clifton College ('also the school of Haig and of Birdwood'):

He is at present getting one day a week's employment as tally clerk on the Brisbane wharfs [sic]. He fought with the A.I.F.—not in any cosy capacity either but, as you would expect of a first class cricketer and footballer, in the thick of it . . . he is unmarried, but I do hope that he will have a chance of employment in Canberra.⁹⁸

The recruitment of temporary staff (and their eventual return by rail at Commonwealth expense to the capital city nearest their home) absorbed considerable energy at senior levels of the Bureau.⁹⁹ But of more lasting significance were the promotions and appointments that followed the prolonged sick leave and eventual retirement of Wickens. For some time following the move to Canberra, Wickens had begun to show signs of strain. In mid-1929 he was forced to take two months' leave. 'My illness has been variously described in the press as a seizure and a stroke', he told A. W. Flux of the British Board of Trade on 8 July 1929, 'but if it was either the one or the other, the seizing or the striking, whichever it be, was done very gently . . .'.¹⁰⁰ A year later he was absent for a fortnight with 'nervous dyspepsia'. These gentle warnings came in the midst of a cycle of ever more demanding activities. In addition

to the ordinary work of the Bureau, and the progressive practical and conceptual refinements that accompanied the regular conferences with the States, Wickens was personally involved in a series of tasks for which his expertise made him the government's logical choice. He was frequently called on to advise the Royal Commission on National Insurance from 1924 onwards. In 1927 he represented Australia in England at a conference of actuaries and made extensive investigations in Geneva, Berne, and Berlin into social insurance leading to the preparation of the national insurance legislation presented to Parliament by Dr Earle Page in September 1928. Subsequently, Wickens took the leading role in investigating for the federal Cabinet the possibility of applying national insurance to workers' compensation, child endowment, widows' pensions, and government superannuation schemes. These complex matters were on the agenda of a conference of Commonwealth and State Ministers in May 1929 but were set aside after the defeat of the Bruce-Page Government and the onset of the economic depression.

Wickens gave evidence on statistics to the Royal Commission on the Constitution (1927) forcefully criticising Australia's failure to supplement production statistics with interstate trade statistics. He prepared statistics and gave evidence to the Royal Commission on South Australian Finance (1928), and supplied both data and personal assistance to the British Economic Mission (1928). In collaboration with J. B. Brigden, Douglas Copland, E. C. Dyason, and L. F. Giblin (now a Professor at the University of Melbourne) he produced at the request of Prime Minister Bruce the important study, *The Australian Tariff: An Economic Enquiry* in 1929. During 1928 and 1929 he also assisted the Attorney-General's Department in drafting a life insurance Bill. In the following year he was called on to furnish material and appear as a witness before both the Coal Commission and the Parliamentary Accounts Committee (on 'Tasmanian disabilities'). He was a special crown witness before the Commonwealth Arbitration Court in the Basic Wage case and was subjected to lengthy cross-examination by all parties. Other matters claiming his attention included a wrangle with Trade and Customs over adherence to a League of Nations convention on trade statistics and the additional burden of organising the supply of information for the world agricultural census sponsored by the International Institute of Agriculture.¹⁰¹

So overwhelmed was Wickens that in December 1929, hardly the most favourable time, he petitioned for the creation of a new position of Assistant Statistician. The appointment was warranted, he said:

by the growth of the functions of the Bureau, and the extent to which the services of the Statistician are requisitioned by various departments in respect of statistical and actuarial matters. In addition . . . there are at present under consideration certain proposals for extending the tabulation . . . of trade statistics and of statistics of taxation. Any such development will necessarily create heavier responsibilities for staff organization and control and will warrant a corresponding strengthening of the administrative section of the Bureau.

The requested relief was not forthcoming. Instead, apparently without comprehension of the magnitude of their request, the government added still further to the Bureau's work by seeking answers to 29 questions on the cost of living, national dividend, wages, taxation, housing finance, exchange rates, costs of production, and unemployment. Had the Labor Government proceeded with a proposal of their predecessors to create a Bureau of Economic Research, the burden of these wide-ranging inquiries would not have fallen on the Statistician. But, although the legislation had been passed, Labor shelved a project which was suspected by some as a device for subverting the Arbitration Court's independence in wage fixation. Worn out by his endeavours, culminating in the preparation of a statement for the Prime Minister's Department on the advantages to the secession-minded Western Australia of remaining in the

federation, Wickens succumbed to a cerebral seizure on the afternoon of 2 February 1931. When it became clear that he was unlikely to return to duty the government took the opportunity to invite Giblin to act as Statistician on the understanding, as Giblin recorded, 'that I should be sufficiently relieved from administrative routine to be able to give the greater part of my time to special investigations required by the Minister'.¹⁰² Giblin's special position was demonstrated by his additional title of Chief Economic Adviser.



L. F. Giblin

The advent of Giblin, who remained Acting Commonwealth Statistician until the end of 1932, accelerated a change in the role of the Bureau which had been gathering momentum under Wickens. Although Wickens, a self taught actuary, was best known for his demographic work, he was also highly respected in the small fraternity of Australian economists. He corresponded with Giblin over fluctuations in exchange rates, exchanged views on Keynes' *Tract on Monetary Reform* ('involves a good deal of unlearning of other theories which regard gold or similar basis as a *sine qua non*'), and joined with Copland, Giblin, and others in forming the Economic Society of Australia and New Zealand. In the Economic Society's journal, *The Economic Record*, he published articles on public debt statistics, 'productive efficiency', the 'relative significance of primary and secondary production', the statistics of factory output and Australian industry, and comparative costs

of living. In October 1930 he reported to the Acting Prime Minister on 'stability of currency'. The report was leaked, then released, precipitating criticism of its deflationary recommendations. His responsibility for price indexes also brought Wickens into the centre of the political controversy surrounding the Arbitration Court's basic wage hearings and eventual decision in January 1931 for an emergency ten per cent reduction in wage rates. Having initiated revision of the wholesale price index regimen and the introduction of indices for all capital cities to complement the Melbourne index, he renovated the retail price index by shifting its base from 1911 to the average of the years 1923-27, 'a period in which there was relative stability of prices, and from which there is no evidence of a prospect of marked deviation in the near future'. He then turned to other problems including the collection of information on new capital issues and 'the difficult matter of securing reliable data as to the so-called "invisible imports and exports"'.¹⁰³

In all of these activities, Wickens and the Bureau were drawn ineluctably into public prominence, a development which was discomfiting to his principal subordinate, Stonham. When the statistician begins to 'meddle with economics', Stonham wrote a little later:

he is liable to incur political odium and to have his standing as a Statistician impugned. (Mr Wickens had an unfortunate experience in this respect as regards currency inflation,

the disabilities of Tasmania under federation, and so on) . . . it is unwise for the statistician to enter the arena of public controversy. The late Sir George Knibbs resolutely set his face against it, and, in fact was opposed to appearing in the Arbitration Court.¹⁰⁴

In reality, Knibbs had never shied from publicity, although he preferred to expose the labour branch head Gerald Lightfoot to cross-examination in the basic wage cases.

Stonham's fundamental objection was not so much to the public profile of his former chief who was an eminent and professionally qualified statistician. Nor was he objecting to the close involvement of Giblin, whose standing both as a statistician and as an economist placed him in a category of his own, in the government. (As Chief Economic Adviser, Giblin attended the Premiers' Conference in May 1931 where he came in conflict with J. T. Lang.) By 1933, the issue was different: what should be the role of an economist with no traditional statistical background in the senior management of the Bureau?

FROM WILSON TO CARVER

The economist in question was Dr Roland Wilson, a protégé of Giblin's who had acquired doctorates from Oxford and Chicago and lectured for eighteen months at the University of Tasmania before being installed at a desk in the Statistician's room in February 1932 to assist Giblin on his policy assignments. Wilson has recalled:

It was L. F., as we used to know him, who brought me to Canberra as a back room boy in the Treasury, allegedly for six months. Those were the days when the only graduates in the Public Service were doctors or lawyers, or a few who did part-time courses after they were appointed . . . I had to be disguised by being put into the Stats. office as a clerk. But on my first day, lo and behold, there was a stopwork meeting. They didn't like the idea of this graduate coming in and threatening their futures . . .

Notwithstanding Giblin's assurance to the staff that Wilson's appointment was only for six months, in December 1932 Wilson was gazetted into a newly created post of Economist at a salary of £970 a year (nearly £300 a year more than the Editor, Stonham, and the Deputy Statistician in Tasmania, H. J. Exley). Wilson's promotion coincided with the return of Giblin to the University of Melbourne, and the appointment of E. T. McPhee to succeed him. McPhee, a Bureau veteran recruited from Tasmania in 1906, had returned from Melbourne to Hobart as Deputy Statistician when Giblin originally left for Melbourne University. He was already 63 in 1932 and apparently accepted the promotion to Canberra on the basis that Wilson was to be groomed as his successor. Wilson himself was not immediately aware of this plan and, in view of the resentment that had greeted his arrival, he could have been forgiven for not foreseeing that five days after his 29th birthday, McPhee would recommend that 'during future absences of the Commonwealth Statistician, the Bureau shall be under the control of Dr Roland Wilson, if he is present'. In explaining the recommendation (and the protest from Stonham which it provoked), McPhee wrote to his permanent head on 12 April 1933:

I understand that when Dr. Wilson joined the Bureau he did not wish to identify himself with the compilation of the statistics, and did not anticipate that he would be called upon to direct this work in a large measure. From his experience in the Bureau, however, Dr. Wilson has formed the opinion that an intimate knowledge of the various branches of statistics is essential to their proper economic interpretation and he is no longer averse from taking a part in this work.

It is also, I think obvious that as economic opinions must rest largely on statistical evidence, some knowledge of economics is essential to the proper selection of statistical data which

should be compiled for the guidance of publicists, and to the direction of analyses which should be made of that data by the statistical staff. I feel that statistics and economics are so closely associated that in practice they are inseparable.

Dr. Wilson during his association with the Bureau, has had frequent conferences with heads of sections or departments of the Bureau work and is almost daily in consultation with one or other of these officers. Consequently Dr. Wilson has acquired a knowledge of the fundamental details of much of the work, and has contact with the daily affairs of the Bureau. The members of the staff readily seek his assistance when they feel the need of it.¹⁰⁵

Quite apart from Wilson's outstanding ability and training, which put him in a class apart from his talented Tasmanian near contemporaries, Archer and Solomon, what McPhee was testifying to was a basic rethinking of the Bureau's purpose and orientation. The new era was signalled in the *Year Book* for 1932. Issued by McPhee under instructions from the Treasurer, to whom the Bureau now reported, the *Year Book* acknowledged the contribution of Giblin as 'consultant economist'. Publication had been delayed so that the latest statistics relevant to the financial and economic crisis could be incorporated, and the preface pointed out that current conditions had created a demand for 'new information' on trade, production, and industry.



E. T. McPhee

The demand, of course, was for understanding as well as knowledge, for policy prescription as well as diagnosis. From the mid-1920s onwards the Bureau operated in a disconcertingly evolving institutional landscape. A succession of temporary and permanent commissions and inquiries jostled for territory with emerging academic and bureaucratic rivals: the Tariff Board, the Development and Migration Commission, The Royal Commissions on National Insurance and Child Endowment, the British Economic Mission, the Loan Council, Premiers' Conferences, and always the Arbitration Court. The Economic Society, the Australian Institute of Political Science, and the Institute of Pacific Relations provided forums for informed exposition and debate. The Commonwealth Bank occupied much of the policy domain which was increasingly contested by the federal Treasury after the appointment of H. J. Sheehan as Secretary in 1932; and the Bank,

stimulated by the visit of Sir Otto Niemeyer and Professor T. E. Gregory in 1930, began to tabulate a range of banking, price, trade, railway, building, assurance, postal, bankruptcy and electrical power consumption statistics to indicate business conditions. A further sign of the times which Wickens had brought to Scullin's attention in February 1930, was the establishment in Queensland of a Bureau of Economics and Statistics under J. B. Brigden. By mid-1931, Brigden was producing an innovative Queensland business index.¹⁰⁶

Arriving at the Bureau in Canberra when the trauma of depression had placed a high premium on the advice, albeit often contradictory, of economists, Roland Wilson

found a fertile field for reform and expansion. The new Secretary to the Treasury, H. J. Sheehan, was inclined to take a more active part than his predecessor in economic policy-making but he lacked the resources and expertise that were directly at Wilson's disposal. Within two years, McPhee and his political masters were convinced that the Bureau could confidently be passed into Wilson's hands. The Assistant Treasurer, R. G. Casey, had at first been inclined to look to England for McPhee's successor; but Giblin persuaded him that British statisticians were too specialised and 'would take several years to learn the job in Australia'. Giblin convinced Casey that:

. . . Wilson is the obvious man for the job, but that we should keep McPhee on as long as possible in order to give Wilson as much opportunity as possible of picking up the multitudinous threads of the job.

McPhee had been effectively deprived of 'three or four of his best men away on the Census job'. But Giblin believed that 'if Wilson has a good economic offside, he should be able to give a fair amount of attention to specific Treasury problems'. In a parting public statement, the retiring Statistician confessed 'I have had enough of it':

The last three years have been very strenuous . . . The extensions of the functions of government and the continually increasing complexity of the social structure demand a continual expansion of the field of statistical inquiry. There is now an army of economists confident that, given sufficient bricks of the right type and quality, a way can be cleared to heaven. It is the statistician's job to provide the bricks.¹⁰⁷

It was unnecessary for Wilson—whose inclination for a policy role was no secret—to proclaim that he had every intention of building the path as well as making the bricks.

