

# Human Resources in Community Services: Conceptual Issues and Empirical Evidence

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## Human Resources in Community Services: Conceptual Issues and Empirical Evidence

by

Adam Jamrozik and Cathy Boland



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# Foreword

Along with the expansion of the welfare state has come the growing importance of bodies providing services to specific target groups in the community. These organisations have also become important as employers of labour in their own right. More and more people rely on community services for their employment and the growth of this sector has thus had important consequences for the growth and structure of the Australian labour market.

Since its establishment in 1980, research conducted at the Social Welfare (now Policy) Research Centre has included a strand which examines the utilisation of human resources in community services. Much of this work has been carried out by, or under the direction of, Adam Jamrozik, one of the authors of this Report. Adam Jamrozik retired from the Centre in 1991 and this Report draws on work carried out over the period of his work here. In addition, it carries the analysis forward, using a field study conducted in a number of local government areas in the Sydney metropolitan area. The locational diversity discovered in the research is highlighted by comparison with data from various ABS publications dealing with Australia as a whole.

It is hoped that this work will provide a framework for future research as well as indicating certain implications of past trends for the development of social policy.

Peter Saunders  
Director

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# 1 Introduction

The research project on which this report is based was a logical extension to the research work completed earlier at the Social Welfare (now Policy) Research Centre since 1980 in the following research programs: The Welfare of the Workforce; The Child and Family Welfare Systems; Youth Policies and Services; and The Welfare State. The common factor in these research programs was the concern with the utilisation of human resources in various areas of economic and social activity, especially in the high labour-intensive service industries located mainly in the public sector of the labour market, referred to as 'community services' and classified as such by the Australian Bureau of Statistics (ABS).

Labour intensity in community services is both quantitative and qualitative. For some decades, ever since the mid-1960s, the sector of community services was the fastest-growing sector of industry in terms of employment, having been exceeded only in the 1980s by the rate of growth (but not in the increase in the number of people employed) by the sectors of finance, property and business services, and recreation and personal services. In the qualitative dimension, the feature of community services has been the professionalisation of services. For example, in February 1991, the ABS recorded that employment in community services accounted for 17.6 per cent of all employment but also accounted for 40 per cent of all employed persons with tertiary degree qualifications (ABS, 1991, Cat. No. 6235.0). In the occupational structure, in August 1991, over one-half (51.9%) of all employed persons classified as professional workers were employed in community services (men = 39.2%; women = 70.2%). The proportions in para-professional occupations were even higher: 60.1 per cent (men = 38.1%; women = 86.3%) (ABS, 1991, Cat. No. 6203.0).

These data indicate that human capital investment in community services is high and most of this investment comes from the public purse. People employed in community services are found in the 'public' and in the 'private' sector of industry but the largest part of their incomes comes from Commonwealth and State government expenditure. Public expenditure on community services is large, exceeding by far the expenditure on cash transfers in the form of pensions and other income support provisions. The complexity of funding arrangements, of responsibility for service provision, and of the diversity of organisational structures and professional orientations presents considerable difficulty in ascertaining how the whole system works, which forces determine or influence the direction and nature of services, who benefits from services and to what extent. Yet, much of the research on social policy and social welfare in recent years has focused on income distribution, taxation, and various related forms of 'cash transfers'. Furthermore, the limited research on community services that has been carried out has tended to focus on aggregate allocations of government budget outlays, giving little attention to the dynamics of community services which give these services their particular nature, vastly different from services in the form of cash transfers. These issues - the

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processes of resource allocation and the outcomes of these processes - constitute the central areas of study in this project.

Community services do not provide material goods. What they provide is the knowledge and skills of professional and para-professional personnel which are used by the recipients to maintain, or improve, their health, to acquire knowledge and skills necessary to enter the labour market, or to receive assistance in child-rearing or in other aspects of social functioning. Thus, in contrast to income support payments whose function is to provide income for the individuals and families who do not receive adequate income from the market, community services have a facilitative function in that they aim to enable the recipient to function in the market economy. However, it needs to be noted that, because community services implement certain policies and operate within certain theoretical, political and normative frameworks or contexts, they also perform an important function of social control.

Many of the issues examined in this report have been addressed in some form and to a varied extent in our earlier research projects and have been published in a number of reports, journal articles, chapters in books and books (e.g. Jamrozik and Hoey, 1982; Sweeney and Jamrozik, 1982, 1984, 1989; Jamrozik, Drury and Sweeney, 1986; Graycar and Jamrozik, 1989; Boland, 1989a, 1989b, 1990; Boland and Jamrozik, 1987, 1989; Jamrozik, 1983a, 1983b, 1986, 1987a, 1987b, 1988a, 1988b, 1989a, 1989b, 1991; Sweeney, 1989; and in a number of other publications and conference papers - see References). Brief references to these earlier publications are made in this report where appropriate, but undue repetitions have been avoided and readers who are interested in specific issues will find the relevant publications more informative in terms of detail and data.

This report aims to present an overview and a further conceptualisation of the nature of the issues identified and examined in the earlier studies, thus providing a theoretical framework for the analysis of the concept of 'human resources', and then applying this framework to the analysis of issues specifically relevant to community services.

It needs to be noted at this point that human resources, as compared with material resources, have always been important in all societies, although their importance has often been taken for granted. Now, in the industrialised societies - or what some people call the 'post-industrial' societies - human resources have acquired new importance, especially in the qualitative terms, that is, in terms of knowledge and skills. At the same time, in many countries and in Australia especially, the value of human resources, particularly their potential value, has received little systematic attention. While one may hear from politicians or from other public figures that 'our people (or 'our children') are our most precious resource', the rhetoric is rarely reflected in practice where human beings are more often regarded as 'factors of production' rather than as human resources. The difference between these two perceptions and terms is of utmost importance, as 'human resources' is a broad concept which encompasses social, economic and cultural dimensions and values, while 'factors of production' reduces the skills, physical and mental abilities and the

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potential of human beings to one dimension comparable to other factors of production such as machines or investment of material capital.

## 1.1 Aims of the Project

The overall aim of the project was to provide an overview and clarification of what is meant by the term 'human resources'; to demonstrate the range of diversity in the use of this term; and to identify the forms and institutional locations of the use of human resources. The focus of the study was on the allocation and utilisation of human resources in various industries; on the trends in utilisation over a certain period of time; on the effect of the trends on the labour market, the economic performance and the society as a whole. It was expected that this analysis would yield identifiable or likely implications of the findings for social and economic policy. Later, as the work on the project developed, the data generated also provided the base for integrated research projects, **Single Parent Families and Community Services** and **Child Health and Socio-Economic Factors**. This project entails an extensive field study and is still in progress; the results of the project are expected to be published some time in 1992. The field study is conducted in a number of local government area (LGAs) in the metropolitan areas of Sydney and this project presents the data on the spatial distribution of human resources in the entire metropolitan area of Sydney thus providing a base for the comparison of the sample of the population interviewed in the field study (see the second part of this report).

## 1.2 Content of the Report

This report has been written in two parts. The first, Sections 2-4, provides a conceptual framework for the analysis of human resources; analyses the data on the trends in the Australian labour market so as to show the trends in the allocation of human resources, in most cases since 1966; it gives a more detailed analysis of the use of human resources in community services; and then examines some data on education, to show how human resources are developed in the education system and the effects of the operation of that system.

The second part, Sections 5-6, examines how human resources are distributed in an urban setting and the effects of this distribution on social structure in terms of class division and socioeconomic stratification. Section 5 presents an overview of literature on the demographic aspects of urban environment and of relevant issues for social policy. Section 6 provides a multivariate analysis of the 1986 census data for the Sydney metropolitan area, using the Local Government Area (LGA) as the unit of analysis. In all, 18 demographic and socioeconomic variables are analysed, with the aim of constructing a 'Vulnerability Index' of the cumulative or compound effects of the spatial distribution of the examined variables. The Index aims to show the extent to which social and economic inequalities are spatially distributed in an urban setting, and then to draw implications of the distribution for governments' policy on the provision of services.

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The concluding section (Section 7) presents a discussion on the content of the report, examines theoretical implications of the findings of the study, and then draws out conclusions and implications for social policy and for future research.

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## 2 Human Resources in Industrial Societies

Human resources have been defined as 'available means afforded by the mind or the personal capabilities'. Thus the term 'human resources' is taken to mean human ideas and productive capacities, although this may be a rather limiting interpretation. The nature of human resources and their value may be determined in economic terms, but ideas, knowledge, skills and abilities are not easily translatable into economic indices. Their value will be determined by particular circumstances of time, economic conditions, the relative scarcity or abundance of the resource, as well as the cultural and normative values of a given society or of the dominant power structure of the society.

In social and more so in economic research and literature, if human resources are considered as such, the conventional approach is to focus on the structure of formal organisations in which human resources are employed, such as, for example, the industries in the formal labour market. This, of course, leaves out from the analysis a large field of social and economic production and of various other activities in the 'informal' areas of society, such as the family, friendship networks, and a wide and diverse range of informal organisations. An attempt to construct a typology of settings, which aims to illustrate the diversity of areas in which human resources are used is shown in Figure 2.1. It can be easily seen from this typology that economic analyses of human resources tend to be confined to those 'formal' areas of activities which are more easily adaptable to statistical manipulation and numerical measurement, namely, the activities taking place in formal commercial and government settings. The 'less formal' areas in which human resources are used in a variety of activities receive little attention beyond some anecdotal evidence and highly speculative estimates. For example, in recent years only one known attempt has been made and published in Australia to examine some areas of economic activities in the domestic economy (Ironmonger, 1989). Based on a workshop held at the University of Melbourne in 1987 the book has a collection of views presented by the Workshop participants, focusing mainly on the economic value of household economy and the role which the women played in that economy. The editor notes that 'households produce many billions of dollars worth of economic output' but 'the work they do and the very large volume of economic production that results from this work are constantly ignored in national statistics' (Ironmonger, 1989: ix).

If this is so, then two issues come immediately into mind. First, if household economy is significant in economic production, then with the transfer of many household activities to the market (e.g. ready-made meals, eating out, commercialised entertainment, child care) the data on the growth of the Gross Domestic Product (GDP) inflate the value of any such growth, thus creating an illusion of economic growth. Such an illusion of growth would have certainly

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**Figure 2.1: A Typology of the Use of Human Resources in Industrial Societies**

	<b>Informal/Formal Division</b>	
	<b>Informal</b>	<b>Formal</b>
<b>Type of Organisation</b>		
Primary Groups	Domestic economy Family Friends Relatives Self-help groups	Family business (eg. 'the corner shop') Co-operative skills exchange
Commercial	The 'black' labour market Drug trafficking 'Black' economy generally	Private sector labour market Private corporations Public corporations
Non-Commercial	Local welfare organisations Cultural, educational recreational activities Pressure groups (informal)	Pressure groups (formal) Formal welfare organisations Community service organisations (eg. RSL, Rotary) Research 'think tanks' Educational, research, health organisations, etc.
Government	Lobby activities Informal advisory bodies and individuals	Commonwealth departments State departments Local departments Statutory bodies

occurred in the 1980s when the commodification of household activities was taking place at an increasing rate, evident in the changing life style and the growth of service industries (e.g. the growth of take-away food outlets - see Jamrozik, Urquhart and Wearing, 1990). Second, as observed elsewhere (Jamrozik, 1989b), it is also arguable whether human productive activities in the informal settings such as the family or voluntary community organisations should be analysed in terms of their economic value equivalents in the formal labour market. Translating the value of household (or voluntary community work) into market-equivalent values needs to be done only with caution and with appropriate qualifications, for using market criteria to ascertain the value of the informal household or community activities reduces the multidimensional and qualitative as well as normative aspects of such activities to one-dimensional values used in market calculations. In addition to being theoretically flawed, such translations also devalue human efforts by changing

'human resources' into 'factors of production'. How does one value the quality of love, for example, in market criteria?

The approach taken in this research was to identify the range and complexity of the variety of settings in which human resources are used in productive activities and then to focus on the formal areas in which human resources are employed. The typology shown in Figure 2.1 aims to demonstrate the limitations of this approach and of the scope of this research project by identifying the areas which are examined in this report as well as those which are not included in the analysis. However, as will be seen later, the analysis in this research goes beyond the 'static' perspectives which are prevalent in current research approaches and explores some of the dynamic dimensions of the utilisation of human resources in the formal labour market. To that extent, at least, the analysis provides some important insights into the utilisation of human resources, which have received little attention in currently prevalent approaches in social and economic research. The typology in Figure 2.1 also identifies certain areas of social organisation, both in the formal and in the informal sphere, where research on human resources could be fruitfully conducted.

The utilisation of human resources in the formal labour markets of industrialised societies has undergone significant changes and shifts, especially in the last two decades or so. It has been the feature of these societies that with the advance of productive technology fewer and fewer people are needed to produce material goods, and more people are employed to distribute goods, to provide services and to manage the economic and social production and its organisation. In the formal labour market four broad categories of industries can be identified. Applying the conventional classification of the Australian Bureau of Statistics (ABS), the industries may be categorised as follows:

- Industries which produce material goods: agriculture and other primary industries; mining; manufacturing; supply of electricity, gas and water; and construction.
- Industries which distribute goods and services: wholesale and retail trade; transport and storage; and communication.
- 'Management industries'; industries which manage material and human resources: finance, property and business services; public administration; and community services.
- Industries which provide personal services, such as recreation, entertainment, hospitality industries and other similar services.

This categorisation assigns the various sectors of industry into aggregate categories according to the economic and social functions the human resources engaged in them perform, i.e., the production of material goods, distribution of goods, management of industrial organisation, and the provision of services in what is referred to as 'service industries'. Community services are included in the group of

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'management industries' as these services, essentially, develop, maintain, manage and control human resources through a range of activities which are referred to as education, health, welfare, and other related services.

Application of this categorisation to the analysis of the use of human resources in the labour market facilitates the identification of quantitative as well as qualitative aspects of human resources. As the value of human resources is not uniform, neither is the quality of their productive activities. Furthermore, as will be seen later, in such sectors of industry as community services, the activities, the settings in which these activities are performed, the population which is 'managed' and the aims, as well as outcomes, of the activities have individually normative as well as organisationally and socially normative values (Boland, 1990; Jamrozik, 1991). These 'dynamic features' of the use of human resources become increasingly important in advanced industrialised societies. As the need for human resources in material production diminishes, the decisions on where to engage people in productive activities, what they are to do, for what purpose and desired outcomes, becomes increasingly a matter of normative and political choices rather than economic necessities.

## 2.1 Human Resources in the Australian Labour Market

In a similar fashion to the trends in other industrialised societies, the use of human resources in the formal Australian economy has shifted from material production to other areas of employment, the most prominent shift being into the 'management industries', as defined above. As shown in Table 2.1, that shift has been consistent for the past 25 years, notwithstanding the changes in periods of economic growth or stagnation, or changes in government at the federal level.

In these 25 years the proportion of persons employed in the industries of material production has fallen from 46.1 per cent of all employed persons to 29.0 per cent, while over the same period employment in the management industries has grown from 19.6 per cent to 35.4 per cent. Total employment over this period has grown by 2845.3 thousand persons, or 59.0 per cent, while employment in the management industries has grown by 1772.8 thousand persons, or 187.5 per cent. Thus, 62.3 per cent of the total increase of employment over this period occurred in the 'management industries'. By contrast, employment in material production has remained static, being only one thousand higher in 1991 than in 1966. The other sector of industry which has recorded an above-average growth in employment has been recreation and personal services, due mainly to the growth of tourism and related hospitality industries. However, this sector still accounts for a small proportion of total employment (7.9% in 1991) and much of employment in that sector is part-time or casual (in 1991, 42.9%, compared to 22.5% in all sectors).

The years heading the columns in Table 2.1 correspond to the changes in government at the federal level, showing in each case the last year of a party in power, except for the addition of change between 1989 and 1991, which shows the recent rapidity of the reversal from growth to recession.

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**Table 2.1: Employment in Types of Industry, Australia, 1966-1991**

Type of Industry	Year						Change 1966-1991
	1966	1972	1975	1982	1989	1991	
<b>All industries</b>							
N ('000)	4823.9	5609.9	5841.3	6379.3	7727.6	7669.2	2845.3
% of all employed	100.0	100.0	100.0	100.0	100.0	100.0	100.0
% increase over period	-	16.3	4.1	9.2	21.1	-0.8	59.0
<b>Material Production</b>							
N ('000)	2222.6	2417.9	2356.4	2293.2	2462.4	2223.6	1.0
% of all employed	46.1	43.1	40.3	35.9	31.9	29.0	-17.1(a)
% increase over period	-	8.8	-2.5	-2.7	7.4	-9.7	0.0
<b>Distribution Services</b>							
N ('000)	1368.9	1571.5	1612.3	1753.3	2154.2	2122.2	753.3
% of all employed	28.4	28.0	27.6	27.5	27.9	27.7	-0.7(a)
% increase over period	-	14.8	26.0	8.7	22.9	-1.5	55.0
<b>Management Industries</b>							
N ('000)	945.4	1271.0	1501.2	1930.4	2556.1	2718.2	1772.8
% of all employed	19.6	22.7	25.7	30.3	33.1	35.4	15.8(a)
% increase over period	-	34.4	18.1	28.6	32.4	6.3	187.5
<b>Recreation, pers. services</b>							
N ('000)	287.0	349.7	371.5	402.5	554.7	605.2	318.2
% of all employed	5.9	6.2	6.4	6.3	7.2	7.9	2.0(a)
increase over period	-	21.8	6.2	8.3	37.8	9.1	110.9

**Notes:** a) Change in percentage points; change shows increase unless shown with a minus sign.

Material Production: agriculture and other primary; mining; manufacturing; electricity, gas, water, construction

Distribution Services: w/sale and retail trade; transport and storage; communication

Management Industries: finance, property, business services; public administration and defence; community services

Recreation, pers. services: entertainment, restaurants, hotels, personal services; domestic services, etc.

**Sources:** ABS (1987), *The Labour Force, Australia, Historical Summary, 1966-1984*, Cat. No. 6204.0.  
 ABS (1989), *The Labour Force, Australia, August 1989*, Cat. No. 6203.0.  
 ABS (1991), *The Labour Force, Australia, August 1991*, Cat. No. 6203.0.

A comparison of changes in employment between 1966 and 1991 in all sectors of industry is shown in Table 2.2. The extent of the shifts of employment from sectors of material production to management industries is clearly demonstrated by the 187.5 per cent increase in employment in these industries, compared to zero growth in material production and a decrease of 10.2 per cent in manufacturing industries and 5.2 per cent decrease in agricultural and other primary production.

The data in Table 2.3 show the changes which have occurred over the 25 year period in the gender composition of the labour force. The change has occurred in all sectors of industry, the percentage increase in the number of employed women being close to four times greater than in the number of employed men (121.1% and 32.0%) and even greater for married women (161.4%). The significance of these changes for the structure of inequality in Australian society, especially at the family level was first noted in one of our earlier studies (Jamrozik and Hoey, 1982) and has been analysed in depth in a recent publication (Jamrozik, 1991). This aspect will be commented upon later in this report.

It needs to be noted that the growth of employment between 1983 and 1991 followed broadly along the same lines as for the whole period since 1966 (see Tables 2.1 and 2.4). The recession which followed in the two years after 1989 has led to a situation very similar to that in 1983 when the current government took office. Again, employment in material production has registered only marginal growth, due mainly to employment in construction industries, while employment in manufacturing industries experienced a further decline. At the same time, employment in the management industries has continued to increase well above the rate of increase in total employment. As can be seen in Table 2.4, the highest rate of increase has occurred in the sector of finance, property and business services (56.0%) in the welfare sector of community services (68.5%) and in 'other' community services (57.5%).

The data in Table 2.5 present the changes between 1983 and 1991 in a wider perspective, taking into account the growth of population over that period, the change in participation rates in the labour force, the different rates of growth between full-time and part-time employment, the unemployment rates, and the average total hours worked per week. The data for the two distinct years separated by a period of eight years do not, of course, account for any changes which had occurred in the intervening years. As shown earlier (Table 2.1), there was a growth of employment from 1983 to 1989 but this was followed by a rapid decline, producing by 1991 a situation similar to that in 1983. The data in Table 2.5 thus show the outcome of the changes which had occurred since 1983, that is, from the time the present Labor Government took office. It is clear from these data that any growth of employment that had been recorded in the six years from 1983 to 1989 was entirely dissipated in the following two years.

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Table 2.2: Changes in Employment, Australia, 1966-1991

Industry Sector	1966		1991		Change 1966-1991		Ratio <sup>(a)</sup>
	N ('000)	%	N ('000)	%	N ('000)	%	
<b>All Industries</b>	<b>4823.9</b>	<b>100.0</b>	<b>7669.2</b>	<b>100.0</b>	<b>2845.3</b>	<b>59.0</b>	<b>0.00</b>
Men	3365.6	69.8	4443.7	57.9	1078.1	32.0	0.54
Women	1458.2	30.2	3225.5	42.1	1767.3	121.2	2.05
Married Women	761.2	15.8	1990.0	25.9	1228.8	161.4	2.74
<b>Material Production</b>	<b>2222.6</b>	<b>46.1</b>	<b>2223.6</b>	<b>29.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.00</b>
Agriculture and related	429.6	8.9	407.1	5.3	-22.5	-5.2	-
Mining	58.0	1.2	95.5	1.2	37.5	64.7	1.10
Manufacturing	1232.5	25.5	1107.1	14.4	-125.4	-10.2	-
Electricity, gas, water	96.5	2.0	103.7	1.4	7.2	7.5	0.13
Construction	406.0	8.4	510.2	6.7	104.2	25.7	0.44
<b>Distribution Services</b>	<b>1368.9</b>	<b>28.4</b>	<b>2122.2</b>	<b>27.7</b>	<b>753.3</b>	<b>55.0</b>	<b>0.93</b>
Wholesale and retail trade	993.5	20.6	1590.5	20.7	597.0	60.1	1.02
Transport and storage	270.0	5.6	399.2	5.2	129.2	47.9	0.81
Communications	105.4	2.2	132.5	1.7	27.1	25.7	0.44
<b>Management Industries</b>	<b>945.4</b>	<b>19.6</b>	<b>2718.2</b>	<b>35.4</b>	<b>1772.8</b>	<b>187.5</b>	<b>3.18</b>
Finance, property, business serv.	294.4	6.1	893.9	11.7	599.5	203.6	3.45
Public administration	165.0	3.4	359.3	4.7	194.3	117.8	2.00
Community services	486.0	10.1	1465.0	19.1	979.0	201.4	3.41
<b>Recreation, Personal services</b>	<b>287.0</b>	<b>5.9</b>	<b>605.2</b>	<b>7.9</b>	<b>318.2</b>	<b>110.9</b>	<b>1.88</b>

**Note:** a) Ratio to the total increase in the labour force (59.0%).

**Sources:** ABS (1987), *The Labour Force, Australia; Historical Summary 1966-1984*, Cat. No. 6204.0.  
 ABS (1991), *The Labour Force, Australia, August 1991*, Cat. No. 6203.0.

There are three important aspects of the data shown in Tables 2.4 and 2.5 which are of relevance to the use of human resources in the labour market over that period. First, the often-repeated claim by the government about the number of 'new jobs' created has to be seen in relation to the growth of the population over the same period. As shown (Table 2.5), the population of 15 years and over has grown over that period by 16.9 per cent. This means that just to maintain the same proportion of the population in employment as in 1983 the number of people employed in 1991 would have been 7286 thousand (6233 thousand + 16.9%). Thus the real growth of 'new' jobs, if related to the growth of the relevant population, amounted to 383 thousand persons.

Second, 40 per cent of the increase in all jobs has been in part-time employment: the rate of growth in part-time jobs has been close to four times that in full-time jobs

Table 2.3: Changes in Employment, Industries, Sex Composition, Australia, 1966-1991

Industry Sector	1966		1991		Change 1966-1991	
	N ('000)	%	N ('000)	%	N ('000)	%
<b>All Industries</b>	<b>4823.9</b>	<b>100.0</b>	<b>7669.2</b>	<b>100.0</b>	<b>2845.3</b>	<b>59.0</b>
• Men	3365.6	69.8	4443.7	57.9	1078.1	32.0
• Women	1458.2	30.2	3225.5	42.1	1767.3	121.2
• Married Women	761.2	15.8	1990.0	25.9	1228.8	161.4
<b>Material Production</b>	<b>2222.6</b>	<b>100.0</b>	<b>2223.6</b>	<b>100.0</b>	<b>1.0</b>	<b>0.0</b>
• Men	1824.6	82.1	1712.8	77.0	-111.8	-6.1
• Women	398.0	17.9	510.6	23.0	112.6	28.3
• Married Women	248.8	11.2	374.8	16.9	126.0	50.6
<b>Distribution Services</b>	<b>1368.9</b>	<b>100.0</b>	<b>2122.2</b>	<b>100.0</b>	<b>753.3</b>	<b>55.0</b>
• Men	937.4	68.5	1289.9	60.8	352.5	37.6
• Women	431.5	31.5	832.3	39.2	400.8	92.9
• Married Women	232.3	17.0	472.0	22.2	239.7	103.2
<b>Management Industries</b>	<b>945.4</b>	<b>100.0</b>	<b>2718.2</b>	<b>100.0</b>	<b>1772.8</b>	<b>187.5</b>
• Men	489.5	51.8	1175.5	43.2	686.0	140.1
• Women	455.8	48.2	1542.5	56.7	1086.7	238.4
• Married Women	179.7	19.0	965.7	35.5	786.0	437.4
<b>Recreation, Personal Services</b>	<b>287.0</b>	<b>100.0</b>	<b>605.2</b>	<b>100.0</b>	<b>318.2</b>	<b>110.9</b>
• Men	114.1	39.8	265.2	43.8	151.1	132.4
• Women	172.9	60.2	340.0	56.2	167.1	96.6
• Married Women	100.4	35.0	177.6	29.3	77.2	76.9

Sources: ABS (1987), *The Labour Force, Australia; Historical Summary 1966-1984*, Cat. No. 6204.0.  
 ABS (1991), *The Labour Force, Australia, August 1991*, Cat. No. 6203.0.

(58.8% and 15.5% respectively). This trend is reflected also in the increase in the average total hours worked per week which is shown to be lower than the increase in the number of people employed. A shorter working week in 1991 is indicated in all sectors of industry except in those engaged in material production where it appears that the average working week has increased slightly while the number of people employed in these industries has decreased.

The third indicator of interest is the outcome of the change in the participation rates. In 1991 the participation rate was 2.8 percentage points higher than in 1983. Relating this change to the working-age population in 1991, this amounts to 378 thousand persons. Assuming that the participation rates had remained the same as in 1983, the number of the recorded unemployed persons would be lower by that number.

**Table 2.4: Changes in Employment, Sectors of Industry, Australia, August 1983-1991**

Industry Sector	Employed persons					
	1983		1991		Change 1983-91(a)	
	N ('000)	%	N ('000)	%	N ('000)	%
<b>All Industries</b>	<b>6232.7</b>	<b>100.0</b>	<b>7669.2</b>	<b>100.0</b>	<b>1436.5</b>	<b>23.0</b>
• Men	3910.8	62.7	4443.7	57.9	532.9	13.6
• Women	2321.8	37.3	3225.5	42.1	903.7	38.9
• Married Women	1435.5	23.0	1990.0	25.9	554.5	38.6
<b>Material Production</b>	<b>2161.8</b>	<b>34.7</b>	<b>2223.6</b>	<b>29.0</b>	<b>61.8</b>	<b>2.9</b>
• Agriculture, other primary	410.6	6.6	407.1	5.3	-3.5	-0.9
• Mining	93.6	1.5	95.5	1.2	1.9	2.0
• Manufacturing	1133.7	18.2	1107.1	14.4	-26.6	-2.3
• Electricity, gas, water	136.1	2.2	103.7	1.4	-32.4	-23.8
• Construction	387.8	6.2	510.2	6.7	122.4	31.6
<b>Distribution Services</b>	<b>1720.7</b>	<b>27.6</b>	<b>2122.2</b>	<b>27.7</b>	<b>401.5</b>	<b>23.3</b>
• Wholesale and retail trade	1215.3	19.5	1590.5	20.7	375.2	30.9
• Transport and storage	365.2	5.9	399.2	5.2	34.0	9.3
• Communication	140.2	2.2	132.5	1.7	-7.7	-5.5
<b>Management Industries</b>	<b>1960.9</b>	<b>31.5</b>	<b>2718.2</b>	<b>35.4</b>	<b>757.3</b>	<b>38.6</b>
• Finance, property, business service	573.0	9.2	893.9	11.7	320.9	56.0
• Public administration	314.3	5.0	359.3	4.7	45.0	14.3
• Community services	1073.6	17.2	1465.0	19.1	391.4	36.5
- Health	438.6	7.0	580.0	7.6	141.4	32.2
- Education and related	433.0	6.9	557.6	7.3	124.6	28.8
- Welfare and related	83.1	1.3	140.0	1.8	56.9	68.5
- Other services	119.0	1.9	187.5	2.4	68.5	57.6
<b>Recreation, personal services</b>	<b>389.2</b>	<b>6.2</b>	<b>605.2</b>	<b>7.9</b>	<b>216.0</b>	<b>55.5</b>

**Note:** a) Change indicates increase except where a minus sign is shown

**Sources:** ABS (1983), *The Labour Force, Australia, August 1983*, Cat. No. 6203.0.  
 ABS (1991), *The Labour Force, Australia, August 1991*, Cat. No. 6203.0.

The results of this analysis, however brief and simple that analysis might be seen by some, lead to three observations. First, the claims of an economic recovery which were so often made during the 1980s have been somewhat exaggerated and were supported by selective but not adequate and complete data. Second, the increase in employment which has occurred, has taken place entirely in the 'non-productive' sectors of the labour market. Even in these sectors, some of the increase in employment has occurred through an effective 'job sharing' by the growth of part

**Table 2.5: Summary of Changes in the Use of Human Resources in the Labour Market, Australia, 1983-1991**

Characteristics of Population	1983		1991		Change 1983-91	
	N ('000)	%	N ('000)	%	N ('000)	%
<b>Population 15 years and +</b>	<b>11566</b>	<b>100.0</b>	<b>13521</b>	<b>100.0</b>	<b>1955</b>	<b>16.9</b>
Labour force	6917	59.8	8475	62.7	1558	22.5
Employed	6233	90.1	7669	90.5	1436	23.0
Full-time	5146	(82.6)	5943	(77.5)	797	15.5
Part-time	1087	(17.4)	1726	(22.5)	639	58.8
Unemployed	684	9.9	806	9.5	122	17.8
<b>Employed: all industries</b>	<b>6233</b>	<b>100.0</b>	<b>7669</b>	<b>100.0</b>	<b>1436</b>	<b>23.0</b>
Hours worked per week <sup>(a)</sup>	<b>223754</b>	<b>100.0</b>	<b>270723</b>	<b>100.0</b>	<b>46969</b>	<b>21.0</b>
Material production	2162	34.7	2224	29.0	62	2.9
Hours worked per week <sup>(a)</sup>	82245	36.8	84696	31.3	2451	3.0
Distribution services	1721	27.6	2122	27.7	401	23.3
Hours worked per week <sup>(a)</sup>	62281	27.8	74615	27.6	12334	19.8
Management industries	1961	31.5	2718	35.4	757	38.6
Hours worked per week <sup>(a)</sup>	66847	29.9	92287	34.1	25440	31.1
Recreation, personal services	389	6.2	605	7.9	216	55.5
Hours worked per week <sup>(a)</sup>	12416	5.5	19003	7.0	6587	53.1

**Notes:** a) Total average hours worked per week.

**Sources:** ABS (1983), *The Labour Force, Australia, August 1983*, Cat. No. 6203.  
 ABS (1991), *The Labour Force, Australia, August 1991*, Cat. No. 6203.

