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Change in the relative occupational status of Indigenous workers, 1986-91

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ABSTRACT

This paper considers whether Indigenous employment strategies implemented over the latter half of the 1980s and early 1990s coincided with an improvement in occupational status for Indigenous workers and a movement towards greater similarity with the occupational profile of the general population. Using detailed occupation data from the 1986 and 1991 Censuses, change in the relative distribution of Indigenous employment is analysed by sex and section-of-State. This reveals no substantive change in the disproportionate reliance of Indigenous people on low-skilled, low-status jobs, although considerable variability exists at disaggregated levels of analysis. While Indigenous female workers increasingly occupy similar occupational niches to other females, considerable dissimilarity remains between Indigenous and other males in the workforce. Also at variance are occupational profiles in major urban areas and rural areas, with far less difference in occupational structure between Indigenous and other workers in the former. At the broad occupational level, the continued concentration of the Indigenous workforce in low-status categories is worrying from a policy perspective. This is because the share of the workforce accounted for by the lower skill categories is projected to fall over the next decade. Furthermore, projected skill-deepening within the labour market will place added strain on future mainstream employment prospects for Indigenous people, given their relatively poor educational status.

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Employment strategies aimed at raising the economic status of Indigenous people carry with them an implicit commitment to raising occupational status. This is because low economic status among Indigenous people has been persistently associated with an over-concentration of employment in unskilled, low paying and often ephemeral jobs (Taylor 1994). In view of this, the Aboriginal Employment Development Policy (AEDP) has laid emphasis on raising participation in formal training and skill improvement programs, as well as on affirmative action to enhance the representation of Indigenous people in positions at middle-management levels and above (Australian Government 1987). Subsequent to the 1994 review of the AEDP and its recommendations for upward occupational mobility, this emphasis on training and skill enhancement remained and was enhanced under the Labor Government's Working Nation strategy (Aboriginal and Torres Strait Islander Commission (ATSIC) 1994; Commonwealth of Australia 1994).

Seemingly running counter to these aims, however, has been an expansion of the Community Development Employment Projects (CDEP) scheme. To date, this component of the AEDP has had the effect of increasing Indigenous workforce participation, particularly in rural areas but overwhelmingly in unskilled occupations. At the national level, just over half of Indigenous employment growth between 1986 and 1991 is estimated to have been generated by the CDEP scheme, while between 1991 and 1994 this proportion rose to around two-thirds (Taylor 1993; Taylor and Liu Jin 1995: 5).

Notwithstanding the existence of links between occupational status and the broader aims of policy, no official monitoring procedure has ever been in place to assess policy outcomes in regard to occupational change. This partly reflects the lack of regular information supply regarding the occupational status of Indigenous people. The primary means of obtaining such information for the total population, the monthly Labour Force Survey, only recently included an Indigenous identifier (in March 1994, February 1995 and February 1996), although only the 1995 and 1996 surveys coincided with the standard quarterly collection of occupational data. In any event, use of this identifier was purely experimental and only data from the March 1994 Labour Force Survey have been published to date (Australian Bureau of Statistics (ABS) 1996a). The indication from this analysis of 1994 data is that occupational profiles for Indigenous people from the Labour Force Survey would be unreliable due to sampling problems. The only other likely recent source of such data, the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) conducted by the ABS, did not collect information on occupations. This means that the five-yearly census remains the only reliable indicator of Indigenous occupational

status. Since information from the 1996 Census will not be available for analysis until at least July 1997, data from the 1991 Census are still the most up-to-date.

Detailed analysis of the relative occupational status of Indigenous Australians has been conducted using 1986 Census data (Taylor 1994). This revealed high levels of statistical segregation between Indigenous and non-Indigenous workers with the former over-represented in low-skilled and low-status occupations. While this analysis for a point in time has yielded valuable insight into the structure of Indigenous work relative to the mainstream, questions regarding the possible impact of employment policies are best addressed by longer-term analysis. The policy significance of such an exercise derives from implied links between changes in social indicators and known policy applications over equivalent periods of time.

In examining occupational change in this way, a number of analytical considerations arise. For example, variations between rural and urban areas in levels of educational attainment, in the application of labour market programs and in available employment opportunities are likely to result in different occupational outcomes according to section-of-State. Also to be expected are variations according to sex, given the quite different occupational distribution of male and female employment, not least because just over two-thirds of CDEP scheme employees are male (ABS 1996b).

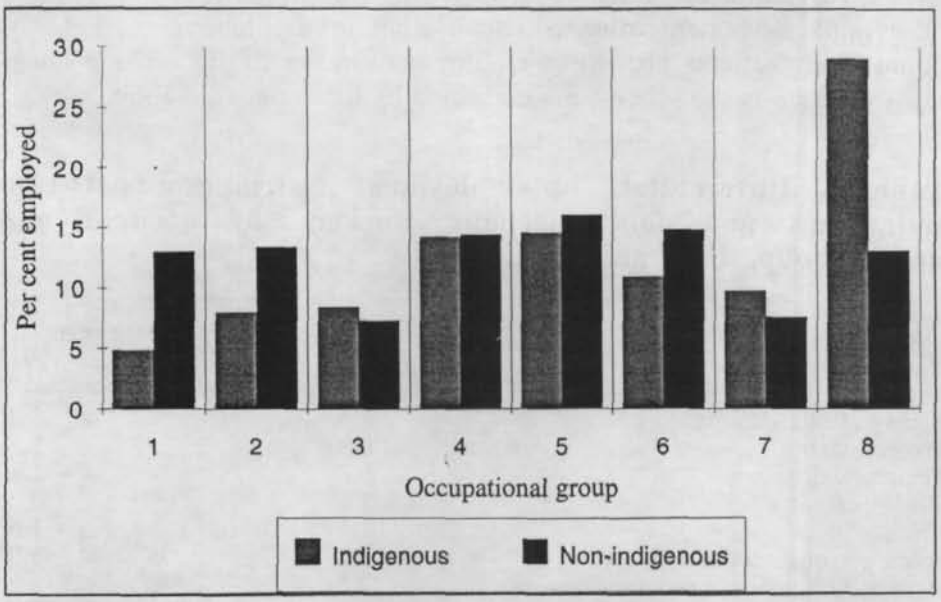
Clarification of such issues is a vital part of assessing the potential effectiveness of policies that implicitly seek to achieve upward occupational mobility for Indigenous people. The basic question, though, is whether employment policy interventions over the latter half of the 1980s and early 1990s coincided with an improvement in occupational status for Indigenous workers and a movement towards greater overall similarity with the occupational profile of the general population. To provide an answer, this paper examines intercensal changes between 1986 and 1991 in the detailed occupation of Indigenous and non-Indigenous employment by sex and section-of-State.

