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PART III

STATISTICS FOR THE NEW NATION

STEPS TOWARDS UNIFORMITY

AT THE BEGINNING of the Commonwealth period, the six States were spending a total of about £18,000 a year on statistical work, of which £2,000 was for the tabulation of vital statistics. The costs associated with decennial censuses were additional as were those of printing, stationery, postage, and telegrams. In a report prepared at the request of the federal government in April 1903, Timothy Coghlan estimated that the States spent between 0.76 pence and 2.82 pence per inhabitant on statistics. The cost comparison alone was of minimal value, as Coghlan pointed out, since the range of statistics covered varied significantly. In some States, 'even statistics relating to the greater primary industries and to Manufactures are neglected or imperfectly collected and presented'.¹

While colonial statisticians, particularly Coghlan and R. M. Johnston, had played notable parts in the federation debates as financial experts, national responsibility for censuses and official statistical compilation was not a subject of controversy.² Federation could be seen as a step towards the elusive goal of statistical uniformity. Some statisticians saw advantages in the prospect of a national statistical authority that might lend its weight to the decisions of the professional conferences which had become the recognised forum for co-ordination. No one disputed that the new nation should have both a responsibility and a capacity to undertake statistical inquiry.

Sir Samuel Griffiths' drafting committee at the National Australasian Convention in March 1891 produced a draft constitution Bill in which Chapter 1 Part V sub-section 12 was to give the Commonwealth the power to make laws in respect of census and statistics. The words 'census and statistics' appear to have come directly from the British North America Act Section 91 sub-section 6.³ There was no debate on this issue and the Australasian Federal Convention in 1897-98 accepted the sub-clause from the Commonwealth Bill of 1891 again without debate. Under Section 51 (xi) of the Constitution, the Commonwealth Parliament was given a concurrent power to make laws with respect to census and statistics. It was not immediately apparent how this power might be exercised. Later events were to suggest that little thought had been given to how the statistical interests of the States and Commonwealth could best be served in the new era.

The first major statistical business of the twentieth century was the 1901 Census. In March 1900 a conference of statisticians, including a representative from New Zealand, was held in Sydney to arrange for the uniform collection of the 1901 Census. Coghlan, as president of the conference, reported to Lyne, Premier and Treasurer of New South Wales, that the conference broke up into three sub-committees: the first to deal with drawing up a uniform householders' schedule; the second to revise the classifications of occupations; and the third to draw up the reasons which led the conference to recommend 28 April as the day for taking the Census.

It was decided that there would be only one question additional to those asked in 1891. It related to the length of residence for those not born in the particular colony. The reasons for not expanding the Census further were explained by Coghlan:

For notes pertaining to Parts III and IV see pp. 86ff.

There were several suggestions for increasing the number of questions to be asked of the people, but the majority of the members of the Conference were of the opinion that it would be unwise to extend the inquiries beyond the class of subjects usually presented in countries where the census is taken upon schedules. If, as in some countries, the plan were adopted of appointing enumerators whose business it would be to make personal inquiry from house to house, and fill up their books from the particulars thus obtained much more elaborate inquiries might be ventured upon.

The conference decided not to change any of the classifications and to accept those drawn up by Johnston and Coghlan in 1890:

The experience of ten years has suggested a few changes, but these are all of a minor character, such as may be looked for in the development of the population and industries of a young community.

A number of the colonies had proposed incorporating with the householders schedule a return relating to land and crops. But this proposal was not adopted. Most of the figures were in any case available in the colonies on an annual basis; and it was contended that the census was not the most opportune time for pursuing investigations relating to land and industries. Coghlan put certain resolutions to the conference regarding uniformity which

. . . if strictly adhered to, will ensure the possibility of exact comparison being drawn between the conditions of the various colonies . . . They consider that uniformity is especially desirable at the present time, when five of the colonies are about to enter upon a federation, as there is every probability that the figures obtained in the coming Census will form the first population statistics of the Commonwealth, and be the basis of many important arrangements in regard to finance and electoral representation.⁴

The actual date of the census also had to be settled. The night of the first Sunday in April had been the usual time of census taking, but in 1901 the first Sunday in April was Easter Sunday.

The effect of taking a Census at a time of general migration like Easter would be to enumerate the population in places in which they do not usually reside, and to increase unduly the population of some localities at the expense of others. The result would be utterly misleading so far as localising the population, and would also affect the number of males resident in given areas.⁵

The choice of April 28, though a departure from the imperial census, would give people time to settle down after holidays and after harvesting.

From the outset it was clear that generally accepted population figures would be essential as a basis for apportioning payments to or for the States. In September 1901 the Prime Minister wrote to all State Premiers asking if they were willing to use figures supplied by the Victorian Government Statistician for the purpose of calculating the future distribution of 'other' new expenditure. Alone of the respondents, New South Wales proposed a different approach. They would prefer to include half-castes in the figure for their State, bringing the total to 1,356,090.⁶

Another conference of statisticians was held in Hobart in January 1902; it was called specifically to look at uniformity in preparation of statistical returns. All the States except Western Australia were present and a representative from New Zealand also attended. This conference had been proposed by Coghlan in a letter to Johnston on 25 June 1901:

I have long considered it would be extremely desirable that the statistics of the States should be placed upon a uniform basis . . . Such uniformity is all the more desirable, since the Statistics of Australia (now that the States have accomplished Federation) will be quoted as for the Commonwealth, and not for the individual States . . . A year or two ago I arrived at an understanding with Mr Fenton of Victoria as to the compilation of statistics relating

to Manufactories and Works, and I see no insuperable difficulties in placing the statistics relating to Education, Law and Crime, Public Finance, Land Settlement, Agriculture, Vital Statistics, and so forth, upon a uniform basis throughout the six Colonies.⁷

In his letter inviting the various State Premiers to send a statistician to the proposed conference, N. E. Lewis, Premier of Tasmania, said that besides the question of uniformity there was a need for a conference:

To advise upon all matters where dual functions of Commonwealth and States respectively may be carried out by the same machinery in the various branches of State Bureaux. For example the whole question of the dual relationship, organization etc., between State and Commonwealth must be carefully gone into so that no confusion may arise, as would be the case if a double set of machinery were employed in collecting statistical and other matters in the same region.⁸

The report of the conference dealt with the need for a 'harmonious relationship' to be established between the various State bureaux and the soon to be formed Commonwealth Bureau:

Having devoted some considerable thought to this important matter of the harmonious relationship . . . it is the general opinion among the members of the Conference that the whole work of collection of the materials of statistics, whether for State or Commonwealth, had better be deputed to the officers of the several State Bureaux of Statistics. This would avoid confusion and extra expense such as would surely arise if double machinery were employed upon the same statistics within the same region; that is the local State officers would be charged with dual functions. As officers of the State, they would be under the direction and discharge the functions which they now carry out for the State. In addition they, co-operating with the Central Bureau of the Commonwealth, could prepare all statistics required in a more concentrated form for the publications of the Commonwealth, of course, under a definite agreement between the respective Governments of State and Commonwealth.⁹

Prior to Federation, the statistics of commerce and shipping were a major part of the work done in each colonial statistical office. Federation had taken from the States their largest source of revenue—the right to levy customs and excise duties. But, after protracted negotiation on principles and procedures, it had been agreed that, for ten years after the determination of a uniform tariff, at least three quarters of the revenue collected by the Commonwealth would be returned to the States. A 'book-keeping system' was devised which kept an account of the destination of all dutiable goods entering the country and each State was to be credited with the revenue deemed to have accrued from goods destined for consumption within its boundaries. Principles of classification were agreed at the Hobart meeting to facilitate the compilation of statistics on a comparable basis. But the classification scheme was not in fact followed by the State bureaux.¹⁰ Although the Commonwealth was to turn to Coghlan for advice, the categorisation of items in trade and customs statistics was to be a recurring problem for which the Commonwealth authorities had no great enthusiasm.