-time employment. Third, of all the sectors of industry, the most negatively affected in terms of employment has been the manufacturing sector. In 1966, manufacturing industries accounted for 25.5 per cent of the total employment; by 1983, this was reduced to 18.2 per cent; and by 1991 it has fallen further to 14.4 per cent. Unless this trend is reversed, the extent to which the increase in the productivity of these industries will offset the loss of human resources employed in them will largely determine the future of the Australian economy.

In Australia the proportion of the total employed labour force which is engaged in manufacturing industries is considerably lower than in other countries, such as those of Western Europe. For example, in 1987, employment in manufacturing industries accounted for 16.5 per cent of the total employment, compared to 30.8 per cent in (West) Germany and 22.1 per cent in Sweden. In contrast, employment in the sector of finance, property and business industries accounted for 10.6 per cent of the total employment in Australia compared to 6.4 per cent in Germany and 7.6 per cent in Sweden (Jamrozik, Urquhart and Wearing, 1990).

Since 1989, the employment situation in material production overall, and in manufacturing especially, has deteriorated further. Indeed, in the space of two years between 1989 and 1991 employment in material production decreased by 238.8 thousand or 9.7 per cent. It is of interest to note that over the same period employment in management industries increased by 162.1 persons or 6.3 per cent. Thus the trend since 1966 has been fairly consistent towards growth of employment in management industries and a continuous decrease of employment in industries engaged in material production. In Australia, it seems, more and more human resources are used to 'manage', and fewer and fewer human resources are used to 'produce'.

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### **3 Human Resources in Community Services**

The broad aim of this project was to develop a conceptual framework for the examination of the nature of human resources and their use in various social settings in the structure of social organisation. The diversity of these settings was illustrated in a form of a typology which presented in a two-dimensional perspective both formal and informal settings in primary, commercial, non-commercial and government sectors (Figure 2.1). A more specific aim of the study was to examine the use of human resources in the sector of industry in the labour market referred to in the ABS classification as community services. As noted earlier, community services is an important sector of the labour market, accounting for close to one-fifth of all employed persons. However, the qualitative significance of the sector is even greater: community services is the most professionalised sector of industry, employing the highest proportion of tertiary qualified personnel. The social and economic as well as political implications of these factors have been examined extensively elsewhere (e.g. Jamrozik, 1987a, 1991) and will not be discussed here at any great length. The aim of this study is a further elaboration of the issues examined earlier, but with a particular focus on the conceptual and empirical significance of the term and nature of human resources.

It needs to be noted that in the ABS classification the sector of community services encompasses a wide range of services and not all of these are examined in this study. The services which are considered here are those which fall into the broad categories of health, education, welfare and related services, that is, those services which are at the forefront, and constitute the essential core, of community services, being also among the most important instruments of social policy.

#### **3.1 Human Resources and Material Resources**

Human resources are used in community services in varied degrees of conjunction with material resources. They are also used at various levels of organisational application: individual, group or corporate (Figure 3.1). For example, professional counselling requires a minimum of material resources: an office equipped with appropriate furniture is usually sufficient to provide the service. In contrast, professional service in a hospital takes place in an expensive building and equipment which is technologically advanced and costly. Similarly, some work is done by individuals working alone or in an organisation; certain activities are carried out typically by groups of people; and others are clearly related to corporate structures.

The typology in Figure 3.1 aims to identify and demonstrate the range of activities in community services. Some of these activities and the functions performed are not explicitly visible and yet they are very important, such as policy advice or policy

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**Figure 3.1: A Typology of the Use of Human Resources in Community Services**

		Use of Human Resources		
		Individual	Groups	Corporate
<b>Material Resources</b>	Not directly involved	Counselling: <ul style="list-style-type: none"> <li>• Social</li> <li>• Psychological</li> <li>• Advisory</li> <li>• Therapeutic</li> <li>• Coercive</li> </ul> Consultation: <ul style="list-style-type: none"> <li>• Medical</li> <li>• Financial</li> <li>• Technical</li> <li>• Other</li> </ul> Writing Research	Group Activities: <ul style="list-style-type: none"> <li>• Recreational</li> <li>• Educational</li> <li>• Cultural</li> <li>• Therapeutic</li> <li>• Religious</li> <li>• Welfare</li> <li>• Political</li> </ul> Writing Research	Policy advice Policy formulation Policy implementation Management Organisation: <ul style="list-style-type: none"> <li>• Political</li> <li>• Educational</li> <li>• Interest/Lobby</li> <li>• Other</li> </ul> Research
	Directly involved	Hospital care Teaching Means testing Emergency relief Home Care Institutional care Research	Teaching (group) Conferences School camps Professional 'retreats' Research	Management of <ul style="list-style-type: none"> <li>• Parks</li> <li>• Institutions (eg. educational)</li> <li>• Income support</li> <li>• Research</li> </ul> Publishing

formulation - activities and processes which are quite complex and very rarely carried out in the overt public arena. The typology also indicates the possibilities of various options in the use of human resources, both on the horizontal axis (individual - group - corporate) and on the vertical axis, that is, in conjunction with a greater or lesser use of material resources. For example, there are options between, say, small community-based services and large hospitals, or between residential care of the aged or care in the persons' own homes. Most of the examples given in Figure 3.1 refer to the formal structure of community services but most of these have varied degrees of informal structure equivalents. For example, policy advice or an opinion on an employee may be given through formal channels such as formally constituted committees or organisational bureaucratic methods, or through a friendly telephone call or a discussion on a golf course. Indeed, informal activities occur at all levels of organisational structures but are especially frequent at management levels where much work is done in social settings, such as business lunches, conferences, and the like.

Figure 3.2 identifies further dimensions in the use of human resources by presenting the public/private scenario of community services. In common perceptions, and in terms of funding of as well as responsibility for service provision, community services are located in the public sector. However, as the examples in Figure 3.2 show, funding and responsibility might be located in the public sector but the activities can be, and are, taking place in a variety of public/private involvement and interaction. Thus, for example, private medical practitioners practise their trade in public hospitals, and lawyers practise theirs in public courts and public legal systems. It is the public sector, especially the public infrastructure of services and legal provisions - and public money - which thus provide the means for the professions in community services to earn their income, pursue their careers and even advance their political aims and class interests.

The public/private configuration in community services is a feature of these services which varies in the degree of complexity, and the division between public and private is not always clear. In the ABS classification, over 60 per cent of persons employed in community services are in the public sector, compared to less than 30 per cent in all industries (Tables 3.1a and 3.1b). The public sector component varies considerably, being the highest in education (77.3%) and the lowest in welfare and religious institutions (22.5%). However, this division is based on the organisational auspices and it does not take into account the government subsidies to private organisations in community services. For example, many private welfare organisations receive subsidies for salaries paid to their personnel and often they also receive subsidies for capital expenditure - a form of transfer of public fund to private corporations. Furthermore, private community services receive 'concealed' subsidies through taxation concessions from all three levels of government: concessions in and exemptions from income tax, sales tax, and local government rates and taxes.

### **3.2 Qualitative Dimensions of Human Resources in Community Services**

The typologies outlined in Figures 2.1, 3.1 and 3.2 present a two-dimensional picture of the use of human resources in various settings. Similarly, the statistical data in Tables 2.1-2.5 and 3.1 present mainly quantitative dimensions of human resources in the labour market. It must be emphasised that these presentations do not include qualitative dimensions of human resources. These dimensions are numerous and varied; some have a formal character and are measurable as such, for example, educational qualifications and corresponding occupational credentials; others are less easily measured by comparative and commonly agreed upon criteria, such as working experience, efficiency, flexibility, adaptability, and a host of other attributes, many of which are assessed and evaluated by more or less subjective and normative criteria and personal preferences, such as sex, ethnicity, attitude to authorities in the workplace or even religion and political beliefs and social values.

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**Figure 3.2: Examples of Human and Material Resources Configuration in Community Services**

		Use of Human Resources		
		Public Sector	Private/Subsidised	Private Sector
Use of Material Resources	Public Sector	Teachers in public schools  Salaried medical practitioners in public hospitals  Librarians in public libraries  Academics in universities	Medical practitioners in public hospitals  Barristers/Solicitors paid by legal aid funds	Barristers/solicitors in court work  Consultants in public organisations  Contracted workers in the public sector
	Private/ Subsidised	Public personnel seconded to private agencies	Non-government welfare organisations  Medical practitioners in private hospitals  Work-based child care  Private schools	Private workers in subsidised organisations  Community organisations with taxation concessions  Religious organisations (churches, religious orders)
	Private Sector	Public organisations in leased private premises	Medical practitioners in private practice	Private (not subsidised) universities  Private community organisations

**Table 3.1a: Wage and Salary Earners, Public and Private Sectors: All Industries and Community Services, Australia, August 1990**

Category	All Industries		Community Services	
	N('000)	%	N('000)	%
<b>All wage and salary earners</b>	<b>6134.6</b>	<b>100.0</b>	<b>1333.8</b>	<b>100.0</b>
Men	3401.6	55.4	459.4	34.4
Women	2733.1	44.6	874.4	65.6
All private sector	4390.9	71.6	507.7	38.1
All public sector	1743.8	28.4	826.0	61.9
Commonwealth Govt.	400.7	6.5	44.5	3.3
State Govt.	1182.9	19.3	780.2	58.5
Local Govt.	160.2	2.6	1.3	0.1

**Table 3.1b: Wage and Salary Earners, Public and Private Sector: Community Services, Australia, August 1990**

Category	Persons		Men		Women	
	N('000)	%	N('000)	%	N('000)	%
<b>All wage and salary earners</b>	<b>1333.8</b>	<b>100.0</b>	<b>459.4</b>	<b>100.0</b>	<b>874.4</b>	<b>100.0</b>
Private sector	507.7	38.1	133.0	29.0	374.8	42.9
Public sector	826.0	61.9	326.4	71.0	499.6	57.1
<b>Health services</b>	<b>526.6</b>	<b>100.0</b>	<b>117.3</b>	<b>100.0</b>	<b>409.3</b>	<b>100.0</b>
Private	233.5	44.3	39.4	33.6	194.2	47.4
Public	293.0	55.6	77.9	66.4	215.1	52.6
<b>Education, Museums, Libraries</b>	<b>514.2</b>	<b>100.0</b>	<b>189.7</b>	<b>100.0</b>	<b>324.4</b>	<b>100.0</b>
Private	116.6	22.7	33.0	17.4	83.6	25.8
Public	397.6	77.3	156.7	82.6	240.8	74.2
<b>Welfare and Religious Institutions</b>	<b>115.9</b>	<b>100.0</b>	<b>34.7</b>	<b>100.0</b>	<b>81.2</b>	<b>100.0</b>
Private	89.8	77.5	26.3	75.8	63.5	78.2
Public	26.1	22.5	8.4	24.2	17.7	21.8
<b>Other Community Services</b>	<b>177.2</b>	<b>100.0</b>	<b>117.7</b>	<b>100.0</b>	<b>59.5</b>	<b>100.0</b>
Private	67.9	38.3	34.4	29.2	33.5	56.3
Public	109.3	61.7	83.3	70.8	26.0	43.7

Source: ABS (1991), *Employed Wage and Salary Earners, Australia, September Quarter, 1990*, Cat. No. 6248.0.

In the formal labour market, both the formal and informal qualitative dimensions are reflected in the positions of organisational hierarchies, wages and salaries, working conditions and a variety of employment or 'fringe' benefits (Jamrozik, 1991).

All these qualitative dimensions, whether identified and measured or not, lead to certain effects and outcomes in all sectors of industry, but are especially of considerable significance in community services where the qualitative dimensions of human resources are the outstanding feature. The qualitative dimensions in community services are of relevance to both the service providers and the public served; this being the case, they also have direct implications for social policy.

Of necessity, not all of the above-mentioned qualitative dimensions can be measured in this study, although some of them receive more attention than in the currently prevailing analyses and some of them have been identified and quantified elsewhere (Boland, 1989b, 1990, 1991). Here attention is given to the educational qualifications and the occupational status of persons employed in community services, and other qualitative dimensions related mainly to the processes of allocating resources and service delivery are discussed later in this chapter.

Table 3.2 shows the levels of educational qualifications of the employed labour force and their distribution among the various sectors of industry. As shown, in February 1991, about one-half (49.0%) of all employed persons had some post-school qualifications and 11.4 per cent had qualifications at the level of a tertiary degree or higher. It is of interest to note the change which has occurred in this dimension over the past two decades. In 1969, only 24.6 per cent of all employed persons had some post-school qualifications and those with a degree or higher accounted for only 3.2 per cent (ABS, 1984, Cat. No. 4101.0).

The differences in the levels of educational qualifications among the sectors of industry are considerable. For example, in the industries of material production which in February 1991 accounted for 30.4 per cent of total employment, only 5.2 per cent of the employed persons had degree qualifications, or 14.0 per cent of all employed degree holders. In comparison, in management industries which accounted for a third (33.9%) of all employment, 23.6 per cent of the employed persons had degree qualifications, accounting for 70.0 per cent of all employed degree holders. The ratio of employed degree holders between management industries and industries of material production is thus 5 to 1 (70/14), although the proportions of the total employment are approximately equal in each group of industries. The investment of human resources in management industries is the highest of all sectors of industry, and the question that arises from this is not so much that the level of educational qualifications is high in management industries but rather that it is so low in the other sectors in industry.

The data in Table 3.3 further indicate the extent and levels of educational qualifications in the three sectors which constitute the management industries group. As shown, community services, in addition to being the largest of the three sectors in term of persons employed, also show the highest proportion of persons with post

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**Table 3.2: Employed Persons 15 to 69 Years: Educational Attainment and Industry Group, Australia, February 1991**

Industry group	All employed persons <sup>(a)</sup>	With post-school qualifications				Without post-school qualifications <sup>(c)</sup>
		All with post-school <sup>(b)</sup>	With degree	Trade qualifications	Certificate or diploma	
<b>All industries</b>						
• N('000)	7651.8	3752.2	875.0	1242.2	1604.1	3758.9
• %	100.0	49.0	11.4	16.2	21.0	49.1
<b>Material production</b>						
• N('000)	2328.3	1100.4	122.1	640.9	328.2	1214.6
• % in group	100.0	47.3	5.2	27.5	14.1	52.2
• % of all employed	30.4	29.3	14.0	51.6	20.5	32.3
<b>Distribution Services</b>						
• N('000)	2153.8	811.7	103.5	355.4	343.9	1241.8
• % in group	100.0	37.7	4.8	16.5	16.0	57.7
• % of all employed	28.1	21.6	11.8	28.6	21.4	33.1
<b>Management Industries</b>						
• N('000)	2593.3	1608.4	612.8	157.6	827.6	976.8
• % in group	100.0	62.0	23.6	6.1	31.9	37.7
• % of all employed	33.9	42.9	70.0	12.7	51.6	26.0
<b>Recreation, Personal Services</b>						
• N('000)	576.5	231.8	36.7	88.2	104.4	324.7
• % in group	100.0	40.2	6.4	15.3	18.1	56.3
• % of all employed	7.5	6.2	4.2	7.1	6.5	8.6

**Notes:** a) Includes persons still at school.  
b) Includes persons with other (unstated) qualifications.  
c) Includes persons who never attended school and those whose attendance at a secondary school could not be determined.

Material Production: agriculture and other primary; mining; manufacturing; electricity, gas, water, construction

Distribution Services: wholesale and retail trade; transport and storage; communication

Management Industries: finance, property, business services; public administration and defence; community services

Recreation, Personal Services: entertainment, restaurants, hotels, personal services, domestic services, etc.

**Source:** ABS (1991), *Labour Force Status and Educational Attainment, Australia, February 1990*, Cat. No. 6235.0.

**Table 3.3: Employed Persons in Management Industries: Educational Attainment, Australia, February 1991**

Industry group	All employed persons <sup>(a)</sup>	With post-school qualifications				Without post-school qualifications <sup>(c)</sup>
		All with post-school <sup>(b)</sup>	With degree	Trade qualifications	Certificate or diploma	
<b>All industries</b>						
N('000)	7651.8	3752.2	875.0	1242.2	1604.1	3758.9
%	100.0	49.0	11.0	16.2	21.0	49.1
<b>Management industries</b>						
• N('000)	2593.3	1608.4	612.8	157.6	827.6	976.8
• % in group	100.0	62.0	23.6	6.1	31.9	37.7
• % of all employed	33.9	42.9	70.0	12.7	51.6	26.0
<b>Finance, property business services</b>						
• N('000)	879.3	467.1	184.0	50.8	228.0	407.6
• % in sector	100.0	53.1	20.9	5.8	25.9	46.4
• % of all employed	11.5	12.4	21.0	4.1	14.2	10.8
<b>Public administration</b>						
• N('000)	364.2	194.0	78.0	35.0	78.7	169.9
• % in sector	100.0	53.3	21.4	9.6	21.6	46.6
• % of all employed	4.8	5.2	8.9	2.8	4.9	4.5
<b>Community Services</b>						
• N('000)	1349.8	947.3	350.8	71.8	520.9	399.3
• % in sector	100.0	70.2	26.0	5.3	38.6	29.6
• % of all employed	17.6	25.2	40.1	5.8	32.5	10.6

**Notes:** a) Includes persons still at school.  
b) Includes persons with other (unstated) qualifications.  
c) Includes persons who never attended school and those whose attendance at a secondary school could not be determined.

**Source:** ABS (1991), *Labour Force Status and Educational Attainment, Australia, February 1991*, Cat. No. 6235.0.

-school qualifications and the highest proportion of persons with degree qualifications. However, the three sectors show a high degree of similarity which makes them quite distinct on this score, as a group, from all other sectors of industry. In fact, there are many common areas of activities and functions performed among the three sectors. For example, lawyers in private practice are considered to be in 'community services', while court administrators are in public administration; and



university researchers as well as members of non-government health and welfare agencies sit together in committees and advisory bodies to government. Similarly, there is an interaction between the sector of finance, property and business services and the other two sectors in management industries. Commonwealth, State and local governments control and administer all kinds of property, and some non-government organisations, especially the established churches and their affiliated bodies in health, education and welfare are among the largest owners of real estate property. In terms of functions performed, through the growth of corporatist arrangements in policy advice and research, the coalescence of functions and interests has also increased and the term 'management industries' is quite appropriate to use in relation to the three sectors as a group. The inter-relationship between community services and public administration is especially prominent, both in the functions the two sectors perform as well as in the auspices under which they operate.

The extent and levels of educational qualifications of persons employed in management industries as a group and more specifically in community services, is reflected in their occupational structure (Table 3.4). As shown, in August 1991, persons employed in the three top occupations - managers and administrators, professionals, para-professionals - accounted for 30.8 per cent of all employed persons, but in management industries they accounted for 47.0 per cent and in community services for 59.1 per cent.

The distinctiveness of the occupational structure and gender composition of the employed labour force is very clearly indicated in Table 3.5. The differences in the extent of professionalisation between community services and all other sectors of industry are not just great but impressive. The ratio of employed professionals in community services is 4.58 to 1 in other industries (men 4.97; women 5.59). Thus, the concentration of tertiary educated persons in community services and corresponding professionalisation of the employed labour force shows the reverse side of the coin in the low educational and professional levels of the labour force employed in the other industries. While it is to be expected that different functions are performed by different sectors of industry, the great disparity between the qualitative dimensions of human resources employed in 'management' and those employed in 'production' does not seem to fit the image of an economic system which can be capable of developing a system of production based on high technology industry.

The differences in the occupational structure between community services and the other sectors of industry are further accentuated among women. First, women account for 65.2 per cent of employed persons in community services and only for 36.6 per cent in the other industries. Second, over one-half (52.7%) are employed in the three top occupations, 3.36 times the percentage of women in the other sectors (15.7%). Third, a smaller proportion (12.2%) of women is employed in labouring and related occupations, the same proportion as in the other industries and almost the same proportion as that for men (11.3%).

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Table 3.4: Employed Persons: Industry/Occupation Configuration, Australia, August 1991

Industry Sector	All employed persons	(1)	Occupational group <sup>(a)</sup>	(2)	(3)	(4)
<b>All employed persons N('000)</b>	<b>7669.2</b>	<b>2361.3</b>	<b>2485.8</b>	<b>1710.8</b>	<b>111.3</b>	
<b>All employed persons %</b>	<b>100.0</b>	<b>30.8</b>	<b>32.4</b>	<b>22.3</b>	<b>14.5</b>	
<b>Material production</b>						
• N('000)	2223.6	554.3	282.6	930.1	456.5	
• % in group	100.0	24.9	12.7	41.8	20.5	
• % of all industries	29.0	23.5	11.4	54.4	41.1	
<b>Distribution Services</b>						
• N('000)	2122.2	386.6	985.9	527.5	222.3	
• % in group	100.0	18.2	46.5	24.9	10.5	
• % of all industries	27.7	16.4	39.7	30.8	20.0	
<b>Recreation, personal services</b>						
• N('000)	605.2	142.0	215.3	123.8	124.1	
• % in group	100.0	23.5	35.6	20.5	20.5	
• % of all industries	7.9	6.0	8.7	7.2	11.2	
<b>Management industries</b>						
• N('000)	2718.2	1278.3	1001.8	129.5	308.4	
• % in group	100.0	47.0	36.9	4.8	11.3	
• % of all industries	35.4	54.1	40.3	7.6	27.8	
<b>Community Services<sup>(b)</sup></b>						
• N('000)	1465.0	865.9	355.6	69.7	173.7	
• % in group	100.0	59.1	24.3	4.8	11.9	
• % of all industries	19.1	36.7	14.3	4.1	15.6	

**Notes:** a) 1) Managers and administrators; professionals; para-professionals  
2) Clerks; salespersons; personal service workers  
3) Tradespersons; plant and machine operators and drivers  
4) Labourers and related

b) Data included in Management industries

**Source:** ABS (1991), *Labour Force Australia, August 1991*, Cat. No. 6203.0.

It is thus evident that the growth of employment in management industries and especially in community services has been an important factor in the increasing utilisation of human resources of the female gender (see Table 2.3). Added to this has been the qualitative factor evident in the educational qualifications and corresponding occupational structure in community services which set this sector apart from the other sectors of industry. The differences are reflected in the reward

**Table 3.5: Occupational and Gender Composition of Employment: All Industries and Community Services, Australia, August 1991**

Industry/Occupation	(1) All Employed		(2) Men		(3) Women		
	N('000)	%	N('000)	%	N('000)	%	% of (1)
<b>All industries excl. community services</b>							
<b>All employed</b>	<b>6204.2</b>	<b>100.0</b>	<b>3933.3</b>	<b>100.0</b>	<b>2270.9</b>	<b>100.0</b>	<b>36.6</b>
<b>Management and professions</b>	<b>1495.4</b>	<b>24.1</b>	<b>1139.2</b>	<b>29.0</b>	<b>356.1</b>	<b>15.7</b>	<b>23.8</b>
• Managers and administrators	807.4	13.0	607.9	15.5	199.4	8.8	24.7
• Professionals	497.1	8.0	370.3	9.4	126.8	5.6	25.5
• Para-professionals	190.9	3.1	161.0	4.1	29.9	1.3	15.7
<b>Clerks, sales, personal services</b>	<b>2130.2</b>	<b>34.3</b>	<b>683.8</b>	<b>17.4</b>	<b>1446.4</b>	<b>63.7</b>	<b>67.9</b>
• Clerks	1092.4	17.6	280.2	7.1	812.2	35.8	74.3
• Salespersons, personal services	1037.8	16.7	403.6	10.3	634.2	27.9	61.1
<b>Trades, plant operators, drivers</b>	<b>1641.1</b>	<b>26.5</b>	<b>1448.1</b>	<b>36.8</b>	<b>193.0</b>	<b>8.5</b>	<b>11.8</b>
• Tradespersons	1100.8	17.7	996.8	25.3	104.0	4.6	9.4
• Plant/machine operators, drivers	540.3	8.7	451.3	11.5	89.0	3.9	16.5
<b>Labourers and related</b>	<b>937.6</b>	<b>15.1</b>	<b>662.3</b>	<b>16.8</b>	<b>275.3</b>	<b>12.1</b>	<b>29.4</b>
<b>Community services</b>							
<b>All employed</b>	<b>1465.0</b>	<b>100.0</b>	<b>510.4</b>	<b>100.0</b>	<b>954.6</b>	<b>100.0</b>	<b>65.2</b>
<b>Management and professions</b>	<b>865.9</b>	<b>59.1</b>	<b>363.0</b>	<b>71.1</b>	<b>502.9</b>	<b>52.7</b>	<b>58.1</b>
• Managers and administrators	41.7	2.8	25.6	5.0	16.1	1.7	38.6
• Professionals	536.9	36.6	238.5	46.7	298.4	31.3	55.6
• Para-professionals	287.3	19.6	98.9	19.4	188.4	19.7	65.6
<b>Clerks, sales, personal services</b>	<b>355.6</b>	<b>24.3</b>	<b>35.9</b>	<b>7.0</b>	<b>319.7</b>	<b>33.5</b>	<b>89.9</b>
• Clerks	237.9	16.2	26.1	5.1	211.8	22.2	89.0
• Salespersons, personal services	117.7	8.0	9.8	1.9	107.9	11.3	91.7
<b>Trades, plant operators, drivers</b>	<b>69.7</b>	<b>4.8</b>	<b>54.0</b>	<b>10.6</b>	<b>15.8</b>	<b>1.7</b>	<b>22.7</b>
• Tradespersons	44.7	3.1	31.9	6.3	12.9	1.4	28.9
• Plant/machine operators, drivers	25.0	1.7	22.1	4.3	2.9	0.3	11.6
<b>Labourers and related</b>	<b>173.7</b>	<b>11.9</b>	<b>57.5</b>	<b>11.3</b>	<b>116.2</b>	<b>12.2</b>	<b>66.9</b>

Source: ABS (1991), *The Labour Force, Australia, August 1991*, Cat. No. 6203.0.

structure in terms of income (Table 3.6) and other dimensions of professional employment which are discussed in the next chapter. These developments have also had a profound effect on the socioeconomic stratification and the class structure of Australian society (Jamrozik, 1991) which will be illustrated in the analysis of the spatial distribution of human resources in an urban environment (Sections 5 and 6).

**Table 3.6: Average Weekly Total Earnings of Full-time Employees: Adult Males and Females, Australia, May 1990**

Occupation	Average Weekly Earnings <sup>(a)</sup>		
	Adult Men \$	Adult Women \$	Adult women as % of men
<b>All occupations</b>	<b>615</b>	<b>484</b>	<b>78.7</b>
Managers and administrators	805	611	75.9
Professionals	761	612	80.4
Para-professionals	671	588	87.6
Clerks	550	454	82.5
Salespersons and personal service	557	424	76.1
Tradespersons	563	422	75.0
Plant operators, drivers	578	388	67.1
Labourers and related	495	391	79.0
<b>All professionals</b>	<b>761</b>	<b>612</b>	<b>80.4</b>
• Natural scientists	797	652	81.8
• Building professionals, engineers	804	611	76.0
• Health diagnosis, med. pract.	1063	731	68.8
• School teachers	637	587	92.1
• Other teachers and instructors	804	687	85.4
• Social professionals	695	665	95.7
• Business professionals	726	605	83.3
• Artists and related professions	698	558	79.9
• Miscellaneous professions	723	601	83.1

**Note:** a) Rounded to the nearest \$.

**Source:** ABS (1991), *Distribution and Composition of Employee Earnings and Hours, Australia, May 1990*, Cat. No. 6306.0.

### 3.3 Processes of Service Delivery in Community Services

The data presented in this chapter so far indicate clearly that the use of human resources in community services is considerable, both in the number of persons employed and in the extent and level of their educational and occupational qualifications. It is appropriate therefore to consider how these human resources are used, what activities take place, what aims and purposes are pursued, and what are the outcomes of these endeavours. The answers to these questions are not easy, mainly because of the qualitative aspects of community services and to a certain extent the 'intangible' nature of the services they provide.

The difficulties of appropriate and fruitful analysis are conceptual and methodological, as well as normative. What constitutes a service and what are the aims of a service, are subjects of varied interpretations, especially in agencies which

employ a number of professions and specialities, each operating within the framework of its own values, theories, methods of service delivery and objectives.

Donnison and Chapman pointed out some years ago (1965: 33) that a study of any organisation in community services would need to consider (and would probably find) four kinds of performance, or 'four tones of voice': the **manifest** (the officially approved version); the **assumed** (the interpretation by the people in the organisation); the **extant** (the 'objective' reality); and the **requisite** (the recommended, or desirable, version). These four versions of performance were rarely, if ever, the same, thus offering a distinct possibility of four different conclusions that could be arrived at in the study of the organisation.