Change in inter-occupational segregation, 1986-91

Notwithstanding potential policy impacts on the occupational structure of employment, Indigenous workers remained far less evenly spread across broad occupational groupings in 1991 than the workforce in general. This discrepancy was due to a continuing over-concentration of Indigenous employment in unskilled labouring jobs and as plant and machine operators and drivers, and a relatively marked absence from

professional, managerial and clerical jobs (Figure 1). In all other occupations, Indigenous representation was more or less equivalent to the national norm, at least at the broad level of major occupational groups.

Figure 1. Distribution of Indigenous and non-Indigenous employment by occupational groups, 1991.



1. Managers and administrators; 2. Professionals; 3. Paraprofessionals; 4. Tradespersons; 5. Clerks; 6. Sales, personal service workers; 7. Plant, machine operators and drivers; 8. Labourers and related workers.

Differential shifts that occurred in the percentage distribution of Indigenous and non-Indigenous workers across occupational groups between 1986 and 1991 are shown in Table 1. Minus signs indicate occupations where Indigenous representation was greatest. In 1986, for example, 34.2 per cent of Indigenous workers were employed as labourers compared to 14.6 per cent of all other workers. Subtracting the Indigenous proportion from that of other workers produces a differential in the proportions of -19.6. In other words, the proportion of Indigenous employees engaged in labouring jobs in 1986 was greater than the proportion of all other workers in the same occupational group by 19.6 percentage points. By 1991, the gap between the two proportions had narrowed somewhat but Indigenous representation in labouring jobs was still greater by 15.9 percentage points.

The main feature of employment change revealed in Table 1 was the lack of any significant shift in relative occupational distribution. Some narrowing of the gap in proportional representation was evident but the overall downward effect on the index of dissimilarity was only slight.[1] However, according to this index, to have achieved equality in the distribution of employment across the broad industry divisions, a fairly stable proportion of around 20 per cent of Indigenous workers in the latter half of the 1980s and early 1990s would theoretically need to have been in different occupational groups. From Figure 1 this would clearly have involved far less reliance on labouring jobs in particular. This lack of overall movement towards equalisation in the labour market no doubt partly reflects growth of employment in the CDEP scheme since most workers in the scheme are classified by the census as labourers.

Table 1. Differentials in employment distribution between Indigenous and non-Indigenous workers by occupational major group, 1986 and 1991.

Occupational group[a]	Difference in per cent employed 1986	1991
Managers and administrators	8.5	8.2
Professionals	6.9	5.5
Paraprofessionals	0.3	-1.1
Tradespersons	1.1	0.2
Clerks	1.1	1.5
Sales, personal service workers	4.2	3.9
Plant and machine operators and drivers	-2.5	-2.2
Labourers and related workers	-19.6	-15.9
Index of dissimilarity	22.1	19.3

a. Excludes those inadequately described or not stated.

Source: 1986 and 1991 Censuses of Population and Housing.

At an aggregate level, the scale of this CDEP scheme effect confounds any attempt to gauge the impact on occupational spread of other AEDP initiatives, particularly those with equalisation goals in mind. However, it is possible to isolate CDEP scheme effects to some extent by controlling for key structural factors in the labour market. The first of these controls derives from the fact that Indigenous employment, like its non-Indigenous counterpart, is largely constructed according to gender. In particular, employment in the CDEP scheme is predominantly male (ABS 1996b). This being the case, if non-CDEP scheme policy initiatives regarding the distribution of employment by occupation have had any effect, then this should be more readily apparent among female

workers. Secondly, and more importantly, both the numbers engaged in the CDEP schemes and the relative importance of the scheme in terms of local employment are greatest in rural areas, thereby producing a substantial section-of-State variation. Based on this fact, non-CDEP scheme policy impacts on occupational distribution should be most evident in urban areas and particularly in major urban areas, where only few CDEP schemes exist.

Gender variation in occupational segregation, 1986-91

The distribution of employment across major occupational groups in 1991 was quite different for Indigenous males and females, largely because Indigenous females mirrored the gender difference apparent in the labour market as a whole (Figure 2). Accordingly, Indigenous female employment was heavily concentrated in sales and personal service occupations as well as in clerical jobs, as was the case with female workers generally. Indigenous males, on the other hand, were over-represented in labouring jobs and as plant and machine operators and drivers but shared, with other males, low representation as sales and personal service workers and clerks.

This gender gap is reflected in the indexes of dissimilarity between Indigenous males and females and non-Indigenous males and females shown in Table 2. The large difference between the occupational distributions of Indigenous males and females is indicated by a high index of dissimilarity of 46.0 in 1986, which remained more or less at the same level in 1991 (43.1). However, the index for non-Indigenous males and females was equally high (37.7 in 1986) and this also remained constant over time (37.2 in 1991). The index of dissimilarity between Indigenous males and their non-Indigenous counterparts was less than between the sexes and showed signs of falling between 1986 and 1991 from 29.2 to 25.7, while the index for females was low in 1986 and lower still in 1991, pointing to little difference among female workers in occupational distribution.

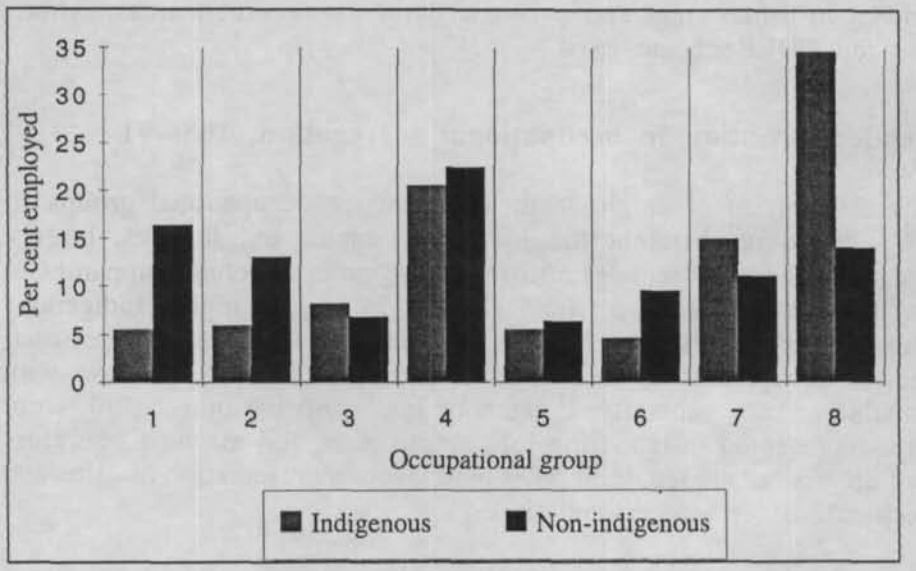
Table 2. Indexes of dissimilarity by sex, 1986 and 1991.