The other important financial loss for the States resulted from the transfer of postal administration to the Commonwealth. Except in South Australia, all statistical returns were carried free of postage charges. The conference strongly recommended:

the retention of the free franking system for the transmission of public business communication in connection with the State Statistical and Registry Department.

There were a number of other recommendations:

- (1) That the conference recognises the necessity for recording all persons engaged in industrial pursuits or attending school in Census enumeration, including aborigines.
- (2) That, as the 5,137 aborigines included in the Queensland Census are engaged in industrial pursuits, or attending schools subsidised by the Government, they should be included in the general population for all purposes except those relating to the Commonwealth.

(3) That, owing to the difficulty of estimating the numbers of the people at long intervals, it is desirable to take an intermediate Census—five years after each general Census—showing at least the Names, Sexes and Ages of the people, and distinguishing Chinese and other Coloured Races, so that it may be possible to separate them from the general population, if thought desirable.

(4) That, in the opinion of this Conference, it is desirable that legislative authority be provided in any State of the Commonwealth not yet possessing permanent Census and Statistics Acts, so as to enable needful information to be efficiently collected.¹¹

The treatment of Aboriginal people was to be a recurring issue and the concept of a quinquennial census was to be urged without success for another half century.

Concerned at the absence of uniformity in estimating the population of the States, Coghlan persuaded the New South Wales Premier, Sir John See, to suggest another conference in 1903. Coghlan and the other five State statisticians agreed on a uniform basis for estimating population, with Coghlan apparently the chief architect of the reforms. The Census of 1901 was taken as the starting point. Various percentages were to be added to the individual States, allowing for unrecorded departures by land, sea or rail. Population figures were henceforth to be published quarterly on a uniform basis and the mean of the four quarters was to be taken as the mean population for the year. The population statistics had a special significance in the context of federal-state financial relationships. Up to 30 June 1910 all 'new' Commonwealth expenditure was debited to the States according to their population. Thereafter payments to the States were also based on population. Moreover, the number of members of the House of Representatives was dependent on population calculated so as to exclude Aboriginals and aliens disqualified from voting by State electoral laws. In determining the population of the various States as at 30 June 1902 full blooded Aboriginals were excluded but the numbers were to be shown on a separate line in the various estimates.

CREATING A NATIONAL ORGANISATION

While the Constitution gave the Commonwealth a concurrent power over census and statistics, the qualified enthusiasm of the States made it by no means certain what this would mean in practice. Federal Cabinet decided in March 1903 that the Minister for Home Affairs, Sir William Lyne, should ask Coghlan to advise on the 'probable extent and cost' of establishing a federal bureau of statistics. Coghlan incorporated in his report the views of his colleagues J. J. Fenton (Victoria), J. Hughes (Queensland), L. H. Sholl (South Australia), M. A. C. Fraser (Western Australia) and R. M. Johnston (Tasmania). All had been asked:

Do you consider it will be necessary or desirable to maintain a State statistical office after the establishment of a Federal Bureau, supposing the latter to be on an entirely efficient basis?

So blatantly contrived a question unsurprisingly elicited a unanimous declaration in the affirmative. Coghlan's conclusion was that however matters were arranged there would remain with the States important work connected with vital statistics, land, labour and licensing laws, public and private charities, 'and other subjects connected with the social and industrial well-being of the community, and in regard to which State Parliaments have the right of legislation'.¹² The Commonwealth intention to set up a body that would in some respects at least supersede or pre-empt the States received little encouragement from Coghlan's peers. In a report written on 4 April 1903, R. M. Johnston made plain his belief that a federal bureau 'could not possibly be established on an entirely efficient basis without the aid of auxiliary subordinate

local Statistical Bureaus in each independent State'. Nevertheless the plan urged by both the Federal Government and the Governments of New South Wales and Victoria at the 1905 Premiers' Conference in Hobart was to create a federal department and abolish the State offices.¹³

In the meantime Coghlan had been engaged to shape the statistical branch of the Customs Department with the intention of developing a model organisation that would be adopted for other federal departments. It seems to have been envisaged that these departmental offices would be linked under a central bureau. Coghlan also supervised the preparation of the Commonwealth Trade and Commerce Returns for 1903 and 1904.

In March 1904 Coghlan was offered the position of federal statistician. He declined the post. According to his own autobiographical account, 'on pointing out the difficulties surrounding the establishment of a Statistical Office to Sir William Lyne, a provisional arrangement was made, under which he agreed to prepare yearly an edition of the "Seven Colonies"'.¹⁴ The offer was renewed by George Reid later in the year. But Coghlan had decided to go to London in response to the urging of the New South Wales Premier, J. H. Carruthers, who was anxious to re-organise the work of the Agent General's Office. Coghlan had shown no enthusiasm for an earlier proposal by Carruthers that he fill the specially created post of Financial Adviser to the New South Wales Treasury. Believing that the London appointment was only temporary, Reid agreed to defer the establishment of the new bureau until Coghlan's return.

In fact, Coghlan was already turning to fresh fields. He told friends that he was concerned about his pension rights if he 'threw over my own Government'. But he also aspired to be Australia's first High Commissioner, seeing in that post the chance to 'make Australia hum'.¹⁵ It was not until the Commonwealth census and statistics legislation was enacted that Coghlan finally advised Deakin not to consider him further for the post of Commonwealth Statistician. Carruthers was unwilling to release him pending the completion of 'financial transactions' on behalf of New South Wales and had suggested that he accept the position on condition that he be allowed to take it up after the appointment of a High Commissioner had been made.¹⁶

Coghlan deliberately did not discuss his London ambition with Deakin, having already disclosed it to Sir John Forrest only to discover that Forrest also coveted the post. But Coghlan's temporising and ambivalence were ultimately self-defeating. He was never a serious contender for a job that was to be ornamented by a succession of ex-Prime Ministers. And his self-serving lament about the absence of qualified rivals for the Statistician's post did not deter the government from proceeding to make an appointment from the available candidates. Littleton Groom, the Minister for Home Affairs, had been willing to pay Coghlan £1,200 a year, but the position was eventually advertised at an annual salary of £800 to £1,000.¹⁷

In February 1905 a conference of Commonwealth and State Ministers was held in Hobart and Sir George Turner, the federal Treasurer, pointed out that the States were spending about £20,000 a year on statistics, and £120,000 every ten years on the census. Prime Minister Reid, in referring to various powers, including that of legislating on census and statistics, said:

We want to explain that the Commonwealth proposes to take over these departments. But, in as much as they are State departments and departments transacting business with the public, we want to take them over with due consideration, in order to avoid dislocation, and with as little inconvenience as possible to the public . . . We will therefore invite the State Governments to co-operate and help us exercise these powers in the most convenient way.