These characteristic features of community services present particular problems in assessments of the allocation of material resources (funds) to community services and of the outcomes of such allocations. This issue has been raised in a number of earlier studies which formed the background to the present analysis (e.g. Jamrozik, 1983a and b, 1986, 1987a and b, 1988a and b, 1989a, 1991; Jamrozik and Boland, 1988; Graycar and Jamrozik, 1989). As explained in one of these studies, in the conceptual framework formulated for the analysis of community services,

a distinction is made between **aggregate allocation** and **unit of allocation** or unit of consumption: the first identifies the funds allocated to a population group and/or for a specific function; the second identifies the recipient. The distinction is important because the path between aggregate allocation and the unit of consumption is not always direct. In cash transfers the path is fairly straightforward, involving a relatively small number of mediators, that is, persons involved in the administration and allocation of funds to the recipients. A different matter entirely takes place in the provision of non-cash collective services, such as education and health, as the cost of these services consists almost entirely of incomes earned by the providers of services, the service itself being of a 'non-tangible' nature in direct cash terms, although it may have an economic value to the recipient, in due course. The first and direct beneficiaries of such expenditure are the providers of services who receive the benefit of employment and corresponding salary or wages. Social expenditure, therefore, which aims to enhance the social functioning of the recipient, more often than not enhances the social functioning of the provider of service, in the first instance. (Jamrozik, 1987a: 50)

The significance of this explanation can be seen in Figure 3.3 which identifies the characteristic features of community services and processes of allocation of resources in them, compared with the equivalent characteristics and allocation processes in cash transfers. The distinction between the two forms of resource

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**Figure 3.3: Cash Transfers and Services: Characteristic Features and Process of Allocation**

Cash Transfers	Characteristic Features	Services
1. Tangible (quantitative)		1. Intangible (qualitative)
2. Value determined in money terms		2. Not easily determined in money terms
3. Entitlement determined by legislation and administration		3. Entitlement determined by administrators and service providers
4. Value allocated = value received		4. Value allocated cannot be equated with value received
5. Immediate benefit		5. Benefit not always immediate
6. Mainly maintaining function		6. Mainly facilitative function
7. Main Cost = benefit received		7. Main Cost = income of service providers
<b>Process of Allocation</b>		
Aggregate allocation		Aggregate allocation
Units of allocation		Units of allocation
- direct to individuals, families		- to departments, agencies, schools, hospitals etc.
Administration - relatively simple		Administration - complex
- few intervening variables		- many intervening variables
Transfer (bank, post)		Transfer - mediated through diverse bodies
Recipient - receives the benefit		Recipient - does not necessarily receive the benefit

**Source:** Jamrozik, 1991: 189

allocation is important, especially in the end-process or the outcome of the allocation. In cash transfers the outcome is a certain amount of monetary value but in services the outcome may be a school success or failure, health care or health neglect, a child in a child care centre or in a correctional institution.

However, the distinction between cash transfers and provision of services diminishes when the criteria of entitlement to cash transfer benefits are made more complex, e.g. through means testing and other forms of scrutiny or surveillance as is currently done by the mobile review teams of the Department of Social Security, requests for

frequent reporting to government offices, work tests, etc. In such cases, the processes of testing the eligibilities for a cash benefit acquire some of the characteristics of the processes in the provision of services, e.g. award of school certificate or university degree. The more complex the procedure, the greater the role played by the administrators and service providers - the 'intervening variables' between aggregate allocation and the eventual recipient.

The complexity of the processes which occur between aggregate allocation and the outcome in community services has economic and, more importantly, social implications. In statements made by governments and in much of the prevailing analyses of government policies, attention focuses on the allocation of funds rather than on the outcome of service provision. This problem is recognised by Saunders who states:

... because social expenditure data are more readily available than indicators of the outputs to which those expenditures are directed, it is easy to fall into the trap of regarding changes in expenditure as indicative of changes in output itself. The danger in this is that social expenditure can be seen as an end in itself rather than as a means of achieving (output-based) social objectives. (Saunders, 1987: 14).

And in another paper Saunders acknowledges the role of the 'intervening variables' in community services by saying:

... unlike income expenditure, which represents a direct transfer of resources to eligible recipients, community services expenditure is incurred in purchasing inputs which are then used to provide services to recipients. Furthermore, unlike expenditure on income support which, if it is adjusted for the number of recipients, provides a meaningful indicator of the output corresponding to that expenditure, the link between expenditure on community services and the corresponding output is much more complex. (Saunders, 1988: 13, 18)

In what way is the link much more complex? Saunders acknowledges that there are 'conceptual and practical difficulties' in ascertaining the nature of the complexity but one of the reasons he advances for these difficulties is that 'those responsible for the provision of community services may be tempted to pursue their own agendas, even at times at a cost to the welfare of those for whom the resources are intended'. Another reason he notes is the number of government and non-government agencies involved: as he says, 'there are more players in the game [than in the processes of income support transfers] and a much more complex set of rules, procedures and agenda which guide their activities' (Saunders, 1988: 18).

The similarity of these statements by Saunders to the explanation of the conceptual framework developed earlier and guiding the analysis in this report (and encapsulated in Figure 3.3) is clearly evident. What needs to be acknowledged and

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emphasised, however, is that the analysis of community services, if it is to come to grips with the issues involved, must extend beyond economic variables. Aggregate allocations can be appropriately analysed in monetary terms, but the 'intervening variables' and the outcomes of the role these variables play in the allocation of resources, both quantitative and qualitative, in the administration of services and in service delivery, all these are predominantly social and political in nature and have to be analysed as such. The service providers' 'own agendas', for example, include personal interests as well as class interests, and these interests may be compatible with the interests of the recipients of services but they also may be in conflict with the recipients' interests (Jamrozik, 1991, ch. 8).

In the conceptual perspective which has guided the analysis in this study of human resources in community services the dynamics of the issues examined are perceived to be as follows: economic resources (money) are translated into human resources (personnel) which are then used to develop other human resources (education processes), to maintain human resources in the community in a state of social functioning (health, welfare, child care), and to maintain social order (law, courts, police, 'welfare'). The outcome of these dynamics is examined in the sections to follow.

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## **4 The Role of Education in the Development of Human Resources**

As noted earlier, human resources have been defined as 'available means afforded by the mind or the personal capabilities'. This definition can be translated to mean 'human productive capacities or capabilities'. It has been shown earlier in this report (Figure 2.1) that these 'productive capabilities' are exercised or, as it were, put to work in a variety of formal and informal settings and under a range of auspices. Having noted this great diversity, the study has then focused on the use of human resources in the formal sector of the Australian economy - the various sectors of industry - and more specifically on the field of 'management industries', narrowing the analysis down to the field of community services.

In this chapter the focus is on one section of community services, namely the education services, or the education system. This system is of particular significance because its task, or its function, is to develop human resources into productive social forces. This function is performed through transfer of knowledge (developing the mind), teaching certain skills (personal capabilities), and instilling or enforcing certain social norms of behaviour and social values (socialisation). However, in addition to these functions, the education system is also an important 'sorting mechanism' which opens or closes the doors of opportunity for the recipients of its services (pupils, students), thus assisting, or hindering them in taking up certain positions in the system of economic production and in the socioeconomic and class structure.

The significance of education and the role of the education system in the development of human resources and assigning them to certain stations in society has been examined and commented upon by many writers. In Australia, most prominent among sociologists in this field have been Anderson (1988), Connell et al. (1982), Encel (1970) and Encel et al. (1974). Their studies have been commented upon elsewhere (Jamrozik, 1991) and will be only briefly referred to here. Similarly, references to other writers on this subject will be brief, mentioning chiefly those who have emphasised the socioeconomic-political role of education systems in the 'sorting-out' processes of young people for their future positions in society.

### **4.1 The Education System and Inequality**

The 'sorting-out' function means not simply allocating people to certain positions in society, but also allocating them positions in the socioeconomic stratification system or the class structure. For example, in one of the oft-quoted studies, Jencks and his associates (1972) identified a range of inequalities related to the education system (in the United States). From their wide-ranging research Jencks et al. conclude that 'educational opportunities, cognitive skills, educational credentials, occupational status, income and job satisfaction are unequally distributed' (Jencks et al., 1972:

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253). The researchers found the educational system to be a key factor in the structure of inequality, but it is rather surprising that they claim to have found usually weak associations between one variable and another which they examined. While they identified and examined a range of variables of inequality, it appears that they made no attempt to measure or evaluate the cumulative effect of the examined variables. However, class relationships and race were two variables which Jencks et al. saw to be significant in the inequality observed in the education system.

Inequality in education has been a well-acknowledged public issue and a social problem throughout the industrialised western world and beyond. There have been many explanations offered of this phenomenon, and these cannot be elaborated upon here to any great length. Of direct relevance to the issues which are examined in this report - human resources in community services - are three aspects of the education system: the political role of the 'sorting out' processes; the division between the public and the private system; and the relationship of the education system to the labour market.

The 'sorting out' processes in the education system take various forms: a hierarchy of 'progressive' or 'selective' schools; systems of 'streaming' within a school; the division between 'academic' and 'practical' subjects; exit points which allow a 'weeding-out' process to take place (e.g. years 10, 11, 12); and a host of assessment procedures through which children and young people are encouraged to or effectively discouraged from proceeding in certain directions and also become convinced that the assessments are valid (e.g. IQ tests, aptitude tests, counselling).

Browne (1981) argues that the first and most important 'sorting-out' process is the division between manual and non-manual labour. There is no technical reason, he says, for the division between physical work and 'brain work' that can explain why mental and manual labour are hierarchically separated and why there are economic, political and ideological distinctions between them. However, the school system initiates and reproduces this division by making a distinction between theory and practice, and theoretical knowledge is valued more highly than the 'non-academic' practical knowledge. The skills of manual labour are not primarily taught at school but in the work situation; the qualifications for mental labour, however, are gained at school and increasingly in institutions of higher learning. This difference is an important factor in the superior regard accorded to mental labour over manual labour.

In Australia, the 'sorting-out' process is entrenched, on a broad scale, in the dual system of education. According to Anderson (1988: 214-38), 'Australia's dual public/private schooling systems have their roots in the beginning of European colonisation of the continent two hundred years ago' (1988:215). However, it must be emphasised that this is not simply a dual system, indicating **diversity**, but a system which maintains and reproduces **inequality**. This effect of the dual system of education is clearly evident in the entry of students into tertiary education. Relying on the evidence from the results of a number of studies, Anderson says, 'the overwhelming impression from these results is one of little change in the socio-

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economic profile of students commencing higher education over the past decade...' (1988: 225). He further adds that the expansion of tertiary education has not changed things. He observes:

Apparently, even when the system expands substantially... a disproportionate number of families which are well-placed in the social order are able to use their advantage (private schools, good home environment for studying, and so on) to secure additional places for their children. (Anderson, 1988: 227)

Anderson who has systematically studied the Australian education system for many years and has published numerous research monographs on the subject (e.g. Anderson and Vervoorn, 1983) certainly is not the only one who has considered the issue of inequality in the system. Among others have been such well known scholars as Encel (1970; et al., 1974) and Connell et al. (1982). Encel et al., for example, have observed:

Access to higher education is closely linked with social class. Higher education is a powerful agent of class stability for this reason, despite the mythology which treats it as a force for social mobility. (Encel et al., 1974: 196)

The third aspect of the education system has always been an issue debated by scholars, employers, governments and students themselves, but the issue intensified greatly in the 1970s and the 1980s. Bourdieu and Passeron (1990) observe that, 'never before has the question of the "aims" of education been so completely identified with the discussion of the contribution education makes to national growth' (1990: 179) and they add that the language of education has increasingly become a language of economic rationality.

The issue has certainly been a subject of public debate in Australia, as with the changing structure of industry, the question of the industry's need for particular knowledge and skills has been frequently asked. Indeed, in the early analysis (1982) of the changing structure of industries and occupations, we commented:

Education looms large as one of the important influences on employment opportunities as well as on the stratification in the occupational structure of the labour market. (Jamrozik and Hoey, 1982: 70)

The method of analysis used in that study was based on the concept of 'expanding' and 'shrinking' industries and occupations, the parameters used being expressed in relative terms for each variable, the total growth of employment over a period of 15 years (1966 to 1981) being the benchmark. This method enabled the identification of some important trends in industries and occupations, showing their relative growth (expansion) or decline (shrinking). The basic configuration of industry/occupation was then extended and related to a range of variables such as

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sex, age, educational qualifications, full-time and part-time work and participation and unemployment rates.

Of the other studies conducted at the Social Welfare (now Policy) Research Centre in which the role of the education system in the development of human resources and the changing structure of employment opportunities was examined, focused especially on young people, particularly relevant to this report was Jamrozik (1983b), Drury and Jamrozik (1985), and Boland and Jamrozik (1987). The trends in education and employment over the past two decades or so, which have been identified and commented upon in these studies, have been maintained, notwithstanding some deviations in particular years. These trends are certainly evident in the data provided in this report.

## 4.2 The Education System and Its Effects

What, then, are the effects of the education system whose characteristics have been briefly discussed in this Section? Are the critical opinions justified and substantiated by reliable data? The statistics presented in Tables 4.1 to 4.7 provide considerable support to the expressed critique as well as to some data and arguments presented in Sections 1 to 3. The successive Tables 4.1-4.7 portray the education system as a 'system in operation', from secondary schools to the eventual outcome in the labour market.

First, some insight into the dual system of education is provided by the data on apparent retention rates in Table 4.1. (The term 'apparent' is used to account for transfers of students from one school to another). As shown, the retention rates in all secondary schools have more than doubled since 1969, and have indeed doubled in government schools since 1977. There was a decline in retention rates in the late 1970s but this occurred only in government schools and affected only young men rather than young women. Two features in Table 4.1 stand out. First, throughout the period the retention rates in non-government schools are significantly higher than in government schools, with a further difference between Catholic schools and other non-government schools. Second, twenty years ago, retention rates for young girls were considerably lower than those for boys, but since the mid-1970s the rates have been increasingly higher for young girls and the gap between the sexes has grown wider. In fact, between 1969 and 1990, the rates for young boys came close to double but for young girls the rates increased three times. These changes have been similar to the changes in the employment structure discussed in the earlier chapters of this report.

Table 4.2 presents some data on the Commonwealth Government funds allocated to schools, and the numbers of students and teachers in public and private schools. The data compare 1982 with 1990, that is, the last year of the previous Coalition Government and the most recent available data, thus showing the changes during the eight year of the Labor Government. The data show quite clearly that over this period a shift occurred from government schools to non-government schools. The

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**Table 4.1: Apparent School Retention Rates from Year 1 to Year 12, Australia, 1969-1990<sup>(a)</sup>**

Year	All schools	Government schools	Non-government schools			All schools	
			All non-government	Catholic schools	Other non-govt.	Males	Females
1969	27.5	n/a	n/a	n/a	n/a	31.1	23.7
1972	32.4	n/a	n/a	n/a	n/a	35.7	28.9
1977	35.3	29.7	54.9	43.2	87.6	34.0	36.6
1979	34.7	28.9	55.4	44.1	87.1	32.4	36.6
1981	34.8	28.5	56.9	45.6	89.2	32.0	37.8
1982	36.3	29.6	58.5	47.5	88.5	32.9	39.9
1983	40.6	33.7	62.5	51.3	92.6	37.5	43.9
1985	46.4	39.9	65.7	55.1	96.9	43.5	49.5
1990	64.0	58.3	78.4	68.1	102.1	58.3	69.9

**Note:** a) All numbers are percentages.

**Sources:** ABS (1984) *Social Indicators No. 4, 1984*, Cat. No. 4101.0  
 ABS (1985) *Schools Australia, 1985*, Cat. No. 4221.0.  
 ABS (1991) *Schools Australia, 1990*, Cat. No. 4221.0.

shift occurred in government funding, in the number of students and in the number of teachers. The shift was particularly strong in secondary schools: 5.2 per cent increase in student numbers in government schools and 28.3 per cent in non-government schools.

In government funding the proportions in the allocation of funds to each sector changed little over the period. In 1982, allocation per student in government schools was \$231 (\$m527.3 per 2283.0 thousand pupils) or 27.2 per cent of the \$850 per student allocated to non-government schools (\$m604.8 per 711.7 thousand pupils). In 1990, allocation per student in government schools was \$466 (\$m1022.8 per 2193.3 thousand pupils) or 31.0 per cent of the \$1498 per student in non-government schools (\$m1271.0 per 848.3 thousand pupils).

This trend towards privatisation of the school system began in 1976 (the first year of the Coalition Government). In that year, funds allocated to government schools amounted to \$202 per student or 62.2 per cent of the \$325 per student in non-government schools (see Jamrozik, 1989a: 150). The extent of the shift to the private school system between 1976 and 1990 was of considerable magnitude. The numbers of students in all schools (primary and secondary) increased by 3.2 per cent; in government schools the numbers actually decreased by 5.6 per cent but in non-government schools the numbers increased by 36.0 per cent. In secondary schools, the numbers increased by 14.3 per cent; again, in government schools the increase was only 2.7 per cent, but in non-government schools it was 50.9 per cent. Over the same period Commonwealth Government allocation in current prices per

**Table 4.2: Commonwealth Government Expenditure on Schools, Student Attendance and Teaching Staff: 1982 and 1990**

Expenditure/Student Enrolment	1982		1990		Change 1982-90 <sup>(a)</sup>	
	N	%	N	%	N	%
<b>Government Expenditure: (\$m)<sup>(b)</sup></b>	<b>1175.8</b>	<b>100.0</b>	<b>2336.3</b>	<b>100.0</b>	<b>1160.5</b>	<b>98.7</b>
• Government schools	527.3	44.8	1022.8	43.8	495.5	94.0
• Non-government schools	604.8	51.4	1271.0	54.4	666.2	110.2
• Joint programs	43.8	3.7	42.6	1.8	-1.2	-2.7
<b>Student enrolments ('000)<sup>(c)</sup></b>						
<b>All schools</b>	<b>2994.6</b>	<b>100.0</b>	<b>3041.7</b>	<b>100.0</b>	<b>47.1</b>	<b>1.6</b>
• Primary schools	1849.0	61.7	1763.5	58.0	-85.5	-4.6
• Secondary schools	1145.7	38.3	1278.2	42.0	132.5	11.6
• All government schools	2283.0	76.2	2193.3	72.1	-89.7	-3.9
• All non-government schools	711.7	23.8	848.3	27.9	136.6	19.2
<b>Primary schools</b>	<b>1849.0</b>	<b>100.0</b>	<b>1763.5</b>	<b>100.0</b>	<b>-85.5</b>	<b>-4.6</b>
• Government schools	1454.9	78.7	1322.5	75.0	-132.4	-9.1
• Non-government schools	394.1	21.3	441.0	25.0	46.9	11.9
<b>Secondary schools</b>	<b>1145.7</b>	<b>100.0</b>	<b>1278.2</b>	<b>100.0</b>	<b>132.5</b>	<b>11.6</b>
• Government schools	828.1	72.3	870.8	68.1	42.7	5.2
• Non-government schools	317.6	27.7	407.4	31.9	89.8	28.3
<b>Teaching staff ('000)</b>	<b>196.7</b>	<b>100.0</b>	<b>199.2</b>	<b>100.0</b>	<b>2.5</b>	<b>1.3</b>
• Government schools	148.3	75.4	146.5	73.5	-1.8	-1.2
• Non-government schools	48.4	24.6	52.7	26.5	4.3	8.9

**Notes:**

- a) Change means increase except where a minus sign is shown  
b) Budget expenditure for 1982-83 and 1990-91, current prices  
c) Student enrolment and teaching staff for 1982 and 1990

**Sources:**

Australia, Treasury, *Budget Paper No. 1*, 1983-84.  
Australia, Treasury, *Budget Paper No. 1*, 1991-92.  
Australia, Department of Employment, Education and Training (1987).  
ABS (1991), *Schools Australia, 1990*, Cat. No. 4221.0.

student in government schools increased by 131 per cent, while the allocation per student in non-government schools increased by 361 per cent, a ratio of 2.76 in favour of the latter.

The inequality in the dual school system continues and is increased in the transition to tertiary education. As shown in Table 4.3, of the 291.5 thousand persons 15 to 24 years who left school in 1989, 72.0 per cent came from government schools and 25.8 per cent from non-government schools. However, of those who entered further education, those from government schools accounted only for 62.8 per cent and

**Table 4.3: Persons 15-24 Years who Attended School in 1989 but Were not Attending in May 1990, Australia**

	Type of school attended in 1989								
	(1)		(2)			(3)			
Activity in May 1990	All schools <sup>(a)</sup>		Government schools			Non-government schools			
	N('000)	%	N('000)	%	% of (1)	N('000)	%	% of (1)	
<b>All who attended school in 1989</b>	<b>291.5</b>	<b>100.0</b>	<b>209.9</b>	<b>100.0</b>	<b>72.0</b>	<b>75.3</b>	<b>100.0</b>	<b>25.8</b>	
• Attending further education	149.5	51.3	93.9	44.7	62.8	53.0	70.4	35.5	
• Higher education	69.3	23.8	36.7	17.5	53.0	31.2	41.4	45.0	
• TAFE/Technical	63.9	21.9	46.5	22.2	72.8	16.4	21.8	25.7	
• Other	16.3	5.6	10.6	5.0	65.0	5.4	7.2	33.1	
• Not attending further education	142.0	48.7	116.0	55.3	81.7	22.3	29.6	15.7	
• Employed full-time	83.1	28.5	66.6	31.7	80.1	14.8	19.7	17.8	
• Employed part-time	20.6	7.1	17.5	8.3	85.0	2.2	2.9	10.7	
• Unemployed	27.7	9.5	23.7	11.3	85.6	3.9	5.2	14.1	
• Not in labour force	10.6	3.6	8.2	3.9	77.4	1.5	2.0	14.1	

**Note:** a) Includes persons (6300) who were not asked the type of school last attended

**Source:** ABS (1990), *Transition from Education to Work, Australia, May 1990*, Cat. No. 6227.0.

those from non-government schools for 35.5 per cent. In the entry to tertiary education the numbers of those from government schools fell further to 53.0 per cent and those of their counterparts from non-government schools rose to 45.0 per cent. Thus of those students who left government schools one in 5.71 went to tertiary education, but of those from non-government schools the ratio was one in 2.41.

The advantageous position of persons who left school and entered the labour market was also maintained by those from the non-government schools. They recorded a higher participation rate, a higher rate of full-time employment and a lower rate of unemployment.

Table 4.4 presents data on the labour market status of persons with post-school qualifications. A few aspects of these data need to be mentioned. First, a certain proportion of such persons was born overseas and many of these obtained their qualifications overseas. Compared to the Australian-born population, their position in the labour market is worse: they show lower participation rates but higher levels of unemployment. Second, the advantage of holding a degree or trade qualifications also shows in higher participation rates and lower unemployment rates than those with a diploma, certificate or other qualifications. The third aspect of significance is the low proportion of post-school qualifications (except trade) in science,

**Table 4.4: Persons Aged 15 to 19 Years with Post-School Qualifications: Labour Force Status, Birthplace and Educational Level, Australia, February 1991**

Demographic Characteristics and Level of Qualifications	Labour force status							
	(1)		(2)		(3)		(4)	
	All persons N('000)	%	Employed N('000)	% of (1)	Unemployed N('000)	% of (1)	Not in labour force N('000)	% of (1)
<b>All persons</b>	<b>4896.1</b>	<b>100.0</b>	<b>3752.2</b>	<b>76.6</b>	<b>269.3</b>	<b>5.5</b>	<b>874.7</b>	<b>17.9</b>
Men	2787.5	56.9	2330.0	83.6	154.4	5.5	303.1	10.9
Women	2108.6	43.1	1422.2	67.4	114.9	5.4	571.6	27.1
Born in Australia	3494.0	71.4	2730.9	78.2	170.9	4.9	592.2	16.9
Born outside Australia	1402.1	28.6	1021.3	72.8	98.4	7.0	282.4	20.1
Qualifications obtained								
• in Australia	4093.9	83.6	3196.6	78.1	213.1	5.2	684.2	16.7
• outside Australia	802.2	16.4	555.5	69.2	56.2	7.0	190.5	23.7
<b>Level of Qualifications</b>								
Degree	1047.2	21.4	875.0	83.6	44.2	4.2	128.1	12.2
Certificate or Diploma	2229.2	45.5	1604.1	72.0	131.2	5.9	494.0	22.2
Other post-school qualifications	47.9	1.0	31.0	64.7	5.7	11.9	11.2	23.4
Trade qualifications	1571.7	32.1	1242.2	79.0	88.2	5.6	241.4	15.4
<b>Field of Study</b>								
<b>All post-school except trade</b>	<b>3324.3</b>	<b>100.0</b>	<b>2510.1</b>	<b>75.5</b>	<b>181.1</b>	<b>5.4</b>	<b>633.3</b>	<b>19.1</b>
Administration <sup>(a)</sup>	489.3	14.7	404.8	82.7	21.0	4.3	63.4	13.0
Law, Education, Medicine	544.5	16.4	434.2	79.7	20.5	3.8	89.8	16.5
Nursing, other health	444.0	13.4	323.9	73.0	13.4	3.0	106.4	24.0
Secretarial <sup>(b)</sup>	567.6	17.1	360.2	63.5	36.1	6.4	171.3	30.2
Social sciences, Arts, etc.	331.9	10.0	231.7	69.8	24.5	7.4	75.6	22.8
Transport, Communication	60.9	1.8	47.6	78.2	5.6	9.2	7.6	12.5
Science, Engineering, Architecture <sup>(c)</sup>	595.6	17.9	496.6	83.4	30.1	5.1	68.6	11.5
Other degree, diploma, etc.	290.8	8.7	210.9	72.5	29.6	10.2	50.3	17.3
<b>Trade qualifications</b>	<b>1571.7</b>	<b>100.0</b>	<b>1242.2</b>	<b>79.0</b>	<b>88.2</b>	<b>5.6</b>	<b>241.4</b>	<b>15.4</b>

**Notes:** a) Includes business and commerce  
b) Includes typing and data processing  
c) Includes veterinary science, agriculture, forestry, computing

**Source:** ABS (1991), *Labour Force Status and Educational Attainment, Australia*, February, 1991, Cat. No. 6235.0.(a)

engineering and other disciplines of direct relevance to material production. The data do not show from which part of the school system the persons come, but reported research indicate clearly that students from private schools are more likely to be found studying for the more prestigious occupations. For example, Anderson comments on a survey conducted in the early 1980s which showed that



...students who had attended non-Catholic private schools were more likely to choose a career in law or medicine than in the less prestigious professions, that they expected to earn higher incomes, and, consistent with this, that they were more likely to have rated financial rewards as having been important when they made their career decisions. (Anderson, 1988: 230)

Finally, the data in Tables 4.5, 4.6 and 4.7, show the advantage held in the labour market by holders of post-school qualifications over the persons without such qualifications. This advantage is multi-dimensional in that the people with post-school qualifications, especially those with degrees, have higher participation rates and higher frequency of full-time rather than part-time employment, and substantially lower rates of unemployment. Furthermore, those unemployed without post-school qualifications experience much longer periods of unemployment; in February 1991 approximately one quarter (24.9%) of them recorded a length of unemployment over one year, compared to 16.9 per cent recorded by those with some post-school qualifications and only 7.9 per cent recorded by the degree holders.

The data presented in Tables 4.1-4.7 show a process consisting of a series of arrangements and successive steps in the education system through which human resources are progressively channelled into certain directions, to be found eventually on a certain rung of the ladder of the socioeconomic stratification, typical of a class society. This process fully substantiates the view of Anderson and Vervoorn who say:

Viewed from a sociological perspective the education system as a whole, and the secondary and post-secondary levels in particular, act as a series of filters allocating students to the various strata of the social structure and the workforce. (Anderson and Vervorn, 1983: 2).

Or, as Jones perceives this process,

Educational qualifications have become rationing devices for entry into secure and satisfying employment, and failure imposes heavy social and economic penalties. (Jones, 1982: 5)

The education system is an important part of community services, as it is that system to which the society delegates the responsibility for the development of human resources. That development has a range of dimensions - social, cultural, economic, political - and the extent to which each of these dimensions is considered in the processes of education influences and determines the outcome for the society as well as for the persons who pass through the system and its 'series of filters'. As shown in the studies quoted in this chapter, and in the range of data presented so far, the political role of 'sorting-out' the participants in the system is clearly demonstrated, as are the effects of these processes on the people whose place in the economic

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**Table 4.5: Persons Aged 15 to 69 Years: Labour Force Status and Educational Attainment, Australia, February 1991**

Labour Force Status	With post-school qualifications						Without post-school qualifications <sup>(c)</sup>
	All persons <sup>(a)</sup>	All with post-school <sup>(b)</sup>	With degree	Trade qualifications	Certificate or diploma		
<b>All persons</b>	N <sup>(d)</sup> 11985.9 % 100.0	4896.1 40.8	1047.2 8.7	1571.7 13.1	2229.2 18.6		6491.9 54.2
In labour force	N <sup>(d)</sup> 8452.5	4021.5	919.1	1330.3	1735.3		4245.3
Participation rate	% 70.5	82.1	87.8	84.6	77.8		65.4
Employed	N <sup>(d)</sup> 7651.8 % <sup>(e)</sup> 90.5	3752.2 93.3	875.0 95.2	1242.2 93.4	1604.1 92.4		3758.9 88.5
• Full-time	N <sup>(d)</sup> 6009.1 % <sup>(f)</sup> 78.5	3136.2 83.6	762.7 87.2	1159.1 93.3	1189.1 74.1		2872.4 76.4
• Part-time	N <sup>(d)</sup> 1642.7 % <sup>(f)</sup> 21.5	615.9 16.4	112.3 12.8	83.0 6.7	414.9 25.9		886.5 23.6
Unemployed	N <sup>(d)</sup> 800.7 % <sup>(e)</sup> 9.5	269.3 6.7	44.2 4.8	88.2 6.6	131.2 7.6		486.4 11.5
Not in labour force	N <sup>(d)</sup> 3533.4 % 29.5	874.7 17.9	128.1 12.2	241.4 15.4	494.0 22.2		2246.7 34.6
Duration of current unemployment (weeks)							
1 and under 4	% 19.5	21.2	27.8	17.0	22.1		17.7
4 and under 26	% 46.3	48.7	52.0	51.8	45.7		44.9
26 and under 52	% 13.4	13.2	12.0	13.5	13.1		13.8
52 and over 104	% 20.8	16.9	7.9	17.7	19.1		24.2

- Notes:**
- a) Includes persons still at school
  - b) Includes persons with other (unstated) qualifications
  - c) Includes persons who never attended school and those whose attendance at a secondary school could not be determined
  - d) All numbers are N('000)
  - e) % of labour force
  - f) % of all employed

**Source:** ABS (1991) *Labour Force Status and Educational Attainment, Australia, February 1991*, Cat. No. 6235.0

**Table 4.6: Men Aged 15 to 69 Years: Labour Force Status and Educational Attainment, Australia, February 1991**

Labour Force Status	With post-school qualifications						Without post-school qualifications <sup>(c)</sup>
		All men <sup>(a)</sup>	All with post-school <sup>(b)</sup>	With degree	Trade qualifications	Certificate or diploma	
All men	N <sup>(d)</sup> %	6027.5 100.0	2787.5 46.2	621.5 10.3	1410.5 23.4	728.4 12.1	2935.1 48.7
In labour force	N <sup>(d)</sup> %	4940.5 82.0	2484.5 89.1	572.7 92.1	1233.0 87.4	655.7 90.0	2369.0 80.7
Employed	N <sup>(d)</sup> % <sup>(e)</sup>	4475.5 90.6	2330.0 93.8	551.5 96.3	1151.8 93.4	608.1 92.7	2081.7 87.9
• Full-time	N <sup>(d)</sup> % <sup>(f)</sup>	4112.7 91.9	2213.4 95.0	522.1 94.7	1103.3 95.8	570.8 93.9	1899.1 91.2
• Part-time	N <sup>(d)</sup> % <sup>(f)</sup>	362.8 8.1	116.7 5.0	29.4 5.3	48.5 4.2	37.3 6.1	182.6 8.8
Unemployed	N <sup>(d)</sup> % <sup>(e)</sup>	465.0 9.4	154.4 6.2	21.2 3.7	81.2 6.6	47.6 7.3	287.2 12.1
Not in labour force	N <sup>(d)</sup> %	1087.0 18.0	303.1 10.9	48.8 7.9	177.5 12.6	72.6 10.0	566.1 19.3

- Notes:**
- a) Includes persons still at school
  - b) Includes persons with other (unstated) qualifications
  - c) Includes persons who never attended school and those whose attendance at a secondary school could not be determined
  - d) All numbers are N('000)
  - e) % of labour force
  - f) % of all employed

**Source:** ABS (1991) *Labour Force Status and Educational Attainment, Australia, February 1991*, Cat. No. 6235.0

activities of the society - the labour market - is largely determined by these processes. The cumulative effect of the processes which take place in the education system is social and economic inequality or, in more clear terms, inclusion in or exclusion from social, political and economic participation.