Writing in the first issue of *The Economic Record*, in November 1925, Professor Douglas Copland had lamented that 'Economic research and advice is not recognised as necessary for good government . . .'. The neglect of economic research could partly be explained, Copland suggested, by 'the excellent service rendered by the extensive statistical bureaux of the Governments'. The early volumes of *The Economic Record* gave glimpses of the professional quality and interests of several of the Commonwealth Bureau's staff. E. T. McPhee reviewed books on tariffs and trade, and H. J. Exley, J. F. Barry, W. T. Murphy all contributed articles. J. T. Sutcliffe, already the author of books on Australian trade union history and 'The National Dividend', the latter a pioneering work on national income estimation, defended the Bureau's popularly mis-named 'cost-of-living' index and its unemployment statistics.

But, while the incomparable Giblin remained a regular contributor, even while he was directing the work of the Bureau, the significant initial participation of Bureau staff was not sustained. By the time young Dr Wilson was making tart comments in footnotes in 1931 ('A little more consistency in official statistics relating to such a comparatively simple matter [interest and dividend payments abroad] would not be amiss.') no one emerged to reply.¹⁰⁸ A new generation of economists had seized the intellectual initiative by the early 1930s. Copland's students, E. K. Heath and J. Polglaze, for example, set out in 1932 to prepare an index of business activity and found official statistics to be 'quite inadequate necessitating recourse to unofficial statistics'. In 1933, Dr F. R. E. Mauldon, Senior Lecturer in Economics at Melbourne University, in a pamphlet based on a series of broadcasts on 3AR, identified 'some gaps which have still to be covered in the whole field of Australian economic statistics', which might well have been listed on a reform agenda for the Bureau:

We need more frequent census-taking . . . especially in view of inter-state migration, and it would be of great value to have enquiries made concerning wealth and income at the

same time . . . In gathering statistics of the production of wealth in Australia the extent of crop failure areas in the total areas under crop in a season is a present serious omission . . . On the mining, manufacturing and building construction sides of production we need to know monthly values and/or quantity of output for all states. To clarify our knowledge of industrial and commercial structure . . . we ought to have data of the size of manufacturing establishments and of the character of ownership (individuals, registered companies, partnerships, co-operative societies, etc.) as distinct from numbers of establishments, or sections thereof, engaged in productive processes. We ought further to have enumeration and classification of wholesale and retail business, records of amalgamations, and records of the nature and membership of trade, primary producers' and industrial associations for mutual interest in business . . .

Mauldon added that statistics of interstate trade should be reviewed and that data on marketing costs, productivity, labour turnover, labour migration, employment, and prices needed to be assembled or augmented.¹⁰⁹ For Wilson, however, the first priority had been the balance of payments. When his special chapter for the 1934 *Year Book* was circulated in advance, Giblin applauded 'this brilliant attack on one of the most important and difficult of statistical problems'. (Brilliant though it was, Wilson's treatment appalled Stonham who, as editor of the *Year Book*, found himself from 1932 onwards obliged to publish tables spattered with question marks where tradition dictated unambivalent precision.) The Conference of Statisticians in Canberra in March 1935 devoted its energies to Wilson's next major concern, production statistics, and agreed on new definitions and procedures covering agricultural, pastoral, and dairying production, mines and quarries. A start was made also on getting the States to prepare a 'key' plan to the statement of social services expenditure by 'functions' with a dissection of all group or composite items. Although McPhee told a British correspondent in January 1935 that the greater part of Wilson's time had 'unfortunately . . . been claimed by the Treasury', Wilson had in fact found it hard to resist probing into most aspects of the Bureau's work. As he told the Secretary of the Treasury in supporting the case for his attendance at the Ottawa conference of Dominion statistical officers:

There are a number of subjects on the agenda on which I have been doing a great deal of work lately . . . (especially methods of compiling various indexes of prices, methods of calculating invisible items in the trade balance, and classification of commodities on a comparable basis in trade, production and price statistics).

In an interview in 1984, Wilson recalled:

. . . the more I poked into the compilation of statistics, the more disgusted I got. So it was one subject after another trying to find out just how the figures got put together . . . For instance, the retail price index . . . we were supposed to get returns from every state from a selected number of retailers, the price of a pair of curtains, otherwise undefined. When I looked at it I found the prices varied in some states from 6/11d. to 96/11d. There might be three or four quotes that were solemnly averaged, and that was the price of a pair of curtains.¹¹⁰

Wilson's appointment as Commonwealth Statistician and Economic Adviser to the Treasury was effective from 29 April 1936. On that day, a congratulatory deputation led by Horace Downing who had been to the fore in the office protest against Wilson's arrival in 1932, let their new chief know that they thought him the best man for the job. The next day, Wilson called on the Secretary to the Treasury to ask for substantial funds to 'reconstitute' the retail price indexes. 'It hasn't taken the new broom very long to sweep clean, has it?' Harry Sheehan remarked. But the money was found. So too, but more tardily, was approval eventually given for Wilson's scheme to create a new employment category—the research officer—to remedy the Bureau's shortage of

staff versed in the economic and technical skills which a changing political environment made necessary. At first, however, he had to rely mainly on such advantage as he could derive from section 36A of the Public Service Act (a 1933 amendment) under which up to ten per cent of each year's appointments to the third division could be of university graduates aged up to 25. (He also contrived to appoint the first female librarian in the Commonwealth Public Service, by devising 'a set of qualifications with appropriate weighting' which ensured the selection of Miss Dora Whitelaw.)¹¹

During the overseas study tour that was planned around his visit to Ottawa, Wilson reported enviously to his political master, R. G. Casey, on the vast resources available to the various American statistical bureaus and New Deal organisations like the Works Progress Administration (WPA), Agricultural Adjustment Administration (AAA), and National Recovery Administration (NRA). 'Doctors of philosophy are as common as sheep in Canberra, and young graduates from the universities simply infest Washington, especially in the new alphabetical agencies.' At Casey's side in Canberra at the time were the young Melbourne commerce graduate J. F. Nimmo, and Wilson's own assistant economist, Arthur Smithies, whose career—from Hobart to Oxford to Harvard and thence via a teaching post at the University of Michigan to the Bureau as Assistant Economist in July 1935—had eerie echoes of Wilson's. With Smithies to understudy him



R. Wilson

on economic policy, Wilson had promoted H. C. Green from Supervisor of Census to Assistant Statistician at a salary 50 per cent higher than the next most senior officers (though less than half of Wilson's own salary).

In Casey, the Bureau found what no previous Commonwealth Statistician had enjoyed—a Minister who as Assistant Treasurer from September 1933 and Treasurer from October 1935 onwards, was intellectually engaged, influential and, above all, in office for long enough to establish rapport with his advisers. In Wilson, Casey found a mind he could respect and an undisguised expertise of which he was occasionally wilfully sceptical but more often in awe. Jocularly, Casey had sketched the basic problem for Wilson to address in August 1935:

I am more modest than most—all I want to know is what we should do within Australia to get things moving more quickly without unduly increasing the national debt, and the interest bill, without indulging in what might be described as inflation without risking an undue rise in the exchange rate with sterling.¹²

Fortunately for the Bureau, an economic revival, for which government could take only small credit, ensured that the reputation of its head was not prematurely jeopardised by questionable diagnoses and policy recommendations. By 1937, the

Conference of Statisticians had clearly passed from a world of crisis to one in which it was possible to discuss without anxiety 'matters of statistical importance relating especially to factory output and retail prices'.¹¹³ There was time to reflect on such anomalies as the entirely different meanings of wholesale price indexes in Canada and Australia, and the impossibility of collecting in Australia the kind of data on private finance which was routinely gathered in New Zealand. While for those who pressed the Bureau to publish an index of manufacturing production, Wilson confessed to the Economic Society in Melbourne his suspicion that 'the whole concept of the quantum of manufacturing production' might be 'a mere mirage which lures succeeding generations of statisticians to an untimely and unhonoured end'.¹¹⁴

A *Monthly Review of Business Statistics* was added to the Bureau's list of publications in 1937.¹¹⁵ The following year, the 'A' series retail price index, launched in 1912, was discontinued. The much renovated All Items ('C' series) index was to survive until 1960 when it was replaced by the Consumer Price Index. Wilson's substantial revision of the 'C' series regimen was agreed to in the 1936 Conference of Statisticians. To the Bureau's satisfaction, the Conciliation and Arbitration Commission adopted its own 'Court' series in 1937 primarily, as the Bureau's *Labour Report* explained in 1943, 'for the purpose of removing conditions which tended to engender the impression that the Commonwealth Statistician was in some way responsible for the fixation and adjustment of wage rates'.¹¹⁶

Averse as he was to bearing the imputed responsibility for wage rates, Wilson needed no convincing of the necessity for private enterprise to be 'subject to more conscious supervision and . . . more adequate guidance than has hitherto been available'. He had proclaimed in 1934 the need for 'a more vigorous and national control of the machinery for creating and distributing purchasing power'.¹¹⁷ As governments universally awakened to a similar need and potential for action, the publication of J. M. Keynes's *General Theory of Employment, Interest and Money* in 1936 crystallised a revolution in economic thinking. Keynesian analysis gave a new relevance to economic statistics, particularly to estimates of national income. A pioneer in national income studies, Colin Clark, was appointed to succeed J. B. Brigden as Director of the Queensland Bureau of Industry in 1938. Dr H. C. Coombs, who came to Canberra after the outbreak of war in 1939 as Economist to the Treasury to assist Wilson and Giblin, recalls that:

with Clark's adventurous simplifications and estimations it became possible to produce estimates contemporaneously, and indeed, by judgment of current trends, events and policies, to produce forecasts some time ahead. For this process the relationships of the Keynesian model of the economic system provided a framework. Better data began to be assembled, techniques improved, and the estimates began to be used, not merely for historical purposes but for analysis; with results which appeared to justify their services.¹¹⁸

With preparations for war a growing preoccupation of the Lyons Government, the leader of the Country Party and Minister for Commerce, Dr Earle Page, asked the Statistician to prepare a comprehensive plan for industrial development and defence to be put to the State governments at the next Premiers' Conference. Wilson's submission to Page, on 1 November 1938, advocated the creation of a council for industrial development with an executive officer and secretariat linked to a network of specialist committees. Neither this visionary scheme, nor an alternative devised by Page and his permanent head, came to fruition.¹¹⁹

Concerned to strengthen the government's capacity to stimulate and steer the economy, Wilson had proposed as early as 1934 the creation of a central 'thinking agency'. With the coming of war in 1939, the climate was more propitious for a

'central thinking committee'. An Advisory Committee on Financial and Economic Policy, set up late in 1938 to advise the Department of Defence and associated with the new Department of Supply and Development under R. G. Casey from April 1939, was now attached to the Treasury and rapidly granted a broader mandate. The Bureau undertook staff work for the 'F & E' Committee.

From his vantage point on the committee Wilson argued in July 1940 for the establishment of a Department of Labour and National Service with responsibility for vital manpower and labour issues.¹²⁰ On his appointment late in 1940 as Secretary of the department he had proposed, Wilson successfully recommended S. R. Carver, Government Statistician of New South Wales since 1938, to lead the Commonwealth Bureau during his absence. 'It is intended that Dr Wilson should resume duty as Commonwealth Statistician as soon as the new Department is satisfactorily established, which I hope may be in six to nine months' time,' Prime Minister Menzies assured the New South Wales Premier. Carver was expected to spend only four days a week in Canberra and his duties would not extend to any of the committee work or the role of Economic Adviser played by Wilson.¹²¹

Stan Carver, a highly respected statistician, had begun to make his mark in the late 1920s and was appointed Assistant Government Statistician in 1933. In 1936 he visited Britain with the Premier of New South Wales where he called on J. M. Keynes and met the young lecturer in statistics, Colin Clark. His 'extensive unpublished research' on the distribution of income in New South Wales had been prominently used by Colin Clark and J. G. Crawford in *The National Income of Australia* (1938). Outstandingly able as he was, he faced enormous problems in a poorly co-ordinated and rapidly evolving wartime administration. The six months transfer he had accepted was to stretch to the end of the war and beyond. The 'censorship complexity, new income tax data, casualty data and the half dozen other special matters' which he had expected to 'represent a fairly heavy addition to the usual flow' of Bureau work were swept up in a torrent of unanticipated demands. In January 1942, for example, Carver 'became extremely busy on the organisation of the War Statistics Section, which required me to spend a considerable time in Melbourne'. Immediately thereafter he was 'still more heavily occupied in assisting the Director-General of Manpower in the preliminary stages of organising the Civilian Register'. During 1942 and 1943 an 'army census' was carried out and a ten per cent sample was tabulated.¹²²

By mid-1943 it had become necessary to reorganise the management of the Bureau to provide more effective support for the Acting Statistician. The Public Service Board approved the temporary elevation of S. E. Solomon from Chief Research Officer to Assistant Statistician (War Statistics) and J. Barry from Senior Clerk and Supervisor of Census to Assistant Statistician (Administrative). J. C. Stephen and K. Archer were also reclassified to handle production and food statistics, and State liaison and 'emergency statistics' respectively. Simultaneously, a brilliant young clerk, H. P. Brown, was promoted to Research Officer. The Secretary to the Treasury had expressed the 'fear that Mr Carver has been endeavouring to handle personally too many of the new problems which have arisen with war-time conditions . . .'. Although Carver was, and remained, an inveterate perfectionist, necessity imposed a greater degree of delegation than he was able to concede in less demanding times. A further reorganisation in September 1944, consequent on Solomon's return to Queensland, saw Barry promoted to Assistant Statistician, and 'second in charge of Bureau'.¹²³

The official histories of Australia in World War II have provided authoritative accounts of major statistical endeavours on manpower, production, price control, rationing, and other problems of war. It is clear that the Bureau was overwhelmed by

a range of tasks for which it was unprepared and under-staffed. 'Our pool of officers is about dry,' Carver confided to O. Gawler, the Victorian Statist on 9 February 1943, 'we have "diluted" to and beyond safe limits . . .'. Statistical units sprang up to meet the pressing needs of particular departments, but their work was usually narrowly focussed and of transient value. The Bureau itself lent officers to liaise with military authorities or to assist other organisations such as Food Control. S. J. Butlin, himself the Director of the Economic and Statistical Division of the Department of War Organisation of Industry from December 1941 to January 1943, concluded in retrospect:

Perhaps the worst result of all was that a particularly scarce form of skill was dispersed in isolated sections which it proved impossible to integrate into a single statistical service. The most remarkable achievement, later in the war, of the Acting Statistician was his high degree of success as a peripatetic diplomat in informal coordination of the work of these scattered workers.¹²⁴

THE POST-WAR AGENDA

In January 1944, the Director-General of the Department of Post-War Reconstruction, H. C. Coombs, pronounced:

The fatalism which regarded the fluctuations of economic activity as something we must take for granted, and the miseries which attended them as inevitable burdens which we must patiently bear, was the first casualty of the war.¹²⁵

The government's commitment to a 'full employment' policy, embodied in a White Paper published in 1945, had great significance for the future scope of the Bureau's role. Stan Carver presciently warned that 'to encourage the belief that it is within the Government's power to maintain a long-term high level of employment was to manufacture political dynamite'. It was also to manufacture a formidable burden for the Bureau. As early as November 1944 Carver commented that 'the post-war deluge of statistical development has begun and we are in no position to meet it with so much personnel away'.¹²⁶

In a memorandum to Carver on 30 October 1945, Coombs sketched the improvements in the range and timeliness of statistics that were essential to full employment planning. Monthly or 'preferably weekly' information on employment, expenditure, and stocks, necessarily compiled on a sample basis, were required. The National Register of July 1939 had revealed unemployment considerably exceeding estimates based on trade union and other customary sources. More frequent censuses or occupational surveys were 'the only means of checking the validity of estimates of total employment, based [since 1941] on Pay Roll Tax and other miscellaneous data, of the number of employed and workers on their own account and of the number unemployed'. Unemployment statistics were now to be tabulated from the records of applicants under the Unemployment and Sickness Benefits Act. (The responsibility for compiling uniform unemployment statistics passed to the Commonwealth Employment Service in 1946.)

For information on past and prospective private capital expenditure, Coombs recommended twice yearly returns from manufacturers, large pastoral and mining companies, construction contractors, private utilities, transport companies, banks, insurance offices, wholesalers, large retailers, 'chain' hotels, restaurants, and theatres. Monthly output statistics for capital goods—the value of output and the volume of production where available—were also to be collected. Motor vehicle, building, and consumer durable expenditure information were desirable as were data on stock volumes. Believing that variations in public capital expenditure would be 'the most

important means of affecting fluctuations in other types of expenditure in order to maintain full employment,' Coombs emphasised the necessity both of historical data and forecasts of expenditure and employment on public capital works. The era of national income and expenditure estimates had begun.

Summarising his paper in seventeen recommendations, Coombs concluded that 'as far as practicable, all important statistical information should be tabulated according to the regions determined by each State for purposes of regional planning'.¹²⁷ (This visionary proposal, far beyond the resources or the political will of the mid-1940s, was to be revived in the 'urban and regional budget' project undertaken collaboratively by the Bureau and the Department of Urban and Regional Development under the Whitlam Government.) The Department of Post-War Reconstruction participated in a sub-committee of the Conference of Statisticians held in November 1945 which reported on the statistics needed in connection with employment policy. Papers from Post-War Reconstruction and the Commonwealth Bank amplified the outline of 'Essential Information' which had been incorporated in the White Paper on 'Full Employment'. The conference agreed on the desirability of a revised approach to the presentation of public finance and public works data, the subdivision of pay-roll tax statistics into all relevant industry classifications rather than classification according to the 'predominating' industry of the employer, an urgent census of distribution, and more comprehensive building statistics, as well as most of Coombs' other requirements. To meet these needs, it would be necessary, Carver and his State colleagues concluded, to enlarge the trained staff of all of the bureaus 'to a level greatly beyond that of pre-war years'. Recalling this resolution four years later, the assembled statisticians again noted that 'the resources of Australian statistical bureaus are insufficient to meet in full either urgent national demands or international obligations . . .'.¹²⁸

In fact the pre-war Commonwealth Bureau permanent staff of about 80 had already doubled by 1948 (with a further 436 temporary staff), and in the next decade would double again. While in some States the resources devoted to statistical work did not keep pace with the tasks to be accomplished, it became increasingly clear that only a unified national organisation could satisfy modern demands. Even unification, however, could not be expected to overcome genuine conflicts of interest between the Commonwealth and the States. The Chairman of the Commonwealth Grants Commission, A. A. Fitzgerald, reminded the Prime Minister on 21 August 1946 of the difficulties posed by 'the lack of uniformity in the financial practices and accounting methods and in the manner of presentation of the public accounts of the several States'. But, as a meeting of Grants Commission, Treasury, Commonwealth Bank, Post-War Reconstruction and Bureau of Statistics officials concluded on 12 December 1946, the possibility of persuading all States to publish supplementary tabulations was remote. The practice of transferring moneys to or from extra-budgetary funds was unlikely to be abandoned by governments wishing 'to arrive at the surplus or deficit which is considered politically desirable'.

The Bureau continued to argue for an economic classification of 'the true relationship of public finance to the private sector of the economy'. But, although there were marginal improvements, a conference of federal and State finance officers in April and August 1955 still admitted that 'the present tabulations and publications were inadequate'. The potentially dramatic effect of adopting a new functional classification of consolidated revenue, trust and special funds, and the loan fund in Queensland was exposed by Stan Solomon who in a letter to Carver on 29 March 1956 compared the proposed method with that used in the *Finance Bulletin*. Using data for 1954-55, Solomon found that only in one item (railways) did the old system produce something

approximating a 'true' figure. Solomon himself was willing to consider a more open approach to what later became known as 'hollow logs'.¹²⁹

During the 1930s, the Commonwealth had not actively pursued the goal of unification. But, as Menzies noted at the time, Carver's dual appointment from late 1940 had 'the further advantage of knitting the work of the Commonwealth and States in the statistical field more closely together'.¹³⁰ Although Wilson returned to the Bureau in March 1946, he was increasingly preoccupied with his economic advisory tasks. A planned six months' overseas assignment early in 1948 turned into an absence of fifteen months during which Carver was once again placed in command of the federal as well as the New South Wales bureau. In seeking Carver's services, Prime Minister Chifley was at pains to point out the prospective mutual benefits:

There may perhaps be a number of ways in which the Commonwealth Bureau of Census and Statistics could be of assistance in helping Mr Carver to carry out his State responsibilities . . . I am hopeful that, if you consent to this proposal, it will enable a closer coordination of Commonwealth and State statistical activities to be achieved. All Governments today are in urgent need of fuller and more up-to-date statistics, and it is believed that this can be realised only by developing the closest possible relationships between the Commonwealth and State statistical agencies.¹³¹



S. R. Carver

James McGirr's warm endorsement of the objective of 'closer co-ordination' was the crucial turning point on the path to unification. In June 1949, McGirr agreed to the Commonwealth's proposal to house the New South Wales bureau and the three sections of the Commonwealth Bureau operating in Sydney together in Dymock's Building. The Premier endorsed action already initiated 'to unite in joint statistical branches the Commonwealth and State staffs dealing with statistics of factories, building and employment in N.S.W'. To set the seal on these developments he also agreed to Chifley's suggestion that the unification process should continue towards 'some form of comprehensive statistical organisation which would serve the needs of both Commonwealth and State'. To this end, Carver was to be appointed Deputy Commonwealth Statistician (N.S.W.) concurrently with his State position, and the Commonwealth

was to reimburse Carver's State salary as well as pay additional allowances. When Wilson finally became head of the Treasury in March 1951, Carver was his logical successor. But the New South Wales Government trembled on the brink of a final decision for integration with the Commonwealth. As a compromise, Carver was appointed Acting Commonwealth Statistician, the status he was to retain until August 1957 when, with integration about to be consummated, it was at last possible for him to enjoy the style and title of Commonwealth Statistician.¹³²

The War had caused the suspension of some statistical collections from January 1942 onwards. The census due in 1941 was also deferred. As the War drew to a

close, Carver discussed with Colin Clark the timing of the postponed census. Clark was eager to hold an early census and suggested that a family schedule could be collected when ration books were issued in June 1946 (an occupational survey had been taken in association with the issue of ration books in 1945).

But Carver saw insurmountable problems in the shortage of skilled staff and the political sensitivity in 'anything that looks like saying "Fill in this big form before you get a Ration Book"'. Moreover:

those who have to be convinced do not yet realise that information is essential to the type of future policy to which they are committed. Therefore there is an unwillingness to do unconventional or enterprising things to get information . . .

Carver's preference was for an 'intermediate census' in 1947. He agreed with H. C. Coombs that the occupational survey of all civilians aged fourteen and over taken in June 1945 would provide most of the data obtainable from a personal census. As Coombs advised the Minister for Post-War Reconstruction on 19 October 1945:

The only important information normally sought in a complete census, which will not be available, is data in respect of dwelling accommodation. As it is already known that there is a widespread and serious shortage of houses and that this is likely to be acute in the winter of 1946 when many demobilised Servicemen will still be looking for homes, questions on dwelling accommodation at that time might arouse public antagonism.

Contrary to Clark, who contended that there was little to be gained by delay as 'nothing really ever settles down properly these days', Coombs and Carver believed that 'population and conditions generally would be too unsettled' to justify a census before 1947.¹³³ The 1945 Conference of Statisticians had concurred, and taken the opportunity to re-affirm their support for quinquennial censuses, recommending that 'the first post-war quinquennial census be held on 30 June 1947'. (Clark was successful in securing agreement to his proposal to reinstate a question about the issue of marriages which had been omitted in 1933. There were also new questions agreed with the Director of Housing on whether dwellings were built before 30 June 1933, materials of roof, availability of gas, electricity, and running water, existence of bathroom, flush toilet, laundry, cooking facilities, and means of cooking.) The statisticians enjoyed the sympathy of the federal Prime Minister and Treasurer, J. B. Chifley, who nevertheless remitted their proposal for a permanent and substantial nucleus census organisation 'for future consideration by the Commonwealth Statistician, the Treasury and the Public Service Board, with a view to a further submission to Cabinet'. The Treasury alone was to consider the quinquennial census issue before Cabinet was invited to make a decision.¹³⁴

In arguing in 1950 against taking a census in 1951, mainly because of difficulties in assembling the staff of collectors, compilers, tabulators, and draftsmen (for mapping and collectors' diagrams), Roland Wilson pointed out that a census in 1954 'would provide equal inter-censal interval of seven years between the Censuses of 1947, 1954 and (presumably) 1961'. This, he suggested, 'might turn out to be a reasonable first step towards the practice of taking Censuses quinquennially rather than decennially—an objective which we have long had in mind'. In the meantime, data from 1947 and ongoing collections were adequate for most purposes, and postponement to the later 1950s would allow for large numbers of immigrants, both received and projected, to be 'absorbed permanently into the Australian economy'.¹³⁵ The case for censuses 'or at least dissected population counts, at short intervals of a few years' was again pressed by Carver in 1959. In a draft Cabinet paper he argued:

Overall population increase in the seven years 1947 to 1954, an important factor influencing the choice of 1954 as a Census year, was 1,407,172 persons, a number far in excess of any

previous intercensal increase during this century. By comparison, the increase in the seven years 1954 to 1961 may exceed this number, bringing the population of Australia at mid-1961 to possibly over 10.4 millions. This record expansion will render the Census information currently available quite out-of-date.

There was a further difficulty in measuring the interstate movement of population because of the rapid development of travel by air and road. A Ministerial conference in June 1958 had drawn attention to the effect of increasingly inaccurate population estimates on tax reimbursements grants. Within the Bureau there was also growing dissatisfaction with the decreasingly dependable estimates of employment, unemployment, and work force projected forward from 1954 on the uncertain basis of pay roll tax returns. Heeding these concerns, successive governments consented to a census every five years from 1961. The *Census and Statistics Act 1977* made a quinquennial census mandatory, a fresh impetus having been imparted by a High Court decision of 1976 requiring an electoral redistribution within the life of every Parliament.¹³⁶

The expanding post-war demand from administrative authorities and representatives of primary, secondary, and tertiary industry for innovatory and more comprehensive statistical collections, strained the Bureau's regulatory and organisational framework. All forms, other than those relating to 'factories, mines and productive industries generally' had to be prescribed by statutory rules and gazetted. Only prescribed persons were obliged to complete forms. Experience with the collection of building statistics demonstrated the inconvenience and embarrassment which this cumbersome process entailed. For the fifteen quarterly collections of building statistics from September 1945 to the first half of 1949, new forms had to be prescribed six times. When Carver sought further changes in 1949 to implement a hard won agreement to collect building statistics on behalf of the Victorian Minister for Housing, he learned that it would be at least six months before the necessary rules could be prepared and gazetted. The only alternative to proceeding without legal authority was to change the legislation. Carver convinced Chifley, who in turn carried the Cabinet, to remove the requirement to prescribe both forms and persons.

As a later Bureau commentator saw it:

No longer would the work of statistical collection be bogged down through the threat, or the fact, of recalcitrant and litigious respondents challenging prescriptive wording on individual collection forms. The fact of being sent a form by the Statistician was to be sufficient to oblige a person to comply with the requirements of the Act, in a stroke "prescribing" both the respondent and the schedule to be completed.