	Index of dissimilarity	
	1986	1991
Indigenous males/females	46.0	43.1
Non-Indigenous males/females	37.7	37.2
Indigenous/non-Indigenous males	29.2	25.7
Indigenous/non-Indigenous females	13.8	11.4

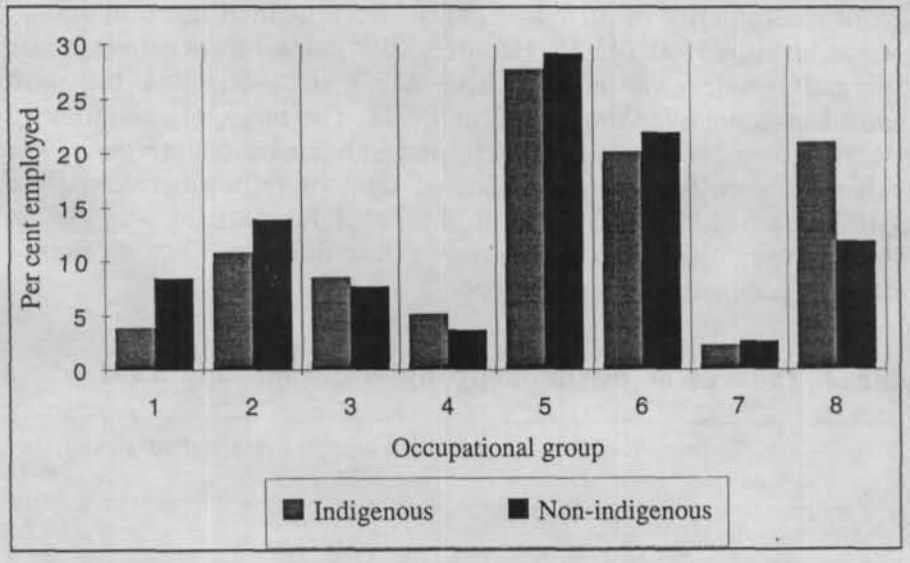
Source: 1986 and 1991 Censuses of Population and Housing.

Figure 2. Percentage distribution of Indigenous and non-Indigenous employment by industry division and sex, 1991.

Males



Females



1. Managers and administrators; 2. Professionals; 3. Paraprofessionals; 4. Tradespersons; 5. Clerks; 6. Sales, personal service workers; 7. Plant, machine operators and drivers; 8. Labourers and related workers.

Change in intra-occupational segregation

In order to derive a more precise assessment of occupational segregation between Indigenous and non-Indigenous workers, detailed tables of occupational units for each group were obtained using the full Australian Standard Classification of Occupations (ASCO).[2] Using these fine-grained data, an index of dissimilarity was calculated for each industry division and the results are presented in Table 3. In interpreting these indexes it is important to note that their comparability across ASCO major groups is reduced somewhat, owing to the tendency of the index to increase with the detail of the classification (Karmel and Maclachlan 1988). To assist in their usage, the number of units in each major occupational group is also indicated.

Table 3. Intra-industry indexes of dissimilarity by sex, 1986 and 1991.

Occupational group	Intra-occupation index of of dissimilarity 1986	1991	Occupational units[a]
	Males		
Managers and administrators	18.3	15.3	25
Professionals	49.7	44.5	72
Paraprofessionals	46.5	43.2	27
Tradespersons	22.7	21.2	70
Clerks	22.5	20.9	31
Sales and personal service workers	24.5	27.0	25
Plant, machine operators and drivers	13.8	13.2	45
Labourers and related workers	31.4	31.1	39
	Females		
Managers and administrators	26.0	19.9	25
Professionals	40.1	39.2	72
Paraprofessionals	44.1	45.5	27
Tradespersons	34.0	35.1	70
Clerks	25.4	22.4	31
Sales and personal service workers	23.6	26.8	25
Plant, machine operators and drivers	12.6	18.3	45
Labourers and related workers	18.1	20.1	39

a. The ASCO structure includes 282 occupational unit groups. The final census classification used in Table 3, however, includes 334 such groups. This is because 'not further defined' categories are added. Thus, some variation in intra-occupational indexes over time may be due to respondent and processing error.

Source: 1986 and 1991 Censuses of Population and Housing.

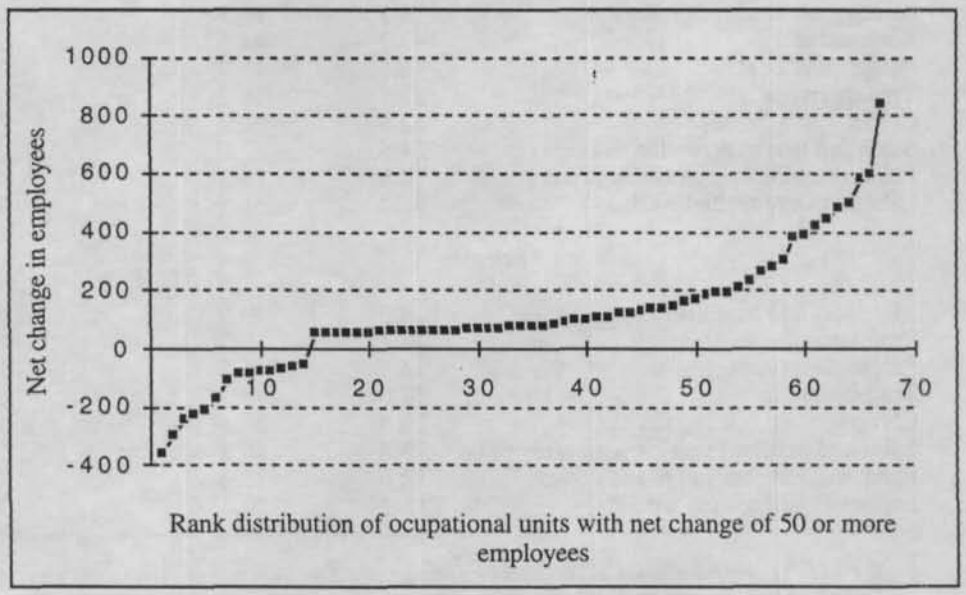
A number of points emerge from these calculations. First, dissimilarity between Indigenous and non-Indigenous female workers was much

higher at the intra-occupational level than at the inter-occupational level as revealed in Table 2. When the distribution of jobs within each occupational group is considered, Indigenous females appear just as segregated as Indigenous males, indeed in some cases they were more so. Second, for both males and females, segregation was highest in professional and paraprofessional occupations while among managers and administrators it was relatively low. Third, in almost all occupational groups the segregation of Indigenous workers declined. The main exception to this was observed among sales and personal service workers.

