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Mildura 3500

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Woollahra 2025

Box Hill 3128

Kings Cross 2011

Wangaratta 3676

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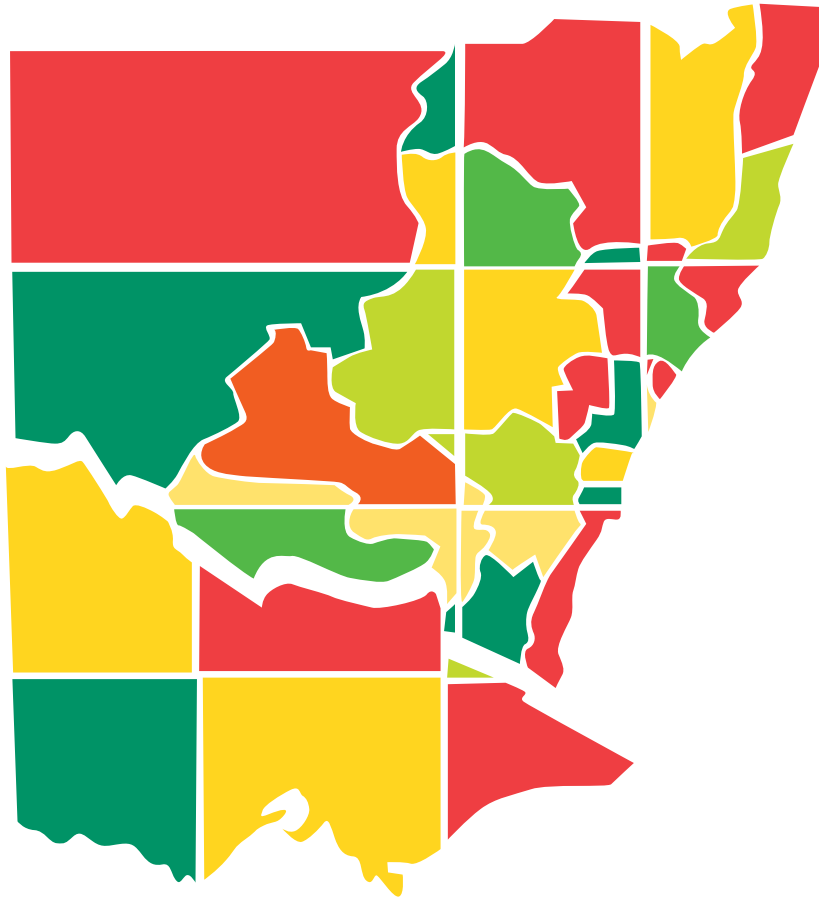
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Community adversity and resilience:

the distribution of social disadvantage in Victoria and New South Wales and the mediating role of social cohesion



Tony Vinson

The Ignatius Centre
for social policy and research

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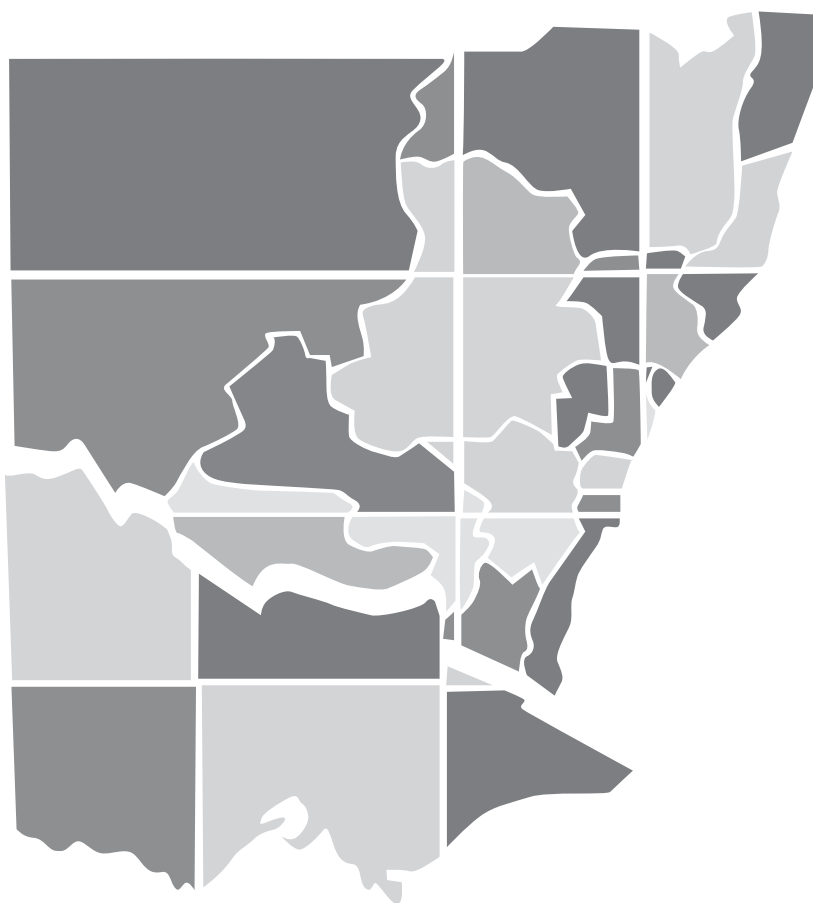
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**Jesuit
Social
Services**

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DATA

- <i>Child abuse</i>	NSW Department of Community Services and Victorian Department of Human Services
- <i>Low birth weight</i>	Victorian Perinatal Data Collection Unit and NSW Midwives Data Unit
- <i>Criminal offences</i>	NSW Bureau of Crime Statistics and Victorian Criminal Justice Statistics and Research Unit
- <i>Child injuries</i>	Victorian Department of Human Services and NSW Health
- <i>Imprisonment</i>	NSW Department of Corrective Services and Victorian Department of Human Services
- <i>Electricity supply</i>	The Electricity supply companies of Victoria and NSW
- <i>Psychiatric admissions</i>	Victorian Department of Human Services and NSW Health
- <i>Mortality</i>	N.S.W. Registry of Births, Deaths and Marriages and Australian Bureau of Statistics
- <i>Disability/sickness</i>	Centrelink
- <i>Unemployment,</i> - <i>Long-term unemployment,</i> - <i>Low income,</i> - <i>Early school leaving,</i> - <i>Year 12 incomplete,</i> - <i>Unskilled workers,</i>	Australian Bureau of Statistics
- <i>Volunteering and informal help</i>	Department for Victorian Communities
- <i>Participation in organised rec./sport</i>	Australian Sports Commission

DATA PROCESSING

Brian Cooper from Westir Ltd helped by processing the above variables and prepared the maps and the compact disk presented in the report

PEOPLE

Father Peter Norden S.J., Policy Director, Jesuit Social Services, has been unstinting in his support for the project. In her capacity as a visiting member of staff of the Ignatius Centre, Jeanette Pope helped considerably in the initial stage of collecting the Victoria data and was assisted in that task by Renata Kokanovic. The design and creation of the enclosed compact disk would not have been possible without the involvement of Ian Johnson and Andrew Wilson of the Spatial Science Innovation Unit, University of Sydney.

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PREFACE

There is no doubt that Australians still feel that this land is “a lucky country”.

There have been benefits resulting from continued economic growth, and Australia has profited in many ways from some of the positive impacts of globalisation. As a consequence, most Australians are better off.

But the international war on terrorism, and the comparatively stable economic and political context in which Australians live, could make us less observant of a significant change taking place in the structure of our own society: some localities and a significant number of Australian families are being left behind.

When this occurs in a time of economic prosperity, it is cause for concern.

That is why *The Ignatius Centre*, the policy and research arm of Jesuit Social Services, is undertaking an ongoing investigation of locational disadvantage in Australian society.

Our earlier study, *Unequal In Life* (Vinson, 1999) highlighted the growth of areas of entrenched social disadvantage in what are identified as the more prosperous States of New South Wales and Victoria, in urban, rural and remote communities.

This study had a significant impact on public policy debate and led to some innovative programs in both New South Wales and Victoria, with a series of new community growth initiatives being undertaken by the respective State government authorities.

The present study, *Community Adversity and Resilience*, is primarily a research report, not a policy document. It measures the concentration of disadvantage according to postcode areas in New South Wales and Victoria. But it goes further in attempting to identify characteristics of local communities faced with severe social disadvantage that could be promoted to build greater social cohesion rather than social exclusion. It presents hard data that demands a substantial public policy response.

It is our belief and conviction that some communities that are marked by social disadvantage are not necessarily communities lacking inner strengths and the potential to progress given reasonable opportunities. Some of the communities identified in our early study as the most socially disadvantaged could develop qualities of resilience and high levels of social interaction and community support.