Simultaneously, the Bureau obtained an extension of the secrecy obligations of section 24 of the Census and Statistics Act to cover information supplied voluntarily as well as 'furnished in pursuance' of the Act. The second reading speech explained that statutory authority was now given to the 'unwritten and inviolable law concerning the privacy of information, about individual persons and individual businesses, obtained for statistical purposes by the Statistician'. Henceforth that secrecy could not be violated by regulation or by administrative action. Confidentiality was extended not only to returns supplied to the Statistician (by State statisticians as well as by individuals and organisations) but to copies of returns held by respondents themselves.¹³⁷

In parallel with these regulatory developments came strains on human resources and a re-orientation of the Bureau's function. During the War, the Commonwealth Government had assumed responsibility for national economic management. The High Court's legitimisation of uniform taxation and State re-imburement laid the foundation for a greatly expanded Commonwealth role in the peacetime economy. State government interest in developing the capacity for long term planning was interrupted, and

buoyant post-war conditions diminished the imperative to monitor and moderate economic fluctuations. As post-war reconstruction lost its momentum, federal policy initiative was grasped by the Treasury whose ascendancy was both symbolised and assured by Wilson's appointment as Secretary in 1951. Treasury annexed the economic domain (contesting some parts of it successively with the Departments of Prime Minister and Cabinet, Commerce and Agriculture, and Trade). The Bureau's fusion of statistical and economic advisory roles embodied most notably in Giblin and Wilson was irrevocably terminated with Wilson's departure and Treasury's rapid recruitment of a team of economists.¹³⁸

When the Commonwealth decided the time was ripe to re-open negotiations towards integration of State and federal statistical bureaus, they were to find themselves embracing what one official was subsequently to describe as 'generally depleted statistical capacities'. In a personal letter to the Western Australian Under Treasurer, Carver noted in September 1953 that 'at least three of the States, without recognising it, have been abandoning their statistical organisations and automatically throwing more and more on to us to do in Canberra'. Nevertheless, Carver was hopeful because 'statistical coordination has come actively to life in both Brisbane and Melbourne, where joint premises and other joint arrangements contingent on the Census are being made'. Meanwhile, in Canberra, the Public Service Board had 'provided career jobs which will now enable us to continue the development of Australian statistics towards the levels attained in the United Kingdom, Canada and the United States'. One of the key jobs created was that of Assistant Statistician (Administrative), a position specially approved in 1949 to regularise Wilson's refusal to allow Archer to take up a promotion in the Department of Health.¹³⁹

With the encouragement of Archer and O'Neill, a frustrated H.P. Brown produced for Carver early in 1950 a list of the Bureau's 'general deficiencies', and 'specific items' which required action. Brown found fault with unco-ordinated publication policy, 'inadequate thinking' about 'general statistical policy' as well as a lack of experimental work on questionnaires, insufficient attention to seasonal variations in monthly collections, and the narrowness of the range of monthly statistics. Delays in compilation and publication, and the 'very summary fashion' in which the inquiries of private persons were dealt with were linked directly with staff shortages, as, by implication, were 60 neglected categories of statistics. Remedying all of the inadequacies nominated by Brown was beyond the resources of even a rapidly growing organisation. But significant progress was made in some important areas. With D.V. Youngman, Brown himself had already pioneered social accounting and had developed sampling techniques for business surveys. Further important analytical work was done on national accounts during the 1950s, but greater emphasis was placed on compiling statistics. In 1950, quarterly surveys of retail establishments began, complementing a Census taken in 1948 and 1949 after strong requests from the business sector. A survey of wage and salary taxpayers introduced in 1952 resulted in a saving of 80 staff who had previously compiled taxation statistics by complete enumeration. The creation in 1953 of a sampling section under I.G. Jones in the Development Branch saw the new techniques established, although a sceptical Carver was tempted to discontinue all sampling operations when the 1954 Census of retail establishments could not at first be reconciled with the surveys for the corresponding quarters. From the mid-1950s onwards, in spite of resistance from some informants who queried the Statistician's authority to use sampling techniques, sample surveys embraced some elements of monthly production, wool clip estimates, stocks, capital expenditure, local government employment, company tax and award occupations, as well as special assignments for the Reserve Bank and various government departments, town planning

authorities, and academic institutions. Developmental work on a household expenditure survey was undertaken by Dr F.B. Horner and G.R. Palmer but the dispersal of senior staff to State offices (and the beginning in 1958 of studies related to the introduction of computers) led to the suspension of household expenditure work and other new projects. Meanwhile, however, E.K. Foreman prepared the groundwork for a labour force survey and the extension of sampling into census quality control. Foreman became the driving force behind a core sampling organisation that progressively, and not without friction with some other 'line' managers, undertook responsibility for innovation in a variety of applications of mathematical statistics.¹⁴⁰

UNIFICATION AND A NEW WORLD

It fell to Archer, at Carver's behest, to usher in the era of the computer. A sympathetic response from Roland Wilson and Lenox Hewitt of the Treasury ensured that funds were available for the purchase of computers (a Control Data 3600 in Canberra and satellite CD 3200s in State capital offices), the programming staff having been recruited from Britain in 1962. Archer and Dr John Ovenstone, a Weapons Research Establishment and subsequently Defence Department expert, had been entrusted by a 'quite terrified' Carver with defining the Bureau's needs and overseeing the installation. The new world which the Bureau was attempting to cope with using advanced techniques and vastly enhanced computational power, was described some years later in a memorandum arguing the case for major statutory changes:

The pressures which were being exerted on the Commonwealth Bureau during the post-War years reflected not only the increase in the volume of statistics being sought, but also a fundamental change in the manner in which official statistics were being used. Whereas in pre-War years, statistics were used primarily as a measure of past performance, since the War they have been used increasingly as a means of evaluating current trends and as a basis for anticipating future economic trends for planning, both in Government and in private industry.¹⁴¹

The management problems of the 1960s and beyond were to be problems of an expanding organisation, still conscious of a mis-match between resources and commitments, where overlapping, duplication, lack of co-ordination, and excessive subject-matter specialisation are endemic. With 3,100 staff by 1969 and 2,000 publications (550 titles) released each year, it was an organisation whose work could be strategically directed but no longer given the degree of personal oversight to which Carver had aspired.¹⁴² As the scope of activities widened, Bureau officers in the State capitals found themselves responding to media inquiries on 'sensitive areas of public opinion (income, expenditure patterns, pension sources, types of illness or infirmity)'.¹⁴³ As academic, business, and government researchers widened the ambit of their concerns, anxieties about the erosion of privacy were more frequently expressed in Parliament and the community. While economic statistics remained central to the Bureau's mission—and were radically enhanced by the introduction in 1969 of an integrated census of mining, manufacturing, electricity, gas, wholesale and retail trade, and certain services—there was a growing emphasis on social statistics. Statistics of household expenditure and the use of motor vehicles had acknowledged policy relevance. In line with overseas practice, seasonal adjustment of a wide range of series became accepted procedure; input-output tables and econometric models were produced; and attention was even turned to the long resisted but pressingly demanded indexes of production and productivity.¹⁴⁴

While the Bureau's leading officers were anything but complacent, particularly as other federal departments developed independent and sometimes incompatible data systems, they had rightfully recognised that the achievement of unification agreements with all States laid the essential foundation for a re-invigorated and extended national statistical enterprise. Negotiations towards an integrated statistical service were re-opened by the Commonwealth in 1953. Discussions with Victoria were promising but inconclusive. The Queensland Labor Government decided to 'retain its own Statistical office to meet all State Governmental, Local Authority and State Industrial requirements'—a stance that was promptly reversed by the Country Party-Liberal Party coalition in 1957.¹⁴⁵ But all States consented to a transitional step of housing their statistical officers in the same premises as Commonwealth officers. Even this move was delayed, as Carver explained to Wilson, by 'the messing about of various Commonwealth instrumentalities, even involving the fundamental question as to whether a State Statistical office could be housed in the Commonwealth space'. Carver proceeded cautiously until mid-1953, feeling that he was 'a bit out of step' with Wilson with whom he had had insufficient opportunity to confer. But having been assured that he was not 'running contra' to Wilson's views, he proceeded 'actively but guardedly with suasion' to the point of having the Treasurer ready by October 1953 to recommend a simple amendment to the Census and Statistics Act to facilitate the negotiation of agreements with individual States. It was to take another three years, however, before legislation was in place.



K. M. Archer



J. P. O'Neill

By early August 1954, Carver had distilled his thinking about unification into eleven 'principles' which he discussed first privately with well placed public servants in New South Wales, South Australia and Western Australia. A draft agreement on

integration, with special reference to Western Australia, was prepared by the Crown Solicitor in January 1955. The following month, Carver advised the Chairman of the New South Wales Public Service Board that an enabling Bill and a draft or staff reorganisation were also ready.¹⁴⁶ Agreement in principle with the governments of Western Australia, New South Wales, and South Australia proved less difficult than had been feared. The draft agreement with Western Australia became the prototype of arrangements to be made with each State following enactment of the Statistics (Arrangements with States) Bill, authority for which was finally sought from the Cabinet by Arthur Fadden in February 1956. Fadden advised Cabinet that the proposed arrangements entailed the creation of:

an integrated statistical service operated by Commonwealth officers under the immediate direction of each State of a Statistician who would hold office under both the Commonwealth and the State . . .

No State would be required to surrender its sovereign powers in the field of statistics. It would agree to exercise them in a special way through an integrated service.¹⁴⁷

In a series of agreements, beginning with South Australia in March 1957 and ending with Victoria in June 1958, the vision that had fired a succession of statisticians from Coghlan to Carver at last became a reality. Of all the benefits predicted to flow from integration, one of immeasurable practical and symbolic significance was identified by the compiler of 'Preliminary Notes on the Provisional Agenda' for the 1958 Statisticians' Conference: 'The Central Bureau can now, for the first time in history, make a firm printing timetable with the Commonwealth Printer.'¹⁴⁸



R. W. Cole



R. J. Cameron

While the completion of unification was Carver's greatest achievement, he also influenced the future course of the Bureau by his nurturing of the careers of Keith Archer and Jack O'Neill. Archer had been made responsible for 'the main statistical

work and general administration of the office' under Carver.¹⁴⁹ He was created Deputy Commonwealth Statistician in 1958 and regularly acted for Carver when the Statistician was absent. He succeeded Carver in February 1962. O'Neill, Archer's close colleague for three decades, followed him as Deputy and ultimately as Statistician in 1972. With the departure of O'Neill in 1975, a half century of continuity was ended. The re-christening of the organisation as the Australian Bureau of Statistics, its statutory autonomy, the appointment of its head from outside, and its headquarters consolidation in concrete isolation eight kilometres from the centre of Canberra at Belconnen, all heralded a new era that awaits its historians.

NOTES

- ¹ 'Report on the Proposed Establishment of a Central Bureau of Statistics', T. A. Coghlan to Sir William Lyne, 21 April 1903, Sir Edmund Barton MSS, NLA 51/1/1112-14.
- ² E. C. Fry, 'T. A. Coghlan as an Historian', paper presented to Section E, ANZAAS Congress, Aug. 1965, p. 9.
- ³ National Australasian Convention, Sydney, 1891, *Votes and Proceedings*, p. clxxvi; John Quick and Robert Garran, *Annotated Constitution of the Australian Commonwealth*, Sydney, 1901, p. 572.
- ⁴ *Census of Australasia 1901*, Conference of Statisticians' Report, Legislative Assembly, New South Wales, 1900, p. 1.
- ⁵ *ibid.*, p. 3.
- ⁶ Correspondence Register, Department of Home Affairs, AA A100.
- ⁷ Conference of Statisticians, Hobart, Jan. 1902, *Parliament of Tasmania*, No. 25, 1902, Appendix III, pp. 32-3.
- ⁸ *ibid.*, p. 33.
- ⁹ *ibid.*, p. 7.
- ¹⁰ *Unification of Australasian Statistical Methods and Co-ordination of the Work of the Commonwealth and State Bureaux*, Conference of Statisticians of the Commonwealth and States of Australia and Colony of New Zealand, Melbourne, 1906, p. 24.
- ¹¹ *Conference of Statisticians* . . . 1902, pp. 8-9.
- ¹² Sir Edmund Barton's Diary, 6 March 1903, Barton MSS, NLA 51/2/951; Coghlan to Lyne, 21 April 1903, Barton MSS, NLA 51/1/1118-25.
- ¹³ Joan M. Cordell, *T. A. Coghlan Government Statist of New South Wales 1888-1905*, unpublished ts., n.d., p. 99; Commonwealth Statistician and Actuary to Secretary, Department of Home Affairs, 8 Feb. 1930, AA A571, 32/2037, refers to Johnston's letter.
- ¹⁴ Cordell, p. 119. For Coghlan's work on the organisation of export and import statistics see his correspondence with the Commonwealth Treasurer, Sir George Turner, Nov.-Dec. 1904, AA A571, 05/3601.
- ¹⁵ Cordell, p. 100; Coghlan to W. McLeod, 11 April 1906, Cordell p. 101; and letters to Deakin urging that the Commonwealth take over the work of the state agents general, 6 Sept. and 27 Oct. 1905, Alfred Deakin MSS, NLA 1540/15/2430, 2446.
- ¹⁶ 'Appointment of Commonwealth Statistician', Department of Home Affairs office memorandum, 12 Feb. 1906; Prime Minister (Deakin) to Premier of New South Wales (Carruthers), 6 Feb. 1906, AA A100, 1906/1258; Coghlan to Deakin, 15 Feb. 1906, Deakin MSS, NLA 1540/1/1334. For an interpretation showing Carruthers in a 'bad light' see D. I. Wright, *Shadow of Dispute*, Aspects of Commonwealth-State Relations, 1901-1910, Canberra, 1970, pp. 78-9; cf David Carment, *Australian Liberal: A Political Biography of Sir Littleton Groom 1867-1936*, Ph.D. Thesis, A.N.U., 1975, pp. 46-9.
- ¹⁷ Secretary, Department of Home Affairs for Minister for Home Affairs, 21 Dec. 1905; T. T. Ewing to L. E. Groom, 27 Dec. 1905; Secretary, Department of Home Affairs to Minister, 12 Jan. 1906, Sir Littleton Groom MSS, NLA 236/1/398, 403, 413; Coghlan to Deakin, 28 Dec. 1905, Deakin MSS, NLA 1540/1/1280-2; *Commonwealth Gazette* 24 Feb. 1906, p. 150; *Nation Building in Australia The Life and Work of Sir Littleton Ernest Groom*, Sydney, 1941, pp. 44-5, 50-1, 118.
- ¹⁸ *Report of the Proceedings of the Conference between the Commonwealth and State Ministers*, Hobart, 1905, pp. 87, 90.
- ¹⁹ *Commonwealth of Australia Parliamentary Debates* (CPD), vol. XXXII, House of Representatives, 23 Aug. 1905, pp. 1384-5.
- ²⁰ The secrecy provisions inadvertently inhibited State statisticians from using information obtained under the Commonwealth Act for State purposes until a regulation remedied the unintended consequence in 1909. (ABS 06/200.) Four Tasmanian businessmen earned the distinction of being the first people to be prosecuted for failure to furnish information. Convictions were recorded and more serious penalties threatened for future delinquents (*The Mercury*, 16 June 1910, ABS Box R8 903/09.) It was not until 1935 that all States had legislative authority for their own statistical collection: Tasmania (*Statistical Returns Act 1877*); Queensland (*Statistical Returns Act 1896*); New South Wales (*Census Act 1901*); Western Australia (*Statistics Act 1907*); Victoria (*Statistics Act 1928*); South Australia (*Statistics Act 1935*). An amending Act in 1920 explicitly empowered the Statistician to publish census results and abstracts 'as the Minister directs, with observations thereon'.
- ²¹ CS (C. H. Wickens) to Secretary, Department of Home Affairs, 8 Feb. 1930, AA A571, 32/2037; Coghlan to Deakin, 28 Dec. 1905, Deakin MSS, NLA 1540/1/1280-2.