J. G. Jenkin, the Premier of South Australia, stated that:

Under the heading of census and statistics we know that means the employment of a good many State officials to get the information. I hope it is not the intention to establish a complete new department of Federal officers to carry out the work. If it means that it will be an expensive luxury.

Allan McLean, the Minister for Trade and Customs, replied:

It is not intended to do that in connection with any service taken over. We desire to take over such services as are included in our constitutional powers, and which can be better managed by one central department.¹⁸

The Census and Statistics Bill was introduced into the House of Representatives by the Minister of Home Affairs, Littleton Groom, on 23 August 1905. His second reading speech noted that the Commonwealth power in relation to census and statistics was a concurrent power. He went on to say:

The object of the Bill is to enable the Commonwealth to establish a central bureau of statistics in order that it may furnish to the world statistical returns with respect to the matters under its special jurisdiction, and also publish certain statistics having reference to the affairs of Australia as a whole.

Even though a central office with a Commonwealth Statistician was to be established the States were still to retain their own offices and officers.

We start on the assumption that the States will require to have their own local statistics for their own purposes . . . I think it would be advantageous for them to have one Commonwealth department; but judging from the tone of replies received from them I am inclined to think that some negotiations will be required before they will be prepared to hand over their own departments.

Groom explained that there were two possible courses:

We might have a central statistical bureau with branches in each of the six States; which could be used for State purposes as required. As an alternative we could establish a central Commonwealth bureau and enter into negotiations with the various States with a view to utilising their departments to the fullest possible extent. During the early stages of the organisation of the Commonwealth departments the latter will be found to be the most practical course to pursue.

The reason for a centralised Bureau was given as a need to:

bring into line the statistics of the States for the purpose of comparison, to lay down a uniform method for the collection of statistics.

In addition:

The central department will collect all information in regard to subjects specially controlled by the Commonwealth, such as imports and exports, trade, and commerce generally including inter-State transactions, navigation and shipping, postal, defence and other matters.¹⁹

It would remain a power of the States to collect their own census data. But the proposed Commonwealth census would be decennial and would rely on a parliamentary appropriation.

When the debate resumed on 3 October 1905 the Bill was closely scrutinised. In the Senate the clause dealing with free postage, which had attracted much attention at the 1903 Conference of Statisticians in Hobart, was deleted. It was also argued unsuccessfully that the census schedule should be approved by Parliament before it could be distributed. The Census and Statistics Act was assented to on 8 December 1905. Part II of the Act dealt with the appointment and powers of the Statistician, arrangements with the States for collection of data, and secrecy provisions. Part III

related to the taking of the census. The first census under the new Act was to be taken in 1911. Part IV of the Act covered statistics and laid down the areas where the Statistician was to have authority:

16. The Statistician shall subject to the regulations and the directions of the Minister, collect, annually, statistics in relation to all or any of the following matters:
- (a) Population;
 - (b) Vital, social, and industrial matters;
 - (c) Employment and non-employment;
 - (d) Imports and exports;
 - (e) Interstate trade;
 - (f) Postal and telegraphic matters;
 - (g) Factories, mines and productive industries generally;
 - (h) Agricultural, horticultural, viticultural, dairying, and pastoral industries;
 - (i) Banking, insurance, and finance;
 - (j) Railways, tramways, shipping, and transport;
 - (k) Land tenure and occupancy;
 - (l) Any other prescribed matters.

The Statistician was given wide powers. He was able at any time during working hours to enter any factory, mine, workshop, or place where persons were employed to make inquiries or inspect all plant and machinery. The penalty for hindering an officer under this section of the Act was ten pounds. Penalties for supplying false information or failure to supply information were also prescribed. A severe penalty of fifty pounds applied to any officer of the Bureau who divulged the contents of any forms or any information furnished to the Bureau.²⁰

At a conference of State and Commonwealth Ministers in Sydney in April 1906 it was resolved 'that the general statistical departments should be handed over to the Commonwealth'. Meanwhile, the position of Commonwealth Statistician had been advertised in the *Commonwealth of Australia Gazette* on 24 February 1906. 'I wish I could see someone fitted for the post in the service of the Commonwealth or of the States', Coghlan intimated to Deakin. 'The only man of ready talent fit for the work is a young man named H. A. Smith in my office in Sydney.'²¹

Smith was chief compiler in the vital statistics branch of the New South Wales Statistician's Office but manifestly too junior, notwithstanding Coghlan's lukewarm patronage, for the federal appointment. In 1919 he became New South Wales Statistician. R. M. Johnston, at 62, declined to be a candidate for a position that would take him away from Tasmania. But George Handley Knibbs was deemed suitable. His appointment, at a salary of £1,000 a year was announced in the *Gazette* on 26 May 1906. Knibbs, born in Sydney in 1858, and formerly a surveyor and lecturer in the engineering school at Sydney University, had been president of the Institution of Surveyors 1892-93 and 1900-01, honorary secretary of the Royal Society of New South Wales for nine years and president in 1898-99. He was co-author of a report on education prepared for the New South Wales Government after an overseas study done in 1902-03 and was appointed Director of Technical Education in New South Wales early in 1906, following a brief period as Acting Professor of Physics at Sydney. Although he had been in 1887 a foundation member (with Coghlan and Hayter) of the Australian Economic Association, whose second but unfulfilled object had been the compilation of a statistical history of the various Australian colonies, Knibbs had hitherto had little direct involvement in the kind of official statistical work for which he was to be responsible.²²

Sir William Lyne, whom Groom consulted about Knibbs, reported that 'he used to be a very bitter opponent and writer to the press, always against our party'. But Knibbs had 'been for some time past rather reasonable' Lyne admitted. 'I know

nothing against him,' the Minister for Trade and Customs concluded, 'and probably he would make a very good man . . .'.²³

In an early private assessment of the Commonwealth Statistician Coghlan had commented:

Knibbs will have a very uphill job. As at present situated he can do his work only thru' the State Offices, and he will speedily find himself in difficulties for lack of information. He has great abilities and attainments, but his lack of acquaintance with the technique and presentation of statistics are great obstacles to success, but of all the applicants he was certainly the best.²⁴

Writing to Alfred Deakin, Coghlan conceded that the 'appointment of Mr Knibbs should carry with it a good share of support in the States'. But the praise that followed was obtrusively faint. 'Mr Knibbs has high mathematical attainments, he is earnest, hardworking and scrupulously honest but he must be given experienced assistants, a knowledge of the technique of statistics is absolutely essential to even moderately good work.'²⁵ A few months later another friend was invited to tell Coghlan 'how Knibbs is shaping—badly, I should say, every man whom I discarded as worthless seems to have got into Knibbs' good graces'.²⁶

Those who had most conspicuously got into Knibbs' good graces were the five principal professional officers appointed, as Knibbs' first *Year Book* put it, 'to the command of the various greater divisions of statistic [sic] in this Bureau'. They were John Stonham, 'M.A., Sydney University (Chief Compiler)', Henry Spondly 'Zurich University', Charles Henry Wickens 'Associate of the Institute of Actuaries', Frederick Dalglish Rossiter 'M.A. Melbourne University', and Edward Tannoch McPhee 'Tasmanian Statistical Bureau'.