Tony Vinson’s professional career has been characterised by his commitment to promoting and encouraging change so that all members of our community can share in the benefits of a prosperous Australian society.

This is also the mission of Jesuit Social Services, in its direct social service provision and in its policy, advocacy and research commitments.

The interest and commitment of the New South Wales Premier's Department and the Department for Victorian Communities has been significant, not only in the public policy debate emanating from our research investigations, but also in the community initiatives that have developed in some of the more socially disadvantaged localities. It is now time for these successful pilot initiatives to be implemented as part of mainstream public policy in areas of significant social need.

But the findings of this investigation have broader implications beyond the States of New South Wales and Victoria. The social impact of a number of Australian local communities being socially excluded has implications for all Australians. This new phenomenon of entrenched and lasting social disadvantage impacts on the quality of life of us all. This report invites, even challenges, Federal and State authorities to consider bi-partisan approaches in ensuring that such serious social disadvantage does not become entrenched in Australian society.

Already in the last decade, we have seen how an increased level of social alienation in a small section of the Australian community can impact on community life.

Social exclusion breeds social alienation and unless this is addressed in national public policy decisions in the coming years, Australians will continue to observe increased instances of child abuse and neglect, mental health disorders, youth suicide, substance misuse, and breaches of the criminal law.

It is now time for leaders of the Australian community to think more cleverly about the future shape of Australian society. The business and the philanthropic sector have an important role to play in this field, in partnership with government authorities. The needs identified in this research have serious economic dimensions that lead us way beyond the more narrow concern of social policy debate.

As a nation, we need to ensure that some local communities are not asked to bear the burden of the less positive impacts of globalisation, and that, even when facing adversity, all Australian citizens are given real opportunities to participate and to experience a sense of belonging and to contribute to new community enterprises.

Diversity is the hallmark of Australian society and some will make better use of the opportunities available than others. But it is important to ensure that the future citizens of our Australian society can actually get to the starting line.

If, for the first time in Australia's history, one's destiny might be shaped by one's location, or even one's postcode, whether that be an urban, regional or remote community, it might be time to rethink some of the rules of the game.

Father Peter Norden, S.J.
Policy Director
Jesuit Social Services

SOME PRELIMINARY INFORMATION ABOUT THIS PUBLICATION...

THE BOUNDARIES OF POST CODE AREAS:

Australian Post boundaries are primarily designed to serve the purposes of mail delivery, not wider social and administrative aims. The Australian Bureau of Statistics (ABS), on the other hand, has the collection of accurate and socially useful statistics as its primary aim and that charter influences its definition of postcode area boundaries. The result is that the two sets of boundaries approximate to one another but they are not necessarily identical. It is a fundamental requirement of the present project that accurate population statistics be used and so the postcode boundaries that we have adopted are those of the ABS.

THE IDENTIFICATION OF DISADVANTAGED AREAS

When a predecessor report, *Unequal in Life*, was published in 1999 there were sound moral and pragmatic reasons for identifying the precise ranking of localities in terms of their comparative social disadvantage. The climate that now exists enables a somewhat modified approach to be adopted without obscuring the priority claims of disadvantaged areas to special assistance. Throughout the report rankings are presented in terms of 'bands' or categories of relative disadvantage and explanations provided as to the nature of the groupings.

THE MAPPING OF DIFFERENT DEGREES OF DISADVANTAGE

In *Unequal in Life* the maps showing the spatial distribution of disadvantage used five categories of severity. The boundaries for these categories were based on a technique known as 'natural breaks'. Although a computing process is used, the underlying notion is similar to the recognition of such breaks in a histogram of a data variable with counts in the y-axis and values in the x-axis. We can intuitively deduce classes from such a representation. The computer can be used to statistically optimise the natural breaks approach with groups of postcodes being clustered in a way that distinguishes them from postcodes outside the group. The same method is used on this occasion to generate the five categories of disadvantage.

THE RANK POSITIONS OF ALL VICTORIAN AND NEW SOUTH WALES POSTCODES

Unequal in Life presented a complete set of rankings for all postcodes in an appendix to the published report. In the interests of economy one place name was used to identify each area which was also labelled with the appropriate postcode number. To minimise the confusion that arose in some cases, a more detailed listing of place names is used this time and presented in the compact disk that accompanies the printed report.

INFORMATION IN THE COMPACT DISK AND HOW TO ACCESS IT

The Compact Disk contains three types of information that supplement the data presented in the printed report:

- 1). Maps showing the distribution of specific forms of disadvantage throughout Victoria and New South Wales with the capacity to zoom-in on particular regions and display detailed attribute information for single postcode areas. In the case of Victoria, there is also a map showing social cohesion scores for those postcodes where the data was available to make the calculations,
- 2). A complete set of relative disadvantage rankings for all postcodes in both states with a detailed listing of place names for each postcode. As discussed in the text, the rankings are expressed in terms of quintile scores. The 5% of postcode areas that are most disadvantaged are designated *1st quintile*; those occupying positions between 5 and 10% are labelled *2nd quintile*, and so on up to the last 5% (*20th quintile*),
- 3). The life stories of a number of women who live in Windale (NSW), representing an extension of the case study presented in Chapter 1 of the report. The stories were provided to the Strengthening Communities Unit of the NSW Premier's Department on the understanding that they would be included in the present report.

Accessing the maps

Install the CD in the computer and be prepared to wait a short time. If you do not have JAVA on your computer the CD will install it. Virtually any computer will operate the present package provided JAVA 1.3 or above is supported by your browser (almost any browser post-1995). The CD has been tested on Windows 2000, Windows XP and Mac OSX. Macs below OSX may have some difficulties reading the CD. It should operate on Linux and Solaris providing they have JAVA installed.

The disk will auto-run on Windows operating systems where enabled, but may not on other operating systems. If this is so then click on index.htm to start the CD.

When the program is ready for use a prompt will require you to indicate whether you wish to examine data for New South Wales or Victoria. Click on the name of the selected state. A menu will appear showing the mapped data available for the selected state. The available choices are as follows:

- a) Social Disadvantage Score from Unequal in Life 1999,
- b). State Primary Disadvantage Factor Score,
- c). State Secondary Disadvantage Factor Score,
- d). Rural Primary Disadvantage Factor Score (rural areas only),
- e). Urban Primary Disadvantage Factor Score (urban areas only),
- f). Childhood Accident Rate,
- g). Criminal Court Convictions,
- h). Disability/Sickness Support,
- i). Early School Leaving,
- j). Imprisonment rate,

- k). Low Birth Weight Rate,
- l). Low skill Workers,
- m). Low Income Families,
- n). Long-term Unemployed, and in the case of Victoria
- o). Social Cohesion (for postcodes with adequate data).

In all cases except *social cohesion* the relative disadvantage of postcodes is shown using the same five-fold classification based upon the idea of ‘natural breaks’:

Disadvantaged (red)
Degree of disadvantage (mauve)
Middle range (tan)
Degree of advantage (light green)
Advantaged (pale yellow).

In the case of the relative cohesion map for Victoria the same three categories are used as in the text (Chapter 5):

Low cohesion (red)
Medium cohesion (tan)
High cohesion (pale yellow).

Select from the menu the variable you wish to examine. First go to the “theme” box and click on *components*. Then go to the area immediately below and click on the small box adjacent to the selected variable. If there is a postcode of particular interest then type the number of that postcode in the box at the top right hand side of the screen and allow a few minutes for the data to load (depending on the speed of your computer). When you click on the binoculars adjacent to the box containing the postcode number the result for the postcode on each variable will appear at the top of the screen. At the left hand side top of that band of information there is a button “Show on map”. If you click on it two things will happen. First, the statewide map will change to one that focuses more on the region in which the selected postcode is located. Second, the postcode of interest will be highlighted in bright green. The visibility of that green marking depends to some extent on the size of the postcode.

The same procedures can be repeated in relation to any other selected variable within the same state. The program can be exited in the standard way.

EXECUTIVE SUMMARY

Links with previous report

In general this 2003 study of the distribution of social disadvantage throughout Victoria and New South Wales shows that not a great deal has changed in the four years since a similar research project was undertaken in 1999. This is shown by statistical measures of the consistency of disadvantage rankings of postcode areas on the two occasions. The postcode areas that were previously assessed as being most disadvantaged remain so. They have consistently high scores on the indicators used. The similarity can also be seen in the comparison maps showing the distribution of degrees of disadvantage throughout the two states in 1999 and 2003.