- ²² Cordell, p. 112; Susan Bambrick, 'The First Commonwealth Statistician: Sir George Knibbs', *Journal and Proceedings*, Royal Society of New South Wales, vol. 102, 1969, pp. 127, 132-3. Knibbs' appointment as Acting Professor of Physics at Sydney University is mentioned in various obituaries but there is no official record of it at the university.
- ²³ Lyne to Groom, 11 May 1906, Groom MSS, NLA 236/1/449. When more prominent statisticians like Victoria's William McLean and Coghlan's deputy and successor, J. B. Trivett, had recently been subjected to public dissection of their methods and social philosophies in the inquiries of the Mackellar Commission into the birth rate, the advantage of having nothing known against him was a considerable asset to Knibbs. (Neville Hicks, *This Sin and Scandal*: Australia's Population Debate 1891-1911, Canberra, 1978, ch. 7; W. D. Borrie, *Population Trends and Policies: A Study in Australian and World Demography*, Sydney, 1948, Ch. IV.) Fortunately, Knibbs was on the platform with Deakin, Groom and the Labor leader, J. C. Watson, at the launching of the Immigration League of Australia in October 1905. (Michael Roe, *Nine Australian Progressives: Vitalism in Bourgeois Social Thought 1890-1960*, St Lucia, 1984, p. 162.)
- ²⁴ Coghlan to D. C. McLachlan, 29 June 1906, Cordell, p. 102.
- ²⁵ Coghlan to Deakin, 29 June 1906, Deakin MSS, NLA 1540/1/1449.
- ²⁶ Coghlan to Ewing, 26 Oct. 1906, Cordell, p. 102.
- ²⁷ J. Stonham to Secretary of the Treasury, 3 May 1933, ABS 57/1530.
- ²⁸ George Handley Knibbs, 'The History and Development of the Statistical System of Australia', in John Koren (ed.), *The History of Statistics, Their Development and Progress in Many Countries . . .*, New York, 1918, p. 60; Commonwealth Bureau of Census and Statistics (CBCS), *Official Year Book of the Commonwealth of Australia . . .*, No. 1, 1908, Melbourne, 1908, p. 12.
- ²⁹ *Conference of Statisticians . . .* 1906, p. 4.
- ³⁰ ABS 140/08.
- ³¹ *Conference of Statisticians . . .* 1906, pp. 15-17,8.
- ³² *ibid.*, p. 6. For the shrewd observations and suggestions of an experienced South Australian mounted police constable, see Leo Dingle to Government Statist, 19 June 1922, ABS (Adelaide), 141/1916.
- ³³ *ibid.*, pp. 7.23; Knibbs argued vigorously for quinquennial enumeration in a memorandum to the Secretary, Department of Home Affairs, 1 Feb. 1907, AA A100, 7/861.
- ³⁴ *ibid.*, pp. 12-13; Ian vanden Driesen, 'Demographic Grumbles: Some Problems with Population Data in Western Australia 1850-1900', *Australian Historical Statistics*, No. 6, Jan. 1983, p. 23.
- ³⁵ *Conference of Statisticians . . .* 1906, pp. 20-1, 6.
- ³⁶ G. H. Knibbs, *Local Government in Australia*, Melbourne, 1919, preface; for an early attempt to minimise 'unwarrantable and misleading' divergences in defining metropolitan areas, see CS (Knibbs) to South Australian Government Statist, 21 June 1911, ABS (Adelaide), 91/1911.
- ³⁷ *Conference of Statisticians . . .* 1906, pp. 20-1.
- ³⁸ *ibid.*, p. 21; CBCS, *Year Book* 1917, p. 197.
- ³⁹ Coghlan to Deakin, 10 July 1905, Cordell, p. 41; Coghlan to Deakin, 20 July 1906, CS (Knibbs) to Secretary, Department of Home Affairs, 12 July 1907, AA A100, 07/4753; CPD, vol. XLV, House of Representatives, 31 March 1908, p. 9875. Knibbs was also riled by the unauthorised description of Coghlan in *Who's Who in Australia 1907* as 'Statistician to the Federal Government since 1906' (CS [Knibbs] to Secretary, Department of Home Affairs, 5 Feb. 1907, AA A100, 7/938.)
- ⁴⁰ CS (Knibbs) to Secretary, Department of Home Affairs, 21 March 1908, ABS 45/26.
- ⁴¹ Memo by CS (Knibbs), 24 March 1908, ABS 45/26; CPD, vol. XLIV, Senate, 24 March 1908, p. 9422; in a memorandum to the Secretary, Department of Home Affairs on 15 Jan. 1907, Knibbs had foreshadowed the annual publication of a 1,500 page Commonwealth statistical register and a quinquennial 1,500 page 'Statistical Account of the Development of the Commonwealth of Australia' as well as the *Year Book*. (AA A100, 07/666.)
- ⁴² CS (Knibbs) to Secretary, Department of Home Affairs, 21 Oct. 1907; 9 April 1908 (approved by Minister, 23 April 1908), ABS 45/26.
- ⁴³ ABS 45/26.
- ⁴⁴ CS (Knibbs) to Secretary, Department of Home Affairs, 4 March 1908, ABS 45/26; L. H. Sholl, the South Australian Government Statist, was particularly dismayed by his State's inability to collect and publish production statistics as promptly as Victoria and New South Wales (Government Statist, South Australia to Victorian and New South Wales Government Statists, 21 June 1911, and replies 12 July 1911 and 28 June 1911, ABS, Adelaide, 95/1911).
- ⁴⁵ CS (Knibbs) to Secretary, Department of Home Affairs, 5 Nov. 1908, minuted by Hugh Mahon, 18 Nov. 1908, ABS 45/26.

- ⁴⁶ CS (Knibbs) to Secretary, Department of Home Affairs, 9 May 1908, ABS 45/26. The similarity between some sections of the *Year Book* and corresponding portions of earlier works by Coghlan gave a particular piquancy to the denigration of Knibbs' prose style. Mr B. D. Haig kindly drew my attention to some parallel passages in the works of Coghlan and the *Year Book*.
- ⁴⁷ Coghlan to N. C. Lockyer, 8 Jan. 1909, Cordell, p. 48.
- ⁴⁸ Coghlan to Deakin, n.d. (ca Oct. 1908), Deakin MSS, NLA 1540/1/2126; Coghlan to MacLachlan, 19 March 1909, Cordell, p. 48.
- ⁴⁹ *Year Book* 1908, pp. 760-1, 767, 516-22.
- ⁵⁰ *ibid.*, p. 7.
- ⁵¹ G. H. Knibbs, *The Problems of Statistics*, Brisbane, 1910, *passim*. For an assessment of Knibbs' social and economic thinking see Craufurd D. W. Goodwin, *Economic Enquiry in Australia*, Durham N. C., 1966, pp. 261-2, 349-50, 448-52, 487-91.
- ⁵² Hughes to Mahon, 15 April 1909, Mahon MSS, NLA 937/129.
- ⁵³ Coghlan to Lockyer, 18 March 1908; to Macleod, 21 Oct. 1910, Cordell, pp. 103, 102; Coghlan to Deakin, 25 March 1909, Deakin MSS, NLA 1540/1/2336.
- ⁵⁴ AA A100, 07/5356; Groom's opinion, 5 Aug. 1907, is published in Patrick Brazil and Bevan Mitchell (eds), *Opinions of the Attorneys-General of the Commonwealth of Australia*, with opinions of Solicitors-General and the Attorney-General's Department, vol. 1, 1901-14, A.G.P.S., Canberra, 1981, pp. 345-6; cf Robert Garran's comment, 11 Aug. 1908, in Brazil and Mitchell (eds), p. 402.
- ⁵⁵ CS (Knibbs) to Secretary, Department of Home Affairs, 26 Nov. 1909; Prime Minister to Premier of Western Australia, 20 Nov. 1908, ABS 06/200; CS (Knibbs) to Secretary, Department of Home Affairs, 5 Jan. 1909, ABS Box R24, 140/08; CS (Knibbs) to Secretary, Department of Home Affairs, 16 Dec. 1909, ABS 200/06. The limits on Knibbs' authority were clearly illustrated by his failure to persuade Queensland and New South Wales to continue the costly compilation of the particulars relating to 'distinct persons' convicted at magistrates' courts which facilitated comparisons of data on lower and higher courts. (CS to Government Statistician, Queensland, 3 Nov. 1910, ABS Box R15, 200/06; cf Satyanshu K. Mukherjee et al., *Crime Trends in Twentieth Century Australia*, Sydney, 1981, pp. 13-15.)
- ⁵⁶ F. B. Horner, 'The Evolution of the Census', Address given to the N.S.W. branch of the Economic Society of Australia and New Zealand, 23 April 1954, p. 11; David Tait, 'Respectability, Property and Fertility: The Development of Official Statistics about Families in Australia', *Labour History*, No. 49, Nov. 1985, p. 92; G. H. Knibbs, *The First Commonwealth Census, 3 April 1911*, Notes, Bureau of Census and Statistics, Melbourne, 1911; in Koren (ed.), *The History of Statistics*, p. 64. Knibbs spoke of the Census team as consisting of 400 enumerators, 7,000 collectors, a maximum of 280 tabulators, and an expenditure of £170,000. British developments are noted in Richard Lawton (ed.), *The Census and Social Structure: An Interpretative Guide to Nineteenth Century Censuses for England and Wales*, London, 1978, p. 20.
- ⁵⁷ A. Adrian, 'Trends in Social Statistics: The Australian Census 1911-1981', Working Paper No. C10, 1981 Census of Population and Housing, Development Programme, ABS Canberra, [1982], pp. 3-4, 5-9; ABS evaluation of the 1976 Census race question indicated that 'the quality of the data is suspect'. (Brian Doyle and Raymond Chambers, 'Census Evaluation in Australia', Working Paper No. C4, 1981 Census of Population and Housing, Development Programme, ABS, Canberra, [1980], Appendix 2.) On the deaf-mute problem, see H. O. Lancaster, *An Introduction to Medical Statistics*, New York, 1975, pp. 1-4.
- ⁵⁸ Press cuttings, Dec. 1910 to July 1911, ABS (Adelaide), 161/1909; CS (Knibbs) to South Australian Government Statist, 13 May 1912, ABS (Adelaide), 96/1912; *Conference of Statisticians of the States of Australia*, Sydney, March 1912, pp. 17, 8, 10, 13. Within weeks of the conference the Commonwealth had moved to arrange for daily reports on interstate rail migration to be supplied by railway officers at border towns. (Minister for Home Affairs, Schedule No. 8, 30 April 1912, AA A742.)
- ⁵⁹ *Year Book* 1912, pp. 1167-84; G. H. Knibbs, *Inquiry into the Cost of Living in Australia 1910-11*, CBCS, Melbourne, Dec. 1911; G. H. Knibbs, *Expenditure on Living in the Commonwealth, November 1913*, Labour and Industrial Branch Report No. 4, CBCS, Melbourne, Aug. 1914.
- ⁶⁰ G. H. Knibbs, *Social Insurance*, Report by the Commonwealth Statistician . . . , CBCS, Melbourne, Sept. 1910, pp. 83, 92.
- ⁶¹ An undated draft 'Labour and Statistics Department Bill', Regulations, and Explanatory Memorandum are in King O'Malley MSS, NLA 460/3046-58.
- ⁶² Minister for Home Affairs to Secretary, Department of Home Affairs, 13 March 1911, 24 Jan. 1911, 13 Feb. 1911, (copies), O'Malley MSS, NLA 460/40-3, 1, 25-8.
- ⁶³ Minute by Minister for Home Affairs, 24 March 1911, (copy); CS (Knibbs) to Minister for Home Affairs, 30 Sept. 1912, O'Malley MSS, NLA 460/44, 3059-60. It was not until 1975 that the Commonwealth Statistician had the full powers of a departmental head.