Spondly's province was vital statistics. Rossiter was recruited from the Victorian Bureau and was responsible for defence and the library. Wickens, who had recently composed Western Australia's first life tables after conducting the 1901 Census there, came to be supervisor of census. Stonham had been with the New South Wales Bureau and was given responsibility for 'general administration'. Though remaining nominally the senior officer, Stonham was passed over for both Wickens and McPhee (who had been in charge of trade, customs, and commerce) as well as by L. F. Giblin when the post of Commonwealth Statistician was vacant in later years. In May 1933, in the course of an unsuccessful appeal against a recommendation by McPhee that Roland Wilson should normally act as Statistician in McPhee's absence, Stonham claimed

. . . I was mainly instrumental in laying down the main lines of procedure at the inception of the Bureau. I was secretary to the first Conference of Commonwealth and State Statisticians . . . Mr Knibbs (as he then was) freely admitted that it was largely due to my official work that the Bureau proceeded on successful lines . . . In addition to being the *original* author of three chapters of the Official Year Book, I contributed portions to others, and some of my original writing in them remains to this day . . .²⁷

The conference at which Stonham served as secretary was held from 30 November to 8 December 1906. In the preceding months Knibbs had travelled to each of the State capitals to examine their methods and 'legal and administrative powers' as well as to seek out potential recruits. He also made an 'exhaustive but rapid examination of the whole range of Australian Statistic [sic]'. Knibbs' plan for the subjects to be covered by the new Bureau were foreshadowed by Senator J. H. Keating, Minister without Portfolio, on 11 October 1906 during discussion of the Appropriation Bill. Keating noted that the transfer to 'the Statistical Department' of the statistical officers of the Customs Department was under consideration.²⁸

Knibbs went to the 1906 conference armed with 'a comprehensive memorandum' and 'a complete series of forms, indicating what might be attempted through an

adequate organization of the State Statistical Bureaus, and illustrative of the range of requirements of the Commonwealth Statistician'.²⁹ His lengthy opening speech was a blend of credo and tactical compromise. The Commonwealth and the States were not 'different and mutually exclusive entities, as in the case, let us suppose, of different nations, but a single entity—the people of Australia'. There had been ministerial agreement earlier in the year, Knibbs pointed out, 'to the effect that general statistics should be relegated to federal control'. This was not a very enlightening formula. In reply to a request by the Prime Minister for elucidation, the States had offered a variety of self-serving interpretations which negated the agreement. The South Australian Premier had the singular honesty to confess on 19 July 1906: 'I have the honour to state that I am not aware of the meaning which these words were intended to convey'. Undaunted, Knibbs declared that the 'scope of the statistical requirements of the Commonwealth . . . cannot be less exhaustive than those of the States'. The Commonwealth was 'materially interested' in all of the available statistical data for each State. Without a 'complete statistical record' it would be 'practically impossible for the Commonwealth Government to be adequately and accurately advised in connexion with its administrative and legislative functions'.³⁰

No one was disposed to challenge these propositions. Nor was there significant disagreement with the details of the 145 'common statistical forms' which Knibbs submitted for adoption. The conference unanimously adopted a series of resolutions that stated and elaborated on the desirability of uniformity in method, order, and date of 'co-extensive' statistical collection, compilation, and publication of statistical information by the State bureaus. Co-operation and consultation was pledged. Exchange of information, initially within the scope of the approved forms and thereafter by agreement, was to be free of charge 'and with the greatest punctuality of which the circumstances admit'.³¹

Some old problems were tackled and new ones identified. It was agreed that the services of the police rather than ordinary enumerators or direct enquiry should be used for the collection of information 'as far as practicable'.³² A quinquennial enumeration restricted to sex and age was seen as essential for ensuring accuracy in determining the fluctuation of population in the States.³³ (The Victorian Statist, having discovered what he believed to be a flaw that greatly exaggerated the loss of his State's population by sea, dissented from the recommendation that the method of estimating inter-censal population changes should not be altered until the next census.)³⁴

In his speech, Knibbs had argued that a 'principle of localization' was needed in order to rationalise the 'determination of statistical aggregates within localities fixed by definite boundaries'. His declared preference for using police patrol areas, at least as an interim procedure, did not win assent. But it was resolved that steps ought to be taken 'for the determination of definite statistical units of area, due consideration being given therein to local enactments, and existing State divisions'.³⁵ (In 1919 Knibbs was to publish a monograph on local government as a prelude to the proposed use of 'the municipal subdivision of the States as a basis for the presentation of data in connexion with the next census'.)³⁶

One of the benefits of localisation of statistical aggregates would be the availability of data linking specific forms of primary industry to 'means of communication'. Knibbs emphasised that such information was vital to determination of 'a true solution' for the management principles to be adopted for government railways. Should railways be run as commercial concerns intended to yield a profit or 'as means of developing a territory' without regard to 'immediate or direct profit'? Whatever the 'true solution' to this or other questions, improvements were also necessary, Knibbs noted, in factory, forestry, water and irrigation, fisheries, banking, private finance, and insurance statistics. Estimates of the value of agricultural produce needed to be put on a more

consistent basis so that 'questions of economic loss arising from lack of co-operative effort or from difficulty in placing on a suitable market would be possible of fuller and more satisfactory discussion'.³⁷

Knibbs could be well pleased with the cordiality and consensus achieved at this meeting. Translating it into concerted action was to prove another matter. During 1903, 1904, and 1905 New South Wales, Queensland and Tasmania had adopted a system of classifying causes of death introduced by the British Registrar-General in 1901. In spite of agreement at the 1902 Statisticians' Conference, Victoria, South Australia and Western Australia had persisted with the Farr-Ogle system. At the Melbourne conference Knibbs successfully recommended the use of the International Institute of Statistics' Bertillon Index. But it was not until 1917 that he was able to report that all of the States were employing the Bertillon System in their monthly and quarterly bulletins of vital statistics.³⁸

Among Knibbs' earliest tribulations was confusion over the activities of Coghlan. In July 1906 Knibbs had concurred with a proposal that Coghlan should publish a volume of statistics on Australia and New Zealand for 1904-05. Coghlan had offered to undertake the task, contending that it was very much a personal work; and the Premier of New South Wales had sought the agreement of the Commonwealth Government to this once-only sequel to the now discontinued New South Wales publication, *A Statistical Account of Australia and New Zealand*. A grant of £500 was made to Coghlan in return for the supply of copies of the work but nearly a year later Coghlan advised that he was abandoning the project.³⁹

In the meantime the Bureau staff had been examining existing statistics prior to establishing their own procedures. 'So many discrepancies were found', Knibbs advised the Secretary of the Department of Home Affairs, 'that it became necessary to compile authoritative statistics for whole Commonwealth period, 1901 to 1907'.⁴⁰ In a draft response to a parliamentary question on whether the government intended to authorise the annual issue of a statistical publication 'on similar lines to that compiled by T. A. Coghlan, and entitled "A Statistical Account of Australia and New Zealand"' Knibbs wrote that he had been authorised to publish 'an Official Year Book for the Commonwealth'. However, the volume 'will not be based upon "Australia and New Zealand" as a model, but its form has been decided upon after a comparative study of the annual statistical publications of the civilised world'.⁴¹