Structure of the report

Chapter 1 establishes the links between the present report and an earlier publication *Unequal in Life* (1999). Many of the same indicators as well as some additional ones are employed to assess the degree of social disadvantage within 647 postcode areas in Victoria and 587 postcode areas in New South Wales. In addition, the present study incorporates a number of indicators of a different kind that relate more to the social ties between residents of localities than their degree of material disadvantage or restricted life opportunities. While the report has a strong local focus it acknowledges that the causes and potential remedies of social disadvantage are located at many levels including the major influence of structural and macroeconomic factors. Where an accumulation of problems makes a serious impact upon the wellbeing of residents of a disadvantaged area, locality-specific measures may be needed to supplement general social policy.

Chapter 2 summarises and, where necessary, updates the rationale for the use of indicators used in 1999 and repeated in the present study. Pivotal to this endeavour is the World Health Organisation's (1998) concept of the *social gradient*. Studies cited in Chapter 2 show the growing evidence supportive of the WHO's position. Chapter 2 also introduces and justifies the additional 'disadvantage' indicators used on this occasion. These include standardised *mortality rates*, *sickness and disability support*, *imprisonment*, *non-completion of Year 12/not in further training* (among 17 to 24 year olds, as distinct from the proportion of the postcode population that left school before age fifteen), and *disconnection of the domestic electricity supply*.

One line of convergence in current international research is upon the importance of a community attribute called *collective efficacy* in combating the harmful effects of socio-economic deprivation. This is a combination of *social cohesion* (a close-knit and trusting neighbourhood that is willing to work towards the best interests of the community), and *social control* (people's willingness to intervene to control or correct young people's misbehaviour). Communities with a high level of this attribute enjoy a reduced level of crime (regardless of the level of poverty in the area), as well as reductions in other problems. An approximation to the social cohesion component of collective efficacy has been used in the present study. A table summarising the indicators employed in the project is presented at the conclusion of Chapter 2.

Results and comparisons with 1999

A distinction is drawn in the report between two ways in which social disadvantage is concentrated: i) high rates of occurrence of different forms of disadvantage taking into account the number of people in each locality to whom the problem could apply by virtue of their gender, age or some other characteristic; ii) the sheer magnitude of instances of a form of disadvantage that occurs within a limited number of postcodes. The first-mentioned approach was the one used in *Unequal in Life*. The current study used thirteen indicators of disadvantage in Victoria. The distributions of rates of disadvantage have been considered in two ways. The first is relatively straightforward and involves constructing lists of postcodes with the thirty highest rates on each of the indicators. These lists are called 'Top 30' rankings. A second approach is more technical in nature and assesses the general vulnerability of each postcode area to all of the forms of disadvantage represented by the indicators used. We refer to this approach as the 'General Disadvantage Factor Scores,' details of which appear a little later in this summary.

After calculating the appropriate population rates it was found that a high proportion (38.2%) of the Top 30 rankings on each of the 13 indicators were accounted for by 4.8% of Victoria's postcodes. This is proportionately very similar to the result in 1999 (when 4.8% yielded 36.5% of the top positions). In NSW fourteen indicators were employed. A high proportion (48.3%) of Top 30 positions were accounted for by 6.1% of NSW postcodes. This result was slightly below the 1999 result (6.1% yielded 56.0%). Nevertheless we conclude that in the current study in both states a relatively small proportion of postcode areas occupied eight times their share of the Top 30 places.

This geographic concentration of social disadvantage is further illustrated by the frequency with which some individual postcodes appeared in the Top 30 rankings. In the present Victorian study six areas appear in the Top 30 lists between six and nine times. For present purposes they are identified with a single place name but a more comprehensive list of the places located within each postcode is presented in the compact disk accompanying the report. The six top-listed locations are postcodes 3520 (Korong Vale), 3887 (Nowa Nowa), 3594 (Nyah), 3851 (Seaspray), 3835 (Thorpdale), and 3544 (Ultima). Twenty-five postcodes appear in the top 30 lists four or five times and a further 66 locations appear two or three times.

How different were these 2003 results from those of 1999? Allowance has to be made for the fact that ten indicators were used in the previous study compared with 13 in 2003. That considered, the pattern was one of considerable stability. Of the 31 postcodes that appeared at least four times in the current Top 30 lists, eight had been listed four or more times, 14 had appeared three times, and 22 had appeared at least once in 1999¹.

In NSW in 2003 eleven postcodes occupied positions in the top 30 lists between seven and eleven times. They included postcode 2668 (Barmedman), 2559 (Claymore), 2839 (Brewarrina), 2846 (Capertree), 2585 (Galong), 2381 (Gunnedah-Forward),

¹ One location had a different postcode identity in 1999.

2807 (Koorawatha), 2834 (Lightning Ridge), 2369 (Tingha), 2017 (Waterloo), and 2306 (Windale). Twenty-five postcodes appeared in the top 30 lists between four and six times and a further 45 locations appeared between two and three times. How stable were the NSW results between 1999 and 2003? Again, allowance must be made for the fact that in 1999 only nine indicators were employed, compared with 14 on this occasion. The pattern was again one of marked stability. Of the 36 locations that appeared at least four times in the current NSW Top 30 lists, seven had been listed five or more times, 15 had appeared at least four times, 26 had previously appeared at least twice, and all but five had appeared at least once.

General disadvantage scores

The major way in which rates of disadvantage have been employed in the current study has involved the calculation of 'General Disadvantage Factor Scores'. Statistical techniques have been used to reduce the different strands of information about each postcode, represented by its set of indicator scores, to a unitary measure of each area's overall relative social disadvantage. Provided certain technical requirements are met the issue of arranging postcode areas according to their degree of susceptibility to disadvantage is reduced to examining scores along a single dimension. This requirement was met in the case of NSW and the forty most disadvantaged areas are listed in the report in groups of six in descending order of disadvantage save for the last band that includes 10 postcodes. Full details are presented in Table 4.3 but the 30 highest-ranking postcodes on the general disadvantage factor were:

2839* (Brewarrina), 2807* (Koorawatha), 2834* (Lightning Ridge), 2369* (Tingha), 2462 (Ulmarra), 2306* (Windale), 2449* (Bowraville), 2559* (Claymore), 2585 (Galong), 2440 (Kempsey), 2502 (Warrarong), 2820 (Wellington), 2506 (Berkeley), 2846 (Capertree), 2848 (Kandos), 2327 (Kurri Kurri), 2770 (Mount Druitt), 2017* (Waterloo), 2361 (Ashford), 2880 (Broken Hill), 2294* (Carrington), 2505 (Port Kembla), 2832* (Walgett), 2831 (Western Plains MSC), 2395 (Binnaway), 2470 (Casino), 2304 (Mayfield), 2441* (Mid -North Coast MSC), 2448* (Nambucca heads), 2455 (Urunga).

How similar was this list of the highest-ranking postcodes to the comparable list in 1999? Twelve of the 30 NSW places listed in 2003 were in the 1999 list. An asterisk marks them above and the overlap can be seen to be particularly strong among the top ranking locations. Seven of the ten first-ranked postcodes in 2003 appeared in the 30 highest-ranking locations in 1999. Another way of considering the consistency of the rank order of postcodes on the disadvantage factor in 1999 and 2003 involves the use of the correlation coefficient (known as r). This coefficient lies between 1.00 and -1.00 . When r is 0 we say there is 'no correlation' between two variables (in this case pairs of disadvantage scores). Where r is -1.00 there is a perfect negative correlation; that is, when X increases, Y decreases. Where r is $+1.00$ there is a perfect positive correlation; when X increases, Y increases. In the case of the two sets of disadvantage scores for NSW (1999 and 2003) the correlation was quite high at .862. The 2003 results also correlated highly with the ABS *Index of Relative Social Disadvantage* ($r = .867$). The latter result was similar to the result in 1999 ($r = .913$).

A similar general risk factor was used to identify the 40 most disadvantaged postcodes in Victoria. Full details are presented in Table 4.4 but the 30 highest-ranking postcodes on the general disadvantage factor were:

3523 (Heathcote/Argyle), 3019* (Braybrook), 3177* (Doveton), 3520* (Korong Vale), 3887* (Nowa Nowa), 3594* (Nyah), 3889* (Cabbage Tree Creek), 3984* (Corinella), 3515 (Marong), 3595* (Nyah West), 3962 (Toora Toora), 3081* (West Heidelberg), 3047* (Broadmeadows), 3214* (Corio), 3472 (Dunolly), 3915* (Hastings), 3965 (Port Welshpool), 3835 (Thorpdale), 3890 (Cann River), 3556* (Comet Hill), 3821 (Crossover), 3423 (Jeparit), 3465 (Maryborough), 3840* (Morwell), 3858 (Heyfield), 3950* (Korumburra), 3909 (Lakes Entrance), 3851 (Longford), 3701 (Tallangatta Valley) and 3995 (Wonthaggi).