In Australia, a significant factor in maintaining and reproducing inequality in education has been the dual system of school education whose effects are carried through to the post-school and tertiary education systems. It must be emphasised

**Table 4.7: Women Aged 15 to 69 Years: Labour Force Status and Educational Attainment, Australia, February 1991**

Labour Force Status	With post-school qualifications						Without post-school qualifications <sup>(c)</sup>
	All women <sup>(a)</sup>	All with post-school <sup>(b)</sup>	With degree	Trade qualifications	Certificate or diploma		
All women	N <sup>(d)</sup> 5958.3 % 100.0	2108.6 35.4	425.7 7.1	161.2 2.7	1500.9 26.0		3556.9 59.7
In labour force	N <sup>(d)</sup> 3511.9	1537.0	346.5	97.3	1079.6		1876.3
Participation rate	% 58.9	72.9	81.4	60.4	71.9		52.8
Employed	N <sup>(d)</sup> 3176.2 % <sup>(e)</sup> 90.4	1422.2 92.5	323.4 93.3	90.3 92.8	995.9 92.2		1677.2 89.4
• Full-time	N <sup>(d)</sup> 1896.4 % <sup>(f)</sup> 59.7	922.9 64.9	240.6 74.4	55.8 61.8	618.3 62.1		973.3 58.0
• Part-time	N <sup>(d)</sup> 1279.9 % <sup>(f)</sup> 40.3	499.3 35.1	82.9 25.6	34.5 38.2	377.6 37.9		703.9 42.0
Unemployed	N <sup>(d)</sup> 335.7 % <sup>(e)</sup> 9.6	114.9 7.5	23.0 6.6	7.0 7.2	83.6 7.7		199.1 10.6
Not in labour force	N <sup>(d)</sup> 2446.4 % 41.1	571.6 27.1	79.3 18.6	63.9 39.6	421.3 28.1		1680.1 47.2

- Notes:**
- a) Includes persons still at school
  - b) Includes persons with other (unstated) qualifications
  - c) Includes persons who never attended school and those whose attendance at a secondary school could not be determined
  - d) All numbers are N('000)
  - e) % of labour force
  - f) % of all employed

**Source:** ABS (1991) *Labour Force Status and Educational Attainment, Australia, February 1991*, Cat. No. 6235.0

at this point that the processes of education do not entail solely the imparting, transfer and reproduction of knowledge and information but also imparting, transfer and reproduction of social values. While this is true of all education, as no knowledge is value-free, it is especially true in vocationally oriented professional education. It is appropriate here to quote at length Anderson's observation about the socialisation impact of professional education. From his studies, Anderson has concluded that

...professional socialisation occurred in engineering, law and medicine, as students progressively acquired beliefs and dispositions which are characteristics of the culture of the profession for which they were preparing. In medicine students' initial idealism which students portrayed declined, and was replaced by a view that the interests of the practitioner and of the professions had to be given considerable weight in relation to client and public interest. This found expression in quite strongly held views by senior students in favour of fees for service minimum government regulation and professional solidarity against criticism. Law and engineering students similarly came to accept their respective professional perspectives on community issues, believing for instance that in disputes with clients, and in defining the public interest, the final arbiter should be the profession itself. (Anderson, 1988: 234)

The phenomenon Anderson describes are those which have been identified as the characteristics and 'intervening variables' of service provision in community services, presented in Figure 3.3 in this report. The outcome of these processes is demonstrated by Pusey (1991) in his analysis of social and political attitudes held by the Senior Executive Service (SES) in the Commonwealth Public Service. Some features of the outcome are also shown by the social indicators of the Canberra population (Jamrozik, 1991: 223-4) and in Section 6 of this report.

The third aspect considered in this report - the relationship of the education system to the labour market - is particularly important now that government policies aim increasingly to direct the education system to the perceived needs of the labour market. This trend has been criticised not only by those who held more 'liberal' views on education but even by such economically-oriented organisations as the Organisation for Economic Co-operation and Development which states, 'there is undoubted merit in the new vocationalism so long as it does not threaten to replace the traditional liberal objectives of producing rounded personalities and good citizens' (OECD 1985: 21).

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## 5 Human Resources and Community Services in the City

In its romantic mythology Australian society has been a rural society but in social reality it has been, and certainly is now, one of the most urbanised societies in the world. However, because of the notorious urban sprawl, the term **suburbanised** rather than **urbanised** would be more appropriate.

The suburban sprawl has become an important factor in social division and in socio-economic and class inequality. Identification of a person's social class with the locality became part of the Australian folklore. Barry Jones commented:

Postcodes determine life-styles and life chances, far more than technology: identify someone's postcodes and a fair estimate can be made of his or her educational background and prospects for satisfying work. (Jones, 1983: 4)

This chapter gives a brief overview of some of the literature in which the issues of human resources in an urban environment and of related spatial inequality are examined. The chapter provides a background to the analysis of spatial inequality and the distribution of human resources in the metropolitan area of Sydney which is provided in the following chapter.

### 5.1 Studies of Urban Environment

One of the earlier systematic studies of urban conditions was carried out at the University of Chicago by Robert Park and his colleagues. *The City* was published in 1925 and became a classic study in urban sociology. Park et al. considered the city to be an ecological unit, a geographic unit, and an economic unit. The ecological or 'organic' approach was dominant in their studies, characterised by the assumption that the essential feature of an urban environment was the concentration of a large number of people in a relatively small space (Morris, 1968: xi). The size of the population and the rate of growth were the two variables which Park et al. considered to be of the main significance in the organisation, or disorganisation, of a city. They saw the growth of cities as a process of outward expansion, resulting in a number of concentric circles of urban space, each with a specific character, such as business areas, decaying areas, transitional areas, suburbia, etc. Furthermore, these areas tended to be socially isolated from one another and in this process certain suburbs and neighbourhoods became 'social problem areas'. In their words:

In the expansion of the city a process of distribution takes place which sifts and sorts individuals and groups by residence and occupation. (Park et al., 1925: 54)

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The research interests of Park et al. revolved around the questions 'what are the defining features of a community' and 'what features distinguish one community from another'. In this approach the location of a community in an urban environment was important, but of crucial importance was the nature of the population: the means through which a local culture was developed and maintained; and the community consciousness which made people act together as a group through the means of their formal and informal institutions - cultural, political, occupational. In other words, to Park et al. a community in an urban environment was defined by the nature of its human resources and by the way these human resources were utilised (1925: 125-55). Using the rapidly growing and expanding city of Chicago as their main area of research, Park et al. saw that this growth also produced social disorganisation in certain parts of the city, and their concern was to identify some of the elements of social organisation which were conducive to social integration. Examining both formal and informal organisations, they observed that at the micro-level of the city, at the level of a neighbourhood, the informal elements were very important. 'Proximity and neighbourly contact are the basis for the simplest and most elementary form of association with which we have to do in the organisation of city life', they observed (1925: 7).

One of the followers of the Chicago School was Louis Wirth who attempted to develop a theory of 'urbanism as a way of life', through a systematic identification of certain characteristics of city life which were distinctly different from those of rural life. Of relevance to this study are the following of Wirth's observations:

- Growth and diversity are associated in the city with relatively weak bonds among co-residents;
- Formal methods of social control must therefore substitute for the traditional informal controls and common traditions; and
- In a diverse population one way of solving the problem of social control is to separate the diverse population groups physically (Wirth, quoted in Morris, 1968: 16).

Wirth also attached great significance to the functions performed by primary groups. He observed that primary groups provided warmth, support and understanding to their members; provided an alternative to the formal, secondary groups contacts; assisted in the assimilation of recent immigrants from rural areas or from other countries; and provided a bridge between the individual and the family, and the wider community (Morris, 1968: 95-100).

In more recent times (1970s) one of the foremost theorists of urban sociology has been Manuel Castells, whose book *City, Class and Power* was first published in 1972. Castells argued that the work of Park et al. was not so much a study of the city per se but rather a study of 'the processes of social disorganisation and individual maladjustment, the persistence of autonomous subcultures, deviant or otherwise, and their resistance to integration' (1976a: 37). In his view,

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... the urban problems requiring solution are no longer problems of integration, but problems of management of the system as a whole: the organisation of spatial interdependencies within a complex technological environment, public sector intervention to organise the consumption of collective goods, attempts to manage the social tensions produced by spatial expression of ethnic and social integration. (Castells, 1976: 63-4)

More specifically, Castells has been interested in the study of the processes of **resource allocation** and of **collective consumption** of resources in the urban environment. He sees that access to the goods of collective consumption, in addition to income inequality, becomes an additional source of inequality and a source of social cleavages. This inequality and social cleavages are

related to the accessibility and use of certain collective services, from housing conditions to working hours, passing through the type and level of health, educational and cultural facilities...[and there is] a new source of inequality inherent in the very use of these collective goods which have become a fundamental part of the daily consumption pattern. (Castells, 1978: 15-16)

Castells thus relates the allocation of, and access to, collective community services in an urban environment to the same processes in the society as a whole. He sees contemporary industrialised societies as almost entirely 'urban'. He observes that the spatial distribution of housing, community services, leisure and cultural facilities is determined by the dominant interests of big organisations and business interests. The spatial distribution of these resources also determines the distribution of the population - the human resources - according to the socioeconomic characteristics: the affluent are able to choose where they want to live; the less affluent wage-earners and the poor are 'pushed out' to suburbs which are often distant from places of employment and services such as health, thus rendering people dependent on public transport (often 'a synonym for discomfort, for congestion, for oppression, for compulsory timing') or expensive private transport - the car.

Studying the urban environment 40 to 50 years later than Park et al., Castells observes a trend which shows a change in the attitudes to city life. While Park et al. saw the movement of the more affluent people to outer suburbs, Castells observes that leisure and cultural activities as well as some important community services tend to be located in the centre, to be followed by luxury residences which can be afforded only by the affluent.

This 'gentrification' of the inner city areas became a trend throughout the industrialised countries in the late 1960s and early 1970s. For example, Touraine has observed that while some inner suburbs in large cities became, or remained, disorganised and decayed, others became exclusive, 'occupied by a new aristocracy ready to pay dearly for proximity to the centres of cultural influence and

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consumption of the past' (Touraine, 1971: 220). Similar observations have been made by other writers on urban environment such as Lojkine (1976), Harloe (1977) and Harvey (1978). The common feature of their observations is the emphasis they place on the significance of the location of and access to collective services as the source of inequality. It needs to be noted here that collective services may be dependent on material resources (e.g. buildings) but their operation, i.e. the service provision itself, relies entirely on human resources. The distribution of human resources in an urban area tends to follow the distribution of material resources, and the other way round as well, thus creating a cumulative effect of an increased social inequality.

### **Australian Studies**

Australian studies of human resources in an urban environment have come from social geographers such as Burnley (1974a and b), Milligan (1983) and Hugo (1988); and sociologists such as Bryson and Thompson (1972), Jakubowicz (1974), Kendig (1979) and Jupp (1984). Among others who examined some specific aspects of relevance to the distribution of human resources, in an urban environment, Vinson and Homel (1976) and Sweeney and Jamrozik (1984) deserve a mention. The list is certainly not exhaustive, but studies of urban environments in which the focus is on the nature and distribution of human resources do not appear to have been numerous.

Burnley's ecological approach has some similarities with the methodology employed by Park et al. (1925), noted earlier. Taking a long-term historical perspective on the growth of cities in Australia, Burnley observes that the process of urbanisation and social segregation were two parallel processes that took place mainly in the larger cities but could be observed in the smaller cities as well (1974a). He notes, for example that

Melbourne and Sydney had already taken on a metropolitan character before the turn of the century, with a real differentiation of suburbs into working class, middle class and high status areas. In fact, the areal differentiation of suburbs into different housing quality and status district can be regarded as attributes of western metropolitan centres in which free market forces favour the agglomeration of like land uses and social types. (Burnley, 1974a: 131)

Burnley identifies ethnicity, social status and familism as the three most important factors in the spatial distribution of certain population groupings which can be observed by such indicators as occupation, education, income, housing quality, ethnicity and even school retention rates (1974a: 132). He emphasises that spatial distribution of certain population characteristics does not signify simply a 'differentiation' but social and economic inequality. Furthermore, he points out that the disadvantage of certain suburbs cannot be ascribed to the population living in those suburbs, because some of these suburbs were from the outset designated and

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set apart as 'slums', and institutional arrangements were such that some of these areas were 'crippled from birth' (Burnley, 1974a: 139).

Burnley further observes that allocation of community services, both in quantitative and qualitative terms, continues to be made in such a way as to continue the inequalities between the affluent and the less affluent or the poor areas. The cumulative effect is again evident, specially in the life chances of the young generation. Looking at education, he notes how spatial socioeconomic segregation is reflected in the rate of educational participation. The 'free' education is thus not necessarily egalitarian because apart from the costs which parents have to incur by keeping their children at school, the quality of State schools varies greatly from one suburb to another. As an example, he looks at tertiary education and notes:

... in 1964, for every one student entering university from the industrial western suburbs of Melbourne, four came from the higher status south-eastern suburbs and only one from the poorer inner suburbs. More recent figures have reinforced the trends indicated. (Burnley, 1974a: 144)

Another aspect that Burnley notes in the growth of Australian cities since World War II is the significance of immigrants in the pattern of urbanisation. He points out that immigration and its ethnic diversity has become 'a major factor in residential, ecological and even social class differentiation within the major cities' (1974b: 165).

The influence of the post-war immigrants on the pattern of urban development is well documented by Kendig (1979) and also commented upon by Jupp (1984). Kendig points out that in the immediate post-war years vast areas of the inner suburbs in Sydney were planned to be demolished because the dwellings in them were regarded as 'beyond repair' (Kendig, 1979: 106). However, the immigrants from non-English speaking countries were attracted to these areas for reasons of low cost of dwellings and the closeness to the city and because of their commercial, recreational and cultural amenities. The immigrants began to renovate the old dwellings and, as the areas improved in housing standard, the new middle class of the growing professional strata began to buy the restored dwellings and the 'gentrification process' took roots and extended to other inner-city suburbs. Commenting on these patterns of urban settlement, Jupp observes that the immigrants' contribution to the restoration of once-decaying and decayed suburbs is largely unacknowledged. He says:

The ethnic transformation of the major cities has attracted less attention than suburbanisation or gentrification, perhaps because its public impact has been less noticeable. (Jupp, 1984: 111)

It is the gentrification process and its associated spatial distribution of material and human resources that have been examined by Jakubowicz (1974) and Milligan (1983). Jakubowicz has focused on the political effect of gentrification, such as the influence of organised pressure groups on political decisions concerning the

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allocation of resources and improving the quality of the environment. Milligan, on the other hand, has examined the rising cost of housing in the gentrified areas, and its effect of 'pushing out' less affluent families into distant suburbs which lacked the community services the families with young children needed (Milligan, 1983: 101-22).

Bryson and Thompson (1972) studied the life in a new housing estate of a large city and focused particularly on the role played by 'civic leaders' in that community, acting as 'self-appointed caretakers' of the population. The 'caretakers', the middle-class professionals employed in a range of community services took it for granted that their position and status also gave them the knowledge, and the right, to determine what the population of the estate, largely working-class, needed, taking little notice of the views of the population itself. As the authors state:

The socialisation of professionals encourages them to be confident that they know what people need and consequently it often appears irrelevant to them to know what people think ... Blinkered by successful socialisation into middle class ways of thought and action, they simply seek to induct 'the less fortunate of the misguided' into the same attitudes and approaches. (Bryson and Thompson, 1972: 288-9)

The professional 'caretakers' in the study by Bryson and Thomson might have lived in the community in which they worked but they did not necessarily see themselves as part of that community. Most of them, in fact, saw themselves to be there only temporarily and intended to move into a 'better' locality in the future. Bryson and Thomson thus raise an important issue of class relations in community services, which suggests that the provision of human resources in community services entails quantitative, qualitative, as well as normative dimensions. What sort of service is provided and with what outcome and effect may be quite different if measured in economic terms or as expressed in the **manifest version**, or if measured in terms of the **assumed version** of the service providers who 'know' what the community needs and act accordingly, irrespective of what the potential recipients of service see as their own needs (see Donnison and Chapman, 1965).

Sweeney and Jamrozik (1984) conducted an extensive study of the provision and use of early childhood services (child care, pre-schools) in the Sydney metropolitan area. In an in-depth survey of 49 services and 156 user-families, located in five local government areas (LGAs) of widely differing socioeconomic characteristics, they found, inter alia, that:

- Incomes of families using early childhood services were, on average, higher than the average family incomes in New South Wales as a whole, and higher than the average family income in each of the five LGAs included in the study.
  - The extent of the use of child care was higher in the high socioeconomic LGAs than in the low socioeconomic LGAs.
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- Mothers' participation in the labour force was also higher in the high socioeconomic LGAs than in the low socioeconomic areas.
- Educational attainment of the user-parents, especially those of the mothers, and especially at the level of a tertiary degree, was considerably higher than the average in the population of the State and higher than the average in each of the five LGAs included in the study. Furthermore, the differences between the user-parents and the population of the LGA were higher in the low socioeconomic status LGAs than in the high socioeconomic LGAs.

The differences in the use of early childhood services thus were found to be clearly related, firstly, to the socioeconomic status of the locality and, secondly, to the socioeconomic status of the families within each locality. The cumulative effect of these two factors was the advantage which the more affluent, two-income, middle-class families had in the access to and use of this particular community service. The findings of the study also confirmed the repeated findings of the surveys of child care arrangements conducted by the Australian Bureau of Statistics (ABS, Cat. No. 4402.0) which had earlier (in 1980) shown (and have since shown in 1984 and 1987) that the use of early childhood services was positively correlated with family income.

A study aimed at a formulation of certain social indicators which would show the spatial distribution of certain characteristics of the population and thus identify differences in social needs for community services was conducted by Vinson and Homel (1976). The researchers used the State of New South Wales as the area for investigation and applied 25 indicators drawn from a number of sources such as the census data for 1966 and 1971, admissions to psychiatric hospitals, suicides, perinatal and infant mortality, infectious disease, personal injuries, and life expectancy rates. The 25 indicators were organised into five groups:

- |  |              |
|--|--------------|
| 1. Physical and mental health -        | 6 indicators |
| 2. Income, economic self-sufficiency - | 4 indicators |
| 3. Social disorganisation -            | 8 indicators |
| 4. Family (in)stability -              | 3 indicators |
| 5. Educational disadvantage -          | 4 indicators |

By ranking various localities (LGAs) on each of the 25 indicators and adding the scores, the researchers arrived at a 'risk rank' for each LGA, giving the most 'risk prone' LGA the rank of 1. The results obtained thus aimed to indicate a **cumulative effect** of the indicators used in the study, or the **relative vulnerability** to certain 'problems'. Their index of risk scores ranged from 4.902 in LGA rank 1, to 1.885 in LGA rank 72.

Vinson and Homel's study produced interesting results by showing that the frequency of certain characteristics of the population, and of certain services, was

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spatially unequally distributed. Furthermore, the results showed that the relative disadvantage of an area was due to a cumulative effect of certain factors. However, the study had certain weaknesses, some of which are frequently encountered in studies which focus on 'social problems'. First, the study focused on the indicators of social pathology rather than on the relative well-being of the population, although it was called a study of 'community well-being'. Second, the researchers used a mixture of data, such as objectively determined data, e.g. educational attainment; and data obtained from various community services and social control agencies, which are derived to a large extent from the interpretation of certain phenomena but give little indication of the bases and processes on which they are compiled. The study thus showed the outcome of the provision of certain community services but not the operation itself which takes place in these services. Nevertheless, the study produced interesting results and can be used as a 'time benchmark' for comparison of results of any subsequent study of a similar kind.

Spatial distribution of certain phenomena which are termed as 'problems' tends to invariably show that such phenomena occur more frequently in low socioeconomic areas than in high socioeconomic areas. This has been indicated in the data on child abuse, collected by the New South Wales Department of Health (1986); and in the data on similar problems, collected by the Department of Family and Community Services (Young et al., 1989). Similar results have been recorded by the Tasmanian Department for Community Welfare (1988) on the distribution of reported frequency of violence in families. However, it is debatable to what extent the explanation for these phenomena can be sought in the population *per se*, and to what extent in the operation of the services themselves. For example, Young et al. acknowledge that, to a certain extent at least, the relationship between, say, child abuse and low socioeconomic status of the families may be:

an artifact of the greater surveillance of poor people by social control authorities, or of a propensity of middle-class welfare workers to label lower income lifestyles as abusive *per se*.  
(Young et al., 1989: 3)

This cautionary comment is certainly apposite to many studies of 'social problems', which focus attention on 'the poor', 'the disadvantaged' or other 'undesirable' categories of population, such as the unemployed. Professionals employed in community services, whether in policy making, administration, service delivery, or research, operate within the framework of scientific as well as normative variables, often with the addition of personal or group interests and political expediency. Thus human resources in community services can be utilised to maintain and enhance people's well-being and social functioning, but they can also be utilised as agents of social control.

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## **6 Human Resources in the Sydney Metropolitan Area**

This section examines the spatial distribution of human resources in one large urban environment, namely the Sydney metropolitan area. The examination includes a number of social indicators but focuses more specifically on human resources which are used in the provision of community services and relates these to the distribution of the important part of the recipient population, namely the families with dependent children.

The source of data for the analysis is the 1986 census of population conducted by the ABS, and the spatial unit of analysis is the local government area (LGA). The area examined is the Sydney Statistical Division (SSD) which in 1986 consisted of 38 LGAs (see Table 6.1). The data extracted from the census consist of 18 social indicators of related demographic, socioeconomic, or service provision features of each LGA (see Figure 6.1).

### **6.1 Theoretical Assumptions and Method of Analysis**

The method used in the selection and analysis of data is based on the theoretical assumption that certain population characteristics of demographic, socioeconomic and cultural nature tend to occur together, creating a network and an interplay of causal relationships. The cumulative effect of these relationships is a certain quality of human resources which differs from one population group to another, thus creating various degrees of social and economic inequality and leading to the formation of a corresponding class structure. This assumption is consistent with the empirical observations and theoretical interpretations of social phenomena and social processes occurring in an urban environment, recorded by the social scientists referred to earlier, in Section 5.

Studies of social inequality in Australia related to spatial distribution of resources in urban environments have been rather limited, the studies which were referred to earlier (Section 5) being something of an exception. In studies not related directly to spatial dimensions, inequality has usually been perceived in one dimension, namely the distribution of income, and restricted narrowly to cash income. Furthermore, most of such studies have focused on one end of income distribution, presenting the results as studies of poverty. Thus, such studies have attempted to measure one dimension, or one effect, of inequality, not the phenomenon of inequality itself.

This study, by aiming to ascertain the multi-dimensional nature and extent of the variability of human resources and the spatial distribution of this variability, seeks to arrive at some measurable extent of this variability and its cumulative effect. The

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Table 6.1: Vulnerability Index: Sydney Statistical Division, 1986 Census

	Index 1: Direct Values			Index 2: Modified Values		
	Sum of Ranks	Cumulative Rank	Index	Sum of Ratios	Cumulative Rank	Index
Ashfield	424.5	25	4.54	32.88	22	1.62
Auburn	585.5	35	6.26	50.62	35	2.49
Banksstown	518.5	30	5.55	46.13	32	2.27
B'Hills	197.0	9	2.11	22.20	3	1.09
Blacktown	557.0	33	5.96	46.67	33	2.29
Botany	589.5	36	6.30	55.20	37	2.71
Burwood	387.0	23	4.14	33.66	24	1.65
Camden	362.5	22	3.88	33.34	23	1.64
Campbelltown	522.0	31	5.58	48.47	34	2.38
Canterbury	576.5	34	6.17	36.72	26	1.81
Concord	318.5	20	3.41	29.05	16.5	1.43
Drummoyne	270.0	15	2.89	28.39	13	1.40
Fairfield	633.5	38	6.78	62.03	38	3.05
Holroyd	501.5	29	5.36	44.96	31	2.21
Hornsby	150.0	5	1.60	22.75	5	1.12
Hunters Hill	132.5	3	1.42	22.59	4	1.11
Hurstville	345.0	21	3.69	32.74	21	1.61
Kogarah	286.0	17	3.06	28.98	14.5	1.42
Kuring-Gai	93.5	1	1.00	20.34	1	1.00
Lane Cove	127.5	2	1.36	21.32	2	1.05
Leichardt	243.5	10	2.60	28.85	14.5	1.42
Liverpool	590.0	37	6.31	54.50	36	2.68
Manly	250.5	11	2.69	27.42	10	1.35
Marrickville	538.5	32	5.76	43.08	29	2.12
Mosman	136.0	4	1.45	22.94	6	1.13
North Sydney	163.0	6	1.74	24.72	9	1.22
Parramatta	423.5	24	4.53	35.47	25	1.74
Penrith	484.5	28	5.18	44.29	30	2.18
Randwick	314.0	19	3.36	30.86	19	1.52
Rockdale	460.5	27	4.93	39.71	27	1.95
Ryde	251.0	12	2.68	27.59	11	1.36
Strathfield	269.5	14	2.88	28.10	12	1.38
Sutherland	280.5	16	3.00	29.33	18	1.44
Sydney	445.0	26	4.76	39.78	28	1.96
Warringah	261.0	13	2.79	29.10	16.5	1.43
Waverley	313.5	18	3.35	31.84	20	1.57
Willoughby	168.5	8	1.80	24.29	7.5	1.19
Woollahra	167.0	7	1.79	24.14	7.5	1.19

**Figure 6.1: Social Indicators Used in the Construction of the Vulnerability Index for the Sydney Metropolitan Area**

<b>A. Income</b>	
1.	Income, persons 15 years +, \$22000 + per annum
2.	Income, all families, \$32000 + pa
3.	Income, two-parent families with dependent children, \$32000 + pa
4.	Income, one-parent families, female-headed, \$22000 + pa
<b>B. Educational Attainment</b>	
5.	Persons 15 years +, a degree or higher qualification
6.	Persons 15 years +, all post-school qualifications
<b>C. Employment</b>	
7.	All women in employment
8.	Married women in employment
9.	Single parents, female, in employment
10.	Persons employed in the 3 top occupational groups
11.	Persons employed in the 'Management industries'
12.	Unemployed persons
<b>D. Family Composition</b>	
13.	All families with dependent children as % of all family units
14.	One-parent families as % of families with dependent children
<b>E. Overseas-born Population</b>	
15.	All overseas-born population
<b>F. Employment in Community Services</b>	
16.	Persons employed in community services
17.	Persons employed in 'helping professions'
18.	Persons employed in health professions

measurement is attempted by the adaptation of the Vulnerability Index, first developed by Jamrozik et al. (1976) and by a further modification of the Index, aimed at obtaining a greater sensitivity of measurement (see later in this Section).

The notion of cumulative effect has been considered in studies of poverty, aiming to ascertain the cumulative effect of certain phenomena observed in situations of social deprivation. Such cumulative effect, according to one study conducted under the auspices of the United Nation (UN), occurs in situations

...whereby a series of handicapping factors tend to reinforce each other and to generate a seemingly irreversible process of deteriorating levels of living, in material as well as in psychosocial terms, affecting families for one or more generations. (UN, 1978: 2)



The UN report explains further:

The phenomena of poverty and of deprived groups of people, including situations of cumulative inequality, cannot be isolated from the broader problems of inequalities in general, or, as a result, from all the questions of social stratification and its structural causes, the different levels of aggregation of the categories concerned and the various factors of inequality (both horizontal and vertical). (UN, 1978: 3)

It is one of the most important assumptions in this study that inasmuch as social deprivation is caused by a cumulative effect of certain phenomena, the counterpart of deprivation, or the other extreme of inequality, that is, the advantage or socioeconomic affluence is also caused by a cumulative effect of certain factors. Such factors may be of a material kind (e.g. wealth and income) but also of a non-material but measurable and correspondingly valued kind (e.g. education, residential locality). This study demonstrates that both the material and non-material factors tend to occur together, thus producing a cumulative effect of advantage. As the results of the analysis presented in this chapter show, the cumulative effect of advantage in a spatial dimension is considerable.

The United Nations report listed among the factors causing deprivation the following: socially inadequate operation of the housing market; management deficiencies; inadequacies of government policies and social services; financial constraints; people's health; and attitudes of the people themselves. One of the most important factors considered in the reports was education. The authors of the report observe: 'Inequality in education, often accompanying inequality in income, is an essential factor for the inter-generational transmission of deprivation' (UN, 1978: 17).

While taking into account the effect of 'negative' factors on poverty and deprivation, such 'negative' factors may be perceived as the absence, in absolute or relative terms, of 'positive' factors which account for the cumulative effect of advantage and affluence. It is with the emphasis on the 'positive' factors that the analysis which follows here has been conducted.

## 6.2 The Construction of the Vulnerability Index

The 18 social indicators used in this study for the construction of a Vulnerability Index have been selected for their relevance to the spatial distribution of human resources. In varied degrees all 18 indicators are related to the demographic and socioeconomic features of the family, especially the family with dependent children.