Eight thousand copies of this innovative book were to be printed, half of which were to be taken by the Department of External Affairs. Knibbs had recommended a 'liberal supply' to British, American and other foreign libraries, as well as to schools, public libraries, steamers, trains, schools of arts, mechanics institutes, agricultural societies, mining institutes, farmers' associations and 'debating societies with proper libraries'. In order to 'meet the difficulty of excessive demand for gratuitous copies', 1,000 copies were also to be placed on sale at 3/6d plus postage.⁴²

Arrangements for the printing of the *Year Book* were themselves the source of prolonged controversy. Knibbs had to overcome Treasury opposition and gain ministerial approval in order to call for tenders rather than rely on the slow and allegedly inferior work of the Victorian Government Printer. He insisted that the entire body of type should be set by hand rather than by linotype or monotype machines. Although one prospective tenderer had indicated that hand setting would double the cost, Parliament was assured on 9 October 1907 in answer to a question on notice to the Prime Minister:

the work is of a special nature, involving a large amount of tabulation, and is subject to continual alteration, as fresh data comes to hand, and in the opinion of experienced statistical officers and printers, it cannot with advantage and economy be dealt with by machine setting.

Only a handful of large firms—John Sands, Sands & McDougall, and McCarron, Bird—could readily meet the requirements of the tender, especially restrictions on sub-letting portions of the contract. McCarron, Bird of Melbourne were the successful tenderers.

It was possible to expedite printing—‘a private firm has to please, or the custom is lost’ Knibbs noted in a memorandum of 21 February 1907, to the Acting Secretary of the Home Affairs Department. But there was little that could be done to overcome the dilatoriness of the States in submitting information. ‘Under existing arrangements this Bureau has to wait until the States of the Commonwealth have compiled the information before we can even start to compile, and owing to the unequal efficiency in the staffs of the several State Offices some of them are much later than others. Further the compilation of individual subjects is not contemporaneously carried out in several States.’⁴³

Nearly a year later Knibbs advised his Minister that the Commonwealth Bureau ‘is at the mercy of the slowest and least efficient State Bureau for the completion of practically the whole of its statistics’. This crippling dependence was obviously irksome. ‘Unless more strenuous efforts are made by the States to supply the Commonwealth with statistical information it will become necessary for the central authority to obtain statistical information directly instead of through the State Statisticians.’⁴⁴

The long awaited first edition of the *Year Book* was widely welcomed. Six months after publication Knibbs forwarded ten pages of extracts from press and personal comments to his Minister, Hugh Mahon. From the range and tone of newspaper reviews it was clear that the volume had achieved its objective of promoting overseas appreciation of Australia. Walter Murdoch, lecturer in English Literature at Melbourne University, commended the work as ‘a miracle of clearness’. The German Acting Consul-General in Sydney and the Commander-in-Chief of the United States Atlantic Fleet found the book ‘of great service’ and ‘invaluable’ respectively.

As for the Minister, he minuted that it was ‘a triumph of industry, discrimination and judicious arrangement’. Diffidently, he suggested that ‘a more copious index to the multitude of facts’ might be desirable.⁴⁵

The only sour note to find its way into the files was an anonymous review in the *Bulletin* on 7 May 1908 which, the Minister was assured, ‘Misrepresents the facts and figures in a very remarkable way’. But the *Bulletin*’s most wounding shaft was aimed not at the Statistician’s ‘columns of figures and his mathematics’ but at his efforts as a ‘descriptive writer’.⁴⁶ The unstated contrast with Coghlan leaped from between the lines. Coghlan’s own judgment was unflattering:

Knibbs, I take it, must have the ear of the press, as I do not hear of any complaints. His yearbook is full of errors, being so inexperienced, I wonder that he did not lay himself out to make a success of one thing at a time.⁴⁷

‘To be a successful Statistician, one needs to be an economist’, he explained to Deakin, ‘statistics and mathematics are often directly opposed’. To another old friend Coghlan wrote ‘I feel vexed with Knibbs who deprecates everybody’s work and does very little himself’. Candidly he confided that he was not enamoured of his post as Agent-General. ‘I would rather be Statistician any day.’⁴⁸

Coghlan’s regret at taking a wrong turning in his own life blinded him to the substance of Knibbs’ achievement. The *Year Book* was an outstanding production. In 29 chapters spread over 931 pages, the Commonwealth had a remarkable compendium of data, historical summaries, and occasional commentary. While there was considerable thematic continuity between Coghlan’s *Statistical Account* and the *Year Book*, Knibbs’ volume had a more austere tone. There were no chapters corresponding with Coghlan’s ‘Food Supply and Cost of Living’, ‘Social Condition’, and ‘Religion’. Where

Coghlan had written of 'Industrial Progress', Knibbs dealt with 'Industrial Unionism and Industrial Legislation'. Nevertheless, the new reference book provided glimpses of the Statistician's personal judgment. In discussing 'Causes of Decrease in Crime' Knibbs noted that 'collaterally with the introduction of ordinary intellectual education certain people have departed from their pristine virtues'. He remarked on the 'mistaken zeal' of police in informing employers about the prison records of prospective employees, and condemned the 'danger and absurdity of sending drunkards to gaol'. On the contentious question of 'Trade of the United Kingdom with Australia. Has it been Diverted?' he relied heavily on quotations from a report of the Advisory Committee on Commercial Intelligence of the United Kingdom Board of Trade.⁴⁹ The following year, however, there was a much expanded chapter on commerce, including articles on the customs tariff of 1908, and the development of trade with the East. In succeeding years specially contributed essays became a feature of the *Year Book* covering such topics as the kindergarten movement (1909), Aborigines (1910), the Commonwealth seat of government (1911), preferential voting (1912), and anthropometrical measurements of military cadets (1918).

GEORGE KNIBBS: INITIATIVE AND ACHIEVEMENT

Knibbs' philosophy and vision were further expounded in a series of publications, in addition to the annual *Year Books*. 'Uniformity in Statistic [sic] an Imperative Necessity', Knibbs' first *Year Book* had proclaimed in a bold heading.⁵⁰ Statistical uniformity, Knibbs said, was an urgent requirement of Commonwealth administration. But, while the Commonwealth 'is directly concerned with the good of the whole as well as that of the individual States' the thrust of his argument remained the same as that of his address to the State statisticians in November 1906, that the well-being of the Commonwealth implies the 'well-being of its integral parts, viz. the several States therein'.

In a lecture on 'The Problems of Statistics' delivered to the Australasian Association for the Advancement of the Science in 1910, Knibbs disclosed his conception of the purpose and agenda of modern official statistics:

Official statistics . . . arise from a clearer perception of what is essential for productive administration, and for what has been called, in the wider sense of the term, police regulation.

The *raison d'être* of official statistical organisations was the need for 'an adequate statistic[sic]' that would make it impossible 'to distinguish between results which may be properly credited to wise or bad government and what may more properly be credited to the lavishness or niggardliness of Nature'.