The similarity between the 2003 and 1999 lists of the highest-ranking postcodes was slightly more marked in the case of Victoria. Fifteen of the 30 places listed in 2003 were in the 1999 list. An asterisk marks them above and the overlap is again particularly strong among the top ranking locations. Eight of the ten first-ranked postcodes in 2003 appeared in the 30 highest-ranking locations in 1999. However the correlation between the 1999 and 2003 results was marginally below the comparable result for NSW at $r = .781$. The correlation between the 2003 results and the ABS Index of Relative Social Disadvantage ($r = .839$) was virtually the same as in 1999 (.828).

While the degree of disadvantage of a locality may limit the life opportunities of its residents, some communities burdened by disadvantage appear more resilient than others in overcoming adversities. Using admittedly limited data garnered from existing Victorian and Commonwealth sources, a measure of *social cohesion* has been created that seems to capture something of the resilience displayed by some communities. When information about three aspects of neighbourhood life - volunteering, group recreation and expectations of informal help - are combined into a single score, communities that score highly on this measure seem to cope considerably better in the face of unemployment, low family income, low occupational skills and limited education, than those that do not. And on the present evidence, the differences are not of a minor nature. Without diminishing in any way the importance of macroeconomic factors to the economic and social health of a neighbourhood, the findings are a reminder that a community's internal relations can also play a significant part in shaping its wellbeing.

Finally, taking another view on the concentration of disadvantage, namely the sheer volume of problems to be found in different localities, the study found that a small number of postcode areas account for a large proportion of instances of different types of disadvantage. So far as Victoria was concerned, 25% of the total on each of 15 indicators were accounted for by 5% of postcodes. In four of the fifteen cases it required less than 3% of postcode areas to cover the 25%; in a further five cases it needed less than 4% to account for the same proportion. The strategic potential of this information was enhanced by the fact that many of the same areas accounted for significant proportions of the totals of several forms of disadvantage. The concentrations of disadvantage within a relatively small number of NSW postcodes did not quite achieve the same degree of compactness. Nevertheless, 5.9% or less of postcodes in every instance accounted for 25% of the total for each indicator. In three instances - imprisonment (3.2%), child abuse (3.4%) and long-term unemployment (4.1%) - it required around 4% or less to cover a quarter of the cases. Just as in Victoria, the concentration of disadvantage within certain postcodes is not simply attributable to the scale of population involved.

CHAPTER 1: SOCIAL GEOGRAPHY AND DISADVANTAGE

The present project is the sequel to an earlier report, *Unequal in Life* (1999) and incorporates many of the same indicators of social disadvantage, as well as some new ones. In addition, the present study incorporates a range of indicators of a different kind that relate more to the social ties between residents of localities than their degree of material disadvantage or restricted life opportunities. In its general character the research is linked to a long tradition of studying social inequalities and their effects by comparing geographic areas, an approach that has illuminated the ways in which people's opportunities in life can be constrained by local conditions and problems.

Mayhew's (1861) study of the spatial concentration of crime in mid-19th Century Britain and Wales and its relationship to other variables, including illiteracy and the rate of teenage marriage, was an early example of the social-geographical approach to the understanding of social phenomena. Mayhew's work (illustrated below) helped to pioneer the now established method of mapping the spatial concentration of social variables, including those linked with the notion of 'disadvantage'. The approach is thought by its adherents to throw light upon the relationship between an issue of special interest (mental illness, crime, child abuse and the like) and what are termed 'ecological' variables, such as poverty and urbanisation.

In contemporary forms of this research the intention is not just to regard neighbourhood measures as proxies for individual level data. An influential contemporary project² (Krieger and collaborators, 2003) asserts on the basis of considerable evidence that area based measures are meaningful indicators of socio-economic environments in their own right. The indicators provide information on not only the area's residents but also area level characteristics not reducible to the individual level. The intricacies of this perspective are teased out in Chapter 2 as a prelude to the consideration of the spatial variations in social disadvantage in New South Wales and Victoria revealed by the present study.

² Public Health Disparities Geo-coding Project





Figure 1:

The intensity of criminality

Map showing the number of criminal offenders to every 10,000 of population in each county of England and Wales, in the 1860's. The counties shaded are those in which the number of criminals is above the average. The counties left white are those in which the number of criminals is below the average. Averages were calculated from the returns for the last ten years.

Map source: *London Labour and the London Poor*, volume 4, New York: Augustus M. Kelly, 1967.

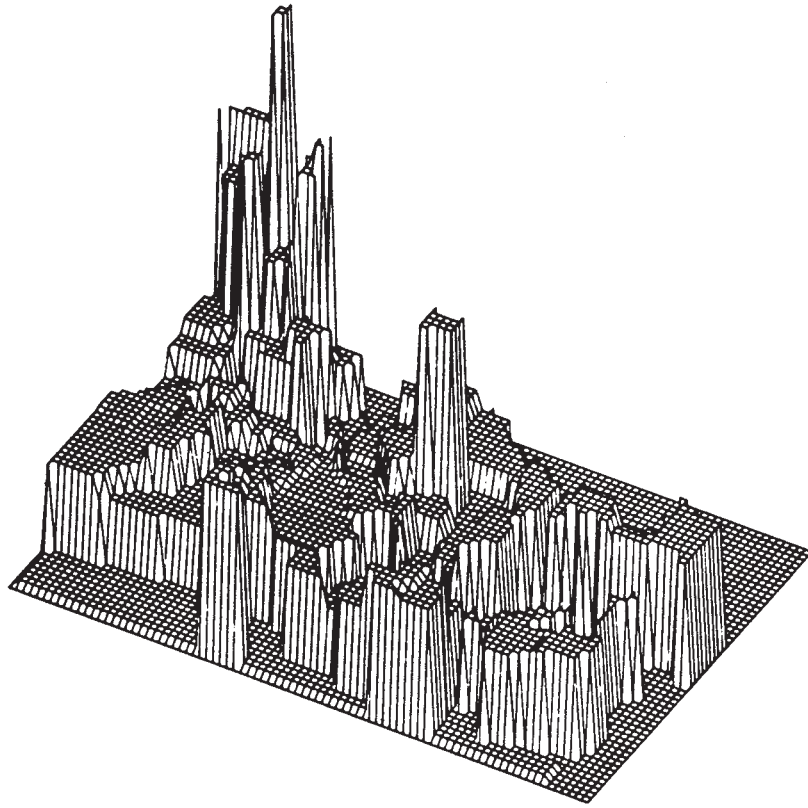


Figure 2: Variations in “risk scores” across 75 minor suburbs of Newcastle (Vinson, T. and Homel, R., (1975) “*Crime and Disadvantage. The coincidence of medical and social problems in an Australian city*”, *British Journal of Criminology*. Vol. 15, No. 1, 21-31.

Another issue discussed in Chapter 2 is the difficulty of establishing causal patterns from measures of community attributes. However, this problem is common to many forms of social inquiry and when the issues involved are as serious and persistent as social disadvantage, then gaining enhanced, albeit incomplete, understanding of what is involved justifies the effort involved. This is particularly the case when a major purpose is to improve social equity by encouraging the re-direction of social resources to where they are most needed. In the view of a pioneer in this field (Smith, 1994), resources devoted to need satisfaction in places with relatively low levels of resources will achieve more than in places with high levels. The 1999 *Unequal in Life* report was intended to encourage just such a distribution of services and resources and following its release there was considerable evidence of a re-direction of human services staff and funding to localities of great need in both Victoria and New South Wales.

Particularly significant was the New South Wales Government’s decision to support a ‘strengthening communities’ project within the southern Newcastle suburb of Windale. Both the 1999 study and a similar project conducted approximately 25 years earlier (Vinson and Homel, 1975) indicated that a special effort should be made to back the community of Windale in creating improved educational, work, health and other opportunities for residents. Social indicator data of the type presented in the current study can help identify the need for more intense assistance in certain locations but the credit for what is being achieved in the case of Windale resides overwhelmingly with the residents themselves. A brief summary of some of those achievements over recent years, together with accounts of two similar projects based in Victoria, appears at the conclusion of this introductory chapter.

In the experience of Smith (1994), in addition to inequalities in the distribution of services and material resources, locality itself is a resource. Local networks of friendship, kinship, and mutual support form part of what people draw on in their struggle to satisfy their needs. Wolch (1989, p. 215) makes the point that places vary in their reserves of social and political capital: “Some local jurisdictions have far greater voluntary resources on which they are able to draw for service augmentation, public sector substitution, and political action”. A difference between the present report and *Unequal in Life* is that this time a start has been made with including a limited range of indicators that relate to the ‘inner strengths’ of communities. It is easier to specify desirable indicators for this purpose than to locate data at the small area level on attributes like the existence of support networks and people’s involvement in volunteering. Nevertheless, some relevant statistics have been located and their use in this present project is described in Chapter 2 (see the section *Available indicators for assessing neighbourhood social cohesion*).