Employment change by occupational unit

Between 1986 and 1991 the number of Indigenous people in employment increased by 14,017. This increase was the net result of employment gains in 230 individual occupational units and job losses in 83 occupations. The remaining 21 occupations experienced no net change in employment.

Figure 3. Rank distribution of net change in Indigenous employment by occupational unit, 1986-91.



Unfortunately, the rather high proportion of Indigenous workers who did not state their occupation of employment (6 per cent in 1986 rising to 12.7 per cent in 1991) limits the scope for precise allocation of job gains and losses to particular occupations, although there is no reason to assume that non-responses could not be accounted for by apportionment

according to occupational share. Also to be noted is the fact that some employment changes by occupational unit were due to alterations in ABS coding procedures. For example, large gains were often made in 'not further defined' categories because of a stricter application of the rules regarding allocation to a given industry class in the coding of 1991 Census data. Other reasons for an increase in some occupational categories and losses in others were to do with micro-economic reform and industry restructuring leading to the disappearance of certain occupations and changes in occupational job mix. This occurred, for example, in various clerical areas where typists and filing clerk duties became part of a wider job mix involving a range of clerical duties. Industry restructuring also allowed more precise definition of some occupations, particularly in the blue-collar area which formerly did not have precise job descriptions.[3]

Table 4. Rank order of top ten net employment gains by occupational unit and sex: Indigenous and non-Indigenous workers, 1986-91.

Indigenous	Non-Indigenous
Males	
Machine operators[a] nfd[b]	Managers and administrators nfd[a]
Welfare paraprofessionals	Machine operators nfd[a]
Labourers and related workers nfd[a]	Road and rail transport drivers nfd
Road and rail transport drivers nfd	Sales representatives
Cleaners	General managers
Other paraprofessionals	Finance managers
Vehicle mechanics	Computing professionals
Garbage collectors	Other paraprofessionals
Other business professionals	Building professionals and engineers nfd
Managers and administrators nfd[a]	Kitchenhands
Females	
Cleaners	Sales assistants
Child care, refuge and related workers	Managers and administrators nfd
Clerks nfd	Child care, refuge and related workers
Sales assistants	Receptionists and information clerks
Enrolled nurses	Finance managers
Accounting clerks	Other paraprofessionals
Welfare paraprofessionals	Machine operators nfd
Receptionists and information clerks	School teachers nfd
Other paraprofessionals	Sales representatives
Other business professionals	Accountants

a. Not further defined.
b. Indicates that net gain to these occupations is likely to reflect methodological and definitional changes in occupational coding rather than actual net gain in employees.

Source: 1986 and 1991 Censuses of Population and Housing.

A rank distribution of net change in employment by occupational unit enables identification of those occupations most responsible for job growth and decline. This is shown in Figure 3, which reveals that substantial change occurred in only very few occupations and that these contributed to the bulk of employment change. For the Indigenous workforce, a group of some nine occupations stand out as the main source of employment growth, accounting for almost 4,600 new jobs. Taking an overall perspective, the leading ten occupations out of the total of 230 that experienced job growth accounted for as much as 42 per cent of all net gain. Likewise, the leading ten losers out of 83 declining occupations accounted for 70 per cent of all net loss. Consequently, the vast majority of occupational units experienced little, if any, change in employment. Figure 3 shows only the extreme ends of the rank distribution, comprising those occupational units with the greatest net change in employment (above or below 50). These accounted for only 20 per cent of all occupational units. Those with a net change of less than 50 employees have been omitted from Figure 3 as well as those with no change. The resultant S-shaped distribution was common to all population sub-groups; male and female, Indigenous and non-Indigenous.

Particular occupations most responsible for the employment gains shown at the extreme right of the curve in Figure 3 are indicated in Table 4 and comparison is made with their non-Indigenous equivalents. Also indicated in this table are those occupations where change in census methodology and industry restructuring were likely to have contributed to employment gain. Some overlap is evident between the lists of occupations both between Indigenous and non-Indigenous workers, as well as for those for Indigenous males and females. This reflects the fact that in some occupations, such as sales assistants and road and rail drivers, Indigenous people shared in the expansion that occurred generally. At the same time, some of the overlap observed can be discarded as due to definitional change and not necessarily to real employment gain. This applies to machine operators, managers and administrators, and receptionists and information clerks. For the most part, however, the lists for Indigenous and non-Indigenous workers display quite different patterns of occupational growth. For example, cleaners and welfare paraprofessionals were major growth occupations for Indigenous people compared to finance managers and sales representatives for the rest of the workforce. The consequence was an Indigenous workforce that had altered few of its distinguishing characteristics since 1986 and continued to occupy employment niches quite distinct from those of the mainstream (Table 5).

Table 5. Rank order of top ten occupational units by sex: Indigenous and non-Indigenous workers, 1991.

Indigenous	Non-Indigenous
Males	
Truck drivers	Sales assistants
Labourers and related workers nfd[a]	Truck drivers
Clerks nfd	Sales representatives
Storemen	Managers and administrators nfd
Cleaners	Metal fitters and machinists
Carpenters and joiners	Storemen
Sales assistants	Vehicle mechanics
Vehicle mechanics	Accountants
Other trade assistants and factory hands	Accounting clerk
Machine operators nfd	Carpenters and joiners
Top ten employment	Top ten employment
Per cent of total employment: 33.1	Per cent of total employment: 24.3
Females	
Cleaners	Sales assistants
Clerks nfd	Office secretaries and stenographers
Sales assistants	Accounting clerks
Accounting clerks	Receptionists and information clerks
Child care, refuge and related workers	Registered nurses
Welfare paraprofessionals	Clerks nfd
Teachers aides	Cleaners
Receptionists and information clerks	Electronic data processing operators
Office secretaries and stenographers	Cashiers
Enrolled nurses	Primary school teachers
Top ten employment	Top ten employment
Per cent of total employment: 48.6	Per cent of total employment: 45.0

a. Not further defined.