Of the 18 indicators (Figure 6.1) 14 have what may be called a 'positive' value and the LGAs have been ranked accordingly, that is, the LGA in which the highest proportion of the population was found to have this characteristic has been given rank one, other LGAs being ranked according to the decreasing percentage of this

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characteristic. Four indicators have what may be called a 'negative' value: unemployment, families with dependent children; one-parent families; and overseas-born population. On these four dimensions, the LGAs with the lowest proportion of the population with these features have been given rank one, other LGAs being ranked according to the increasing percentage of this characteristic. The 'negative' value assigned to these indicators is based on the assumption that, in general, people with these characteristics have greater difficulties in access to, or greater need for, material and human resources.

The Vulnerability Index (V.I.) is derived by collecting the ratio of the sum of rankings for an LGA to the sum of rankings for the LGA with the lowest aggregate of ranks. Thus

$$\text{V.I. for an LGA} = \frac{\text{Sum of ranks for the LGA}}{\text{Sum of ranks for the top LGA}}$$

The index arrived at by this method gives an indication of the cumulative effect of the aggregate of ranked variables (social indicators) but it does not allow for the variability of the difference, or the distance between or among the given indicators in various LGAs. For example, if a certain positive characteristic of the population (say, income \$22 000 + per annum) is found to be in the 60 per cent of the population in the top LGA, it does not make any difference whether the frequency of that income in the second-ranking LGA will be 40 cent or 50 per cent; the ranking and the index will be the same. It is in the cumulative effect of a number of social indicators that a difference arises. If, for example, the same frequencies occur in two indicators for the same LGAs, the Index for the second-ranking LGA will be either 1.5 (120/80) or 1.2 (120/100). For this reason, a second method of calculating the Vulnerability Index has been introduced, namely the V.I. for the 18 indicators is arrived at by dividing the sum of per cent ratios for an LGA by the sum of per cent ratios for the top-ranking LGA (it needs to be noted that the first-ranking LGA on the aggregate of the 18 social indicators is not necessarily first-ranking on each indicator). Thus,

$$\text{V.I. for an LGA} = \frac{\text{Sum of \% ratios for the LGA}}{\text{Sum of \% ratios for the top LGA}}$$

As will be seen later in this chapter (Table 6.1), the variability of V.I. arrived at by the first method is considerably greater than that arrived at by the second method but the rank order for the 38 LGAs is almost the same, with some minor variations in a small number of LGAs. The cumulative effect of the distribution of the 18 social indicators is clearly visible in the results arrived at by both methods. Before demonstrating the constructed Index, the distribution of the population characteristics expressed in the form of the 18 social indicators is discussed in some detail and illustrated visually by a number of figures.

It must be noted at this point that the LGAs in the Sydney Statistical Division (SSD) are not all the same in size of population (nor in size of area). In 1986, the smallest LGA was Hunters Hill (12172 persons) and the largest was Blacktown (193735 persons). Thus in presenting certain characteristics of the population of an LGA, expressed in percentages, no indication is given of the actual number of people with such characteristics. The relevant numbers are however presented in the statistical tables, discussed later in this Section. As a general feature, the inner and mid-distant suburbs were small in the size of the population as well as in the geographic area; the distant LGAs being large in both dimensions.

The second feature to be borne in mind is the relative homogeneity of the population in an LGA. While most LGAs in the Sydney metropolitan area have a relatively high demographic and socioeconomic homogeneity, there are some 'transitional' areas, mainly in some inner suburbs which have been in the process of 'gentrification', thus acquiring something of a 'hybrid' character. In 1986, typical LGAs with a 'hybrid' character were Sydney (which included the suburb of Redfern, now in South Sydney), Leichhardt, Waverley and Marrickville, but the process of gentrification was certainly not restricted only to these LGAs.

### **Age Structure**

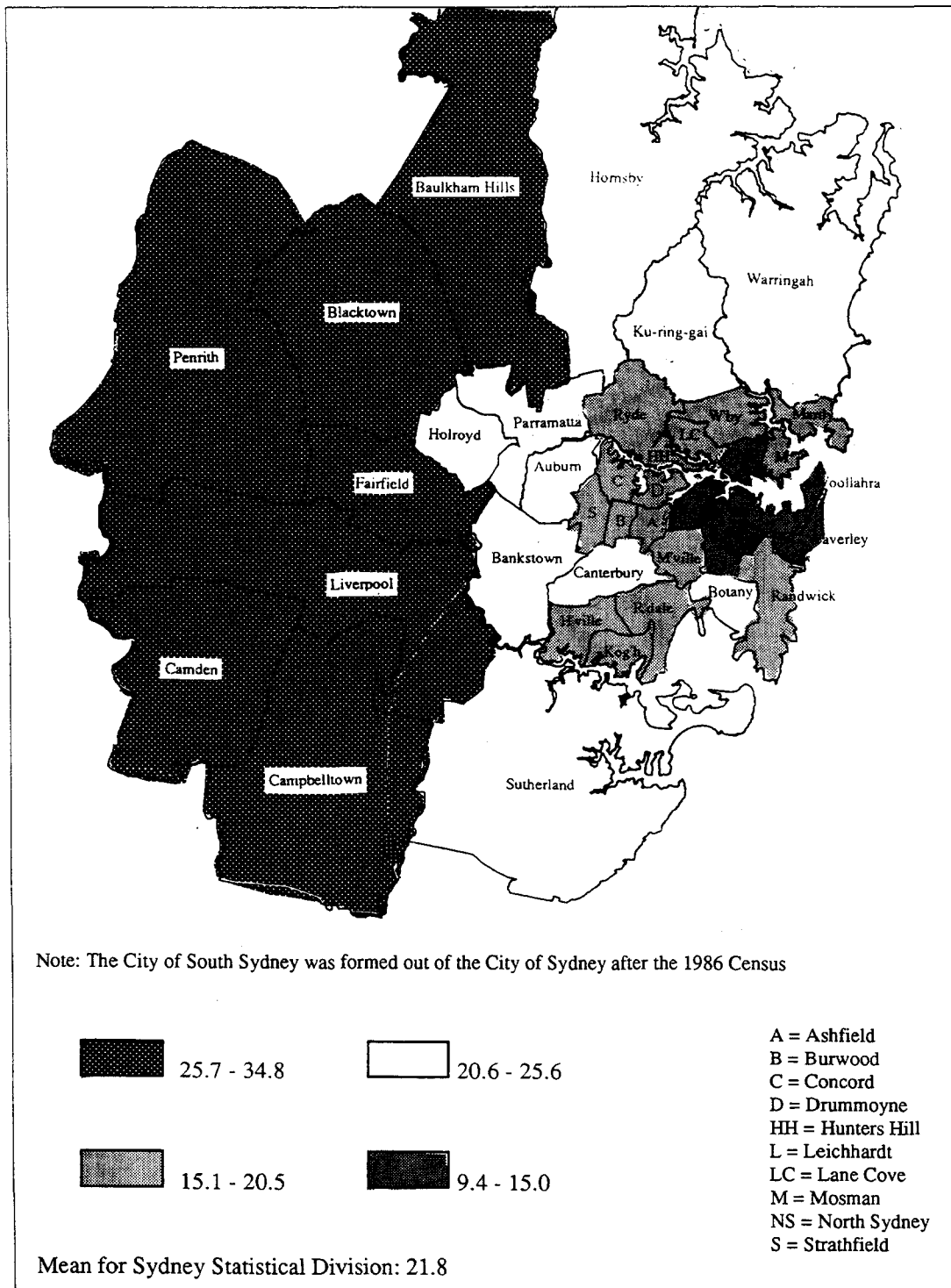
The composition of the age structure in the Sydney metropolitan area varies considerably from one LGA to another but, as a general trend the distant suburbs are those with a high percentage of children (Figure 6.2). In 1986 the LGA with the highest proportion of children under 15 years (34.8%) was Campbelltown, the most distant suburb from the centre of Sydney, and the LGA with the lowest proportion of children under 15 years was North Sydney (9.4%), the ratio between these two extremes being 3.70 to 1. The mean for the whole SSD was 21.8 per cent.

Corresponding to this age distribution, people over 65 year are more frequently found in the inner suburbs. In 1986, the mean distribution of people 65 years and over in the SSD was 10.6 per cent of the total population, with the extremes ranging from 3.7 per cent in Campbelltown to 18.0 per cent in the seaside LGA of Manly, the frequency ratio between the two LGAs being 4.86 to 1.

An important aspect of age distribution is the ratio between the working-age population (15 to 64 years) and the 'dependent population' (children under 15 and people 65 and over). In 1986, the more distant suburbs showed a low rate of people 15 to 64 years, the lowest being Campbelltown with 61.6 per cent and the highest was Sydney (77.1%), the mean for the SSD being 67.7 per cent. This means that the 'dependency' ratio in Campbelltown was 0.62 (38.4/61.6) while in Sydney it was only 0.30 (22.9/77.1), the mean for the SSD being 0.48 (32.3/67.7).

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Figure 6.2: Local Government Areas, Sydney: Population 0-14 as Percentage of Population, 1986



## Family Structure

Corresponding to the distribution of age structure, families with dependent children are more frequently found in the distant suburbs of the Sydney metropolitan area (Figure 6.3). In 1986, 51.1 per cent of all family units in the SSD were families with dependent children and 15.3 per cent of these were one-parent families. The LGA with the highest frequency of families with dependent children was Campbelltown (69.8%) and the LGA with the lowest frequency was North Sydney (31.4%), the ratio between the two being 2.22 to 1. The LGA with the highest frequency of one parent families (as the percentage of families with dependent children) was Sydney (32.4%) and the lowest was Baulkham Hills (7.6%), the ratio between the two being 4.26 to 1.

It is thus important to note that the spatial distribution of one-parent families (with dependent children) is vastly different from the distribution of families with dependent children as a whole. As shown in Figure 6.4, it is in the inner suburbs adjacent to the harbour (Sydney, Leichhardt, North Sydney, Woollahra and Waverley) where one-parent families figured prominently in 1986, followed by some distant suburbs in the south-east (LGAs of Campbelltown and Liverpool).

When income of families is taken into consideration, a different pattern of distribution emerges. In 1986, 41.2 per cent two-parent families with dependent children reported incomes of above \$32 000 per annum. As shown in Figure 6.5, most of these families were in the northern suburbs. The LGA with the highest proportion of such families (74.3%) was Kuring-gai, and the LGA with lowest proportion was Marrickville (23.1%), the ratio between the two being 3.22 to 1.

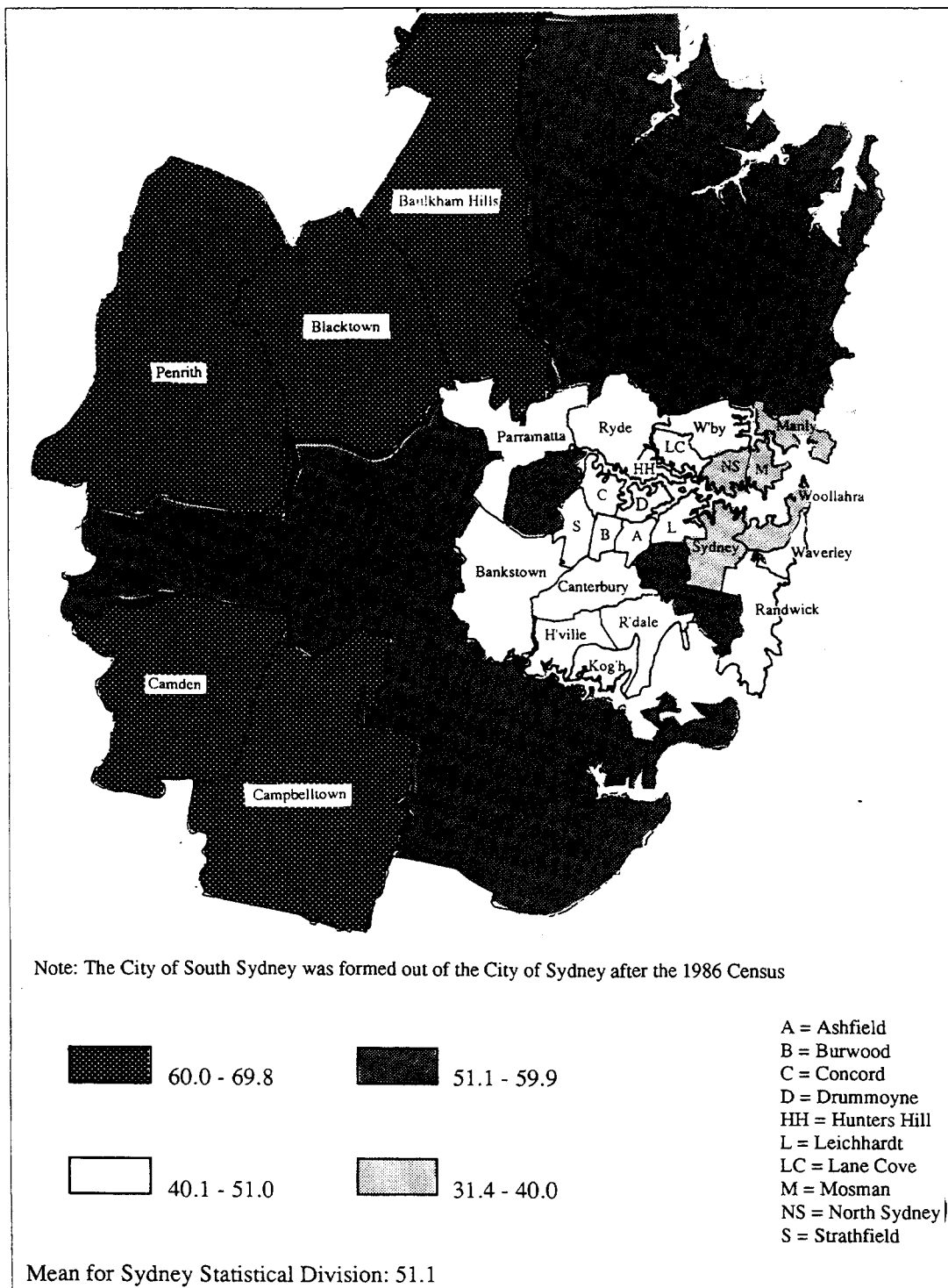
One-parent families, particularly the female-headed, recorded considerably lower levels of income than two-parent families (as would be expected). However, the range of income distribution in female-headed one-parent families was much wider. Taking \$22 000 + per annum as a basis for comparison, the mean for the SSD of female-headed one-parent families with incomes above that level was 16.0 per cent. However, the frequency ranged from 36.6 per cent in Kuring-gai to 7.0 in Campbelltown, a ratio of 5.23 to 1. As can be ascertained from Figure 6.6, higher incomes were consistently prevalent in the northern suburbs, starkly contrasted with low incomes throughout the distant western suburbs.

## Overseas-born Population

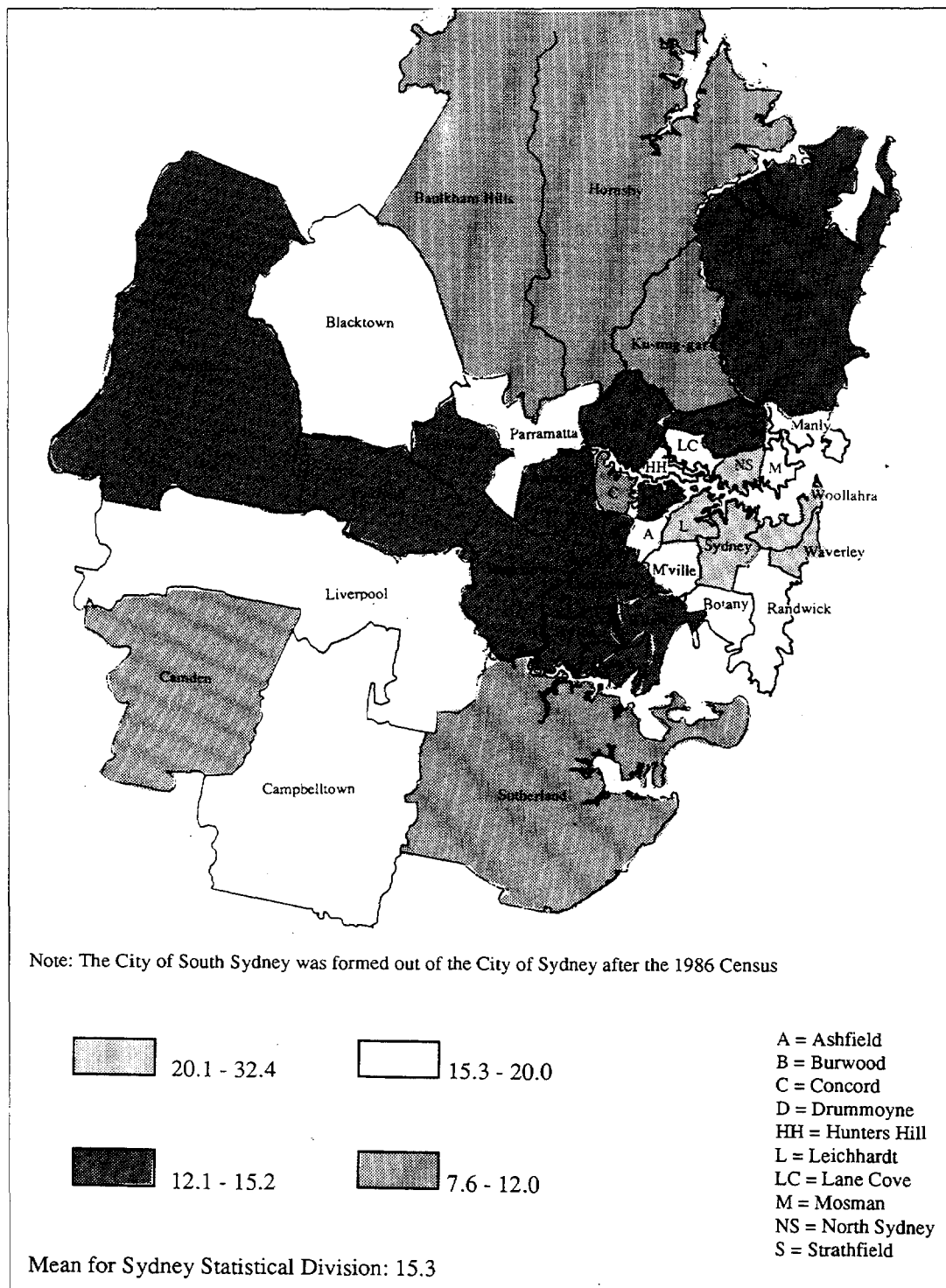
In 1986, 30.5 per cent of persons in the SSD were born overseas. However, the distribution ranged from 48.9 per cent in the inner suburb of Marrickville, to 16.6 per cent in the southern suburb of Sutherland, a ratio of 2.95 to 1. Except for one distant suburb (Fairfield), the overseas-born population showed the highest concentration (above the mean for the SSD) in the inner and mid-distant suburbs and predominantly in the southern side of the harbour. On a broader scale, the overseas-born population provided a kind of dividing belt between the northern and the

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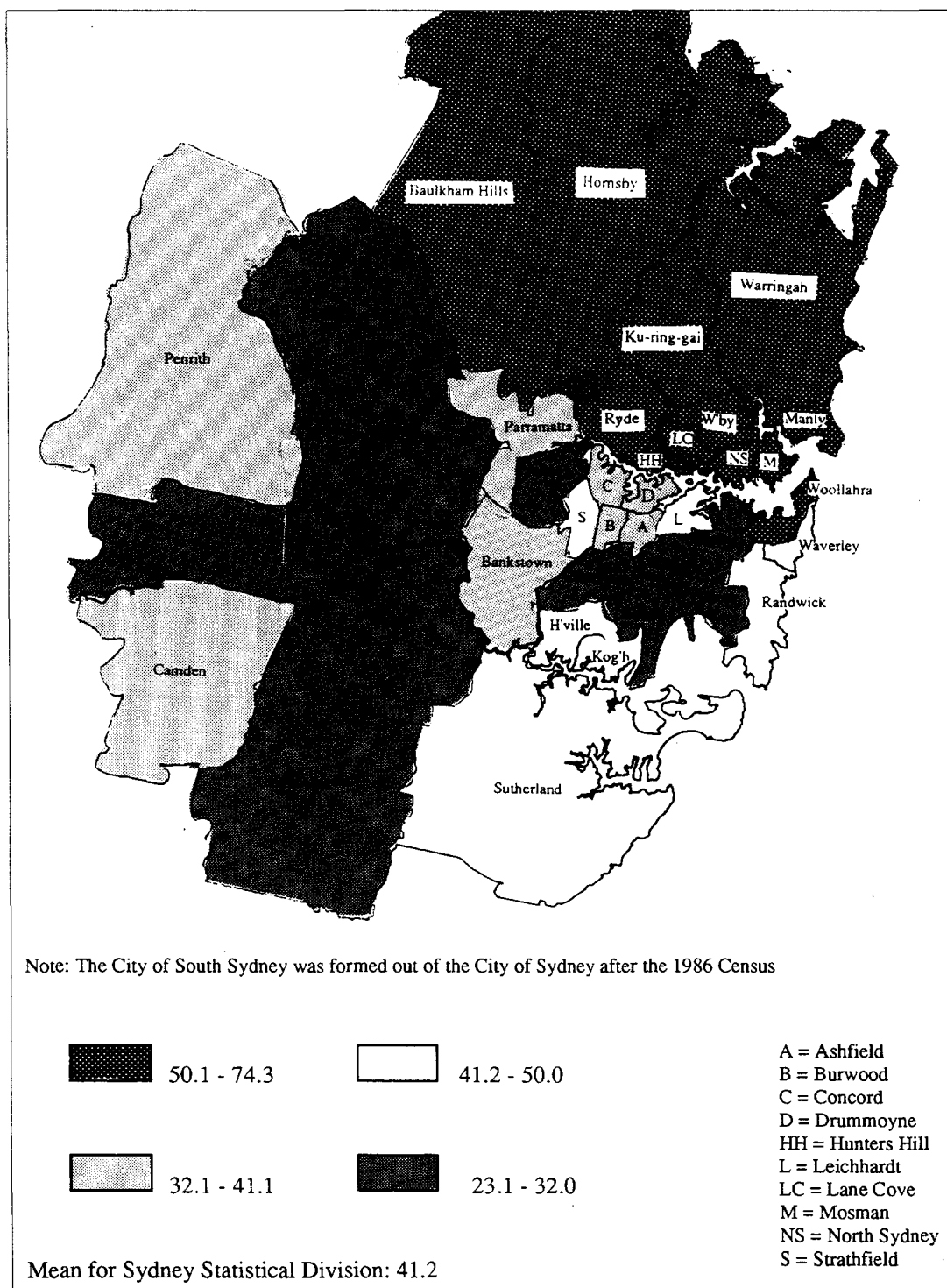
Figure 6.3: Local Government Areas, Sydney: Families with Dependent Children as Percentage of all Family Units, 1986



**Figure 6.4: Local Government Areas, Sydney: One-parent Families (Male and Female-headed), as Percentage of Families with Dependent Children, 1986**

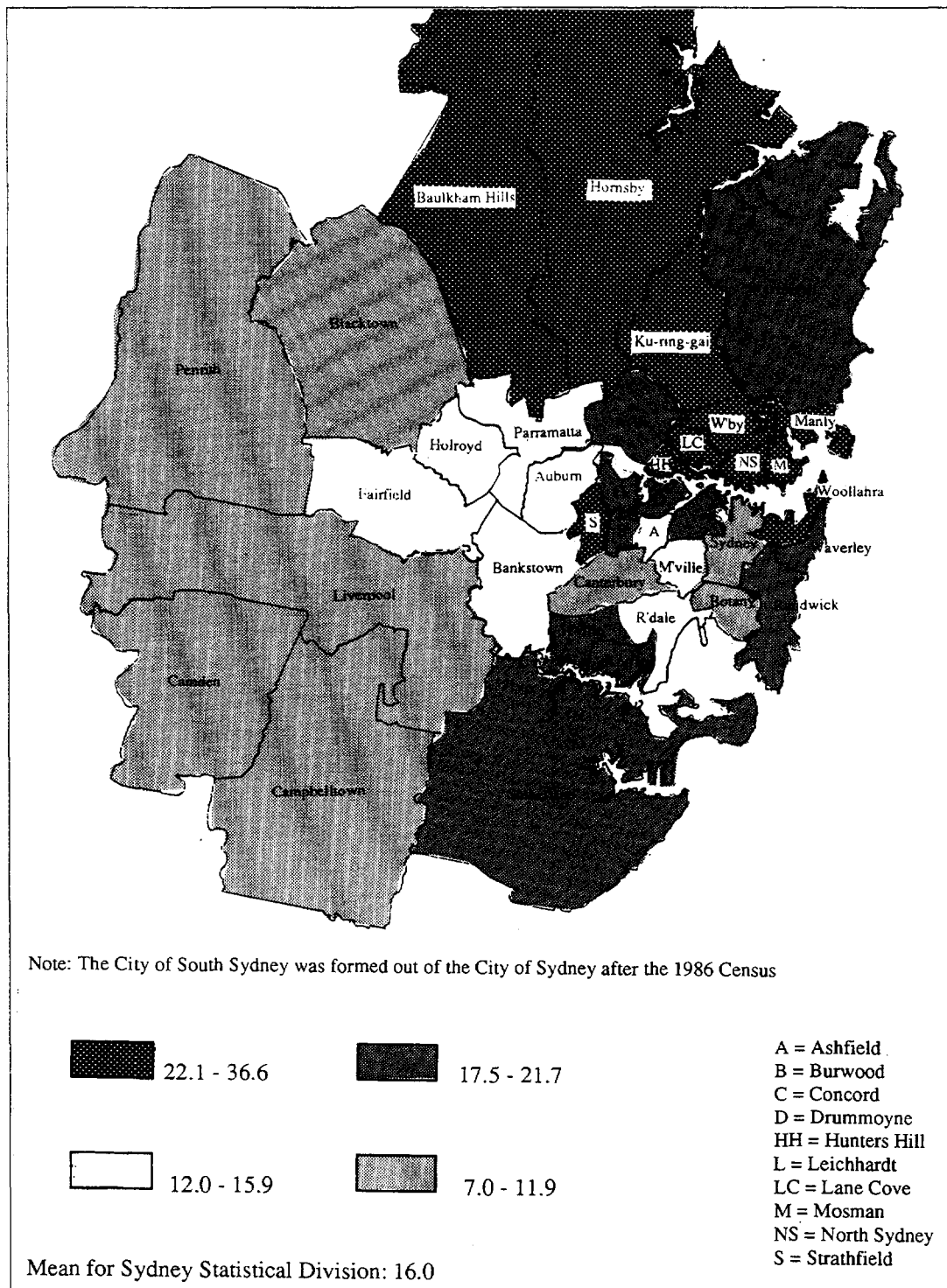


**Figure 6.5: Local Government Areas, Sydney: Two-parent Families with Dependent Children, Percentage with Annual Income of \$32000 and Over, 1986**





**Figure 6.6: Local Government Areas, Sydney: One-parent Families (Female-headed)  
Percentage with Annual Income \$22000 and Over, 1986**



southern suburbs, the lowest proportion of overseas-born population being in the distant and relatively affluent LGAs of Sutherland (16.6%), Camden (17.5%), and Baulkham Hills (20.0%) (see Figure 6.7).

### **Educational Qualifications**

Two dimensions of educational qualifications have been used in this analysis: tertiary qualifications at the level of a degree or higher; and all post-school qualifications. On the first dimension, in 1986, 6.5 per cent of the population 15 years and over residing in the SSD had this level of educational qualifications, but the differences among the various LGAs were great, ranging from 17.5 per cent in Kuring-gai, to 1.6 per cent in Fairfield and Liverpool, a ratio of 10.94 to 1, the largest difference of all indicators examined in this study (Figure 6.8). At the level of all post-school qualifications, the mean for the SSD was 33.5 per cent, the extremes ranging from 47.9 per cent in Kuring-gai, to 23.6 per cent in Fairfield and Auburn (Figure 6.9).

### **Employment**

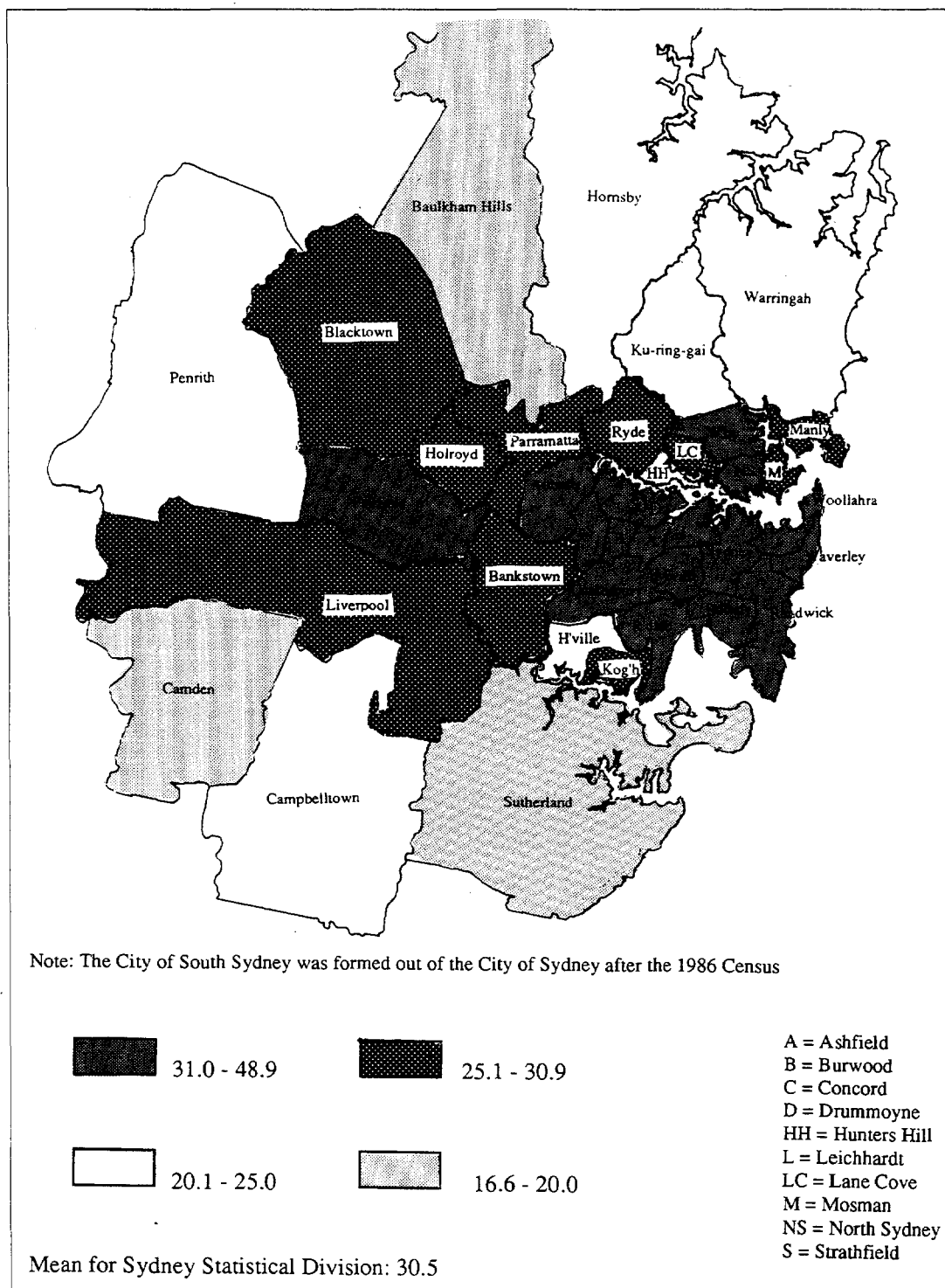
Because of the importance and diversity of employment as an indicator of the use of human resources (e.g. who is employed, in which occupation, which industry, etc.), six indicators of employment have been used in this analysis. In particular, employment of women, and especially of married women, was considered to be an important component of family income. It was also important to consider the employment of female single parents, as this has been an issue in public debate and in social policy. Where people worked and in which occupations were other dimensions included in the analysis, as were the rates of unemployment.