Indicators of social deprivation or disadvantage are now in wide use in many countries and here the Australian Bureau of Statistics (1994) publishes an Index of Relative Socio-economic Disadvantage that enables local areas to be ranked on this variable. While there is a substantial degree of overlap between the Index and the approach used in the present project one difference is that the ABS measure is totally reliant on census data. The variables involved focus upon low income, low educational attainment and high unemployment. The assessment of disadvantage made in the present study is conceptually distinct. It involves the use of a wide range of variables selected on the basis that they are direct manifestations of disadvantage entailing a minimum of theoretical suppositions. Examples include child abuse, imprisonment, the discontinuance of household electricity supply, mortality rates and psychiatric hospital admissions. More often than not this information has to be garnered from government departments and agencies.

Advantage has been taken of a small number of census items that meet our general requirements but we have resisted the temptation to augment the range of variables employed by simply including available census information. This decision is consistent with the belief of two leading researchers in the field that merely adding census variables to indexes entails conceptual confusion (Carstairs and Morris, 1991). They comment that better measures of disadvantage could be constructed “if government departments would make available some of the wealth of information that currently lies hidden (within them)”.

There are additional indicators of social disadvantage that could have been included had pertinent data been available and/or authorities been willing to provide the required information. A complication in this regard is the use in the present study of postcode areas as the geographic unit of analysis. Potential indicator data is more readily available at the Local Government Area level but the larger and more heterogeneous populations that are involved frequently result in the social advantages of some sub-areas cancelling out the disadvantages of others. As a result the social deprivation of some localities can remain concealed. To a lesser extent the same problem can arise with postcodes but this is the smallest practicable unit that can be used to gather the kind of disadvantage data that is preferred.

Of course, there is no standardised data collection framework that assuredly detects all geographic concentrations of social disadvantage. Micro-social environments can occur in patterns that are not aligned with administrative or statistical boundaries (Vinson and Baldry, 1999). A related issue is the meaning ascribed to the findings of small area research, a question recently examined in a review of the New Zealand Dep96 Area Index (Salmond and Crampton, 2001). Because of the previously noted heterogeneity of area populations it cannot be assumed that every resident of a deprived area is deprived. However, researchers have established that the use of small spatial areas diminishes the extent of measurement error. Given that fact and the population/geographic scale at which relevant data is available, the practical solution adopted in this project is to use postcode areas as the principal level of analysis. The information yielded at that level can be supplemented, where it is considered necessary, by the more general statistical information available for smaller census collectors' districts.

In the interests of avoiding misunderstandings about the significance attached in this project to local area deprivation it is necessary to make one final introductory remark: the causes and potential remedies of social disadvantage are located at many levels. Evidence presented in Chapter 2 illustrates the fact that neighbourhoods can have independent effects. However, that is not invariably the case with respect to all aspects of health or personal and social functioning nor is the spatial approach to the understanding of human well being always more illuminating than other perspectives. For example, many scholars stress the overwhelming influence of structural macroeconomic factors in creating concentrations of poverty (Atkinson and Kintrea, 2001, pp.2278-2279). Social problems, such as family breakdown, can flow directly from unemployment. Positive changes in the economy also impact positively on poor areas many of whose residents benefit from the upswing. In many instances it is necessary to respond to social disadvantage by providing universal social measures, or measures that combat poverty wherever poor people live, rather than by area-selective welfare provisions.

Nonetheless, research shows that neighbourhood disadvantage can be important in addition to individual circumstances. There are associations between poor neighbourhoods and other social problems that are more than the consequences of macroeconomic forces and household characteristics. Atkinson and Kintrea add that the larger and longer running an area's problems, the stronger the cumulative impact becomes causing a drain on services with resultant lower-quality 'outputs', such as educational performance or health care.

The view espoused by the present project is that where an accumulation of problems makes a serious impact upon the well being of residents of a disadvantaged area, locality-specific measures may be needed to supplement general social policy. Continuing research also is needed to identify areas of special need and to gain a better understanding of the restorative strategies that may be available. The three brief case studies that follow illustrate some of the planned initiatives that can be taken to strengthen a community previously lacking in the educational, health, employment and other social opportunities available to its adults and children. They also illustrate the fact that strengthening the connectedness or *social cohesion* of disadvantaged areas is an integral part of renewing the life opportunities of people.

The importance of social cohesion is illustrated in Chapter 5. Meanwhile, the first study deals with the Windale project in southern Newcastle. The Strengthening Communities Unit of the NSW Premier's Department has provided this summary together with a number of life stories of women who live in Windale. The latter can be found on the compact disk. The women made their stories available on the understanding that they would be included in the present report. The second case study has been provided by the Victorian Department of Communities, the third by Jesuit Social Services, the organization responsible for the current project.

WINDALE CASE STUDY OF PLANNED COMMUNITY STRENGTHENING

Prepared by the Strengthening Communities Unit, NSW Premier's Department

Windale was established in 1949 as a Department of Housing suburb in southern Newcastle, comprising 1600 houses accommodating approximately 3200 people. The suburb was born with clear boundaries and is a distinctly encapsulated suburb with its own postcode. In 1999 the Jesuit Social Services released a report prepared by Professor Tony Vinson entitled *Unequal in Life*. The report measured social disadvantage by postcode in NSW and Victoria and rated Windale as being the most socially disadvantaged community in NSW. Windale is now characterised as disadvantaged with 34% unemployment, high disability rates, high fragile aged and people living with drug and alcohol problems.

Hunter Community Renewal Scheme

In response to the above-mentioned report, the Hunter Regional Coordination Management Group developed a Community Renewal Strategy to address the issues in Windale. This project was led by the Premier's Department and involved the various State Government Departments in the Hunter Region. The scheme was later extended to the Booragul/Bolton Point area and the Cessnock Local Government Area. It was funded by the Premier's Department, Hunter Area Health Service, Department of Housing, Department of Community Services, Department of Education and Training, Jesuit Social Services, Department of State and Regional Development, the Two Bishops' Trust and the Department of Sport and Recreation. Also involved were NSW Police, Lake Macquarie City Council and the community.

A comprehensive three-year Action Plan addressing social and employment needs was prepared and a 'Place Manager' was engaged for a three-year period in early 2000. This position ceased at the end of June 2003. The Two Bishops' Trust has employed an Employment and Business Development Officer for the past two and a half years with financial support from the state government.

In the Windale area there were eight phases of the Hunter Community Renewal Strategy:

- Initial consultation in March 2000;
- A community benchmarking survey, conducted in October 2000;
- A community forum held to consider the survey results and develop a draft Action Plan, in November 2000;

- The Windale Action Plan endorsed by the community and agencies in March 2001;
- Implementation of the plan and monitoring its progress between 2001 and June 2003;
- A post-benchmark survey in November 2002;
- Transition of responsibilities from the Place Manager to line agencies and transition of local project administration to the community in July 2003;
- Creation of the Windale Board of Management, a resident-run collective, to oversee community renewal activities.

The Benchmark Survey collected local residents' attitudes on the following issues: demographic descriptors, health risks, physical environment, community facilities and services, crime and safety, social capital and social cohesion, employment and parenting. These were used in the development of the Action Plan, as well as for the purposes of establishing baseline data.

The Action Plan identified nine key result areas:

1. Business development, employment and training;
2. Parenting and family responsibility;
3. Value of education;
4. Communication;
5. Activities for young people and children;
6. Physical improvements, image and community pride;
7. Community and domestic violence;
8. Drug and alcohol abuse;
9. Personal and community safety.

The guiding principles that underpinned the community renewal process included:

- Government must work with the local community-residents, business and all levels of government and non-government agencies;
- Consider the full range of social, economic and environmental factors;
- Develop holistic solutions to local problems;
- Select actions based on local priorities;
- Engage in sustainable actions and outcomes;
- Build on the strengths within the community and local agencies.