- ⁶⁴ *Year Book* 1913, pp. 1123–55; CPD, vol. LXII, House of Representatives, 24 November 1911, p. 3165; C. Forster, 'Australian Unemployment, 1900–1940', *The Economic Record*, vol. 41, no. 95, Sept. 1965, pp. 426–50 and 'Indexation and the Commonwealth Basic Wage 1907–22', *Australian Economic History Review*, vol. XX, no. 2, Sept. 1980, pp. 99–118; the early development of the Labour and Industrial Branch can be traced in 'schedules' of current work circulated to parliamentarians by King O'Malley, Oct. 1911 to May 1913 (AA A742).
- ⁶⁵ Knibbs in Koren (ed.), *The History of Statistics*, pp. 65–8. By December 1912, Wickens had accumulated 54 days untaken leave 'through pressure of exceptional official duties'. (Wickens to CS, 30 Dec. 1912, ABS W/65.)
- ⁶⁶ CS (Knibbs) to Minister for Home Affairs, 2 Nov. 1916, annotated by O'Malley, 6 Nov. 1916, ABS W/65. In answer to a question on notice, the Senate had been told on 14 September 1916 that there were 24 permanent staff and 28 temporaries employed on the usual work of the Bureau, with an additional 107 temporary staff on war census work. (CPD, vol. LXXXIX, Senate, 14 Sept. 1916, p. 8534).
- ⁶⁷ CS (Knibbs) to South Australian Government Statist, 4 Sept. 1914; New South Wales Government Statistician to CS, 1 Oct. 1914, (copy); R. M. Johnston to G. H. Knibbs, 23 Sept. 1914, (copy), ABS (Adelaide), 159/1914; Memorandum, Government Statist to Chief Secretary, 26 July 1916, ABS (Adelaide), 144/1916; South Australian Government Statist to CS (Knibbs), 13 July and 18 Aug. 1916; CS (Knibbs) to Government Statist, 17 July and 22 Aug. 1916, ABS (Adelaide), 136/1916. As early as 24 Sept. 1908, Knibbs had commented that production statistics could be improved and issued earlier if the State bureaus 'were relieved of effort in connection with Vital Statistics'. (ABS Box 24, 140/08.)
- ⁶⁸ G. F. Pearce to Premier, South Australia, 3 June 1916; 'Report Upon the Work of the State Statistical Department and the Proposal for Transfer to the Commonwealth Government'. Government Statist, 30 June 1916, ABS (Adelaide), 118/1916 (CPD, vol. XCIV, Senate, 24 Nov. 1920, p. 6871).
- ⁶⁹ R. M. Johnston to Premier, 17 July 1916, (Tasmanian Premier's Department 1.269) quoted in D. N. Allen, *The Development of Official Statistics in Tasmania*, Diploma of Public Administration thesis, University of Tasmania, 1965, p. 81.
- ⁷⁰ 'Report ... 30 June 1916', ABS (Adelaide), 118/1916; the Registration of Births, Deaths, and Marriages Department was amalgamated with the Statistics Department in 1928, bringing South Australia into harmony with Victoria, Queensland, and Western Australia, with Tasmania and New South Wales the exceptions. (CS [Wickens] to Secretary Department of Home Affairs, 8 Feb. 1930, AA A571, 32/2037.)
- ⁷¹ *The Age* 13 Dec. 1916. As a war economy, Victoria had ceased publishing its Statistical Register, shortened its *Year Book*, and reduced the print run. (Unsigned and undated memorandum ca 1920, ABS Melbourne; Erle Bourke, *Victorian Year Book 1986*, Melbourne, 1986, pp. 18–19.)
- ⁷² CS (Wickens) to Secretary, Department of Home Affairs, 8 Feb. 1930, AA A571; Johnston to Knibbs, 23 Sept. 1914, (copy), ABS (Adelaide), 159/1914.
- ⁷³ G. H. Knibbs, *The Private Wealth of Australia and its Growth as ascertained by various methods, together with A Report of The War Census of 1915*, CBCS, Melbourne, 1918, pp. 8–13, 19; Knibbs to G. Pitt-Rivers, 17 March 1921, (copy), AA A1606, B5/1 Part 3.
- ⁷⁴ *ibid.*, pp. 36–7; Government Statist, South Australia to CS (Knibbs), 8 Sept. 1915, ABS (Adelaide), 129/1915; Colin Clark and J. G. Crawford, *The National Income of Australia*, Sydney, 1938, p. 7; L. Soltow, 'The Censuses of Wealth of Men in Australia in 1915 and in the United States in 1860 and 1870', *Australian Economic History Review*, vol. XII, no. 2, Sept. 1972, pp. 125–6; F. Lancaster Jones, 'The Changing Shape of the Australian Income Distribution, 1914–15, and 1968–69', *Australian Economic History Review*, vol. XV, no. 1, March 1975, pp. 21–34. Understatement was also evident in responses to the voluntary questions on income in the 1933 Census. (Clark and Crawford *op. cit.*, pp. 7–22.)
- ⁷⁵ Knibbs, *Private Wealth*, p. 178.
- ⁷⁶ Knibbs to Stonham, 23 Dec. 1919, ABS 26 19/579. Knibbs had admitted to an inquirer in 1919 that not all information about the sources of personal income had been tabulated at the war census. (CPD, vol. XCL, House of Representatives, 4 March 1920, p. 201.)
- ⁷⁷ CPD, vol. XCIV, House of Representatives, 6 Oct. 1920, p. 5364; Knibbs to Sholl, 29 Jan. 1915, ABS (Adelaide) 23/1914.
- ⁷⁸ CS (Knibbs) to Minister for Home and Territories, 25 Feb. 1918, AA A461, D320/1/3; ABS R12 18/169. Knibbs' comprehensive treatment of the proposed imperial bureau, including a floor plan for the offices and library, suggests a personal as well as an official interest in the outcome. While in London, Knibbs pointed out that the British had no central bureau of statistics. The Commonwealth government was unenthusiastic about committing funds to an organisation that might necessarily have to undertake tasks more properly the responsibility of the British alone. With the British themselves bent on economy the scheme languished. (R. R. Garran to Prime Minister, 25 Jan. 1924, AA A461, D320/1/3.)
- ⁷⁹ Knibbs to Stonham, 23 Dec. 1919, ABS 26 19/579.

- ⁸⁰ G. H. Knibbs, 'Statistics and National Destiny', *United Empire*, vol. XI (New Series), No. 1, Jan. 1920, pp. 14-25; 'The Problems of Population, Food Supply and Migration', *Scientia*, vol. XXVI, Dec. 1919, pp. 485-95.
- ⁸¹ Fraser to Knibbs, 9 May 1919, ABS 26 19/579.
- ⁸² Secretary, Home and Territories Department to CS (Knibbs), 28 July 1919; CS (Knibbs) to Secretary, Home and Territories Department, 23 July 1919 (copy), ABS R26 19/579. Wickens had not been one of Knibbs' original choices for the Bureau but had successfully applied when his more senior Perth colleague W. Siebenhaar had declined an offer of appointment. (C. F. Wilson, Colonial Treasurer, to CS [Knibbs], telegram, 24 Oct. 1906, ABS 53/06.)
- ⁸³ J. G. McLaren (Secretary, Home and Territories Department) to Knibbs, 19 May 1921, CSIRO Archives 1/175 Pt 1; H. O. Lancaster, 'Charles Henry Wickens 1872-1939', *Australian Journal of Statistics*, vol. 16, no. 2, 1974, pp. 71-82 for Wickens' life and an assessment of his contributions to demography and vital statistics in particular. Sir Roland Wilson, recalling a view expressed in the Bureau in the early 1930s, credits Wickens with authorship of *The Mathematical Theory of Population*, the major work published over Knibbs' name. Wickens himself, in an obituary of Knibbs, described the study as Knibbs' 'most ambitious effort'. Professor C. C. Heyde concludes from a study of this and earlier works that Wickens would have had a claim to recognition as co-author (private communication, 15 Feb. 1988). ('An address by Sir Roland Wilson to mark the 50th anniversary of his appointment as Commonwealth Statistician', ABS, Canberra, 29 April 1986, pp. 1-2; C. H. Wickens, 'Sir George Knibbs'. *The Economic Record*, vol. v, no. 9, Nov. 1929, p. 335.) George Pearce saw the deaths of several State officials as affording 'a splendid opportunity' for reform. (CPD, XCIV, Senate, 24 Nov. 1920, p. 6871.) W. L. Johnston to Wickens, 22 Oct. 1923, ABS 08/140.
- ⁸⁴ CS (Wickens) to Secretary, Home and Territories Department, 9 Aug. 1922, AA A571, 32/2030; CS (Knibbs) to Secretary, Department of Home Affairs, 18 March 1911, (copy), ABS Box W165 53/06. Barford, who was to be principal assistant to Stonham, also found himself reclassified from professional to clerical.
- ⁸⁵ *Year Book* 1922, pp. 1084-5. The machine tabulation saga is documented in AA A571, 32/2034-5. In the mid 1920s, the New South Wales and Victorian bureaus were each using two Powers Automatic Key Punches and a Powers Automatic Counting Sorter which could sort about 18,000 cards an hour. (ABS, Adelaide, 49/1926.)
- ⁸⁶ 'Extract from Report of Conference between Prime Minister, State Premiers and Ministers . . . Melbourne, May, 1923', ABS (Melbourne); *Conference of Statisticians, Melbourne 2/10/23 to 5/10/23*, typescript report to Prime Minister and Premiers, 5 Oct. 1923; Giblin to Wickens 12 March and 4 April 1924. ABS 08/140.
- ⁸⁷ CS (Wickens) to Secretary, Home and Territories Department, 10 Sept. 1924, ABS 08/140. Correspondence, memoranda, and copies of legislation relating to the takeover of the Tasmanian operation are in AA A571, 32/2028, ABS 08/140 and 39/1/1. (The property transferred to the Commonwealth by the Tasmanian Act included three revolving chairs, five mats, a waste paper basket, three Fuller slide rules, and an arithmometer. The South Australian Bureau's copy of the Act has a marginal query about the last two items: 'What are these? Wd they help the office'. [ABS, Adelaide 215/1924].)
- ⁸⁸ Giblin to CS (Wickens), 18 March 1927 (copy), and subsequent exchanges with the Public Service Board, AA A571, 32/2041. K. A. Archer, Commonwealth Statistician 1962-70, was paid personally by Giblin for his first nine months in the Hobart office until his appointment was formalised retrospectively when Giblin's friend, Lyons, became Premier in 1924. As the other juniors were 'town-bred', Archer's farming background led to his assignment to understudy the 63 year old J. R. Green on 'stock and crop' statistics (NLA, TRC C12/38). J. P. O'Neill was another Commonwealth Statistician to benefit from Giblin's guidance and support in obtaining a free place for university study in 1929 (ABS 30/57). In his enthusiasm for youth, Giblin apparently did not sense the frustration of his principal assistant. In a protest over his treatment since 1924, the 64 year old W. T. Murphy obliquely indicated a suspicion that neither merit nor age was the crucial factor. 'I understand that the laws of Italy now provide that no member of the Public Service shall be at the same time a member of any Secret Society. Such a law cannot possibly be an injustice to any one; and would, undoubtedly, have the effect of considerable saving to the taxpayers, of greater efficiency in the Service, and of inspiring confidence in the administration.' (W. T. Murphy to Chairman, Public Service Board of Commissioners, 6 Jan. 1929, ABS 30/57.)
- ⁸⁹ CS (Wickens) to Tasmanian Government Statistician, 10 April 1924, ABS 08/140; CS (Wickens) to Assistant Secretary, Department of Home Affairs, 24 Oct. 1924; J. Stonham et al to CS (Wickens) 16 Sept. 1929, and subsequent correspondence between CS, PSB, and Home Affairs Department, AA A571, 32/2030. In the harsh economic climate of 1929-30, Wickens' advocacy on behalf of his staff, and his request for the creation of a position of Assistant Statistician fell on deaf ears.
- ⁹⁰ CS (Wickens) to Secretary, Department of Home Affairs, 22 Jan. 1930, AA A571, 32/2030.
- ⁹¹ H. A. Smith, 'Report upon Scheme for Unification of Australian Statistics . . .', 11 May 1923, ABS (Melbourne).
- ⁹² The conferences attended by Wickens were held in Adelaide (1924), Sydney (1925), Perth (1926), Hobart (1928), Canberra (1929), and Brisbane (1930). The agenda usually embraced population and vital statistics, finance, transport and communication, trade and commerce, local government, production,