Source: 1991 Census of Population and Housing.

Section-of-State variation in industry segregation, 1986-91

The nature and level of Indigenous employment is strongly associated with location (Taylor 1993; ABS 1996b). This reflects the fact that many Indigenous people are not resident in places where the greatest number and range of jobs are found, nor are they predisposed to changing residential location to overcome this mismatch. In remote rural areas, for example, Indigenous settlement is in numerous, small-scale and widely dispersed localities. This serves to diminish economies of scale and limits the development of market thresholds for job creation and occupational diversity. The main employment policy response in this context of seemingly limited options has been to

facilitate expansion of the CDEP scheme. Not surprisingly, this is reflected in the maintenance of high occupational segregation for both males and females in rural areas due to an over-concentration of employment in labouring occupations (Table 6). Interestingly, however, high rural segregation indexes also reflect the fact that non-Indigenous employment in such areas is far less dependent on labouring jobs. In 1991, only 14 per cent of non-Indigenous workers employed in rural areas of Australia were engaged in labouring jobs compared to 38 per cent of Indigenous workers. Clearly, diversity of employment opportunity does exist in rural areas, it is simply segmented.

The data in Table 6 also reveal a distinct settlement-size gradient in the degree of occupational dissimilarity. This shifts from major urban areas, where the difference in occupational distribution between Indigenous and non-Indigenous workers is small (especially among females), to other urban areas where the gap between occupational distributions is somewhat wider, to rural areas where substantial difference occurs, particularly among males. While it is true to say that the dissimilarity index declined between 1986 and 1991 in all sections-of-State, the least impact was felt in rural areas, whereas urban areas had clearly shifted to much lower dissimilarity by 1991.

Table 6. Indexes of occupational dissimilarity by section-of-State and sex, 1986 and 1991.

Section-of-State	1986			1991		
	Males	Females	Total	Males	Females	Total
Major urban	22.0	10.9	16.9	19.3	5.7	13.0
Other urban	26.0	14.5	20.7	20.2	10.0	15.5
Rural	37.1	25.4	31.6	35.3	22.7	29.8

Source: 1986 and 1991 Censuses of Population and Housing.

This section-of-State gradient in segregation is repeated at the intra-occupational level (Table 7). Not only were dissimilarity indexes lowest in urban areas, and especially major urban areas, they were also more stable between censuses than in rural areas. Of particular note was the extreme dissimilarity between rural workers in professional and para-professional occupations, although this was fairly high in all locations anyway. This reflects the concentration of Indigenous professionals and paraprofessionals in jobs related to servicing Indigenous communities, notably in welfare and community service work as well as in education and health. Also of note is the increase in dissimilarity in clerical and labouring jobs in rural areas. This probably reflects the growing

reliance for employment in rural areas on the CDEP scheme (ABS 1996b).

Table 7. Intra-occupation segregation by section-of-State, 1986 and 1991.

Occupational group	1986 Major urban	1986 Other urban	1986 Rural	1991 Major urban	1991 Other urban	1991 Rural
1	22.8	22.7	29.4	16.2	15.4	24.7
2	39.5	47.1	54.2	37.6	45.8	46.1
3	34.9	45.2	56.9	31.9	42.1	58.7
4	15.0	23.4	35.8	14.2	21.4	32.1
5	19.1	24.4	38.1	17.9	20.2	35.2
6	21.8	29.8	21.8	22.6	27.5	33.4
7	16.3	10.8	14.7	15.9	10.1	14.7
8	16.1	22.8	22.8	14.1	17.0	30.9

1. Managers and administrators; 2. Professionals; 3. Paraprofessionals; 4. Tradespersons; 5. Clerks; 6. Sales and personal service workers; 7. Plant, machine operators and drivers; 8. Labourers and related workers.

Source: 1986 and 1991 Censuses of Population and Housing.

A nominal measure of the particular occupational concentrations responsible for employment segregation can be established by simply ranking the top ten industry classes of employment. This is done for each section-of-State in Tables 8 and 9. The share of total employment accounted for by the top ten occupational units for both male and female workers is lowest in major urban areas and highest in rural areas. This is not surprising given the greater diversity of economic activity in metropolitan settings and is also consistent with the pattern found in the labour market generally. Also of note is the fact that the concentration of work in the top ten occupations was consistently greater among the Indigenous workforce, though by only a small margin, while the degree of occupational concentration among Indigenous females in major urban areas was equivalent to that of their non-Indigenous counterparts.

While some of the main employing occupations were common to both Indigenous and non-Indigenous workers, though in somewhat different rank order, others were quite different. The striking feature, however, is the fact that Indigenous females in urban areas shared many of the same occupational units with other females, whereas males, in non-metropolitan urban areas particularly, displayed a quite different set of occupations. Urban jobs that Indigenous males appear to be relatively absent from include sales assistants and sales representatives, vehicle

Table 8. Rank order of top ten occupational units by Indigenous and non-Indigenous male employment and section-of-State, 1991.

Indigenous	Non-Indigenous
Major urban	
Truck drivers	Sales assistants
Labourers nfd[a]	Truck drivers
Clerks nfd	Sales representatives
Storemen/women	Managers and administrators nfd
Cleaners	Metal fitters and machinists
Carpenters and joiners	Storemen/women
Sales assistants	Vehicle mechanics
Vehicle mechanics	Accountants
Other trade assistants and factory hands	Accounting clerks
Machine operators nfd	Carpenters and joiners
Per cent of total employment: 27.0	Per cent of total employment: 22.7
Other urban	
Labourers nfd	Truck drivers
Truck drivers	Sales assistants
Other trade assistants and factory hands	Metal fitters and machinists
Cleaners	Vehicle mechanics
Farm hands and assistants	Carpenters and joiners
Welfare paraprofessionals	Other trade assistants and factory hands
Machine operators nfd	Sales representatives
Railway labourers	Managers and administrators nfd
Structural steel and welding tradespersons	Electrical mechanics
Excavating and earthmoving operators	Structural steel and welding tradespersons
Per cent of total employment: 30.6	Per cent of total employment: 24.4
Rural	
Farm hands and assistants	Farmers and farm managers
Labourers nfd	Farm hands and assistants
Welfare paraprofessionals	Truck drivers
Other construction and mining labourers	Vehicle mechanics
Cleaners	Sales assistants
Truck drivers	Metal fitters and machinists
Gardeners	Managing supervisors
Farmers and farm managers	Carpenters and joiners
Garbage collectors	Managers and administrators nfd
Carpenters and joiners	Excavating and earthmoving operators
Per cent of total employment: 49.3	Per cent of total employment: 43.2

a. Not further defined.