Achievements between 2001 and 2003

Over the three-year implementation period, 28 organisations undertook 96 actions within the Action Plan. Significant achievements have been made during this time including:

- Volunteer involvement has increased significantly with over 40 people being actively involved and receiving training;
- Two very successful festivals have been held, with over 10,000 people attending last year's festival;
- Twenty seven local women were successfully trained in an Assistant in Nursing course offered by WEA;
- Funding was received for the establishment of a shed for men in conjunction with the PCYC;

- Twenty five jobs and nine new start-up businesses were created including the establishment of the Crew Cuts Industrial, a tenant employment initiative of the Two Bishops' Trust;
- A local newsletter, *Valley Views*, was produced over two years and distributed to all households;
- Crime Watch was established at the end of 2002. This has involved a successful system of informal surveillance by residents. Women are now reporting that they feel safe when moving around the community at night. The Police also have reported that tensions between them and the community have lessened. As well, three drug houses have been shut down as a result of information provided;
- A 'School as Community' Centre has been established at Windale Primary School (Alcazar Centre) and this has become a blueprint for similar initiatives throughout New South Wales. Some of the programs introduced include: parenting classes; the staged introduction of pre-school aged children to school; exercise-cum-sociability groups for some isolated mothers; the identification of talented youngsters and provision of academic extension opportunities; locally created scholarships; the Department of Housing's relocation of some families to make school more accessible; the engagement of some fifty fathers in making various contributions to the life of the school and a generally increased involvement by parents in school-based committees, and a Shop Smart (nutrition) program. Recently the Director General of the Department of Education and Training gave the Alcazar Centre an Award for Excellence;
- Increasingly satisfactory attendance by all students over the last two years at the local schools and a more supportive relationship between the Indigenous and non-Indigenous parents of the school;
- An increase in residents' positive perceptions about living in Windale related to an improvement in the Pacific Highway entrance to the suburb, improved street lighting and the beautification of one of the major local streets;
- The introduction of a Domestic Violence Agency Referral Scheme (DVARs) that has resulted in fifty-seven referrals to services for support. This has been a good example of agencies such as the police and family support services working closely together;
- Five camps have been held for women at Myuna Bay and this has built stronger relationships between women in the Windale area;
- An inter-agency group has been established that fosters better partnerships between local service providers.

VICTORIAN CASE STUDY: WENDOUREE WEST NEIGHBOURHOOD RENEWAL

Prepared by the Department for Victorian Communities

The project

People with social and economic disadvantage struggle to raise families, maintain their homes and access services with limited facilities and income. They also live with an often subtle, yet strong, stigma attached to them and their community. Public

housing areas become known as “the other side of the tracks” or “the Bronx”. Residents of one such community - Wendouree West in Ballarat – have fought the image and revitalised their community. Residents have created new community facilities, enhanced health and wellbeing, improved employment and economic opportunities, and increased community safety. In doing so, they have shattered the stereotype of low-income communities.

Wendouree West, just northwest of Lake Wendouree in Ballarat is home to 2,500 people. Established as a public housing area for post war British migrants, the community has sunk into a cycle of disadvantage. Limited infrastructure and access to services, run down housing, intergenerational unemployment, and the negative image of the community have built on each other. Together, they reduce motivation, maintain dependence, suppress community pride and ownership and limit opportunities for residents to gain education and employment.

In 2001, the Office of Housing, Department of Human Services and other State Government Agencies joined with local residents to address persistent community issues in Wendouree West. Launched in April 2001, Wendouree West Neighbourhood Renewal is one of fifteen efforts in the Victorian Government’s Neighbourhood Renewal Program involving residents with government to improve the situation of disadvantaged communities. While part of the Neighbourhood Renewal Program, the Wendouree West effort is referred to locally as Community Renewal.

Initial community meetings led to the establishment of a Project Steering Committee and a Residents Group. Community members developed a Community Action Plan that included a clear vision for the community and a comprehensive action plan to achieve it. Kevin Waugh, a member of the Residents Group said, “We needed to understand it (Neighbourhood Renewal). It’s not the typical notion of the public service. A resident’s view of public servants was they were people we have battled to gain access to services. But residents now feel they are people who can talk with us.”

An important initial step in residents placing trust in the Neighbourhood Renewal Program was acknowledgement of the community’s situation. At early community meetings, people were able to express and validate that their community had had a raw deal for a long time. “Well here is a chance to do something about it,” said Kieran Murrhy, Resident Net-worker for the project. Once people believed that genuine power was being given to residents they were prepared to join committees. “People have to feel they are being listened to, not just told that they are,” said Gerardine Christou, Wendouree West Neighbourhood Renewal Manager for DHS.

The initiative also had early “champions” which gave the effort local credibility. Karen Overington, MP for Ballarat West, and Wendy Middleton, DHS District Manager communicated widely with residents. They challenged agencies and community members to work together and they supported residents who volunteered on committees. “There was a lot of thinking about housing redevelopment but Karen and Wendy pushed the public sector and the community well beyond that. They ran into all the barriers – agencies didn’t see it as core business, residents were suspicious of more promises,” said Gerardine Christou. “But now we have residents and agencies sitting around a table as equals. Residents and agencies now know that they

have to engage differently,” she added. “Things had to go slowly at the start to get people on board but people were being listened to and they started to understand the process and get confidence and passion. Cynicism has died down,” said Kieran Murrihy.

Neighbourhood Renewal is centred on genuine community involvement. It involves a mix of standing, short term, and informal ways in which residents can be involved with government agencies in acting on community concerns. The Steering Committee and Residents Group oversee action on three key topics – Learning, Employment and Economic Development; Community Well Being and Safety; and Community Works, Environment and Housing. A working group coordinates each of these.

Less formal working parties allow people to contribute as they can on issues such as mental health, Neighbourhood Watch, a skills survey and improvements to parks and sporting facilities. Neighbourhood Renewal has also deliberately created many ways for residents to informally “rub shoulders” and to have places for people to meet where they feel at ease.

Under the three key topics, work has progressed on a broad range of actions identified in the Community Action Plan. Residents have refurbished many of the houses in the area with many gaining skills in the 146 Community Jobs Program training positions created. A Community Hub is being developed incorporating a primary school and retail shops. The bare Jaycees Park will be upgraded and a BMX track is being redeveloped. Services are being improved with residents being trained in accessing government services. Services are being made more locally accessible. A Traffic Management Plan is being developed. Community murals have replaced Graffiti. A “tool pool” and community handyman helps people maintain their homes.

‘Secrets of Success’

Throughout the planning and action stages, community ownership has been vital. Communication has been a priority with residents doorknocking the area on several occasions. Community members have also communicated with a major community expo, newsletters, forums, a residents’ kit, media coverage, and an internet portal. Communication has meant far more than keeping people informed. The way residents and agency staff have communicated has built trust and respect. John Boers, a local resident said, “Even if we don’t get what we want, at least we have a voice. Now we can live with decisions because we understand. Before we didn’t have a chance to explain or have a voice”. For community members, seen for years as “Westies”, respect, trust and confidence have been both important drivers and outcomes of the project. “People are now proud of Wendouree West. As soon as people were trusted their confidence grew.” John added.

Kevin Waugh said, “Just being asked is empowering. We live in a world of \$1.20 and here we were contributing to a community hub project worth a million dollars. We were actually involved in the discussion and we could get into the process.” That involvement and respect has led to a tangible sense of pride and self esteem in a community that was demoralised. Far from people just “feeling good”, this self worth

and involvement has underpinned residents achieving “hard” outcomes, such as improved facilities and services.

Respect and confidence developed from recognising the existing assets of the community, self-belief, and overcoming stereotypes. “Government agencies, and the community itself, have underestimated the community. They have underestimated that the community has the capacity to make good decisions and to take action,” said Kevin Waugh. “We have third generation unemployment here but the project shows that Mums and Dads are not “no hopers”. Participation was crucial to community members gaining confidence. Over 60% of the community have been involved in some way in the project. Yet it took time for confidence and participation to build. Discussion and planning needed to be matched by action. “The talk-fests were hard going, but once people saw things happening they got on board,” said Kevin Waugh. These small visible actions built community involvement and gave the project momentum. “The CJP work meant that people were seeing other locals working in their own community. You could see it happening and people got to know each other,” said Kevin Waugh.

Another factor in the project’s success was the early recognition that activities needed to build the skills and knowledge of local people. The Residents Group saw this as very important and has maintained skill development as a key component of the project. This not only included “physical” skills but also focused on leadership, communication and assertiveness. Learning and skill development has also involved what local people call “gentle mentoring”. John Boers explained “When I was getting angry about poor services Keiran would say “say it like this”. He wasn’t saying “don’t say it” but rather helping me get me point across in a better way. I really appreciated that.”

A final “secret of success” has been humour and laughter. Making events fun, social and “friendly” has attracted people without compromising the importance of the issues or the legitimacy of decision-making.

Learning for Government

Residents had a poor relationship with government and Neighbourhood Renewal could have become a government project delivered “into” a community. While the effort brought additional government resources to bear, the real success of Neighbourhood Renewal was its redefinition of the relationship between communities and government agencies. It involved a different way for agencies to work with communities involving a commitment to community partnership, investment in relationships, community presence, and validating the capacity of the community.

Despite additional resources, the real “engine room” for improvements in Wendouree West has been community commitment and ownership. This has leveraged community input and volunteering that would easily outweigh the investment of government funds. The way in which agencies have worked with the community has brought this community effort to bear and built sustainability through local ownership and commitment.