In the employment rates of all women, the mean for the SSD in 1986 was 53.3 per cent, the rates ranging from 73.8 per cent in North Sydney to 41.6 per cent in Fairfield, a ratio of 1.77 to 1. For married women the mean for the SSD was 45.7 per cent, the differences between the extremes being lower, ranging from 56.1 per cent in Baulkham Hills to 34.4 per cent in Auburn, a ratio of 1.63 to 1 (Figure 6.10). The greatest differences were recorded in the rates of employment for female single-parents. With the mean of 37.1 per cent for the SSD, the rates ranged from 66.0 in Lane Cove to 16.9 per cent in Campbelltown, a ratio of 3.91 to 1 (Figure 6.11).

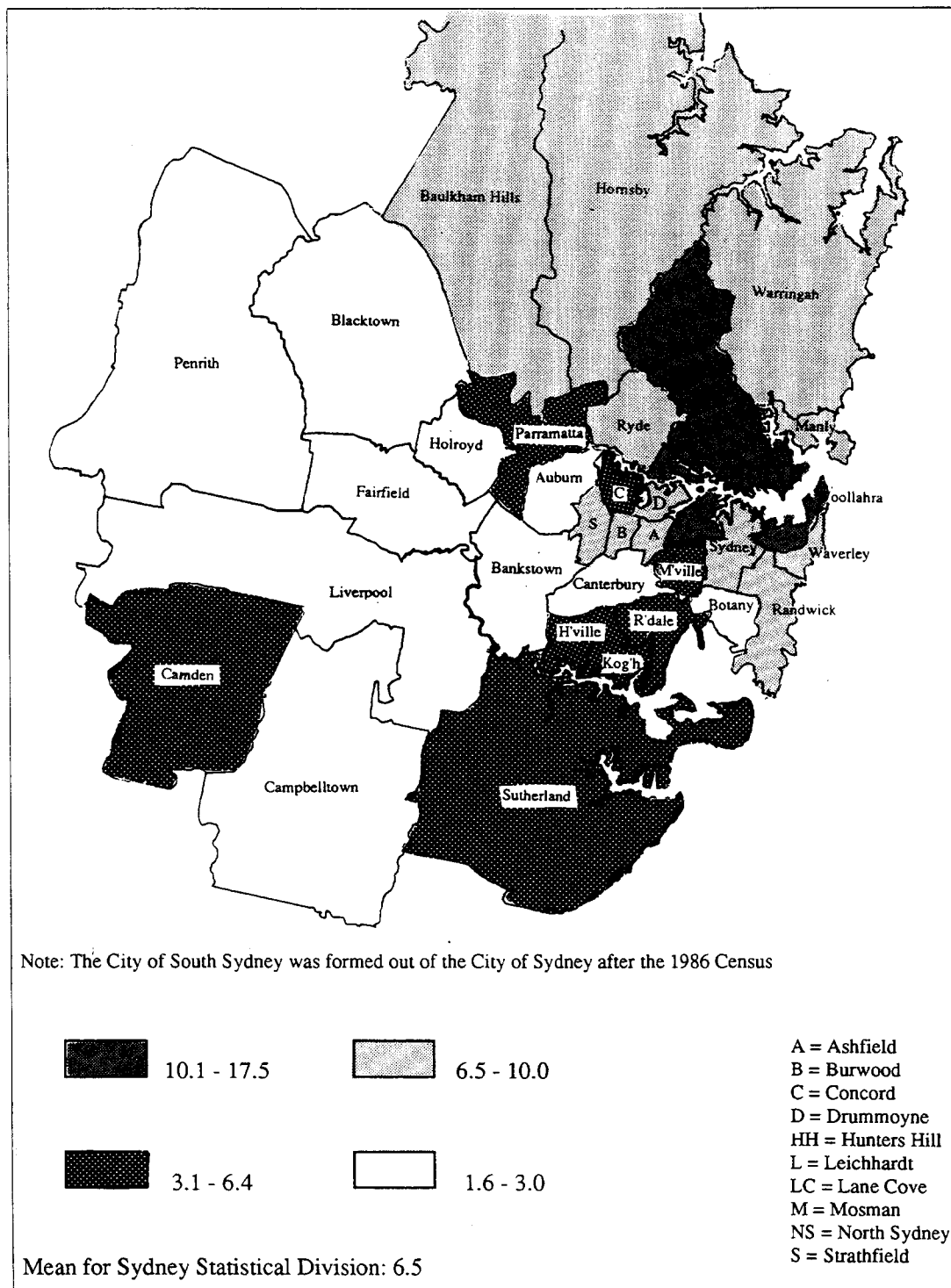
In considering the occupational structure of employment in the formal labour market the three top occupational groups as classified by the ABS (managers and administrators, professionals, para-professionals) have been used in this analysis as indicators of occupational advantage. Considering both sexes together, the mean for the SSD was 29.4 per cent of all employed persons employed in these three occupational groups, the rates ranging from 54.0 per cent in Kuring-gai, to 13.7 per cent in Botany, a ratio of 3.94 to 1 (Figure 6.12). Similarly, employment in the 'management industries' as defined earlier (finance, property and business services;

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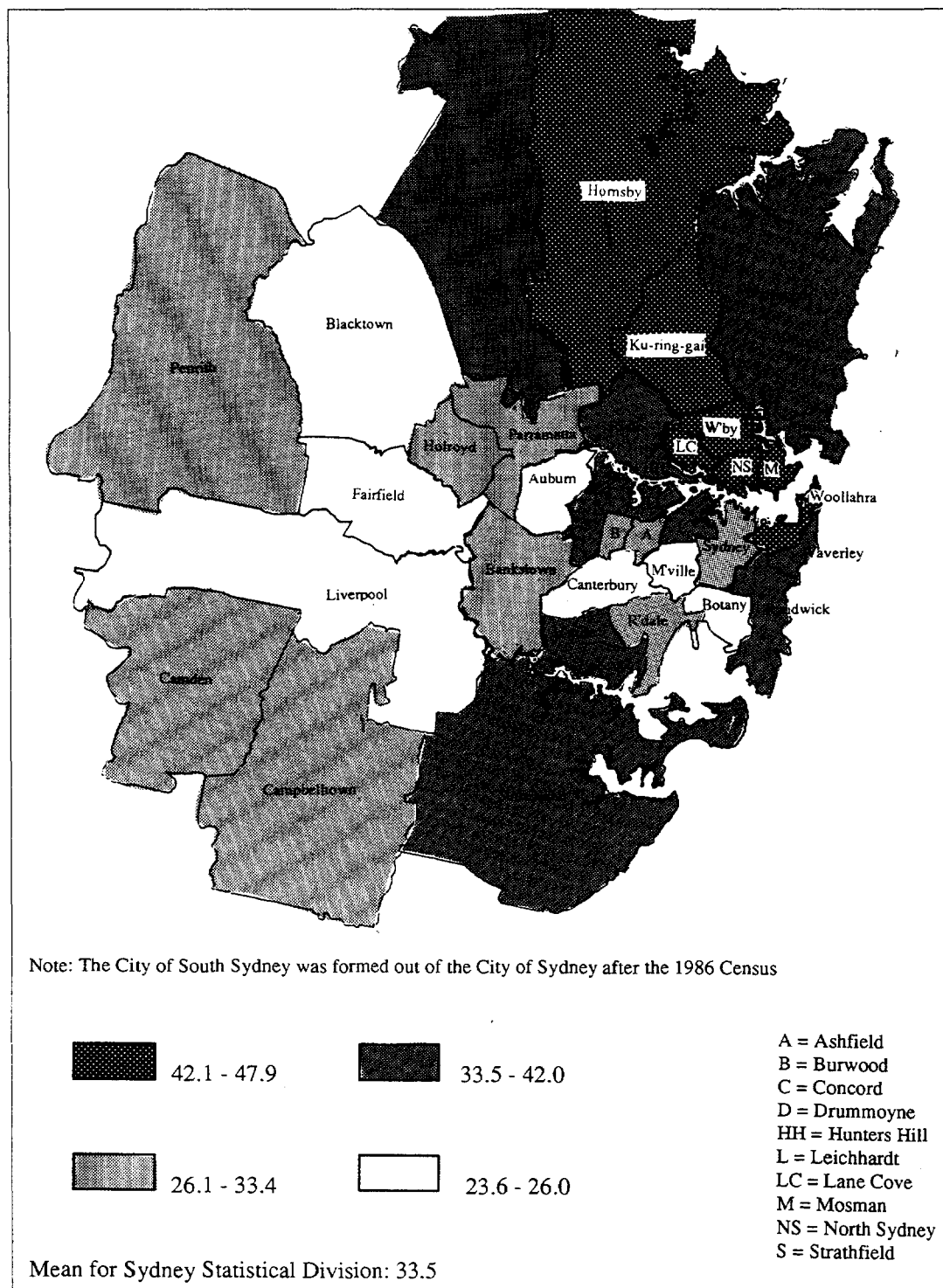
Figure 6.7: Local Government Areas, Sydney: Persons Born Overseas as Percentage of Population, 1986



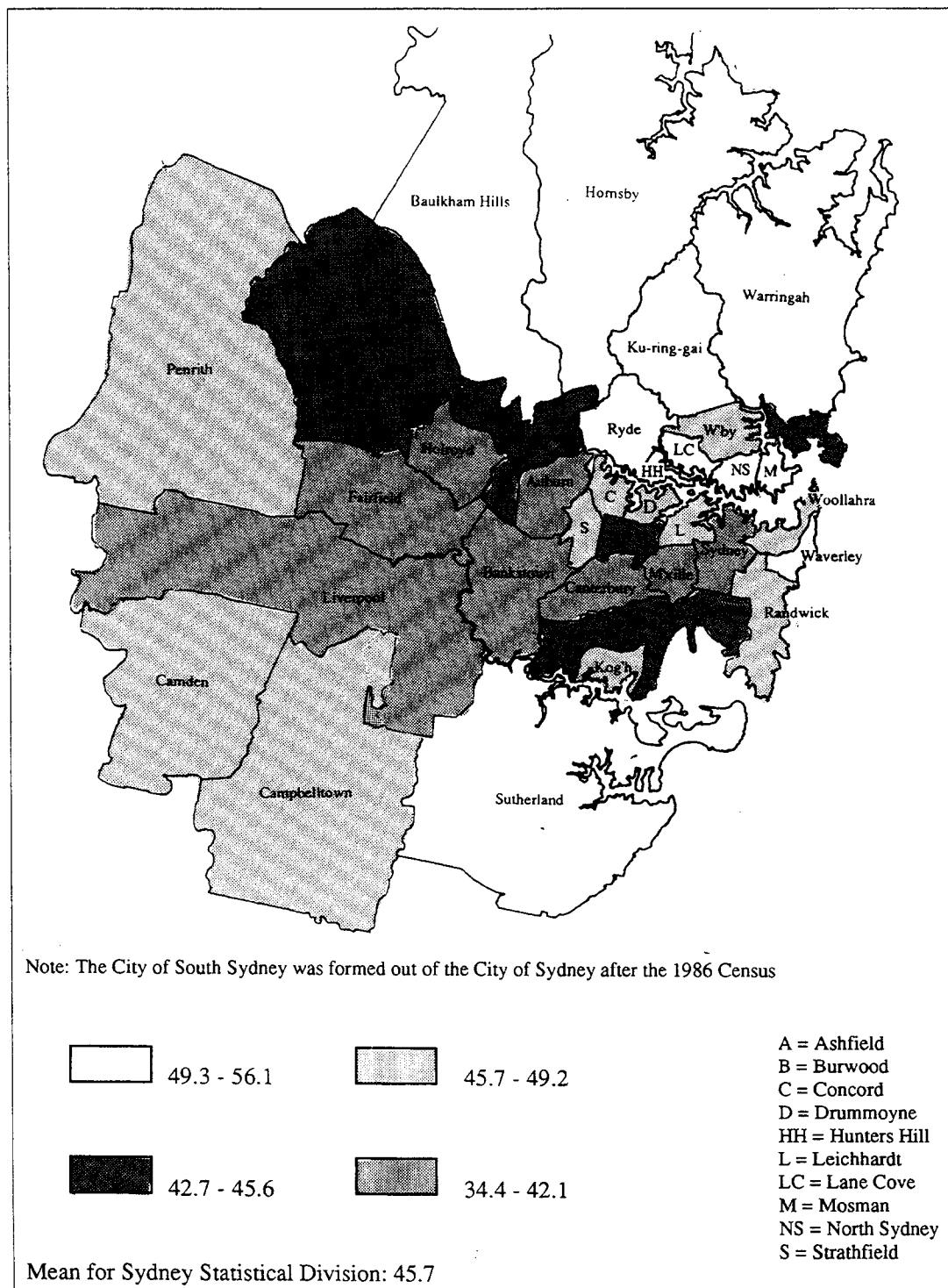
**Figure 6.8: Local Government Areas, Sydney: All Persons 15 Years and Over with Degree Qualifications as Percentage of Population 15 Years and Over, 1986**



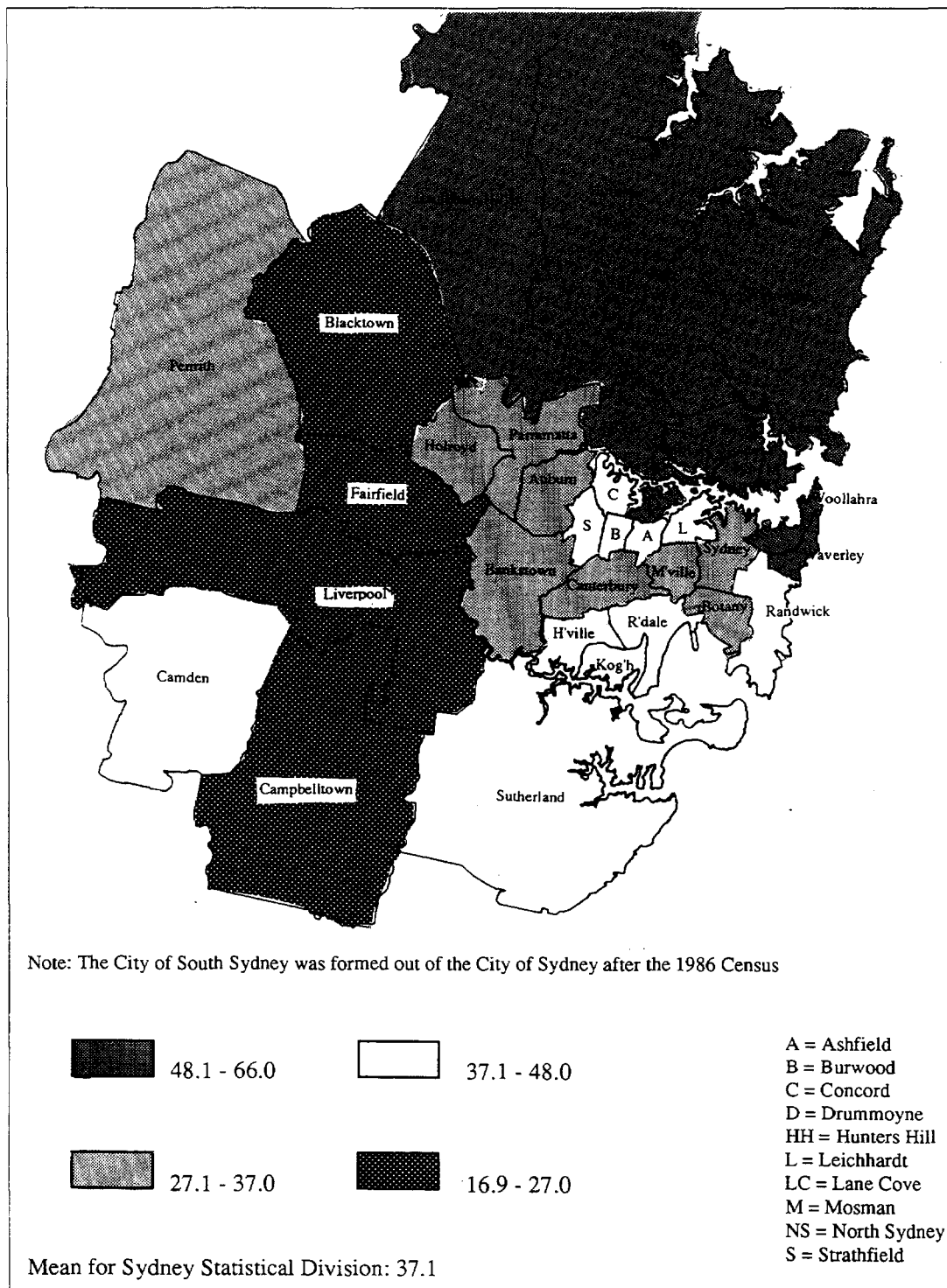
**Figure 6.9: Local Government Areas, Sydney: All Persons 15 Years and Over with Post-School Qualifications as Percentage of Persons 15 Years and Over, 1986**



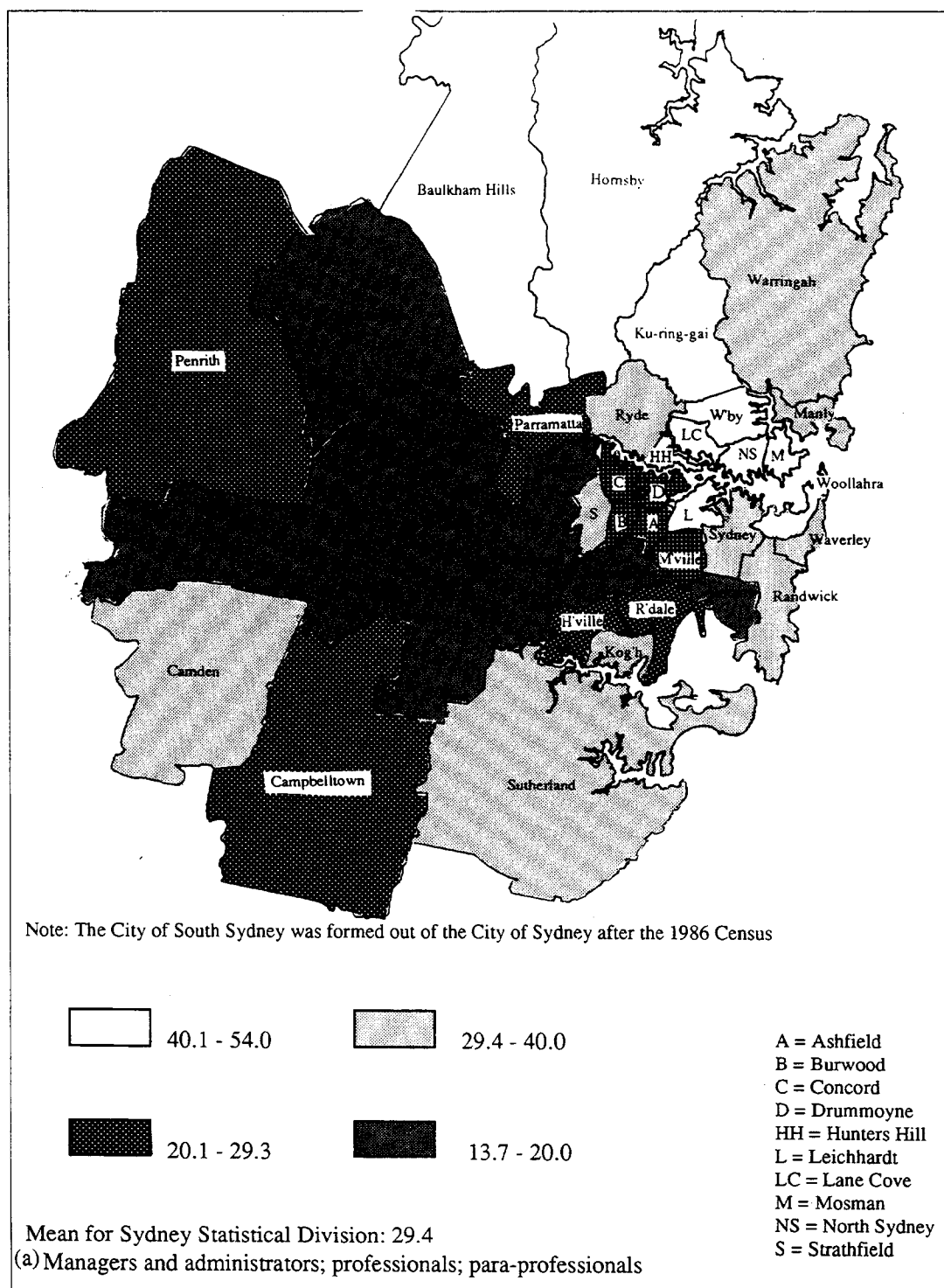
**Figure 6.10: Local Government Areas, Sydney: Married Women in Employment as Percentage of all Married Women, 1986**



**Figure 6.11: Local Government Areas, Sydney: Female Single Parents in Employment as Percentage of all Female Single Parents, 1986**



**Figure 6.12: Local Government Areas, Sydney: Persons Employed in the Three Top Occupational Groups<sup>(a)</sup> as a Percentage of all Employed Persons, 1986**





public administration; community services) showed the mean for the SSD of 36.7 per cent, the rates ranging from 53.6 per cent in the inner northern LGA of Mosman, to 22.2 per cent in the distant western suburb of Fairfield, a ratio of 2.41 to 1 (Figure 6.13).

Unemployment rates recorded in the 1986 census showed a trend in the opposite direction from the trend indicating qualitatively higher employment. The mean for the SSD (for both sexes) was 8.4 per cent but the rates ranged from 16.7 per cent in Fairfield to 3.5 per cent in Kuring-gai, a ratio of 4.77 to 1.

### **Employment in Community Services**

The focus of this study was on the use of human resources in community services, and for this reason employment in community services received particular attention in the analysis of the spatial distribution of human resources in the Sydney metropolitan area. Three sets of indicators of employment in community services have been used in the analysis: employment in community services as a whole (as classified by the ABS); people employed in the 'helping professions'; and people employed in health professions. In including the latter two occupational indicators it was assumed that the majority of the people employed in these occupations would be employed in community services.

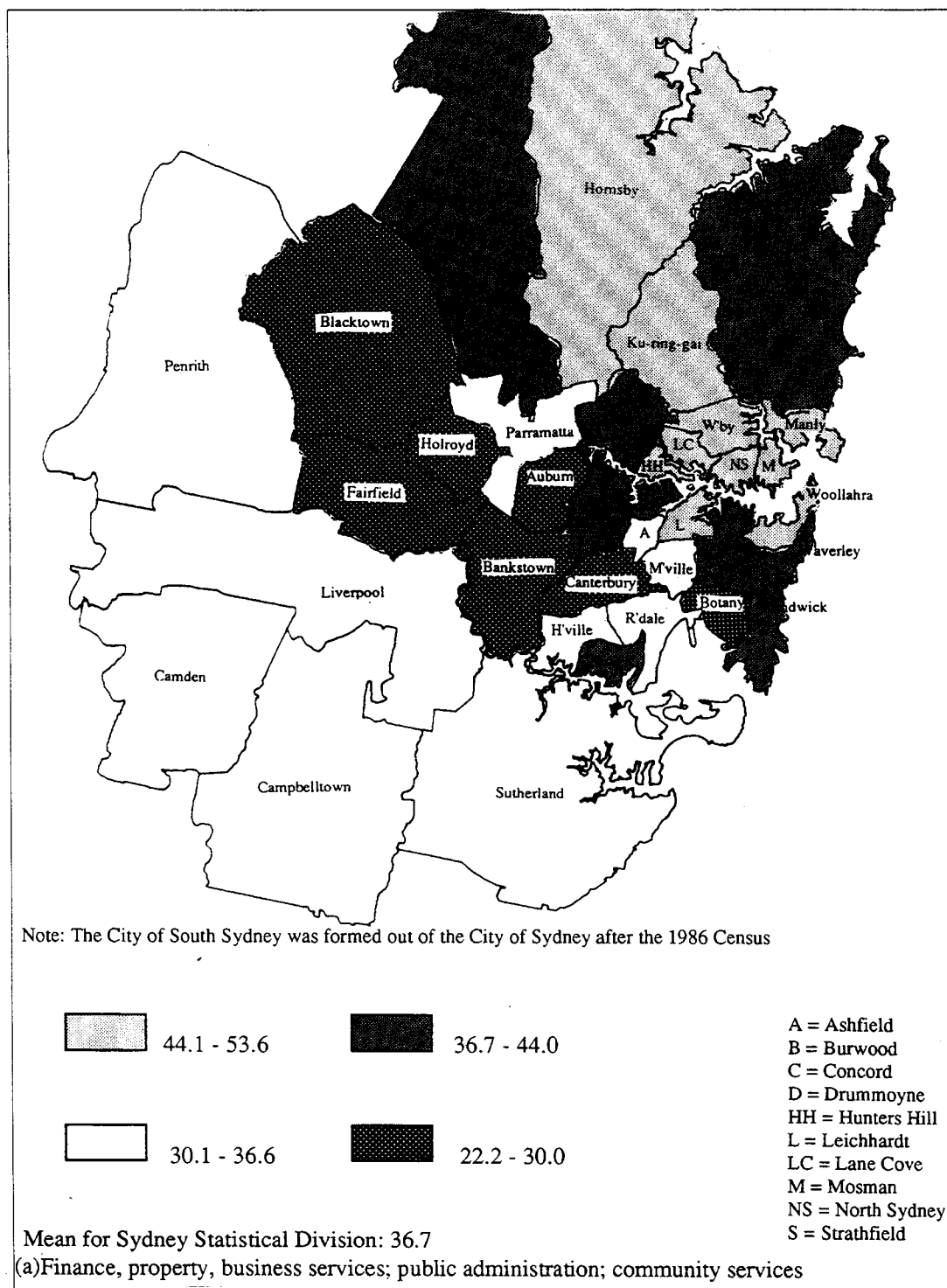
In 1986, 16.4 per cent of all employed persons in the SSD were employed in community services, the rates ranging from 24.1 per cent in the inner LGA of Leichhardt, to 9.5 per cent in the distant suburb of Fairfield, a ratio of 2.54 to 1 (Figure 6.14). The distribution of persons employed in the 'helping professions' (medical practitioners, nurses, teachers and instructors, social professions) showed a greater disparity. The mean for the SSD was 8.3 per cent, the extremes ranging from 16.3 per cent in the small inner LGA of Hunters Hill, to 2.9 per cent in another inner LGA of Botany, a ratio of 5.62 to 1 (Figure 6.15). An even greater disparity was recorded in the residential localities of people employed in health professions (medical practitioners, nurses). The mean for the SSD was 3.4 per cent, the extremes ranging from 7.8 per cent in Hunters Hill, to 1.2 per cent in Botany, a ratio of 6.50 to 1 (Figure 6.16).