Source: 1991 Census of Population and Housing.

Table 9. Rank order of top ten occupational units by Indigenous and non-Indigenous female employment and section-of-State, 1991.

Indigenous	Non-Indigenous
Major urban	
Clerks nfd[a]	Sales assistants
Sales assistants	Office secretaries
Accounting clerk	Accounting clerks
Receptionists and information clerks	Receptionists and information clerks
Child care and refuge workers	Registered nurses
Cleaners	Clerks nfd
Office secretaries	Cleaners
Welfare paraprofessionals	Electronic data processing operators
Electronic data processing operators	Cashiers
Registered nurses	Primary school teachers
Per cent of total employment: 44.9	Per cent of total employment: 45.3
Other urban	
Cleaners	Sales assistants
Clerks nfd	Accounting clerks
Sales assistants	Cleaners
Child care and refuge workers	Registered nurses
Accounting clerks	Office secretaries
Teachers aides	Receptionists and information clerks
Receptionists and information clerks	Clerks nfd
Office secretaries	Primary school teachers
Welfare paraprofessionals	Cashiers
Enrolled nurses	Child care and refuge workers
Per cent of total employment: 49.8	Per cent of total employment: 47.9
Rural	
Cleaners	Farmers and farm managers
Teachers aides	Sales assistants
Welfare paraprofessionals	Accounting clerks
Sales assistants	Office secretaries
Enrolled nurses	Registered nurses
Clerks nfd	Cleaners
Child care and refuge workers	Receptionists and information clerks
Accounting clerks	Clerks nfd
Labourers nfd	Primary school teachers
Cooks	Farm hands and assistants
Per cent of total employment: 55.5	Per cent of total employment: 53.3

a. Not further defined.

Source: 1991 Census of Population and Housing.

mechanics and electrical mechanics, managers and administrators, accounting and industry-linked trade jobs. In rural areas Indigenous occupations continued to be more reflective of CDEP scheme work and community service delivery as opposed to the non-Indigenous workforce which was focused more on management, trades and sales jobs for males, and nursing, clerical and teaching jobs for females.

Change in occupational prestige and socioeconomic status

From a policy or social science perspective, it is insufficient to simply compare the occupational distribution of different groups in the workforce and hope to derive confident conclusions about their relative economic and social well-being. The ASCO is a skills-based classification and this focus on skills overlooks popular ratings of the social standing of different occupations as well as their manifest outcomes in terms of economic rewards and general life chances. While these generally correlate well with qualifications and other indicators of skill level, some variation does exist.

With this in mind, a number of alternative occupational scales have been developed, with the aim of amalgamating the above considerations into a single measure of socioeconomic status. The most recent of these is the ANU3 scale. This provides prestige ratings that are reflective of aggregate differences in job entry requirements, economic rewards, power and privilege, as well as popular judgements about the social standing of jobs, and it links these to ASCO occupational units (Jones 1989: 195-96).[4] Regarding issues of cross-cultural relevance, the application of such a scale to the analysis of occupational segregation should enable a more rigorous assessment of the relative standing of Indigenous people in the Australian labour market.

In brief, the ANU3 scale provides a composite measure of socioeconomic status for each occupational unit group and ranges from a low of zero (ASCO unit group 8901, ushers and door attendants) to a high of 100 points (unit group 2303, specialist medical practitioners). The overall distribution of ANU3 scores across the full ASCO range displays marked positive skewness, with a standard deviation of 23.4 around a fairly low mean of 34.8. While closely tied to ASCO rankings (high scores tend to be concentrated among managers, administrators and professionals and low scores among labourers), the scale also reveals a wide variation of prestige levels around the mean for each major ASCO group with considerable scope for overlap (Table 10). For example, some paraprofessional occupations have prestige scores lower than some labouring occupations. Rather than complicating matters, this serves to underline the need for adopting such a scale so as to override

the inconsistencies inherent in using ASCO alone as a basis for occupational comparisons.

Table 10. Range and mean of ANU3 scores by major ASCO group.

Occupational group	Range	Mean	Occupational units
Managers and administrators	39.9 - 97.0	60.9	21
Professionals	31.9 -100.0	64.6	62
Paraprofessionals	25.9 - 66.8	43.9	22
Tradespersons	3.4 - 39.5	24.1	60
Clerks	14.3 - 33.8	25.6	23
Sales, personal services	9.5 - 49.8	30.4	20
Plant and machine operators	3.4 - 35.9	12.3	40
Labourers	0.0 - 30.4	10.7	34
Total		34.8	282
Standard deviation		23.4	

Source: Adapted from Jones (1989).

In order to apply these ratings as a means of comparing the relative standing of Indigenous people in the workforce, ANU3 scores for each occupational unit have been weighted by the appropriate number of workers in each category. Average weighted scores for major ASCO groups are shown in Table 11 for males and females in 1986 and 1991. Taking the overall distribution of employment across major occupational groups, the occupational status score for Indigenous male workers was persistently low (18.1 in 1986 and 20.3 in 1991) and notably below that of other male workers. Overall occupational status for Indigenous females was higher than that of Indigenous males but still below that of other females. In both cases, slight improvement was evident between 1986 and 1991. As for status scores within each occupational group, these have been consistently lower for both Indigenous males and females compared to their non-Indigenous counterparts, although the gap in average status scores was only minor. The main exception to this was in professional occupations, where non-Indigenous workers maintained substantially higher occupational status despite a relative improvement in the status of Indigenous professionals. The other feature to note is that a decline in the average status of Indigenous managers and administrators was consistent with the pattern found generally in the labour market.

Table 11. Mean weighted ANU3 scores by major occupational group: Indigenous and non-Indigenous males and females, 1986 and 1991.