The project has an organisational structure that mediates this partnership between government and the community. However, personal relationships have been the key to agencies and community members engaging each other. For agencies understandably focused on delivering services with limited resources, it would be easy to see relationship building as ill-defined non-core business. Yet it was the investment in relationships and trust that levered community action and enhanced the achievement of “hard” core business outcomes. Agencies can foster relationships by supporting field staff, instilling a culture of community partnership and by maintaining continuity of contact. A key factor that fostered relationships at Wendouree West was the community presence of the project. The physical location of the project office in a house in the community, rather than a government office, not only provided a face for agencies but also demonstrated genuine partnership with the community.

Neighbourhood Renewal has not only left Wendouree West residents with improved facilities, economic possibilities, and greater amenity. It has also fostered a more organised, functional community with residents with greater self worth and confidence. This has been the project’s real outcome. John Boers said, “If you give the community the chance they will grab it, but it is about being given the chance.”

INNER MELBOURNE CASE STUDY: CITY OF YARRA PUBLIC HOUSING ESTATES

Prepared by Jesuit Social Services Manager, Cathy Guinness

Communities Together project

In 1999, the Unequal in Life study identified a number of locations of high disadvantage in Melbourne. One of these was Collingwood post-code area, which roughly equated to the Collingwood high-rise public housing estate. This location, together with similar high-rise estates in Fitzroy and Richmond, was chosen for a community development project funded by the Department of Human Services and carried out by Jesuit Social Services. The project was named Communities Together.

Prior to the allocation of the funding JSS carried out two in-depth assessments of the service needs of low-income families on these estates. These assessments concluded that community needs were very high. Community participation on the high rise estates was seen to be impeded by a dozen factors including isolation and fear, disempowerment of tenant associations, lack of information in English and in other community languages, poor maintenance of the physical environment, illicit drug dealing and drug use and an increased sense of powerlessness particularly in regard to lack of effective policing of drug dealers.

The community development approach chosen by Communities Together can be described as follows:

Social needs within the mixed heterogeneous, inner-urban high rise neighbourhood communities will be met by community development practice aimed at relationship-building as a condition for increasing social capital and community participation in decision-making, and at maximizing the benefits of developing partnerships with external agencies. Community development

aimed at fostering participation in decision-making beyond service development may require alternative strategies more in the social action realm (*Final Evaluation Report, 2003*).

The project funding allowed for one Community Development Worker on each estate in Collingwood, Fitzroy and North Richmond, and the team selected was from a range of cultural backgrounds. The staff were based on the estates and co-located with other non-government staff where that was possible. The first year was spent developing relationships, networks and partnerships with other service providers and establishing a broad range of activities to get to know residents and for residents to connect with others from the estate. These included barbecues, festivals, community arts, sports and social support groups for specific ethnic groups. These were very successful in establishing a base of trust and respect between the workers and the residents.

Out of these relationships with residents, and with the support of many partners including the agencies with established work on the estates like the Community Health Centres, Tenant Advice Services, Neighbourhood Houses, the City of Yarra and the Office of Housing, a number of new projects were identified and developed. These included support groups with marginalized ethnic groups (Vietnamese mothers, Mandarin Chinese, Iranian and Afghan women, Somali women); a Computer Access Centre; a Community Information and Drop In Centre; the Yarra Multicultural Sports Program; a drug education project and homework support programs. As well the workers provided information and referral on a day-to-day basis, and access by residents to phones, photocopiers and faxes.

Communication strategies are an essential element of this work. The rights of people with a language other than English were respected by routinely providing translations of information and interpreters at meetings and social events, by providing newsletters, leaflets and posters, and by engaging bi-lingual workers and volunteers. With seventy-three languages used on the estates, it has not been possible to do more than address the major language groups. Vietnamese people are more numerous than English speakers, and it has been a priority of Communities Together to employ Vietnamese staff. Two of these have been estate residents. The considerable strengths of the major cultural groups are now being made available to the community.

The empowerment of residents in relation to decision-making has been achieved through setting up democratic structures and providing training in participation and advocacy. Estate Improvement Meetings where residents sit around the table with those responsible for essential services – security, policing, property maintenance, cleaning and gardening – had limited success in achieving real change. As a result of policy changes at State government level (Neighbourhood Renewal Initiatives), new neighbourhood advisory structures are being developed. These structures focus on equal representation of residents and agencies, and training in participation has been provided. Representatives include speakers of languages other than English. As well, a City of Yarra Community Advocates Project involving over forty residents from different language backgrounds in training and project development is being conducted in the three neighbourhoods.

To put the community development work in a broader context, it needs to be understood that initiatives have been taking place at different levels. Parallel to the

local grass roots developments that are the focus of Communities Together, there have been changes at Local and State government levels. These have been driven by the advocacy work of a network of local agencies coordinated mainly by the City of Yarra. Under the Bracks Labor Government there has been a significant injection of funding to upgrade the flats and public areas on the estates. This work has been expanded by a whole of government response to geographical disadvantage- the Neighbourhood Renewal Initiative. This initiative promises to shift the emphasis from physical facilities and welfare to education, employment and training. Already residents are gaining jobs on the estates as a result of Department of Human Services policy requiring contractors to employ a proportion of residents. In addition, the Community Jobs Programs have provided training to a considerable number of local residents.

Have these approaches worked and is the development sustainable?

Certainly there has been an increase in resident participation at many different levels. Residents have gained confidence, self-esteem and skills and have moved into voluntary work, education, training and employment. The level of safety and security on the estates has improved as a result of a collaborative effort by a range of agencies. The involvement of residents in planning and decision-making has risen significantly. Other changes are just at the planning stage. For example, new partnerships with the Brotherhood of Saint Laurence employment service and the Jesuit Social Services Gateway program promise new opportunities for training and employment.

Experience elsewhere around the world has shown that to achieve long-term change this locality development work requires up to 10-20 years. It will be very important to keep the momentum going if the gains are to see families shifted out of long-term unemployment and generational poverty, and for the communities as a whole to establish a culture of civic participation.

The foregoing case studies summarise some of the goals that can be achieved by cooperation between residents, community organisations and government agencies. The four chapters of this report that follow attempt to provide information that can assist the planned extension of comparable opportunities to adults and children living in other similarly placed locations in Victoria and New South Wales.

CHAPTER 2: LITERATURE UPDATE, CHOICE OF INDICATORS AND PROCEDURES

As mentioned in Chapter 1, the present project is the sequel to an earlier report, *Unequal in Life* (1999) and incorporates many of the same indicators of social disadvantage, as well as some new ones. The overall purpose of the study is to build upon and refine the earlier findings so that the following preparatory work is undertaken in this chapter:

- Part 1 - Briefly summarise and, where necessary, update the rationale for the use of indicators employed in 1999 and repeated in the present study. A more extensive justification, with references, is presented in Chapter 2 of *Unequal in Life*;
- Part 2 - Introduce and justify the additional ‘disadvantage’ indicators used on this occasion; and
- Part 3 - Review the evidence for the influence of place of residence – referred to as *area effects* - on human wellbeing, over and beyond the influence of individual and family attributes. This objective requires a somewhat more extensive consideration of the present state of knowledge of the field. The review is followed by a presentation of some available indicators for assessing neighbourhood ‘social cohesion’ in the present study.

PART 1-REPEATED INDICATORS

Health, illness and the socio-economic gradient

The World Health Organisation (1998) has summarised the evidence for the influence of social factors in the following way: Poor social and economic circumstances affect health throughout life. People further down the social ladder usually run at least twice the risk of serious illness and premature death of those near the top. Disadvantages tend to concentrate among the same people and their effects on health are cumulative. This general picture has been qualified to some degree by evidence that for some conditions the socio-economic association can be reversed.

A recent Australian study of end-stage renal disease (Cass, Cunningham, Wang and Hoy, 2001) produced findings consistent with the national and international literature regarding the social determinants of health and illness. Variations in relative disadvantage (Australian Bureau of Statistics Index of Relative Socio-economic Disadvantage) were significantly associated with the standardised incidence of end-stage renal disease. Since the WHO published *The Social Determinants of Health* (1998), the longer-term consequences of early life disadvantage have continued to be researched and documented. Hertzman, 1999 (cited in Bradley and Corwyn, 2002) describes this process as the “biological embedding” of early experience, a concept that includes the effects of early biologic damage and differences in the quality of early environments. There is recent evidence that neighbourhood of residence is associated with health prior to birth. Vrijheid, Dolk, Stone, Abramsky, Alberman and Scott (2000) have found that the risk of non-chromosomal anomalies increases with the socio-economic rating of different areas.