Knibbs saw it as a fundamental task of economics to investigate 'the economic efficiency of the human unit'. As he conceived it, this entailed calculating the energy spent in nurture, education, and 'general maintenance' and setting it against 'productive activity'. It would be desirable, he contended, to know the extent to which the activity of productive units was affected by disease, and variations in efficiency according to age and natural and acquired endowments. The cost of general and preventative medicine, and of education and occupational training, would also need to be considered in 'any equitable adjustment of the social system'. A 'complete analysis of the total economic effect' of public hygiene measures remained to be made. And, without explicitly endorsing the arguments of eugenicists, he noted that 'eugenic considerations' were increasingly influencing public opinion, and commended the 'systematic examination of school children from an anthropometric and hygienic point of view'.

Returning to one of the subjects he had put before his fellow official statisticians in 1906, he articulated his argument that 'too strict an adoption of the commercial principle may be detrimental to the general interest of the community' when applied to the nation's railway system. Knibbs left no doubt that he had a vision of the role of statistician guided by a 'high aim' of understanding 'the inter-relations and inter-dependencies of man with his fellow-man, and, from his position of professional expert in statecraft, assisting the administrative statesman with his counsel and advice'.⁵¹

High minded utterances combined with what W. M. Hughes, the Attorney-General, characterised as 'wholesale condemnation of his predecessors' exposed Knibbs to criticism for 'the extraordinary amount of corrigenda in his own work'. Hughes told Knibbs' Minister, Hugh Mahon, in April 1909, that the Commonwealth Statistician is 'purely a theorist'. 'If you were to make enquiries into the work of his office you would find', Hughes forecast, 'that what he does himself is very little indeed'.⁵²

The source of many of the adverse assessments of Knibbs was the acerbic pen of Coghlan. Thus when Knibbs travelled overseas to study census methods he was derided for taking 'a jaunt'. And, in a letter to a friend at the *Bulletin*, Coghlan confided that 'I think his work is of poor quality, and he suffers terribly from swelled-head'.⁵³

Critical perceptions of Knibbs' activities were associated with State resistance to Commonwealth ambitions. When the Western Australian Government introduced a statistics Bill in July 1907, Knibbs pressed for federal intervention to prevent it, but the Attorney-General, Groom, advised that a State Parliament had the right 'to legislate to obtain certain statistics for itself independently'. It was a question of policy whether representations should be made 'in respect to the unnecessary duplication of machinery'.⁵⁴ Persistent efforts by Knibbs from 1907 onwards to persuade his Ministers that 'federalising of statistical services' was essential were to no avail. While the principal State statistical officers of Queensland and South Australia had been appointed as Commonwealth officers as envisaged in the 1905 Act, they operated under an uneasy formula — which encountered prolonged resistance from other States — that entailed their acceptance of 'professional directions' from the Commonwealth Statistician without being under his 'immediate administrative authority'. 'The present system of dual control is conducive to delay, incompleteness and want of uniformity in presentation', Knibbs complained to his departmental head on 26 November 1909 after vexing correspondence with Queensland and frustrating delays in obtaining returns from the under-staffed Tasmanian statistician. Nevertheless, because of the need for co-operation on the Census, he suggested the following April that 'the matter of assuming the whole range of statistical functions' should be deferred until after the main part of the Census work had been completed.⁵⁵

The 1911 Census was the first major opportunity for Knibbs' counsel (and the talents of Wickens as a vital statistician) to be implemented. Knibbs adopted the innovative New South Wales and Victorian question of 1901 about the number of children born to the marriage and extended it to previous marriages. (Ex-nuptial births were not recorded and data on women who were separated, divorced, or widowed were collected but not tabulated.) He introduced questions about race, the occupation of a person's employer, and the length of time unemployed persons had been out of work; and made it possible to distinguish between house-owners and tenants. The weekly rent of tenants was asked but the Senate refused to sanction questions about alcohol consumption, wage rates, and the amount of currency in circulation. Information was to be supplied on cards by each individual rather than on a household schedule. The British were planning to transfer data from householders' schedules to Hollerith punched cards for storage and processing. Knibbs decided, however, that electric adding machines and calculators, but not tabulating or sorting machines, were to be used for computation. In a widely circulated pamphlet, Knibbs

explained the historical background, purposes, and operations of the Census. As a 'national stocktaking' for 'sociological, economic and hygienic purposes' the data would enable the government to deal more effectively with 'the most urgent problem of the day', the declining birth-rate. In explaining some of the administrative, financial, and social policy objectives of Census taking, Knibbs made an effective case for the prospective temporary employment of 350 enumerators, 6,000 collectors, and 150 clerks.⁵⁶

Among the 1911 findings, published in seventeen bulletins and a three volume report, were some with significant policy implications, notably the estimates of the male population aged between 18 and 60 who were eligible to serve in the Citizen Forces in time of war (57 per cent), and the revelation that 4.5 per cent of the population was eligible for old age pensions. Because of mis-statements by respondents, calculations of age based on previous censuses were believed to be very inaccurate. Knibbs and Wickens introduced a process of 'age smoothing', but the problem persisted, posing a puzzle for successive Statisticians. As the 1933 Census Report put it, 'unassailable generalisation' about the reasons for mis-stating age was not possible. Ignorance and carelessness were factors, as were

a more or less conscious preference for certain attractive digits, such as 0,5, and even numbers, and possibly unconscious aversion to certain odd numbers such as 7; and some wilful misrepresentations arising from motives of an economic, social or purely individual character.

By 1961, the problem had largely evaporated, probably as a result of improved educational standards and 'a more constant necessity' to disclose or prove age in a variety of contexts, as well as the compulsory registration of births, deaths, and marriages.

Confronted by the fact that their 1911 figures showed that 80 per cent of all reported cases of deaf mutism were aged 10 to 14, rather than in the earliest age groups as would be expected for a congenital condition, Knibbs and Wickens sought the explanation in understatement by parents hoping that their children would recover or anxious about losing them to educational institutions. The group aged 10 to 14 would be thoroughly enumerated because they were likely to be receiving specialised education and their teachers would provide the census information. Ten years later the discovery that the age group 20 to 24 had the most deaf mutes made it clear that an epidemic of some sort must have affected this particular cohort. Later medical research, drawing heavily on the 1911 and 1921 Census results, established a convincing link between deaf mutism and rubella.