Occupational group	Mean weighted ANU3 score			
	Males		Females	
	1986	1991	1986	1991
	Indigenous			
Managers, administrators	49.2	46.3	47.9	45.1
Professionals	53.9	54.5	50.1	51.1
Paraprofessionals	39.2	38.8	41.8	39.7
Tradespersons	22.5	22.8	25.2	24.8
Clerks	17.4	17.7	24.0	23.4
Sales, personal services	27.0	27.5	24.4	25.1
Plant, machine operators	10.7	9.6	7.6	7.5
Labourers	8.5	8.4	7.6	7.0
Total	18.1	20.3	23.7	25.2
	Non-Indigenous			
Managers, administrators	52.1	48.2	48.6	46.2
Professionals	63.0	60.0	58.7	56.6
Paraprofessionals	39.4	37.5	46.2	43.5
Tradespersons	24.9	25.0	26.2	26.0
Clerks	18.7	20.1	24.7	24.8
Sales, personal services	30.0	30.1	24.2	24.7
Plant, machine operators	11.0	10.2	7.0	6.9
Labourers	9.0	9.0	8.6	8.4
Total	30.3	30.5	29.5	30.1

The fact that Indigenous females had overall higher job prestige than Indigenous males contrasts with the pattern in the labour market as a whole, where little sex difference in average status is evident (Jones 1992a: 70). From Table 11, it appears that this may have primarily been due to their consistently greater representation in higher status clerical jobs. Another likely reason is the fact that even detailed occupational codings, such as ASCO, overlook different levels of seniority and responsibility within otherwise similar jobs and therefore disguise real status levels. For example, Jones (1992a: 71) cites an example of the ASCO coding for university teachers who all receive the same classification with no distinction drawn between professors at one end of the salary and seniority scale and tutors at the other. In occupations such as this, and no doubt in many others, females tend to be concentrated at the lower end of the seniority scale and are also more likely than males to be in part-time employment.[5] Notwithstanding such issues of job seniority, it is likely that the overwhelming concentration of Indigenous

females in semi-skilled occupations, compared to the male emphasis on unskilled labouring jobs, is still sufficient to account for their overall higher occupational status.

Policy implications

Comparison of the occupational distribution of Indigenous people in 1986 and 1991 revealed no substantive change in their disproportionate reliance on low-skilled, low-status jobs. This was despite explicit policy goals to raise skills levels and encourage upward occupational mobility. To the extent that income status is tied to occupational status, one consequence of this lack of change is reflected in the fact that the ratio of Indigenous/non-Indigenous income from employment sources fell from 0.76 in 1986 to 0.71 in 1991 (Taylor 1993: 61).

Although outcomes for Indigenous people as a whole appear less than encouraging, considerable variability exists at disaggregated levels of analysis. For example, the occupational distribution of Indigenous workers in major urban areas is much closer to that of the general workforce than it is in non-metropolitan centres or in rural areas. Likewise, Indigenous females in the workforce increasingly share the same occupational niches as other females, particularly in major urban areas. In measuring relativities, however, much depends on the degree of occupational disaggregation. Similarity in female occupations, for example, is mostly confined to the broad level of major ASCO groups. At more detailed intra-occupational levels, females are often highly segregated into particular jobs to the same extent as males. The reason for this is probably found in the lower status of jobs held by Indigenous workers generally. Within the ASCO structure, knowledge of the individual occupations that employ people indicates little other than the relative skill levels required for job entry. Thus, in the context of policies aimed at improving economic status, it is also necessary to consider related indicators, such as the economic rewards and prestige attached to individual occupations. Examination of an ASCO-linked socioeconomic status scale revealed that Indigenous males and females occupied lower status positions than other workers within most occupational groups and only slight improvement in this situation occurred between 1986 and 1991.

To date, employment policies in Indigenous affairs have tended to respond to occupational imbalances in the workforce as perceived at the broadest level of analysis. Clearly, it is important to go beyond this and identify the particular jobs in which Indigenous workers congregate. The reason for this stems from the shifts in occupational structure that are expected to occur in coming years. The Australian labour market is

increasingly dynamic and the workforce is projected to become more skilled at the expense of jobs at the lower end of the ASCO scale (Department of Employment, Education and Training (DEET) 1995). These changes in workforce structure are driven by two main effects: an industry structure effect, which results from trends in industry output and productivity; and an occupational share effect, which reflects the shifts occurring in the occupational mix of individual industries. Computer programmers, for example, can expect to increase their share of employment within virtually all industries, whereas the demand for machine operators will diminish over time due to technological change and industry restructuring.

At the broad occupational level, the concentration of the Indigenous workforce in lower status categories should be of policy concern. This is because the share of the workforce accounted for by the lower skill categories of clerks, machine operators, drivers and labourers (which in 1991 accounted for 54 per cent of the Indigenous workforce) is projected to fall from 37 per cent of the total workforce in 1991 to 34 per cent by 2005. Over the same period, the higher skill categories will increase their share (DEET 1995: 89). Furthermore, this pattern of employment growth by occupation will be tied to increasingly higher skill requirements, with those employed in growth occupations expected to increase their share of employed persons with qualifications. Given the relatively poor educational status of Indigenous people, this projected skill-deepening within the labour market will place added strain on their future mainstream employment prospects (ABS 1996b).

While the overall trend is towards growth in higher skilled occupations, the outcomes in terms of individual jobs for Indigenous people are potentially mixed. From DEET (now Department of Employment, Education, Training and Youth Affairs) projections, it is apparent that Indigenous workers are concentrated in a number of occupations that are set for relative decline or, at best, below average growth. These include farm hands, machine operators, cleaners, other clerks, drivers and trades assistants. The actual level of concentration in jobs of declining importance may also be greater than the data suggest as 'labourers not further defined' form the largest single occupational group among Indigenous males. At the same time, other concentrations, particularly among females, are evident in jobs that are projected to grow in relative importance. These include welfare paraprofessionals, sales assistants, child care and refuge workers, and registered nurses. The general outcome in terms of future employment growth for Indigenous people is therefore difficult to predict, except to say that there appears to be some prospect of expansion in certain favourably inclined occupations but this is likely to be cancelled out by job losses in other occupations that are less secure.

In addition to these general industry and occupation effects, it is also the case that job growth for Indigenous people is driven by an internal dynamic through the mechanisms of labour market programs. Put simply, there is also an 'Indigenous' industry effect. For example, at the time of the 1991 Census, the CDEP scheme employed approximately 11,000 workers in 165 communities. By 1994, the NATSIS estimated this number to have risen to 16,800 or 25 per cent of the Indigenous workforce (ABS 1996b). Given the emphasis in the scheme on providing unskilled employment alternatives to social security, the overall effect on Indigenous employment profiles, especially in rural areas, has been to reinforce a concentration in low-status occupations.