## **6.2 Cumulative Effect of Spatial Distribution of Human Resources**

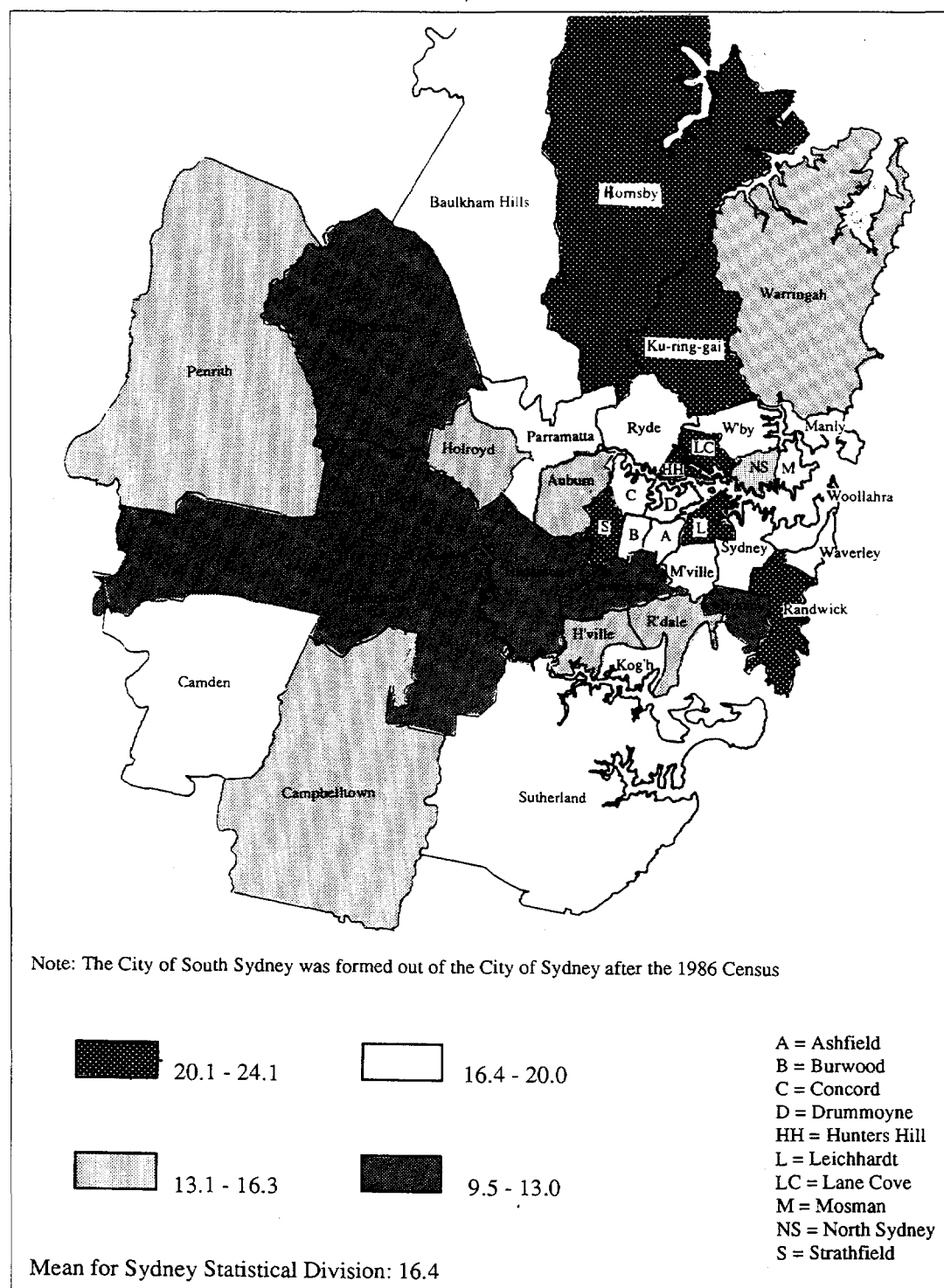
The foregoing discussion on the spatial distribution of human resources in the metropolitan area of Sydney, identified by 18 social indicators and by a visual illustration of that distribution presented in Figures 6.2-6.16, shows quite clearly a high degree of similarity in the patterns of distribution. The distribution indicates a network of causal relationships in which the presence of one attribute, say, educational qualifications, tends to be closely associated with certain occupations, employment in certain sectors of industry and certain levels of income. The effect of

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**Figure 6.13: Local Government Areas, Sydney: Persons Employed in 'Management Industries' <sup>(a)</sup> as Percentage of all Employed Persons, 1986**



**Figure 6.14: Local Government Areas, Sydney: Persons Employed in Community Services, as Percentage of all Employed Persons, 1986**



**Figure 6.15: Local Government Areas, Sydney: Persons Employed in 'Helping Professions'<sup>(a)</sup> as Percentage of all Employed Persons, 1986**

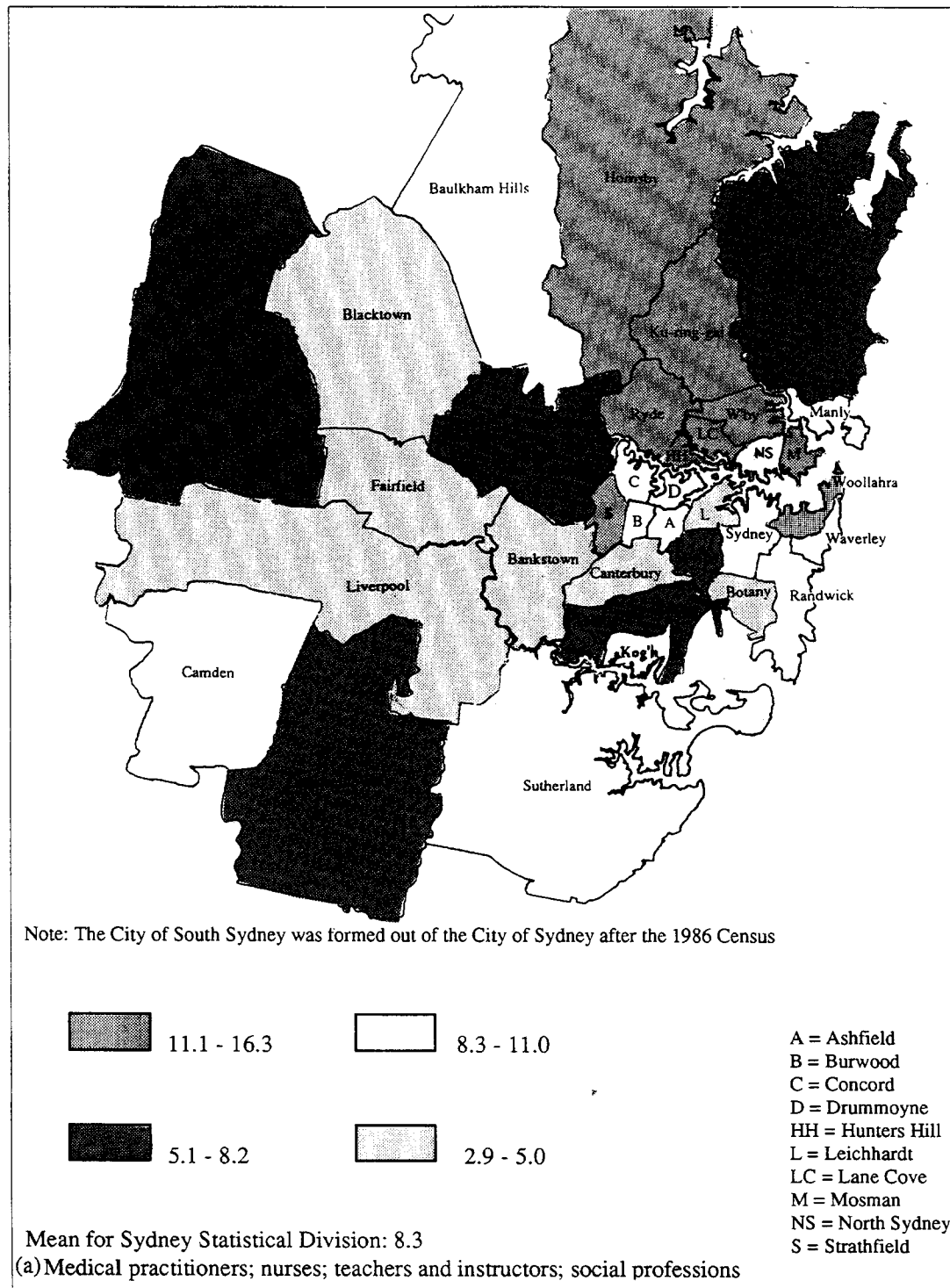
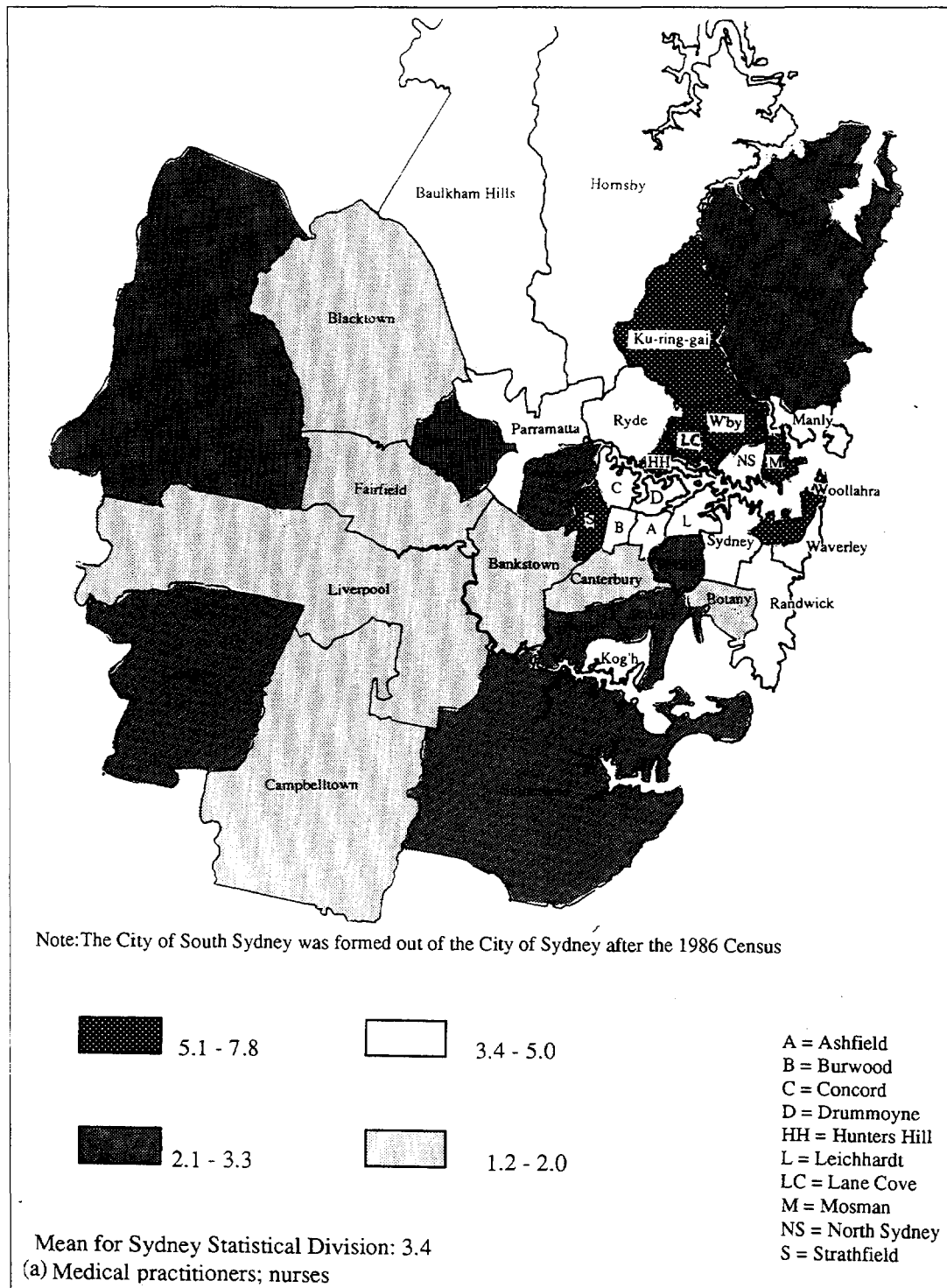


Figure 6.16: Local Government Areas, Sydney: Persons Employed in Health Professions<sup>(a)</sup> as Percentage all Employed Persons, 1986



these causal relationships means a comparative degree of advantage or disadvantage, that is, social and economic inequality. How great is the cumulative effect of these relationships is discussed in the remainder of this section and illustrated by the data obtained from the construction of a Vulnerability Index, explained earlier.

The Vulnerability Index constructed from the rankings of the 18 social indicators is presented in Table 6.1. Index 1 presents direct values of the sum of rankings, arrived at by the method explained earlier. Index 2 presents modified values of the sum of ranking obtained by the calculation of ratios of the percentage distribution of the 18 indicators. The difference between the two methods is in the extent of the disparity shown by the index. For example, using the first method, the difference between the top (the most advantaged) LGA and the bottom (the least advantaged) LGA is 6.78 to 1; while the difference arrived at by the second method is only 3.05 to 1. However, the order of rankings arrived at by each method is not much different and the rank correlation between the two, using Spearman Rho indicator, is +.975. The spatial congruence of the two methods is also clearly illustrated in Figures 6.17 and 6.18.

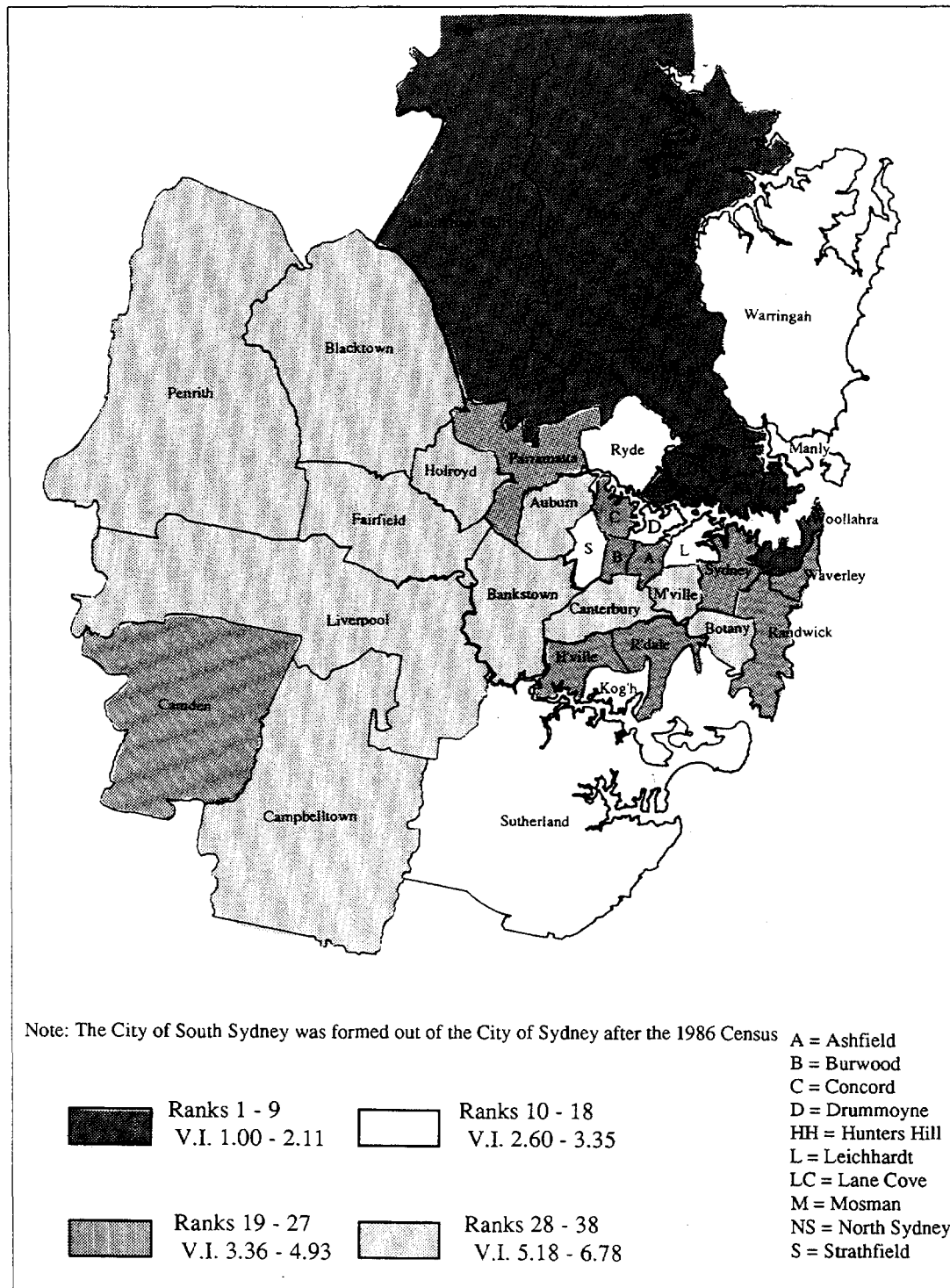
It must be emphasised at this point that the index arrived at by either method does not give an exact arithmetic measure of comparative inequality. However, the index does show the distribution of the selected population attributes (social indicators) and, most importantly, it shows the **cumulative effect** of that distribution. The cumulative effect is clearly demonstrated in the correlation data presented in Table 6.2. As can be ascertained from these data, the distribution of income, educational qualifications, quality of employment, all these indicators show remarkably high correlations with the cumulative index. In each of these groups, the cumulative effect of single indicators occurring at the same or similar levels of ranking order is equally evident.

The only three social indicators which do not show high positive correlations are those indicating the locations of families with dependent children, the location of single-parent families, and the location of overseas-born population. While the correlation of these three indicators with the cumulative index is still positive, the correlation in each case is rather low, thus indicating that families with dependent children, single-parent families, and overseas-born population are found more often in lower socioeconomic status LGAs but they are also found in the more affluent areas. The significance of this distribution is discussed later on in this chapter.

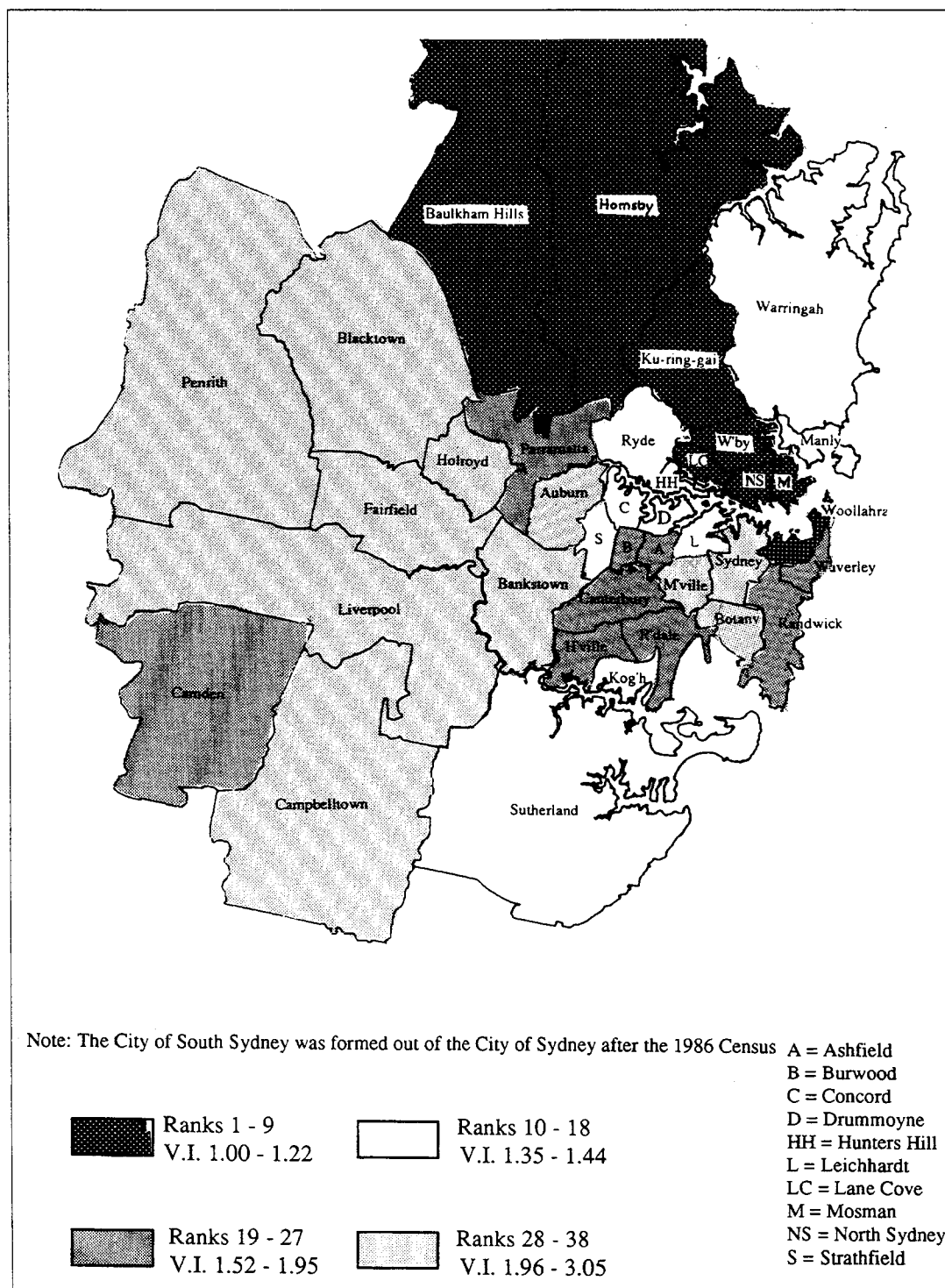
In the following tables (Table 6.3-6.7) the 38 LGAs have been divided into four groups; three groups of nine LGAs each and one group with 11 LGAs, corresponding to the spatial distribution shown in Figure 6.17. Table 6.3 gives the summary of the data, presented in the numbers of the relevant populations and then in the percentages of certain characteristics, expressed as the means for each group of LGAs. The means for the entire SSD are also shown in the first column for the purpose of comparison.

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Figure 6.17: Local Government Areas, Sydney: Vulnerability Index 1: Direct Cumulative Value of 18 Variables, 1986 Census



**Figure 6.18: Local Government Areas, Sydney: Vulnerability Index 2: Modified Cumulative Value of 18 Variables, 1986 Census**





**Table 6.2: Vulnerability Index: Rank Correlations with Social Indicators, Sydney Statistical Division (38 LGAs), 1986 Census**

Social Indicators	Spearman Rank Index 1	Correlation Index 2
<b>A. Income</b>	<b>Rho +.975</b>	<b>Rho +.957</b>
1. All persons 15 years +, \$22000 + p.a.	+.931	+.893
2. All families, \$32000 + p.a.	+.952	+.933
3. 2-parent families, with dep. children, \$32000 + p.a.	+.952	+.925
4. 1-parent families, female-headed, \$22000 + p.a.	+.932	+.943
<b>B. Education</b>	<b>+.973</b>	<b>+.917</b>
5. Persons 15 years +, a degree or higher	+.880	+.876
6. Persons 15 years +, all post-school qualifications	+.970	+.943
<b>C. Employment</b>	<b>+.984</b>	<b>+.962</b>
7. All employed women	+.897	+.868
8. All employed married women	+.848	+.813
9. Single parents, female, employed	+.923	+.921
10. Persons employed in the 3 top occupations	+.960	+.931
11. Persons employed in the 'managmeent industries'	+.908	+.867
12. Unemployed persons	+.837	+.837
<b>D. Family Composition</b>	<b>+.516</b>	<b>+.419</b>
13. Families with dependent children, % of all families	+.340	+.384
14. 1-parent families, % of families with dep. children	+.139	+.250
<b>E. Overseas-born Population</b>	<b>+.328</b>	<b>+.287</b>
15. All overseas-born population	+.328	+.287
<b>F. Employment in Community Services</b>	<b>+.839</b>	<b>+.845</b>
16. Persons employed in community services	+.719	+.720
17. Persons employed in the 'helping professions'	+.897	+.879
18. Persons employed in health professions	+.854	+.839

**Table 6.3: Summary of Variables Used in the Calculation of the Vulnerability Index: Sydney Statistical Division, 1986 Census (as Percentage of Relevant Population)**

Variables	Sydney Statistical Division	LGA Groups and Ranks			
		1 Rank 1-9	2 Rank 10-18	3 Rank 19-27	4 Rank 28-38
<b>Population (N)</b>	<b>2989070</b>	<b>538463</b>	<b>693567</b>	<b>579773</b>	<b>1221003</b>
• 0-14 years	21.8	20.4	19.2	17.4	26.1
• 15-64 years	67.7	67.3	68.6	69.2	66.5
• 65 and +	10.6	12.3	12.2	13.3	7.4
• Born overseas	30.5	26.1	25.9	31.5	43.7
<b>Population 15 years and + (N)</b>	<b>2338759</b>	<b>428573</b>	<b>560656</b>	<b>478629</b>	<b>902667</b>
• Income, persons, \$22000 + pa	17.0	26.9	20.2	14.5	11.3
• Educational attainment: degree or +	6.5	13.5	7.7	6.1	2.5
• Education attainment: all post-school qualifications	33.6	44.2	38.6	31.6	26.5
• In labour force	61.5	63.6	63.4	59.0	61.4
• Employed <sup>(a)</sup>	91.6	95.7	94.2	91.0	88.2
• Unemployed <sup>(a)</sup>	8.4	4.3	5.8	9.0	11.8
• Employed in the 3 top occupations <sup>(b)</sup>	29.4	46.1	33.7	27.7	18.5
• Employed in the 'management industries' <sup>(b)</sup>	36.7	46.1	39.0	37.0	29.1
All employed women <sup>(c)</sup>	53.3	61.8	59.6	52.9	45.9
<b>Families (N)</b>	<b>785412</b>	<b>139594</b>	<b>186866</b>	<b>147712</b>	<b>323896</b>
• with income \$32000 + pa	38.0	52.3	43.2	34.3	29.6
• with dependent children	51.1	50.6	47.1	42.4	57.1
• Couples with dependent children \$32000 + pa <sup>(d)</sup>	41.2	55.2	48.8	38.0	29.9
• Married women employed <sup>(e)</sup>	45.7	51.6	49.6	43.8	41.8
• One-parent: male and female headed <sup>(f)</sup>	15.3	11.8	14.5	18.1	16.0
• One parent: female headed <sup>(g)</sup>	86.4	84.6	85.5	86.8	87.1
• Female-headed with income \$22000 + pa	16.0	28.7	19.8	15.4	10.8
• Female-headed parent employed <sup>(h)</sup>	37.1	59.8	49.6	38.0	24.8
<b>All Employed Persons (N)</b>	<b>1316430</b>	<b>260948</b>	<b>334898</b>	<b>257270</b>	<b>489441</b>
Persons employed in community services <sup>(b)</sup>	16.4	19.3	17.6	17.1	12.6
Persons employed in helping professions <sup>(b)</sup>	8.3	12.5	9.2	8.7	4.8
Persons employed in health professions <sup>(b)</sup>	3.4	5.2	3.7	3.8	1.9

**Notes:** (a) % of the labour force; (b) % of all employed persons; (c) % of all women 15-64 years; (d) % of all couples with dependent children; (e) % of all married women; (f) % of all families with dependent children; (g) % of all one-parent families; (h) % of all female-headed one-parent families.

**Table 6.4: Summary of Variables Used in the Calculation of the Vulnerability Index: LGA Group 1, Ranks 1-9, Vulnerability Index 1.00-2.11**

	Number and Per Cent in the LGA Group			% of Sydney Stats. Div.
	N	%	% Range	
<b>Population (N)</b>	538463	100.0	-	18.0
• 0-14 years	109890	20.4	9.4 - 28.2	16.9
• 15-64 years	362 419	67.3	63.9 - 76.5	17.9
• 65 and +	66154	12.3	5.6 - 17.8	20.9
• Born overseas	140653	26.1	20.0 - 37.2	15.4
<b>Population 15 years and + (N)</b>	428573	100.0	71.8 - 90.6	18.3
• Income, persons, \$22000 + pa	115445	26.9	22.3 - 32.1	29.0
• Educational attainment: degree or +	58005	13.5	7.7 - 17.5	38.0
• Education attainment: all post-school qualifications	189346	44.2	40.0 - 47.9	24.1
• In labour force	272706	63.6	52.6 - 70.1	19.0
• Employed <sup>(a)</sup>	260948	95.7	93.3 - 96.5	19.8
• Unemployed <sup>(a)</sup>	11758	4.3	3.3 - 6.7	9.7
• Employed in the 3 top occupations <sup>(b)</sup>	120347	46.1	40.1 - 54.0	31.1
• Employed in the 'management industries' <sup>(b)</sup>	120518	46.1	36.7 - 53.6	25.0
All employed women <sup>(c)</sup>	114005	61.8	56.7 - 73.8	21.2
<b>Families (N)</b>	139594	100.0	-	17.8
• with income \$32000 + pa	73071	52.3	49.2 - 63.6	24.4
• with dependent children	70651	50.6	31.4 - 64.3	17.6
• Couples with dependent children \$32000 + pa <sup>(d)</sup>	39004	55.2	57.1 - 74.3	27.8
• Married women employed <sup>(e)</sup>	61279	51.6	47.0 - 56.1	20.8
• One-parent: male and female headed <sup>(f)</sup>	8354	11.8	7.6 - 24.8	13.6
• One parent: female headed <sup>(g)</sup>	7068	84.6	82.6 - 86.9	13.3
• Female-headed with income \$22000 + pa	2027	28.7	23.0 - 36.6	23.9
• Female-headed parent employed <sup>(h)</sup>	4225	59.8	47.7 - 66.0	21.5
<b>All Employed Persons (N)</b>	260948	100.0	-	19.8
Persons employed in community services <sup>(b)</sup>	50484	19.3	16.3 - 24.0	23.5
Persons employed in helping professions <sup>(b)</sup>	32510	12.5	10.2 - 16.3	29.8
Persons employed in health professions <sup>(b)</sup>	13588	5.2	3.9 - 7.8	30.4

**Notes:** (a) % of the labour force; (b) % of all employed persons; (c) % of all women 15-64 years; (d) % of all couples with dependent children; (e) % of all married women; (f) % of all families with dependent children; (g) % of all one-parent families; (h) % of all female-headed one-parent families.

**Table 6.5: Summary of Variables Used in the Calculation of the Vulnerability Index: LGA Group 2, Ranks 10-18, Vulnerability Index 2.60-3.35**

	Number and Per Cent in the LGA Group		% Range	% of Sydney Stats. Div.
	N	%		
<b>Population (N)</b>	693567	100.0	-	23.2
• 0-14 years	132911	19.2	14.2 - 23.3	20.4
• 15-64 years	475911	68.6	65.2 - 73.8	23.5
• 65 and +	84745	12.2	9.1 - 18.0	26.8
• Born overseas	179485	25.9	16.6 - 41.6	19.7
<b>Population 15 years and + (N)</b>	560656	100.0	76.7 - 85.8	24.0
• Income, persons, \$22000 + pa	113212	20.2	16.5 - 22.2	28.5
• Educational attainment: degree or +	43188	7.7	5.4 - 14.2	28.3
• Education attainment: all post-school qualifications	216201	38.6	33.5 - 40.1	27.5
• In labour force	355589	63.4	58.0 - 64.9	24.7
• Employed <sup>(a)</sup>	334898	94.2	89.6 - 95.7	25.4
• Unemployed <sup>(a)</sup>	20686	5.8	4.3 - 10.4	17.0
• Employed in the 3 top occupations <sup>(b)</sup>	112877	33.7	31.5 - 40.4	29.1
• Employed in the 'management industries' <sup>(b)</sup>	130470	39.0	36.5 - 45.2	27.0
All employed women <sup>(c)</sup>	141633	59.6	55.8 - 61.8	26.4
<b>Families (N)</b>	186866	100.0	-	23.8
• with income \$32000 + pa	80796	43.2	36.1 - 46.1	27.0
• with dependent children	87929	47.1	39.5 - 52.7	21.9
• Couples with dependent children \$32000 + pa <sup>(d)</sup>	36670	48.8	40.8 - 54.1	26.1
• Married women employed <sup>(e)</sup>	76059	49.6	43.4 - 52.9	25.9
• One-parent: male and female headed <sup>(f)</sup>	12783	14.5	11.2 - 26.4	20.8
• One parent: female headed <sup>(g)</sup>	10932	85.5	80.5 - 87.2	20.6
• Female-headed with income \$22000 + pa	2165	19.8	17.7 - 23.4	25.6
• Female-headed parent employed <sup>(h)</sup>	5425	49.6	39.7 - 53.5	27.6
<b>All Employed Persons (N)</b>	334898	100.0	-	25.4
Persons employed in community services <sup>(b)</sup>	58790	17.6	15.4 - 24.1	27.3
Persons employed in helping professions <sup>(b)</sup>	30953	9.2	7.7 - 14.1	28.4
Persons employed in health professions <sup>(b)</sup>	12387	3.7	2.9 - 7.2	27.7

**Notes:** (a) % of the labour force; (b) % of all employed persons; (c) % of all women 15-64 years; (d) % of all couples with dependent children; (e) % of all married women; (f) % of all families with dependent children; (g) % of all one-parent families; (h) % of all female-headed one-parent families.