Knibbs justified the inclusion of a question about race as 'important for the Commonwealth Representation Act, which expresses the determination of the people of the Commonwealth to preserve their country as a white Australia'. While the racial question was principally concerned with European and non-European origins, full blooded Aboriginals in accordance with section 127 of the Constitution were not included in reckoning the numbers of the people. Not until 1933 were collectors instructed to gather as much information as they could about Aboriginals 'in employment or living in proximity to settlements'. Only after the repeal of section 127 of the Constitution in 1967, did the focus shift to identifying for policy purposes an 'Aboriginal/Torres Strait Islander' population rather than a European one. Seventy years after Knibbs introduced the race question, the discredited concept of a 'European race' was dropped. Information sought thereafter about country of birth, citizenship, and language use reflected the concerns of a multi-cultural society; and the large number of persons identifying themselves as Aboriginal (40 per cent more in 1976 than in 1971) demonstrated a radical shift in attitudes.⁵⁷

One of the most controversial aspects of the 1911 Census was the Statistician's calculation of the population of the States which showed that both federal and State inter-censal estimates had consistently overstated each State's population. Bickering over the reasons for the discrepancies did not disguise the real cause of concern — every head less was 25 shillings less in a State's coffers from federal contributions. The Commonwealth steadfastly resisted a call for a statisticians' conference to re-examine methods of calculating population. Believing themselves to be 'men competent to discuss the matter, and who have had the practical handling of Australian Statistics for many years', the State statisticians convened in Sydney in March 1912 and agreed on recommendations for compilation of overland migration figures. They also urged the Commonwealth to resume collection of interstate trade statistics and passed a ritual resolution in favour of a quinquennial census limited to 'sex and locality'. Incensed by a press statement by King O'Malley, Minister for Home Affairs, blaming the States for the 'dilatatory supply of statistics', and threatening the establishment of 'Commonwealth Statistical Bureaus' in each State, they wrote to Knibbs asking if he was in sympathy with this view. They could not have been appeased by a reply suggesting the impropriety of asking for a comment from an official about a Minister. 'The facts will, of course, speak for themselves' Knibbs concluded.⁵⁸

From its earliest days, the Bureau published regular bulletins on finance, population and vital statistics, production, transport and communication, and social statistics. From 1910 onwards, in a political environment increasingly concerned with inflation and employment issues, substantial effort was devoted to studies of employment, wages, prices, and the cost of living. Data from a household budget survey, in which only 222 out of 'approximately 1,500' account books dispatched were returned, were subjected to exhaustive manipulation. Knibbs expressed his regret that only 9.4 per cent of the families who embarked on the exercise 'persevered' throughout the twelve month period required. He compared Australians unfavourably with 'the masses of the community' in the United States and Germany whose performance on similar projects had demonstrated their understanding that 'sociological knowledge can contribute to national success'. Optimistically, Knibbs tried again in November 1913, inviting volunteers to fill in a detailed record of income and expenditure for a month. Of 7,000 sets of papers distributed only 392 usable budgets were returned. Although the sample left much to be desired, the analysis was suggestive, and once again included calculations of average weekly expenditure on food weighted for age and sex which were comparable with the most advanced contemporary overseas methodology. Nearly 50 years elapsed before the Bureau's next social survey venture—the labour force survey.⁵⁹

In a report on *Social Insurance* written after his European trip of 1909, Knibbs noted the need for more information about unemployment before the impact of a scheme of insurance could be assessed.⁶⁰ Fired by the 'entirely new development' represented by Winston Churchill's plans for national labour exchanges and compulsory unemployment insurance, Knibbs devised a new Department of Labour and Statistics 'to co-ordinate and centralise the Commonwealth agencies dealing with labour, industrial and statistical matters'. The Statistician envisaged detaching this Bureau from the Department of Home Affairs, adding responsibility for the administration of the Conciliation and Arbitration Acts from the Attorney-General's Department, and establishing a network of labour exchanges.⁶¹

Early in 1911, the Labour Minister for Home Affairs, King O'Malley, had directed his permanent head, David Miller, 'to eliminate the red-tape convention, the needless multiplication of records, the grave waste of time and the most useless expense' which allegedly characterised the 'ptolemaic business system' of his department.⁶² But, while he was emphatically in favour of more autonomy for the 'sub-departments' of his Ministry responsible for electoral, meteorological, and statistical

matters, O'Malley's low standing in the government made Knibbs' ambition unattainable. Even the Statistician's more modest wish to establish the Bureau alone as an independent department with himself as a 'permanent head' with 'the necessary powers, as to organisation, control, and discipline' was, as it turned out, some 60 years premature.⁶³

Within the Bureau a Labour and Industrial Branch was set up in 1911 and was responsible for reports on *Prices, Price Indexes and Cost of Living in Australia, 1891 to 1912* and *Trade Unionism, Unemployment, Wages, Prices, and Cost of Living in Australia 1891 to 1912*. A Labour Bulletin began publication in 1913 covering industrial conditions and disputes, unemployment, retail prices, house rent, and cost of living, wholesale prices, and wage rates. Although much criticised by later officials and scholars, this was pioneering work providing information where previously there had been none and authoritative data for the Arbitration Court's deliberations on wages.⁶⁴

In taking stock of the progress of official statistical endeavour by 1914, Knibbs commented that the compilation and computation of statistics relating to production, including agricultural, pastoral, dairying, mining, manufacturing, forestry and fisheries, remained the province of the States. He lamented the absence of a single centre where 'all the details are available for systematic study' and opined that 'the latent powers' of the Commonwealth might need to be exercised to secure uniformity, efficiency, and reductions in cost. Another handicap to be overcome was the difficulty in recruiting, housing, and retaining staff with 'considerable powers of analysis, aptitude for original research, and the special ability to penetrate the hidden significance of statistical data'.⁶⁵ The staff difficulty was shortly to be compounded by the enlistment of Bureau personnel and the transfer of others to wartime duties in other spheres. By 2 November 1916, only 15 of the staff of 27 remained, and the 44 year old Wickens who was married with children, had to be restrained by the Minister from joining the infantry following the failure of the conscription referendum.⁶⁶

Shortly after the outbreak of war in 1914, Knibbs circulated an 'urgent' letter to his State colleagues recommending that production and trade statistics should henceforth be compiled on a fiscal year basis rather than from calendar years or agricultural years (which ended either on February 28 or March 31). J.B. Trivett of New South Wales was the first to respond favourably. South Australia's new Statist, W.L. Johnston, advised in July 1916 that he had agreed with his predecessor that the statistical year should in future end on June 30. 'I have little doubt', Knibbs wrote, 'that . . . all will eventually fall into line'.⁶⁷

One way of ensuring uniformity was for the Commonwealth to take over the State bureaus. King O'Malley, once again Minister for Home Affairs, was able to persuade the Acting Prime Minister, George Pearce, to propose that the Commonwealth 'should assume the duty of compiling and publishing all Australian statistics'.⁶⁸ But the States proved uniformly unenthusiastic. R.M. Johnston of Tasmania advised his Premier that 'such a scheme of transfer and monopoly, of the right of publishing all statistics' would be detrimental to State interests.⁶⁹ In South Australia, where all statistics were collected under the authority of the Commonwealth Census and Statistics Act and little was collected beyond what the Commonwealth required, there had been a deliberate avoidance of duplication in tabulation, compilation, and publication. The South Australian statisticians believed that continued compliance with Commonwealth requirements, together with discontinuance of the vital statistics operations of the Registrar General of Births, Deaths and Marriages, would make a transfer of control unnecessary.⁷⁰ In Victoria, the Chief Secretary warned that the discontinuance of State statistical endeavour would be 'crippling' to Parliament and Royal Commissions and inconsistent with the State's dignity.⁷¹