A degree of dependence for employment on Indigenous community organisations also exists beyond the CDEP scheme. In 1994, the NATSIS estimated that 4,100 individuals, or 6 per cent of the Indigenous workforce, was employed by community organisations outside of the CDEP scheme (ABS 1996b). In addition, 3,500 people were employed by local governments. Given the typically small size of such bodies, and their limited range of activities, the scope for generating occupational diversity and upward mobility through these forms of employment is severely limited. At the same time, it has been noted that employment outcomes from labour market program placements in community sector jobs tend to be more successful than other placements (Johnston 1991: 94). This is attributed to the types of skills required for work in community organisations which include those used by public sector officers as well as other skills which are more culturally derived. It may also reflect the role of Indigenous social networks in the job search process as reported for other sub-groups in the labour market (Campbell et al. 1991; Jones 1992a).

Apart from providing Indigenous people with a labour market niche, this growing focus on jobs that are linked in some way to either servicing the Indigenous population or to funding regimes designed specifically to engage Indigenous labour, brings into question the wholesale application of socioeconomic ratings, such as in the ANU3 scale, as an appropriate basis from which to measure relative standing in the workforce. In Aboriginal and Torres Strait Islander segments of the labour market, culturally derived skills may form an important part of human capital that such ratings do not take into account. The basic policy implication to be drawn from this is that the Indigenous population may still experience employment growth despite their relatively low occupational standing in an increasingly skilled workforce. In the process, however, it is unlikely that they will also acquire an occupational profile more closely approximating that of the rest of the workforce, especially in rural areas. In areas devoid of mainstream labour markets, where a section of the Indigenous

population increasingly chooses to live, this would hardly seem a achievable goal anyway.

Notes

1. The Index of Dissimilarity provides a measure of the difference between two proportional distributions. It is calculated by summing the absolute differences between the percentage of all Indigenous people employed in different occupations and dividing the answer by two. For example, using hypothetical data showing the percentage of Indigenous and non-Indigenous workers employed in three occupations:

	Indigenous employed (per cent)	Non-Indigenous employed (per cent)	Absolute difference
Occupation A	65	20	45
Occupation B	10	50	40
Occupation C	20	30	10
Total	100	100	95

   In this case, the index of dissimilarity would equal 95/2 or 47.5 per cent. In other words, almost half of Indigenous workers (or non-Indigenous workers) would have to change their occupation of employment in order to eliminate the difference in the statistical distributions. The index thus ranges from zero (no segregation) to 100 (complete segregation). For further discussion of the index methodology see Jones (1992b).

2. The ASCO structure contains four levels, although data are only available from the census for the first three of these. Eight major occupational groups represent the broadest level of the classification. These are subdivided into 52 minor groups which, in turn, comprise 282 unit groups identified on the basis of skill specialisation (ABS 1986).

3. We are indebted to Paul Williams and staff of the Population Census Processing and User Services section of the ABS Central Office in Canberra for guidance on these issues.

4. To use Jones' (1989: 196) own phraseology, the ANU3 scale has a demonstrable socioeconomic basis in the Australian labour market. It has tight links to popular ratings of the general social standing of jobs, and provides a bridge between these to ASCO via such census characteristics as age, sex, employment status, employment sector, hours worked, income, qualifications and years of schooling.

5. One illustrative example of such hidden segregation is provided by data on employees of ATSIC, although a much wider scrutiny of employment data would be needed to fully substantiate the case. Of all Aboriginal and Torres Strait Islander clerical workers in ATSIC around the time of the 1991 Census, 54 per cent out of a total of 189 females were in the lowest four job classifications compared to only 19 per cent out of a total of 133 males. A similar seniority effect is evident when controlling for Aboriginality as three-quarters of all non-Indigenous clerical workers were classified ASO 4 or above, compared to just over half of all Indigenous workers (56 per cent) (ATSIC 1992).

References

Aboriginal and Torres Strait Islander Commission (ATSIC) 1992. *ATSIC Annual Report 1990-91*, Australian Government Publishing Service, Canberra.

Aboriginal and Torres Strait Islander Commission (ATSIC) 1994. *Review of the Aboriginal Employment Development Policy*, ATSIC, Canberra.

Australian Bureau of Statistics (ABS) 1986. *ASCO Statistical Classification*, cat. no. 1222.0, ABS, Canberra.

Australian Bureau of Statistics (ABS) 1996a. *Labour Force Characteristics of Indigenous Australians: Statistics, Methodology and Comparisons*, Occasional Paper, cat. no. 6287.0, ABS, Canberra.

Australian Bureau of Statistics (ABS) 1996b. *National Aboriginal and Torres Strait Islander Survey 1994: Employment Outcomes for Australia's Indigenous Peoples*, cat. no. 4199.0, ABS, Canberra.

Australian Government 1987. *Aboriginal Employment Development Policy Statement: Policy Paper No. 1*, Australian Government Publishing Service, Canberra.

Campbell, I., Fincher R. and Webber, M. 1991. 'Occupational mobility in segmented labour markets: the experience of immigrant workers in Melbourne', *Australia and New Zealand Journal of Sociology*, 27 (2): 172-95.

Commonwealth of Australia 1994. *Working Nation: Policies and Programs*, Australian Government Publishing Service, Canberra.

Department of Employment, Education and Training (DEET) 1995. *Australia's Workforce in the Year 2005: Jobs in the Future*, Australian Government Publishing Service, Canberra.

Jones, F.L. 1989. 'Occupational prestige in Australia: a new scale', *Australia and New Zealand Journal of Sociology*, 25 (2): 187-99.

Jones, F.L. 1992a. *Sex and Ethnicity in the Australian Labour Market: The Immigrant Experience*, Occasional Paper, Australian Bureau of Statistics, Canberra.

Jones, F.L. 1992b. 'Segregation indices: an historical and conceptual note', *Australia and New Zealand Journal of Sociology*, 28 (1): 105-10.

Johnston, E. 1991. *Review of the Training for Aboriginals Program*, Report to the Ministers for Employment, Education and Training, and Aboriginal Affairs, Department of Employment, Education and Training, Canberra.

Karmel, T. and Maclachlan, M. 1988. 'Occupational sex segregation – increasing or decreasing?', *Economic Record*, 64: 187-95.

Taylor, J. 1993. *Regional Change in the Economic Status of Indigenous Australians, 1986-91*, Research Monograph No. 6, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.

Taylor, J. 1994. 'Measuring the occupational segregation of Australia's Indigenous workforce: a census-based analysis', *Social Indicators*, 31, 175-204.

Taylor, J. and Lui Jin 1995. 'Change in the relative distribution of indigenous employment by industry, 1986-91', *CAEPR Discussion Paper No. 96*, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.

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