**Table 6.6: Summary of Variables Used in the Calculation of the Vulnerability Index: LGA Group 3, Ranks 19-27, Vulnerability Index 3.36-4.93**

	Number and Per Cent in the LGA Group			% of Sydney
	N	%	% Range	Stats. Div.
<b>Population (N)</b>	579773	100.0	-	19.4
• 0-14 years	101144	17.4	10.4 - 28.0	15.6
• 15-64 years	401265	69.2	64.1 - 77.1	19.8
• 65 and +	77364	13.3	7.8 - 16.7	24.4
• Born overseas	182667	31.5	17.5 - 44.5	20.0
<b>Population 15 years and + (N)</b>	478629	100.0	72.0 - 89.6	20.5
• Income, persons, \$22000 + pa	69477	14.5	12.6 - 17.5	17.5
• Educational attainment: degree or +	29186	6.1	3.6 - 9.3	19.1
• Education attainment: all post-school qualifications	151204	31.6	28.7 - 35.2	19.2
• In labour force	282565	59.0	56.6 - 64.0	19.7
• Employed <sup>(a)</sup>	257270	91.0	83.9 - 94.8	19.5
• Unemployed <sup>(a)</sup>	25284	9.0	5.2 - 16.1	20.8
• Employed in the 3 top occupations <sup>(b)</sup>	71268	27.7	22.2 - 33.9	18.4
• Employed in the 'management industries' <sup>(b)</sup>	95156	37.0	30.9 - 42.7	19.7
All employed women <sup>(c)</sup>	103520	52.9	50.9 - 58.5	19.3
<b>Families (N)</b>	147712	100.0	-	18.8
• with income \$32000 + pa	50726	34.3	26.6 - 39.3	17.0
• with dependent children	62699	42.4	37.5 - 60.2	15.6
• Couples with dependent children \$32000 + pa <sup>(d)</sup>	20752	38.0	28.6 - 44.5	14.8
• Married women employed <sup>(e)</sup>	52499	43.8	35.7 - 48.0	17.8
• One-parent: male and female headed <sup>(f)</sup>	11355	18.1	10.4 - 32.5	18.5
• One parent: female headed <sup>(g)</sup>	9861	86.8	82.5 - 88.6	18.6
• Female-headed with income \$22000 + pa	1521	15.4	11.0 - 19.3	18.0
• Female-headed parent employed <sup>(h)</sup>	3749	38.0	27.8 - 46.3	19.0
<b>All Employed Persons (N)</b>	257270	100.0	-	19.5
Persons employed in community services <sup>(b)</sup>	43934	17.1	13.1 - 21.2	20.4
Persons employed in helping professions <sup>(b)</sup>	22499	8.7	5.7 - 10.2	20.6
Persons employed in health professions <sup>(b)</sup>	9817	3.8	2.3 - 4.9	22.0

**Notes:** (a) % of the labour force; (b) % of all employed persons; (c) % of all women 15-64 years; (d) % of all couples with dependent children; (e) % of all married women; (f) % of all families with dependent children; (g) % of all one-parent families; (h) % of all female-headed one-parent families.

**Table 6.7: Summary of Variables Used in the Calculation of the Vulnerability Index: LGA Group 4, Ranks 28-38, Vulnerability Index 5.18-6.78**

	Number and Per Cent in the LGA Group		% Range	% of Sydney Stats. Div.
	N	%		
<b>Population (N)</b>	1221003	100.0	-	40.8
• 0-14 years	318336	26.1	19.7 - 34.8	49.0
• 15-64 years	812133	66.5	61.6 - 70.7	40.2
• 65 and +	90534	7.4	3.7 - 11.9	28.6
• Born overseas	398738	32.7	23.3 - 48.9	43.7
<b>Population 15 years and + (N)</b>	902667	100.0	65.3 - 80.3	38.6
• Income, persons, \$22000 + pa	102168	11.3	8.1 - 17.4	25.7
• Educational attainment: degree or +	22420	2.5	1.6 - 6.3	14.7
• Education attainment: all post-school qualifications	239484	26.5	23.5 - 29.8	30.4
• In labour force	554643	61.4	55.6 - 66.0	38.6
• Employed <sup>(a)</sup>	489441	88.2	46.8 - 60.3	37.2
• Unemployed <sup>(a)</sup>	65211	11.8	7.6 - 16.7	53.7
• Employed in the 3 top occupations <sup>(b)</sup>	90776	18.5	13.7 - 22.4	23.4
• Employed in the 'management industries' <sup>(b)</sup>	142319	29.1	22.2 - 33.3	29.5
All employed women <sup>(c)</sup>	183993	45.9	41.6 - 49.9	34.3
<b>Families (N)</b>	323896	100.0	-	41.2
• with income \$32000 + pa	95889	29.6	24.6 - 33.2	32.1
• with dependent children	185054	57.1	47.0 - 69.9	46.1
• Couples with dependent children \$32000 + pa <sup>(d)</sup>	46549	29.9	23.1 - 34.6	33.1
• Married women employed <sup>(e)</sup>	109996	41.8	34.4 - 46.4	37.4
• One-parent: male and female headed <sup>(f)</sup>	29559	16.0	13.4 - 19.0	48.2
• One parent: female headed <sup>(g)</sup>	25736	87.1	82.1 - 90.0	48.5
• Female-headed with income \$22000 + pa	2781	10.8	7.0 - 14.5	32.8
• Female-headed parent employed <sup>(h)</sup>	6394	24.8	16.9 - 35.0	32.5
<b>All Employed Persons (N)</b>	489441	100.0	-	37.2
Persons employed in community services <sup>(b)</sup>	61590	12.6	9.5 - 16.9	28.6
Persons employed in helping professions <sup>(b)</sup>	23634	4.8	2.9 - 7.3	21.7
Persons employed in health professions <sup>(b)</sup>	9392	1.9	1.2 - 2.7	21.0

**Notes:** (a) % of the labour force; (b) % of all employed persons; (c) % of all women 15-64 years; (d) % of all couples with dependent children; (e) % of all married women; (f) % of all families with dependent children; (g) % of all one-parent families; (h) % of all female-headed one-parent families.

The spatial distribution of the ranked and grouped LGAs according to their rank in the Vulnerability Index shows clearly that the affluent LGAs concentrate around the Sydney harbour and extend north. In the first group (V.I. ranks 1-9) only one LGA (Woollahra) is located on the southern side of the harbour. The LGAs in the second group (V.I. ranks 10-18) encircle the LGAs in the first group, with the exception of Sutherland which is the only distant LGA in this group. The LGAs in the third group (V.I. ranks 19-27) consist mainly of the inner and mid-distance suburbs, with the exception of Camden which is a distant semi-rural suburb. The fourth group (V.I. ranks 28-38) includes all distant western suburbs (except Camden), and the mid-distant and inner suburbs on the southern side of the metropolitan area.

The differences in population characteristics in the four groups of LGAs are clearly discernible from the data in Table 6.3, even at a glance. In all socioeconomic indicators, the means on the first two groups (V.I. ranks 1-18) are above the means for the SSD, and with a few exceptions the means in the second two groups (V.I. ranks 19-38) are below the means for the SSD. The means in the fourth group (V.I. ranks 28-38) are certainly well below the means for the entire SSD. The spatial differentiation in the distribution of human resources and their utilisation is clearly demonstrated in the differences among the four groups of LGAs.

However, as noted earlier, the population of the various LGAs does not have the same degree of homogeneity in terms of the range of the examined attributes. How wide are the differences within the four groups of LGAs is shown in Tables 6.4-6.7. The first column in these tables shows the number of the relevant population groups, the second column shows the mean percentages of the various characteristics, the third column shows the range of these percentages, and the fourth column shows the percentage of relevant characteristics for the entire SSD. Thus, for example, Table 6.4 shows that the nine LGAs in the first group accounted for 18.0 per cent of the population in the SSD, for 18.3 per cent of the population 15 years and over, for 38.0 per cent of the population with educational qualifications at the level of a degree or higher, and for 29.8 per cent of all employed persons in the 'helping professions'. It can also be ascertained that the population in this group of LGAs shows a high degree of homogeneity in the levels of education, income and employment, but a low degree of homogeneity in the age structure (especially children 0-14 years), in proportions of families with dependent children, and in the proportions of one-parent families.

In comparison, the population in the 11 LGAs in the fourth group (Table 6.7) accounted in 1986 for 40.8 per cent of the population in the SSD, for 14.7 per cent of the population with educational qualifications at the level of a degree or higher, and for 21.7 per cent of persons employed in the 'helping professions'. By and large, in its age structure as well as in its socioeconomic indicators the population in these 11 LGAs shows a fairly high degree of homogeneity.

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How large are the differences between the affluent and the less affluent and poor suburbs? This is illustrated in Table 6.8 which gives comparisons between the two top-ranking LGAs and the two bottom-ranking LGAs in the Vulnerability Index, shown also in relation to the means for the entire SSD. It can be easily seen that the differences between the two extremes are consistent throughout, except in the distribution of families with dependent children and one-parent families.

The extent of the differences between the top and the bottom LGAs is further illustrated by the comparative frequency ratios of the 18 social indicators in Table 6.9. The first column presents the ratios of the means for the top nine LGAs and the bottom 11 LGAs, and the second column gives the comparison between the top-ranking LGA (Kuring-gai) and the bottom-ranking LGA (Fairfield). The table shows with a great clarity that in all 'positive' indicators the top-ranking LGAs show a distinct advantage (e.g. 3.64 times more people per head of population with an income of \$22000 pa in the top-ranking LGA than in the bottom-ranking LGA). The disparity between the frequency of tertiary education is particularly stark. In contrast, in the 'negative' social indicators (Nos 12, 13, 14 15) the frequencies go in the opposite direction.

## 6.4 Employment in Community Services

In this study the analysis of human resources in the metropolitan area of Sydney has been carried out on the basis of their location, that is, the residential location of the persons and families. Thus in identifying people's occupation and the sector of industry in which they are employed, the location of that industry and people's place of employment are not identified. The place of residence is important because it indicates the social, economic and cultural positions of the inhabitants. People choose to live in a certain location because they aspire to certain standards of social environment, because of convenience, or because their choice is limited by the scarcity of their material resources.

In considering the use of human resources in community services three social indicators have been used: employment in the sector of industry defined by the ABS as community services; people's occupations which fall into the category of the 'helping professions'; and people's occupations in health professions (Indicators 16-18). As shown in the various statistical tables, figures and correlations in this chapter, all three indicators show a distinct high concentration in the inner suburbs and the more affluent LGAs. The cumulative effect of these is a correlation with the Vulnerability Index of +.839 and +.845 (Table 6.2).

The residential location of persons employed in community services indicates clearly their relatively high socioeconomic status. As shown in Table 6.10, the Cumulative Indicator 16-18 correlates positively at significant levels with the indicators of income, education and employment, the two highest positive correlations being with education (Nos. 5-6, Rho +.899) and employment in the three top occupations

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**Table 6.8: Summary of Variables Used in the Calculation of the Vulnerability Index:  
Comparison of Top and Bottom Ranking LGAs, Sydney Statistical Division, 1986 Census.**

Variables	Sydney Statistical Division	Top 2 LGAs		Bottom 2 LGAs	
		Kuring-gai	Lane Cove	Liverpool	Fairfield
<b>Population (N)</b>	<b>2989070</b>	<b>100026</b>	<b>28674</b>	<b>93500</b>	<b>153531</b>
• 0-14 years	21.8	21.5	17.6	25.7	26.2
• 15-64 years	67.7	65.4	67.3	68.8	67.6
• 65 and +	10.6	13.0	15.1	5.4	6.2
• Born overseas	30.5	24.3	28.7	27.4	47.3
<b>Population 15 years and + (N)</b>	<b>2338759</b>	<b>78430</b>	<b>23633</b>	<b>69448</b>	<b>113251</b>
• Income, persons, \$22000 + pa	17.0	30.2	27.5	10.8	8.3
• Educational attainment: degree or +	6.5	17.5	15.4	1.6	1.6
• Education attainment: all post-school qualifications	33.6	47.9	45.4	25.4	23.6
• In labour force	61.5	57.7	63.1	63.8	61.6
• Employed <sup>(a)</sup>	91.6	96.5	95.7	88.0	83.3
• Unemployed <sup>(a)</sup>	8.4	3.5	4.3	12.0	16.7
• Employed in the 3 top occupations <sup>(b)</sup>	29.4	54.0	46.8	17.2	13.8
• Employed in the 'management industries' <sup>(b)</sup>	36.7	51.6	48.7	31.9	22.2
All employed women <sup>(c)</sup>	53.3	56.7	65.6	44.4	41.6
<b>Families (N)</b>	<b>785412</b>	<b>26930</b>	<b>7456</b>	<b>24475</b>	<b>40663</b>
• with income \$32000 + pa	38.0	63.6	52.3	28.9	26.8
• with dependent children	51.1	53.7	43.9	58.1	58.7
• Couples with dependent children \$32000 + pa <sup>(d)</sup>	41.2	74.3	63.6	29.6	26.4
• Married women employed <sup>(e)</sup>	45.7	49.7	51.5	42.1	38.6
• One-parent: male and female headed <sup>(f)</sup>	15.3	9.1	16.4	18.9	15.0
• One parent: female headed <sup>(g)</sup>	86.4	83.6	86.3	88.3	85.8
• Female-headed with income \$22000 + pa	16.0	36.6	31.8	9.2	12.0
• Female-headed parent employed <sup>(h)</sup>	37.1	61.5	66.0	20.1	21.1
<b>All Employed Persons (N)</b>	<b>1316430</b>	<b>44913</b>	<b>14466</b>	<b>38653</b>	<b>57959</b>
Persons employed in community services <sup>(b)</sup>	16.4	22.0	20.2	11.0	9.5
Persons employed in helping professions <sup>(b)</sup>	8.3	15.2	12.9	4.1	3.2
Persons employed in health professions <sup>(b)</sup>	3.4	6.5	5.7	1.8	1.5

**Notes:** (a) % of the labour force; (b) % of all employed persons; (c) % of all women 15-64 years; (d) % of all couples with dependent children; (e) % of all married women; (f) % of all families with dependent children; (g) % of all one-parent families; (h) % of all female-headed one-parent families.

**Table 6.9: Ratio Comparisons of Frequency (%) of Attributes at LGA Levels**

Variable	LGA's Top 9/Bottom 11	LGA's Top/Bottom
<b>A. Income</b>		
1. Persons 15 years+, \$22000 + p.a.	2.38	3.64
2. All families, \$32000 + p.a.	1.77	2.37
3. 2-parent families with dep. children \$32000 + p.a.	1.85	2.81
4. 1-parent families, female headed, \$22000 + p.a.	2.66	3.05
<b>B. Educational Attainment</b>		
5. Degree or higher qualification	5.40	10.93
6. All post-school qualifications	1.67	2.03
<b>C. Employment</b>		
7. All women in employment	1.35	1.36
8. Married women in employment	1.23	1.29
9. Single parents, female, in employment	2.41	2.91
10. Persons employed in the 3 top occupations	2.49	3.91
11. Persons employed in 'management industries'	1.58	2.32
12. Unemployed persons	0.36	0.21
<b>D. Family Composition</b>		
13. All families with dep. children as % of all families	0.89	0.91
14. 1-parent families as % of families with dep. children	0.74	0.61
<b>E. Overseas-born Population</b>		
15. All overseas-born population	0.60	0.51
<b>F. Employment in Community Services</b>		
16. Persons employed in community services	1.53	2.32
17. Persons employed in 'helping professions'	2.60	4.75
18. Persons employed in health professions	2.74	4.33

**Source:** ABS, 1986 *Census of Population and Housing*.

**Table 6.10: Location of Persons Employed in Community Services (Items 16-18) Correlated with Other Social Indicators, Sydney Statistical Division, 1986 Census**

Correlated with Indicator		Rho
Vulnerability Index 2 (18 Indicators)		+ .845
Items 1-4:	Income, cumulative	+ .797
Items 5-6:	Education, cumulative	+ .899
Items 7-12:	Employment cumulative	+ .813
Items 13-14:	Family composition cumulative	+ .207
Item 15:	Overseas-born persons	+ .087
Item 2:	Family income \$32000 + p.a.	+ .731
Item 7:	All employed women	+ .763
Item 8:	All employed married women	+ .643
Item 9:	Single parents, female, employed	+ .743
Item 10:	Persons employed in 3 top occupations	+ .906
Item 13:	(Order reversed) <sup>(a)</sup> Families with dependent children	- .472
Item 14:	(Order reversed) <sup>(a)</sup> One-parent families	- .006

**Note:** a) Order reversed means that the highest frequency of this indicator in a LGA was given rank 1.

(No. 10, Rho +.906). It is the location of families with dependent children which attracts a low positive correlation, as does the location of overseas-born persons (Rho + .207 and +.087 respectively).

A comment needs to be made at this point on the differences between the location of families with dependent children (as a proportion of all family units) and the location of one-parent families (as a proportion of families with dependent children). The correlation between the rankings of these two indicators results in a Rho -.438, a considerable negative correlation. The LGAs with the high frequency of families with dependent children (which include one-parent families), show a distinctly different location from the LGAs in which one-parent families are predominant. The five LGAs with the highest frequency of families with dependent children in 1986 were Campbelltown, Baulkham Hills, Penrith, Blacktown and Camden - all distant suburbs (see Figure 6.3), and none of them ranking among the first five LGAs with persons employed in community services. The five LGAs with the highest frequency of one-parent families were Sydney, Leichhardt, North Sydney, Waverley and Woollahra - all inner suburbs (see Figure 6.4) and two of them (Leichhardt and Woollahra) figuring among the first five LGAs with persons employed in community services. Three of these LGAs (Woollahra, Sydney, North Sydney) were also among the five LGAs with the lowest frequency of families with dependent

**Table 6.11: Differences in the Frequency of the 18 Social Indicators Used in the Construction of the Vulnerability Index, SSD, 1986 Census**

Indicator	Mean SSD (%)	Highest % LGA	Lowest % LGA	Frequency Ratio
<b>A. Income</b>				
1. Persons 15 years +, \$22000+ pa	17.0	32.1 North Sydney	8.1 Auburn	3.96
2. All families, \$32000+ pa	38.0	63.6 Kuring-gai	24.6 Marrickville	2.56
3. 2-parent families with dep. children \$32000+ pa	41.2	74.3 Kuring-gai	23.1 Marrickville	3.22
4. 1-parent families, female-headed, \$22000+ pa	16.0	36.6 Kuring-gai	7.0 Campbelltown	5.23
<b>B. Education</b>				
5. Persons, a degree or higher	6.5	17.5 Kuring-gai	1.6 Fairfield/ Liverpool	10.93
6. Persons, all post-school qualifications	33.5	47.9 Kuring-gai	23.6 Auburn/ Fairfield	2.04
<b>C. Employment</b>				
7. All employed women	53.3	73.8 North Sydney	41.6 Fairfield	1.77
8. All employed married women	45.7	56.1 Baulkham Hills	34.4 Auburn	1.63
9. Single parents, female, employed	37.1	66.0 Lane Cove	16.9 Campbelltown	3.91
10. Persons employed, 3 top occupations	29.4	54.0 Kuring-gai	13.7 Botany	3.94
11. Persons employed, management industries	36.7	53.6 Mosman	22.2 Fairfield	2.41
12. Unemployed persons	8.4	16.7 Fairfield	3.5 Kuring-gai	4.77
<b>D. Family Composition</b>				
13. Families with dependent children	51.1	69.8 Campbelltown	31.4 North Sydney	2.22
14. 1-parent families	15.3	32.4 Sydney	7.6 Baulkham Hills	4.26
<b>E. Overseas-born Persons</b>				
15. All overseas-born persons	30.5	48.9 Marrickville	16.6 Sutherland	2.95
<b>F. Employment in Community Services</b>				
16. Persons employed in community services	16.4	24.1 Leichhardt	9.5 Fairfield	2.54
17. Persons employed in 'helping professions'	8.3	16.3 Hunters Hill	2.9 Botany	5.62
18. Persons employed in health professions	3.4	7.8 Hunters Hill	1.2 Botany	6.50

children. It is therefore not surprising that the location of persons employed in community services correlates negatively with the location of families with dependent children (Rho -.472) but is rather neutral in correlation with the frequency of one-parent families (Rho -.006).

The spatial distribution of persons employed in community services indicates clearly a high density in the inner suburbs, and the rank correlations with the other social

indicators used in the construction of the Vulnerability Index also indicate close positive correlation with affluence. If it is considered, however, that families with dependent children are, or would be expected to be, the important recipients of community services, the disparity in the spatial distribution of the providers of services and the recipients of services poses some important questions about the utilisation of human resources in these services and about the effects of such utilisation. Some of these questions are examined in the final Section of this report.

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## 7 Conclusions

The aim of this research project was to explore the nature of human resources, the variety of meanings given to this term, and then to focus attention on the use of human resources in the broad range of services, defined as community services. This aim was to be achieved first by developing a conceptual framework which would enable an examination to be made of the use of human resources in various settings in the structure of social organisation. The study was then to examine in greater detail the use of human resources in community services and follow this by a study of human resources in an urban environment. The metropolitan area of Sydney was chosen for the study of the spatial distribution of these resources, using the 1986 census as the source of the relevant data.

The scope of the project was wide and it is not intended here to comment at length on all the findings and their implications for social policy, for any future research and for research methodology in social sciences generally. It also needs to be re-emphasised, first, that this research project was the culmination of a number of projects completed earlier, as noted in the introductory chapter and in the bibliography; and, second, that the results of a related project, **Single Parent Families and Community Services: Child Health and Socio-Economic Factors**, conducted by Cathy Boland are still being analysed and expected to be published later in 1992.

Among the important features of this research is the focus on the **multi-dimensional nature** of human resources, as well as that of material resources. The data in this report demonstrate clearly how important it is to recognise this fact of social and economic life. The results of the analysis show that the recognition of this multi-dimensional nature of human and material resources is an essential prerequisite for the understanding of society and its structure, and therefore essential for social and policy-relevant research. In the past decades, and especially in the 1980s, this issue became neglected in social research and 'human resources' had been reduced to so many 'factors of production'. The endeavours of reducing the nature of human resources to one-dimensional analyses, such as distribution of income (normally defined in cash terms) have produced masses of statistical data far removed from the social reality which such endeavours were purported to measure. This trend also extended into analyses of community services, with little weight given to important qualitative aspects of these services as well as their political, ideological and self-interest elements.

The outcome of this development in social and policy-relevant research has been a neglect of human resources and of their potentialities in social and economic development in Australia. For example, for over 40 years now Australia has experienced shortages of labour and especially of skilled labour, and has sought to overcome these by importing skilled people from other countries. However, to this day, immigrants from non-English speaking countries, however well skilled, continue to experience considerable difficulties in having their educational and

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occupational qualifications accepted. Indeed, the prevailing emphasis in policy (and in much of the sponsored research) is to assess the value of imported human resources in terms of narrow 'economic' criteria, giving little weight to, or entirely ignoring, the social and cultural values of these resources and their real or potential contribution to social, cultural and economic development (Jamrozik, Urquhart and Wearing, 1990).

This research project, although wide-ranging in scope, still has to be regarded as exploratory, seeking to generate concepts, typologies and hypotheses about the nature of human resources. Even with these limitations, the methods of enquiry and analysis adopted in the project give rise to a number of issues which have received little, if any, attention in recent research. Only a few of these are commented upon here, the others must wait for attention in future research. We can only express hope that this report will serve as a stimulus for other researchers to widen their perceptions and methods so that the multi-dimensional nature of human resources is recognised and considered accordingly.

The first issue arising from this research is the 'informal/formal' division in social organisation and the corresponding use of human resources in this configuration. As noted in Section 2, most analyses related to the issue of human resources are confined to some aspects of the formal part of social organisation (Figure 2.1) and the significance of the large and diverse informal part is largely ignored. Even in those rare cases where attempts are made to examine some aspects of the informal structure of social organisation, such as the domestic economy (Ironmonger, 1989), efforts are made to evaluate the functions performed in that sector in terms of formal economic measures. As argued elsewhere (Jamrozik, 1989b), such 'conversion' is inappropriate as it is an attempt to 'translate' certain tangible and less-tangible values of domestic organisation into market criteria, thus subjugating the values of social life to the values of a one-dimensional market economy.

The data on the changes in the structure of employment in the Australian labour market over the past 25 years (Table 2.1-2.5) are, of necessity, confined to the formal labour market as these are the only data on human resources systematically collected by ABS. The data also show very clearly that over that period of time employment has shifted substantially from material production into relatively 'unproductive' areas of management of property, public administration and community services. How is the value of human resources used in these activities evaluated and measured? To be sure, some arbitrarily agreed-upon conventions are used in determining the value of 'production' in these areas in comparison with the value of material production. While some comparative measurements are undoubtedly necessary, a question does have to be asked about which measurements are appropriate and whether some new methods of measurement and new dimensions should be developed. The data in Tables 2.1-2.5 suggest that because the qualitative nature of the employment structure has been given little weight in economic analyses during the 1980s, the claims of economic growth during that period now appear to have been to a large extent illusory.

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The problem of evaluating the use of human resources is exacerbated in the analyses of community services where the 'production' is by and large intangible in terms of conventional economic criteria. As discussed in Sections 3 and 4, and illustrated in Figures 3.1-3.3 and Tables 3.1-3.6, community services present a complex of organisational and funding arrangements, as well as performing a multitude of functions which are of an economic, social and political as well as an ideological and religious nature. They also employ close to one-fifth of all employed persons and 40 per cent of all employed persons with qualifications at a tertiary degree level or higher. Clearly, with such great input of material and human resources, community services constitute an important aspect of social and economic organisation but the nature of their 'production' is far more complex than the conventional economic analyses are able to identify measure and evaluate.

An important part of community services is the education system and its significance is discussed in Section 4. According to the recent data (ABS, August 1991, Cat. No. 6203.0), 7.3 per cent of all employed persons and 38.0 per cent of all employed persons in community services were employed in the various parts of the education system. The importance of the education system lies not only in the large number of people employed in it but in its function of 'creating' and developing human resources. Its importance further lies in its function of maintaining or modifying certain socio-economic stratification and class structure of society. The data provided in Section 4 (Tables 4.1-4.7) illustrate clearly, first, the division of the education system between its private and public parts, and, second, the socioeconomic effects of that division. The data further show that similarly to the trend in the industry towards employment in 'non-productive' sectors, the majority of employed persons with tertiary qualifications are also qualified in the areas of management, administration and community services (Table 4.4). However, irrespective of the field of occupational qualifications, the data in Tables 4.5-4.7 demonstrate the advantage held by people with such qualifications in the labour market. It needs to be noted that this advantage is also multi-dimensional, even if the data do not provide any information on the conditions of employment, such as environment, industrial relations, autonomy, and the like.

With the growth of science and technology and the situation of Australia in the world's economic, political and cultural organisation, education will become an increasingly important element in the allocation of material and human resources, both quantitative and qualitative. Broadly conceptualised, the policies on education and their implementation will be one of the most important factors in shaping and determining the future of Australian society.

Section 5 introduced the issue of spatial distribution of human resources in an urban environment. It examined briefly a number of studies from other countries as well as from Australia which show that an urban environment provides a social system in which the allocation of resources and their individual and collective consumption influence significantly the social structure in terms of power, class, economic and social well-being and the quality of life generally. The overview of literature serves as an introduction to the analysis of the distribution of human resources in one large

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urban environment, the metropolitan area of Sydney, which is presented in considerable detail in Section 6.

The method of data collection and analysis used in the construction of the Vulnerability Index has produced a multi-dimensional profile of Sydney, presenting vividly the nature of the spatial distribution of human resources throughout the Sydney Statistical Division (SSD). A wealth of data has been produced and further analysis is still being done to relate the data to the results which have been obtained from the field survey of families and community services, to be published later. The statistical tables and figures presented in Section 6 raise a number of questions and issues of direct implications for current and further research and for social policy. Only a few main issues are connected here.

First, the usefulness and validity of the concept of **cumulative advantage** are clearly demonstrated by the identified social indicators and their correlations. The high degree of consistency of correlations pose some serious questions about the usefulness of one-dimensional analyses which have been so prevalent in recent policy-relevant economic analyses, such as the studies of income distribution or the studies which focus solely on the 'poor' or the 'disadvantaged'. Systematic studies of advantage, let alone of **cumulative advantage** have been simply non-existent.

Furthermore, the analysis shows the importance of comparative data and the importance of the concept of the **cumulative effect** of advantage. By identifying which attributes reinforce one another to account for advantage, a clear indication is obtained of which attributes are relatively absent in the areas and populations experiencing a cumulative effect of disadvantage. The explanation of inequality through such analysis is not only theoretically much more sound than any explanation derived from studies of poverty, but also of direct value to policy makers because of a clear indication of the things that one group (the less affluent and the poor) do not have which the other groups (the affluent) have in relative abundance.

Second, the findings raise certain questions about the nature and diversity of the family unit. It is evident from the analysis that in the urban environment of a large city, the young family with dependent children is more frequently found on the periphery rather than close to the centre of the city. However, the presence of dependent children is only one dimension that is relevant to the issue of inequality. As the data clearly show, there is a great diversity in the characteristics of the family; affluence is a cumulative effect of parents' education, occupation, women's employment and, of course, locality. For this reason, to focus on one dimension, such as the presence of dependent children, or single-parenthood, or even income, is to present a severely truncated picture of the family.

Finally, the study focused on the use of human resources in community services, and the analysis of the spatial distribution of the residential location of persons employed in these services and in the corresponding occupations (the 'helping professions') indicates clearly the close relationship of professional employment in community services and relative affluence. As for the residential location, the data suggest that people employed in community services tend to live in the areas close to the city,

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relatively scarcely populated by families with dependent children. It seems therefore that because of the locational distance between the prevalence of families with dependent children and the providers of professional community services many of the providers are 'visiting caretakers' in the localities in which they work. This distance, and related differences in living conditions, life styles, and access to resources pose some important and interesting questions, not only concerned with the kind and quality of services provided but more so with the providers' perceptions and understanding of the populations of their services' recipients.

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