- labour and industrial, with production statistics usually a major item. The 1924 conference, for example, was urged by the Western Australian Statist to review various categories affected by the rapid growth of the automobile industry. 'The fact that motor chassis manufacture has not yet been undertaken in Australia does not preclude the intelligent anticipation of the likelihood of such a possibility.' (Briefing notes for CS [Aug. 1924], Treasury 69/1975.)
- ⁹³ The Victorian deliberations are documented in ABS (Melbourne) files. The history of unification efforts from 1906 was summarised in CS (Wickens) to Secretary, Department of Home Affairs, 8 Feb. 1930, AA A571, 32/2037; cf 'Uniformity in Statistics', paper for meeting of Commonwealth and State Ministers, 20 Feb. 1930, AA A571, 30/1011.
- ⁹⁴ Wickens had speculated hopefully on 29 March 1928 that it was 'unlikely that a move will take place at midwinter'. (AA A571, 32/1587 Pt 1); for the proposed move to the Hotel Acton see ABS 30/328.
- ⁹⁵ CS (Wickens) to C. Laverty, 23 June 1928, ABS 45/1486. The Public Service Board had decided in February 1924 that machine tabulation 'is routine work and particularly suitable for the employment of female officers of the Fourth Division with duties embracing coding statistical information, punching cards according to the code, and general routine work of machine tabulation . . . in addition to the economy which will be thus effected, it may be anticipated that there will be a gain in efficiency by the establishment of a nucleus of trained staff . . .'. (AA A571, 32/2030.)
- ⁹⁶ CS (Wickens) to Secretary, Home and Territories Department, 29 March 1928, 8 Oct. 1929; Memoranda by Wickens 4 Nov., 2 and 7 Dec. 1929; CS (Wickens) to Minister for Home Affairs, 6 Feb. 1930; CS (Wickens) to Secretary, Department of Home Affairs, 27 June 1930, AA A571, 32/1587 Pt 1. For political background see John Robertson, *J. H. Scullin, A Political Biography*, Perth, 1974, chapters 11-22. For E. G. Theodore's interest in the income question and Wickens' explanation see CS (Wickens) to Secretary, Department of Home Affairs, 14 March 1930; H. J. Sheehan (Assistant Secretary, Treasury) to Minister for Home Affairs, 21 March 1930, AA A571, 32/2046. As the income question was recommended by the statisticians' conference in September 1929 it could not have been, as has been accepted on the authority of the Statistician's Report on the 1933 Census, 'actuated in part . . . by the special interest in the effects upon the pattern of distribution produced by three years of severe depression'. (Adrian, 'Trends in Social Statistics . . .', p. 14; Ian McLean and Sue Richardson, 'More or Less Equal? Australian Income Distribution Since 1933', *The Economic Record*, vol. 62, March 1986, p. 74). On orphans and fertility see *Report, Resolutions, and Agenda of the Conference of Statisticians of Australia . . .* Canberra, 9 to 13 September 1929, Canberra, 1929, pp. 4-5; Adrian, 'Trends in Social Statistics . . .', pp. 12-13. Occupational data are discussed in L. F. Giblin, 'The Census and Occupational Trends', G. V. Portus (ed.), *What the Census Reveals*, Adelaide, 1936, pp. 55-80; Roland Wilson, *Census of the Commonwealth of Australia 30th June 1933, Statistician's Report*, Canberra, 1940, chapters xxii-xxiv. Wilson does not appear to have pursued Giblin's vision of fertility and reproduction rates by occupation.
- ⁹⁷ Parkhill's Cabinet submission, 28 Jan. 1932, AA A571, 32/1587 Pt 1; *Report, Resolutions, and Agenda of the Conference of Statisticians of Australia . . .* Sydney, 10 to 17 August, 1932, Sydney, 1932, p. 10; Acting CS (Giblin) to Secretary Treasury, 30 Sept. 1932, AA A571, 1932/1587 Pt 2. Premier of New South Wales to Prime Minister, 9 March 1932, AA A571, 32/1781; *Report, Resolutions, and Agenda of the Conference of Statisticians of Australia . . .* Brisbane, 22 to 27 May, 1930, Brisbane, 1930, p. 8. The Bureau's declining public commitment to its trade union figures as an indicator of unemployment is charted in Forster, 'Australian Unemployment . . .', pp. 433-46. Cf. J. L. K. Gifford, *Economic Statistics for Australian Arbitration Courts*, Explanation of their Uses, Criticisms of Existing Statistics and Suggestions for their Improvement, Melbourne, 1928, ch. II.
- ⁹⁸ CS (Wickens) to Secretary, Department of Home and Territories, 29 March 1928; Bean to Perkins (Treasury), 26 April 1933, AA A571, 32/1587 Pts 1-3.
- ⁹⁹ For lobbying by the R.S.S.I.L. and the government's response see AA A461, L320/1/1 and M320/1/1. Preference was given to returned soldiers as sub-enumerators, and only ex-soldiers were eligible for appointment to the Canberra temporary clerical staff. The Statistician instructed the Deputy Supervisors of Census to select suitable unemployed persons as collectors. These positions were exempted by order-in-council from the returned soldiers' preference section of the Public Service Act but the Public Service Commissioners still supported the general policy of preference.
- ¹⁰⁰ ABS 27/646.
- ¹⁰¹ On Wickens' health and activities in 1927-31, see ABS W165, 27/646 (trade statistics), 24/873 (world agricultural census), *Royal Commission on the Constitution*, Vol. 1, *Minutes of Evidence*, Pt III, Melbourne, 1927, pp. 378-81 29/429 (social insurance), T. H. Kewley, *Social Security in Australia 1900-72*, Sydney, 1974, pp. 143-54. In his first discussion on tariffs with Wickens, Giblin and Dyason, Bruce was relieved to discover 'they were equally fogged with myself as to what had actually been the effect from the economic standpoint of Australia's policy of protection', (Bruce to F. L. McDougall, 29 Sept. 1927, quoted in W. H. Richmond, 'S. M. Bruce and Australian Economic Policy 1923-29', *Australian Economic History Review*, vol. XXIII, no. 2, Sept. 1983, p. 251).

- ¹⁰² CS (Wickens) to Secretary, Department of Home Affairs, 16 Dec. 1929, AA A571, 32/2030; Minister for Home Affairs to Minister for Defence, 4 Nov. 1931, AA A571, 34/2633; CPD, CXX, Senate, 20 March 1929, pp. 1495–1518; J. Buckley-Moran, 'Australian Science and Industry Between the Wars', *Prometheus*, vol. 5, no. 1, June 1987, pp. 12–13; Acting CS (Giblin) to Secretary, Department of Home Affairs, 24 April 1931, ABS W165; Neville Cain, 'Lyndhurst Falkiner Giblin', in Bede Nairn and Geoffrey Serle (eds), *Australian Dictionary of Biography*, vol. 8: 1891–1939, Cl-Gib, Melbourne, 1981, pp. 646–8.
- ¹⁰³ Wickens to Giblin, (copy), 4 Feb. 1924, ABS 08/140; Notes on agenda, Conference of Statisticians, Perth, Aug. 1926, Treasury 69/1974; Wickens, 'Some of the Problems of Index Numbers', typescript [1929], ABS 19/2; CS (Wickens) to B. Latham (Commonwealth Bank), 18 and 28 Nov. 1930, ABS 30/1357; Neville Cain, 'The Economists and Controversy over Policy in 1930–31', Economic History Joint Seminar paper, A.N.U. 1 May 1987, pp. 5–6, 17–18.
- ¹⁰⁴ Stonham to Secretary to the Treasury, 3 May 1933, (copy), ABS 57/1530. In 1930 Wickens had crossed swords publicly with Giblin over Tasmania's claim for additional financial allocations from the Commonwealth.
- ¹⁰⁵ 'An address by Sir Roland Wilson . . .', p. 3; Giblin to (E. M. Giblin), 8 Feb. 1932, L. F. Giblin MSS, NLA 366, Ser. 5, 1–88–CS, (McPhee) to Secretary to the Treasury, 12 April 1933, AA A571, 33/1625. The joint Parliamentary Committee on Public Accounts had recommended in its *Report on the General Question of Tasmania's Disabilities*, the creation of a permanent body to study federal-state financial relations with 'a qualified economist' under the control of the Commonwealth Statistician.
- ¹⁰⁶ C. B. Schedvin, *Australia and the Great Depression*, Sydney, 1970, ch. IV; Neville Cain, 'Economics Between the Wars: A Tall Poppy as Seedling', *Australian Cultural History*, no. 3, 1984, pp. 74–86; ABS 39/1/1 and 30/1357 for the Queensland Bureau of Economics and Statistics and the Commonwealth Bank. The Queensland Bureau of Economics and Statistics was reconstituted as a Bureau of Industry in late 1932, shorn of one of its original functions of assisting the Industrial Court (B. H. Molesworth, 'The Bureau of Industry in Queensland', *The Economic Record*, vol. ix, no. 16, June 1933, pp. 105–8). For Development and Migration Commission and Royal Commission on National Insurance interest in unemployment, see Colin Forster, 'An Economic Consequence of Mr Justice Higgins', *Australian Economic History Review*, vol. XXV, no. 2, Sept. 1985, pp. 103–9.
- ¹⁰⁷ Casey to Sheehan, 26 Jan. 1935, (copy), Lord Casey MSS, AA CP503/1 Bundle 3; *The Argus*, 26 Feb. 1936.
- ¹⁰⁸ D. B. Copland, 'The Economic Society—Its Origin and Constitution', *The Economic Record*, vol. 1, no. 1, Nov. 1925, p. 140; Roland Wilson, 'Australian Capital Imports, 1871–1930', *ibid.*, vol. vii, no. 12, May 1931, p. 53 fn 1; 'Australian Monetary Policy Reviewed', *ibid.*, vol. vii, no. 13, Nov. 1931, pp. 195–215.
- ¹⁰⁹ E. K. Heath and J. Polglaze, 'A Business Index for Australia', *The Economic Record*, vol. ix, no. 17, Dec. 1933, p. 215; F. R. E. Mauldon, *The Use and Abuse of Statistics*, With Special Reference to Australian Economic Statistics, Melbourne, 1933, pp. 21–2. Mauldon, by then Professor of Economics in Tasmania, was appointed Economist and Research Director in the Bureau in 1939 but left two years later. Other economists calling for new approaches to statistics included E. R. Walker and G. L. Wood. *The Economic Record*, vol. XII, no. 2, Dec. 1936, pp. 290–1. For contemporary developments in the United States, see Wilson Gee (ed.), *Research in the Social Sciences, Its Fundamental Methods and Objectives*, New York, 1929; A. Ross Eckler, *The Bureau of the Census*, New York, 1972; Joseph W. Duncan and William C. Shelton, *Revolution in United States Government Statistics 1926–1976*, U.S. Department of Commerce, Washington, 1978.
- ¹¹⁰ *The Economic Record*, vol. ix, no. 17, Dec. 1933, p. 297; *Report, Agenda and Resolutions of the Conference of Statisticians of Australia . . .* Canberra, 6 to 8 March 1935, Canberra, 1935; McPhee to H. Leak, 15 Jan. 1935, ABS 34/1195; Wilson to Secretary, Treasury, 2 April 1935, Sir Roland Wilson MSS (ABS); Interview, Sir Roland Wilson, NLA TRC 1612/1. At the 1936 statisticians' conference agreement was reached on extensive revision of the 'C' Series Index and the appointment of six field officers to collect and check retail price and rent data. (*Report and Resolutions of the Conference of Statisticians of Australia . . .* Canberra, 16 April to 22 April, 1936, Canberra, 1936, pp. 4–8; correspondence with Premiers June–July 1936, AA A461, C320/1/2).
- ¹¹¹ 'An address by Sir Roland Wilson . . .', pp. 5–6; Robert S. Parker, *Public Service Recruitment in Australia*, Melbourne, 1942, pp. 109–10; Wilson Interview . . ., NLA TRC 1612/1. Under the previous librarian, Wilson recalled, 'if you wanted a book . . . you had to tell him what size it was, how thick, what colour the binding was, then he'd bring you three or four to pick from!'
- ¹¹² Wilson to Casey, 6 Dec. 1935, (copy); Casey to Wilson, 13 Aug. 1935, Wilson MSS (ABS). Wilson's promotion to Economic Adviser was accelerated by Casey's intervention on learning that Wilson was contemplating an invitation to become Professor of Economics at the University of Tasmania. (W. J. Hudson, *Casey*, Melbourne 1986, p. 99.) Schedvin (*Australia and the Great Depression*, p. 316) dismisses Casey as energetic but uninspired in his successive Treasury positions; but see for example Casey's analysis of Australia's balance of payments position utilising Wilson's figures in a letter to S. M. Bruce, 19 Oct. 1936 (AA A1963/391/{50}).