A motion in favour of amalgamating the statistical bureaus of the Commonwealth and the States was actually carried at a conference of Ministers in Adelaide in May 1916. But, after two years of desultory deliberation, the States announced via a memorandum from the Premier of New South Wales on 2 July 1918 that 'under the circumstances it is not proposed to take any further steps to give effect to the resolution passed at the Conference'. Although 'many manifest disabilities' were cited as more than counterbalancing any advantages that might accrue from amalgamation, no specific 'disabilities' were identified by the States. R.M. Johnston had once complained to Knibbs of 'frequent changes made by your central bureau without previous warning, and the gradual growth of details under various categories from year to year'. Clearly, while Johnston and other statisticians might continue to co-operate and to espouse a doctrine of uniformity, they remained unwilling to surrender the autonomy which they and their predecessors had enjoyed for so long.⁷²

While State statisticians were resolute in maintaining their freedom of action, the exigencies of war—the need for what Prime Minister Hughes called a 'great scheme of organisation'—produced a War Census Act in July 1915 that imposed significant duties of disclosure and compliance on the Australian public. The onus to obtain, complete, and return the schedules was placed on respondents who were required to provide information not only about the present occupations of males aged eighteen to 59 but about other occupations they were capable of undertaking. The 'personal' card also asked questions of direct concern to military and security authorities—about health, military training, possession of firearms and ammunition, birthplace, and citizenship. A 'wealth and income' card sought details from all persons over eighteen not only of 'income' and 'property' but also about ownership of motor cars, motor cycles, other motor vehicles, and traction engines, and 'the kind and number of any other vehicles'. Information was also required on horses and foals (by sex and use), cattle (including working bullocks), mules, camels, sheep and pigs.

Using lists derived from their card indexes, the war census staff were able to facilitate the issue of recruiting appeals to all males other than the enemy subjects aged between eighteen and 45; and war loan appeals and prospectuses were dispatched to persons who had disclosed that they were 'in possession of £1,000 or upwards'. Complete lists of those born in enemy countries or whose parents were enemy aliens were 'prepared for the information of the military authorities'.⁷³

Suspicion that the census of income and wealth was a prelude to fresh taxation imposts led to 'conservative' estimates. There was evidence that some parents omitted to record the property of children under eighteen, and some older pensioners may not have filed. Nevertheless, in spite of the problems caused by those whom the South Australian Statist described as 'the simple minds of the community', the inquiry was a uniquely revealing exercise which, as the 1925 *Year Book* candidly admitted, was unlikely to be repeated in 'normal' times because of its 'inquisitorial character'.⁷⁴

While conscious of the deficiencies of the war emergency census, Knibbs urged the desirability of distributing wealth and income forms with each decennial population census. The Statistician suggested:

In those cases in which there is an objection to disclosing the particulars, in respect of wealth and income to a local resident (the collector) even though under an oath of secrecy, arrangements could be made for the collector to furnish an envelope for the transmission of the form post free to the Commonwealth Statistician, and could, by a note to this effect in his record book, ensure that the person to whom the envelope was issued would not be overlooked in the event of default.⁷⁵

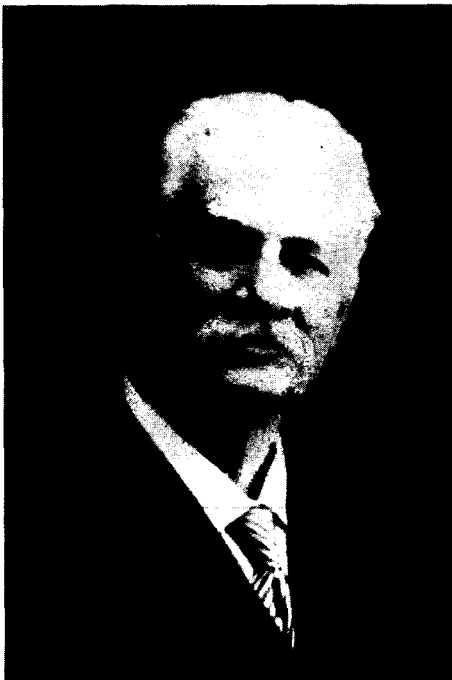
Following several months in England in 1919 as the Australian representative on the double taxation sub-committee of the Royal Commission on the income tax, Knibbs

had concluded that it would be desirable to collect more statistics on taxation of income and land. He reported to Stonham that there was a growing feeling in Britain that:

. . . there will have to be a heavy wealth tax, and that the nation's well-being will not allow the War Debt to be a perpetual charge on the nation's productive activity . . . I am hoping, that in these, as in other matters, we shall be able to set the pace in Australia.⁷⁶

But in the debates on the legislation required for the 1921 Census, the Labor leader, Frank Tudor, quoted correspondence in which Knibbs resiled from his support for a contemporary income and wealth survey which he now said was unnecessary, inconvenient, and impracticable. Reliance would be placed henceforth on inventory estimates of wealth, Knibbs having already advised the government that 'any estimate of wealth based on probate returns must take into account at least five, or still better, ten years' experience'.⁷⁷

Early in 1920 Knibbs attended the first Empire Statistical Conference in London. In preparing for the Australian submission to the conference, Knibbs had compiled a comprehensive memorandum which advanced the case for an Imperial Statistical Bureau. Reflecting his experience at the head of a federal agency, Knibbs argued that the prestige of an imperial bureau would be 'a more potent factor in the introduction of uniformity than any number of Statistical Conferences'. Continuity would also provide regular analysis not available from 'the intermittent conference method of control' or a 'mere summarising agency'. Among Knibbs' observations was a condemnation of existing statistics on unemployment as 'meagre and unsatisfactory'. He emphasised the need to measure the 'efficiency' of labour and of manufacturing on a common basis, and saw an urgent need for better data on industrial disputes.⁷⁸



G. H. Knibbs

In a letter to Stonham from London, Knibbs foreshadowed that 'we shall have to enlarge Industrial Section's work, and in a way which will take account of the industrial drift . . .'.⁷⁹ Knibbs had been developing his thinking on the social issues of the post-war world. 'The potential multiplying power of the human race' was a growing preoccupation leading to an increasing concern with questions of race hygiene and migration. His changing interests, and the challenge of a new task, led Knibbs to accept the invitation of the Prime Minister to take up the directorship of the newly created Bureau of Science and Industries in 1921.⁸⁰

In the fundamentally unpropitious environment of an emergent Commonwealth, Knibbs had built an organisation that was respected by those whose judgment was not impaired by jealousy or political and institutional antagonism. He had coped with a dizzying succession of Ministers, creating and maintaining a

high reputation for professional competence and integrity. Occasional controversy and collisions of personality did not detract from the basic achievement and growing authority of what had become a secure element of the federal administration. The New Zealand Government Statistician, Malcolm Fraser, had written to his Australian colleague in 1919:

I know that on account of your experience and pioneer work in Australia you would bring more initiative and influence to the Conference [of Empire statisticians] than any other Representative, and without your assistance the work of the Conference would suffer. I freely acknowledge New Zealand's indebtedness to you; your work in Australia has been a constant help and inspiration to us here. I notice also the Director of the new Statistical Office, established in South Africa, in his *Year Book*, which is so closely modelled on the Commonwealth *Year Book*, makes particular acknowledgement of your help and advice. No other Statistician in the Empire is so well known nor is there any whose views carry more weight—but your reputation is not confined to the Empire; it is world-wide.⁸¹

These unsolicited remarks, prompted neither by a valedictory occasion nor the hope of preferment, were a fitting tribute to the work of the first Australian statistician to bear national responsibilities.