- ¹¹³ W. V. Lancaster (Treasury) to Secretary, Prime Minister's Department, 10 Feb. 1937, AA A461, B320/1/3. The conclusions of a secret conclave of economists and bank officials on the causes, prospects, and policies for economic recovery were conveyed by Giblin to Wilson on 14 Oct. 1935 (Wilson MSS, ABS).
- ¹¹⁴ Acting CS (Giblin) to Secretary, Department of Home Affairs, 20 Nov. 1931, (copy), Wilson MSS (ABS): Wilson, 'Price, Quantities and Values', 24 Sept. 1937, H. P. Brown MSS, 36, H. P. Brown Library, Australian National University.
- ¹¹⁵ The next general publication issued by the Bureau, the Digest of Current Economic Statistics, did not appear until 22 years later. (W.H.D. Morris, 'Australian Statistics and Commonwealth Bureau of Census and Statistics Publications', Legislative Research Service, Commonwealth Parliamentary Library, [Feb. 1970]. p. 23.)
- ¹¹⁶ *Labour Report*, 1943, No. 33, p. 34.
- ¹¹⁷ Roland Wilson, 'The Economic Implications of Planning', in W.G.K. Duncan (ed.), *National Economic Planning*, Sydney, 1934, pp. 74-5; Greg Whitwell, 'The Social Philosophy of the F & E Economists', *Australian Economic History Review*, vol. xxv, no. 1, March 1985, pp. 2-6.
- ¹¹⁸ H.C. Coombs, *Trial Balance: Issues of My Working Life*, Melbourne, 1983, p. 3. Giblin had been told by Sir Otto Niemeyer of the Bank of England on 19 Oct. 1932 that 'Keynes (of all people) has recently been saying that economists are apt to reason far too much from statistics, to which they attach a degree of dogmatic verity which is hardly deserved by the closeness with which abstract and general statistics fit the varying and individual manifestations of actual business', (Giblin MSS, NLA 366, Ser. 5, 1-88). R.I. Downing saw Clark's work as part of an older tradition rather than as the precursor of the 'social accounts' approach. ('Current Problems of the Australian Economy', in *Business and Economic Policy*. Third Summer School of Business Administration 1958, University of Adelaide, Adelaide, 1958, pp. 5-6.)
- ¹¹⁹ Paul Hasluck, *The Government and the People 1939-1941*, Canberra 1965 (1st edn. 1952), pp. 130-1.
- ¹²⁰ Wilson, 'The Economic Implications of Planning', pp. 68-9; Wilson, A Note on Economic Policy and Organization for War, 12 Sept. 1939, AA A571, 39/3251; Hasluck, op. cit., pp. 451-3; S.J. Bulfin, *War Economy 1939-1942*, Canberra 1961 (1st edn. 1955), pp. 21-3; Rodney Maddock and Janet Penny, 'Economists at War: The Financial and Economic Committee 1939-44', *Australian Economic History Review*, vol. xxiii, no. 1, March 1983, pp. 28-47.
- ¹²¹ R.G. Menzies to A. Mair, 21 Nov. 1940, (copy), ABS 57/1530.
- ¹²² Colin Clark to Cameron Hazlehurst, 4 Mar. 1987; Colin Clark and J.G. Crawford, *The National Income of Australia*, Sydney, 1938, pp. 14-18; A/g CS (Carver) to Exley, 7 Jan. 1941, copy, ABS 57/1530; A/g CS to Secretary, Treasury, 8 April 1942, ABS 35/5 (J.C. Stephen file). For the Bureau's collaboration with the military authorities see ABS 62/1983, 67/5938, and AA CP200, Box 3. On censorship, ABS 62/1984 reveals Carver's differences with the navy and Defence department.
- ¹²³ Secretary to Treasury to Chairman, Public Service Board 24 July 1943, and reply 27 July 1943, ABS 35/5. Stephen had been flown to Britain in 1942 to study production statistics methods. (E.K. Foreman, 'State Government Statistical Requirements—Historical Perspective', typescript, 30 May 1980, ABS Library.) Another recruit in 1943 was P.H. Karmel. 'He has performed several pieces of original statistical research of a high order,' Carver told the Secretary to the Treasury on 28 Sept. 1944, 'and shows real capacity for the work'. (ABS 35/S.)
- ¹²⁴ ABS 67/5938; S.J. Bulfin, *War Economy 1939-1942*, Canberra, 1955, p. 354. Compare U.S. experience in Arnyess Joy Wickens, 'Statistics and the Public Interest', *Journal of the American Statistical Association*, vol. 48, no. 261, March 1983, p.3.
- ¹²⁵ H.C. Coombs, 'The Economic Aftermath of War', in D.A.S. Campbell (ed.), *Post-War Reconstruction in Australia*, Sydney, 1944, p.85.
- ¹²⁶ Coombs, *Trial Balance*, p. 51; Selwyn Cornish, *Full Employment in Australia: The Genesis of a White Paper*, Research Paper in Economic History, No. 1, 1981, Department of Economic History, Faculty of Economics, Australian National University, pp. 78-9; Carver to H.C. Green, 1 Nov. 1944, ABS 67/5938. On the emerging post-war agenda, see Robert Watts, *The Foundations of the National Welfare State*, Sydney, 1987.
- ¹²⁷ Director-General, Post-War Reconstruction to A/g CS (Carver), 30 Oct. 1945; 31 Oct., 5/6, 7 Nov. 1945, ABS 53/682.
- ¹²⁸ A/g CS (Carver), to Secretary, Treasury, 5 Dec. 1945, ABS 45/79; *Report and Resolutions of the Thirteenth Conference of Statisticians of Australia . . . 19 November to 23 November, 1945*, Canberra, 1945, pp. 11-12, 4; *Report and Resolutions of the Fifteenth Conference of Statisticians . . . , 31 October to 4 November, 1949*, Canberra, 1949, p. 2. The importance of professional judgment in forecasting was implicitly acknowledged in a report by the Department of Post-War Reconstruction for the I.L.O. in 1948: 'The general method is to study critically the trend in individual statistical series and to use general impressions combined with historical precedents in order to assess the imminence of any downward tendency in effective demand'. (United Nations, Department of Economic Affairs, *The Maintenance of Full Employment*. . . U.N., New York, 1949, Appendix: No. 3 Reply from Australia, p. 77.)

- ¹²⁹ ABS 53/682 covers public finance correspondence and reports 1946 to 1956. On the 1954–55 roads expenditure Solomon revealed 'an error of £10,000,000' in the old system figures.
- ¹³⁰ Prime Minister to Premier, N.S.W., 21 Nov. 1940, (copy), ABS 57/1530.
- ¹³¹ Prime Minister to Premier, N.S.W., 2 Feb. 1948, 27 June 1949; Premier, N.S.W. to Prime Minister, 13 Feb. 1948, 15 July 1949, (copies), ABS 57/1530.
- ¹³² Secretary, Treasury to Treasurer, 20 July 1951, (copy), ABS 57/1530. Curiously, Carver's appointment did not make him either an officer of the Public Service or of the Parliament. (Minute by R. Whalen, 15 Aug. 1958, ABS 57/1530.) Early in 1971 it was realised that there was no legislative basis on which an 'Acting Commonwealth Statistician' could be appointed when the office of Commonwealth Statistician was vacant. Carver therefore could not validly have been 'Acting Commonwealth Statistician' between 1951 and 1957 although he was properly empowered to perform the duties of the Statistician. The similar situation which occurred after Archer's retirement was expounded in a memorandum from E. Smith (Attorney-General's Department) to Secretary, Treasury, 25 Feb. 1971, ABS 57/1530.
- ¹³³ P.C. Spender, 'Proposed Census of 1941', Cabinet Paper, 11 April 1940, AA A461, N 320/1/1; 'Proposals for Effecting Economic Operation Bureau Section 1939–45 War', ABS 62/1982; Clark to Carver 14 May 1945; Carver to Clark 18 May 1945; Director-General, Post War Reconstruction to Minister, 19 Oct. 1945; A/g CS (Carver) to A.P. Elkin, 11 Dec. 1945, ABS 45/79. The refusal of rationing authorities to withhold ration books from applicants who failed to produce occupational survey cards had undermined the comprehensiveness of the occupational survey. (ABS CR8.)
- ¹³⁴ For details of the professional discussions on the 1947 Census, including the decision to drop questions on 'sickness or infirmity' and 'education' see ABS (Treasury) 62/2055, 60/1404, and J.B. Chifley, 'Proposed Census 1947', draft Cabinet submission, 1 Feb. 1946, ABS 45/79. Cabinet rejected the option of deleting all specified categories of census questions from the Act and providing that the contents of the census schedule should be prescribed by regulation. This approach was eventually adopted in 1979. For R.S.L. urging of a census of 'alien immigrants' and queries from the Jewish Council to Combat Fascism and Anti-Semitism about the concept of 'race' embodied in the census schedule see AA A461, p 320/1/1.
- ¹³⁵ CS (Wilson) to Treasurer, 21 June 1950, ABS (Treasury) 62/2055.
- ¹³⁶ CS (Carver) to Secretary, Treasury enclosing 'Date of Next Census', draft Cabinet submission, 20 April 1959, ABS 59/694. With Treasurer Harold Holt's encouragement the Bureau successfully resisted Cabinet pressure to bring forward the 1961 Census so as to facilitate an electoral redistribution before the next Commonwealth election. (J.F. Nimmo to Secretary, Treasury and CS, 28 May 1959, ABS 59/694.) For 1970s see Brian Doyle, 'The Politics of Census Taking', Working Paper No. C2, 1981 Census of Population and Housing, Development Programme, ABS, Canberra, [1979]. By 1973 senior Bureau officers were unconvinced about legislating for quinquennial censuses. 'I wonder about the wisdom of quinquennial Censuses or even the necessity. The decision to do the 1966 one related to Commonwealth Grants & Queensland's population. Our part in the Grants is peculiar. I would rather use the resources on filling up some gaps.' (Minute by C.S. [O'Neill] on K.S. Watson to J.G. Miller, 9 Jan. 1973, ABS 70/2447.)
- ¹³⁷ Memorandum for Secretary, Treasury: draft amendments, Cabinet submission, and associated documents, May–June 1949, ABS (Treasury) 60/1404; S. Horn to D. Trewin, 'History of Legislation', 7 Nov. 1983, ABS. Horn noted that the considerable importance which the changes represented in 'balance of authority' for collecting statistics was 'downplayed in favour of efficiency arguments' in the Cabinet submission. The extension of confidentiality to voluntary returns was made discretionary thirty years later.
- ¹³⁸ Michael Howard, *The Growth in the Domestic Economic and Social Role of the Commonwealth Government in Australia, from the late 1930s to the early Post-war Period: Some Aspects*, Ph. D. thesis, University of Sydney, 1978. Sir Claus Moser, former head of the British Government Statistical Service, noted a hardening of boundaries between economists and statisticians in the mid-1950s. ('Statistics and Public Policy', *Journal of the Royal Statistical Society*, A, vol. 143, 1980, Pt 1, p. 23; cf R. Petridis, 'Australia: Economists in a federal system', in W.A. Coats (ed.), *Economists in Government: An international comparative study*, Durham, N.C., 1981, pp. 71–3); Greg Whitwell, *The Treasury Line*, Sydney, 1986, ch. 1.
- ¹³⁹ Foreman, 'State Government Statistical Requirements . . .'; Carver to A.J. Reid, 10 Sept. 1953, (copy), Sir Stanley Carver MSS, ABS; Archer interview, NLA TRC 12/38.
- ¹⁴⁰ Brown to Carver, Feb. 1950, Brown MSS, 49; Brown was appointed Reader in Economic Statistics at the Australian National University in 1950 and published his criticisms in 'Australian Statistics—A Programme', *Institute of Public Affairs Review*, May–June 1952, pp. 90–6. E.K. Foreman, 'Development and Co-ordination Division—Historical Note,' 31 March 1977, ABS Library, is a valuable chronicle. Cf K.A. Archer interview, NLA TRC 12/38; Dr F. B. Horner interview, NLA TRC 1594/1; J.P. O'Neill interview, NLA TRC 1613/1; B.D. Haig and S.S. McBurney, *The Interpretation of National Income Estimates*, Canberra, 1968. On the census of retail establishments see 'Census of Distribution in Australia', *Papers Presented at the Conference of British Commonwealth Statisticians 1951 . . .* Canberra, [1951]. pp. 111–13. On challenges to legality of sampling, see 'Proposals for Revision of the Census and

- Statistics Act', March 1967, ABS 64/1537; Secretary, Attorney-General's Department (K.H. Bailey), Memorandum for A/g CS, 8 Oct. 1954, ABS 70/2447. Nearly two years after a Bureau officer had first raised the matter, a judge of the N.S.W. Supreme Court, whose Wahroonga home was in the sample for the quarterly population survey in May 1964, prompted urgent review (and an amendment to the Census and Statistics Act) by advising a senior compiler that in his opinion the act did not authorise the Statistician to obtain information by interview at private dwellings. (Dep. CS [N.S.W.] to CS, 21 May 1964, and minute, O'Neill to A.W. Mumme 27 May 1964, ABS 64/1537; Mumme to I.G. Jones 21 Nov. 1963 and minute 12 June 1962, ABS 70/2447.)
- ¹⁴¹ Archer interview, NLA TRC 12/38; unsigned and undated memorandum, [April 1969], ABS 71/3155 Pt 1. The Dominion Bureau of Statistics in Canada had an IBM 705 Model III operational from 1961. The U.S. Bureau of the Census had UNIVAC 1 in service in 1951 but card-to-tape converters were not satisfactory until 1953, and a 'high speed' printer (120 character lines at 600 lines per minute) was not available until 1955. (Marjorie Tucker, 'Recent Developments in the Work of the Dominion Bureau of Statistics,' *Canadian Journal of Economics and Political Science*, vol. xxv, no. 4, Nov. 1959, p. 501; Duncan and Shelton, *Revolution in United States Government Statistics* . . . , pp. 126-8.) Between 1964 and 1971 a network of eleven medium to large scale and four small scale computers costing \$12m had replaced the Bureau's mechanical tabulation equipment and associated electronic calculators. Over 800 staff were employed in a computer service centre. (F.N. Bennett, 'Computers and the User of Australian Economic Statistics', paper presented to Section 24, ANZAAS Congress, May 1971; 'Automating Australian Statistics', symposium paper, Statistical Society of Australia, N.S.W. Branch, 24/25 Aug. 1972.)
- ¹⁴² A.W. Mumme, 'A Case for Functional Specialisation in the Bureau of Census and Statistics', Nov. 1970; P.A.A. Kaufmann, 'Towards a Socio-Demographic Statistics Organisation', 1 Feb. 1972, ABS Library.
- ¹⁴³ Extended scope of duties is outlined in a series of submissions to the Public Service Board in 1974 (ABS, Adelaide, Z/402/2 Pt III).
- ¹⁴⁴ A/g CS (O'Neill), 'Work Programme and Staff Requirements 1970-72', 9 June 1970, ABS 70/2080; B.D. Haig, 'Indexes of Australian Factory Production, 1949-50 to 1962-63', *The Economic Record*, vol. 41, no. 95, Sept. 1965, pp. 451-2.
- ¹⁴⁵ Premier, Queensland (Gair) to Prime Minister (Menzies), 16 Dec. 1953; Treasurer (A.W. Fadden), Note for file, 16 Sept. 1957, AA A571, 61/1058.
- ¹⁴⁶ Carver to Wallace Wurth, 6 Aug. 1954; to A.W. Bowden, 10 Aug. 1954; to F.W. Sayer 15 Sept. 1954; to L.L. Chapman, 6 Oct. 1954; to S.A. Taylor, 20 Jan. 1955, to Wurth, 22 Feb. 1955, Carver MSS, ABS.
- ¹⁴⁷ Fadden, 'Statistics (Arrangements with States) Bill', Cabinet submission, annexure A, 1 Feb. 1956, AA A571, 563/2351 Pt I.
- ¹⁴⁸ AA A571 53/2351.
- ¹⁴⁹ A/g CS (Carver) to Secretary, Treasury, 25 March 1954, ABS 57/1530.