A team of researchers who have examined the life course accumulation of disadvantages has made another recent contribution to the tracing of continuous health difficulties in life. Holland, Berney, Blane, Davey-Smith, Gunnell and Montgomery (2000) have studied the association between physical and social disadvantage during childhood and lifetime exposure to health-damaging environments within and outside of people's homes. Childhood height and the presence or absence of signs and diagnoses of chronic disease were chosen as indicators of childhood health. The hazards considered varied from residential dampness to air pollutants and occupational fumes and dust. For both males and females age-adjusted height during childhood was found to predict total lifetime exposure to combined hazards. This association was most pronounced among males from manual class backgrounds and the authors conclude that "...a series or a chain of problems was experienced because one precipitated another" (pp. 1293-94).

Unemployment

The WHO states that unemployment puts health at risk and unemployed people and their families suffer a substantial increased risk of premature death. Job uncertainty and the threat of job loss are related to increased psychological disorder, anxiety, depression, and harmful bodily effects. When joblessness becomes concentrated within particular neighbourhoods an environment is created that isolates residents from the world of work and promotes a culture of dependency.

Low birth-weight

Low birth-weight is a strong risk factor for infant mortality and varies by social class. A decline in social status, the level of parental education (especially that of mothers), living in economically deprived areas, diminished support networks, the timing of pre-natal care and community unemployment rates are among the factors implicated in the occurrence of low weight babies. Studies that have focused on community level social phenomena show the contribution of a cluster of variables subsumed by the term *economic hardship* to the occurrence of low birth weight deliveries. Low *per capita* incomes, unemployment, indicators of social class generally, environmental stressors and poor housing conditions are among the predisposing factors (Roberts, 1997; O'Campo, 1997).

Child maltreatment

International and local studies of the distribution of confirmed instances of child abuse have revealed a tendency for such cases to be geographically clustered. A Sydney study has highlighted the detachment of people living in neighbourhoods with high rates of child abuse from local residents and their neighbourhood generally (Vinson and Baldry, 1999). Using state-level panel data, Paxon and Waldfogel (2002) have recently reported that socio-economic circumstances, including income and employment status, affect the incidence of child maltreatment. Increases in the fraction of children living below 75% of the poverty line are associated with higher rates of child maltreatment. Ernst's (2001) examination of the neighbourhood correlates of child maltreatment indicates that neighbourhood structural factors, including poverty and residential mobility, are related to high rates of child maltreatment. A typical state of affairs is for unemployment to be one element of a

recurring constellation of social factors within low-income urban neighbourhoods that includes crime, single parent households and mobility, as well as limited cohesion and support among neighbours (Roosa, Jones, Jenn-Yun and Cree, 2003).

Childhood injuries

Research has regularly shown that injuries to children are not spread evenly over all social groups. Hospital accident department studies show that more frequent and more severe injuries occur among the families of unskilled workers. Increased levels of maternal education and increased maternal age are also associated with decreased risk of serious accidents involving children (Alwash and McCarthy, 1988). Localities characterised by low-income households, single parent families, low education and unemployment have higher rates of childhood accidents with low income being of particular significance. A recent Scottish review (Central Research Unit, 2000) indicates that the incidence of traffic injury in deprived urban areas is greater than in more prosperous areas. Social class was found to correlate highly with mortality for all ages by all causes of death with child pedestrian death rates correlating closely with all causes of child deaths.

Education

Research has generally indicated that the number of years of formal schooling is among the best predictors of good health (Stacey, 1998). Among the young, schooling is associated with the avoidance of smoking, children's nutritional intake, cognitive development and good health generally. Extended education is associated with the amount and quality of time parents spend with their children and the number and spacing of births. It is negatively associated with early family formation, child abuse and neglect. People with higher levels of education also experience better mental health, including low levels of depression and psycho-physiological illness. In the sphere of crime prevention, the socialising and supervisory aspects of education appear to play an important role.

Psychiatric admissions

An association between admissions to hospital for mental illness and socio-economic status has been acknowledged for more than fifty years. The classical study of Faris and Dunham (1939) has recently been updated with respect to the independent effect of place of residence on mental wellbeing (Silver, Mulvey and Swanson, 2002) and the current research is summarised in a later section of this chapter (see *Influence of Place of Residence*). Other research, summarised in *Unequal in Life*, testifies to the connection between social disadvantage (particularly an area's unemployment rate) and psychiatric admissions.

Crime

There has been an increasing emphasis upon neighbourhood studies of crime rather than larger population groups. The general direction of the findings of this research is that a small proportion of offenders commit a large proportion of crime and that a small proportion of areas (and victims) suffer a large proportion of crime committed. Those charged with perpetrating crime are more often found in a limited number of

poorer socio-economic neighbourhoods (Hope and Hough, 1998). Another recent development has been an observed relationship between income inequality and homicide, assault, burglary and robbery but not property crimes (Wilkinson, Kawachi and Kennedy, 1998). This line of research is discussed in a later section of this chapter, as also are the more recent, sophisticated studies of factors that mediate the relationship between socio-economic deprivation and crime.

Income

Income is interwoven with the influence of the other factors briefly outlined above. A contentious issue is whether it is the absolute material standard of living within an area that is the important ingredient for health and wellbeing or is it inequality *per se* that is bad for the health of an area or nation? There is considerable evidence supporting the latter of these two views with perhaps the best known proponent of the relative inequality position, R. G. Wilkinson (1998) arguing that the evidence strongly suggests that the health effects of income distribution ‘involve comparative social cognitive processes, rather than the direct effects of material standards’. This claim continues to attract considerable research attention and is further discussed in a later section of this Chapter titled *Influence of Place of Residence*. Meanwhile, the present project includes ‘low family income’ as one of the indicators of disadvantage.

Dire shortage of money

Beyond the general role of low income in the creation of disadvantage, an extreme measure of financial disadvantage helps to measure economic deprivation at something approaching near-survival level. In a 1975 study of Newcastle (Vinson and Homel) it was found that the best single item of information for identifying ‘at risk’ areas of the city was the distribution of financial aid handled by non-government agencies. Regrettably, as a result of a Commonwealth Government decision, in the past few years’ data on the distribution of emergency relief has no longer been collated by the Victorian and New South Wales Councils of Social Service. Hence, it is not possible to include this variable in the present project.³ If governments wish to be informed about the geographic distribution of social disadvantage then the collation of information concerning emergency relief needs to be restored on the basis that the organisations distributing the funds report the postcodes of beneficiaries.

Meanwhile, brief mention should be made of another potential indicator of the near-survival level existence of some individuals and families. One of the questions asked by the NSW Department of Health in its Continuous Health Survey Program concerns having the means to purchase food. The Survey, which began in January 2002, covers the following eight priority areas: social determinants of health, environmental determinants of health, individual or behavioural determinants of health, major health problems, population groups with special needs, settings, partnerships, and infrastructure. Twenty two thousand interviews are conducted each year using automated and interactive reporting facilities. Unfortunately this information was not available to the present project, as well as a number of *social capital* items concerning volunteering, participation in community events, active membership of local

³ NCOSS conducted a survey of more than 300 agencies and units of community organisations in a valiant effort to make the NSW data available for the present analysis but too few returns were obtained for that to be possible.

organisations, perception of local safety, and identification with one's local area. There is no doubting the relevance and usefulness to future studies of disadvantage of much of this information.

PART 2 - ADDITIONAL INDICATORS

Mortality

Unequal in Life reported some partial findings in respect of mortality rates using a synthetic indicator. On this occasion standardised mortality rates for all postcode areas have been calculated taking into account the age differences between the areas. Essentially the indicator measures the difference between the number of deaths in each locality and what would be expected on the basis of statewide rates, given the age profile of the locality.

Sickness and Disability Support

To be eligible for sickness and disability support, people have to manifest either short-term or enduring incapacity to a degree that warrants financial assistance. Eligibility for assistance takes account of an applicant's assets and income. High rates of these benefits reflect a combination of economic stress and the social influences that are associated with illness justifying the use of a combination of the two forms of benefit as an indicator of disadvantage.

Imprisonment

A long established relationship exists between social disadvantage and high rates of imprisonment. The unskilled occupational background of the majority of prisoners and their poor level of formal education – two-thirds are functionally illiterate in NSW – testify to their markedly depressed economic and social backgrounds. The present project affords the opportunity to examine the relationships between imprisonment rates within postcode areas and a wide array of other indicators of disadvantage.

Early school leaving

In Part 1 of this chapter we noted the crucial influence exerted by education on many aspects of wellbeing throughout life. *Unequal in Life* employed an educational attainment indicator in the form of the proportion of postcode populations that left school before 15 years of age. That variable is repeated on this occasion. In addition, an indicator that reflects the educational and training backgrounds of young adults has been constructed on the basis of the number of young people between 17 and 24 years who have not completed high school and are not undergoing further education or training.

Disconnecting the domestic electricity supply

Cutting off the electricity supply to homes should be a strong indicator of survival-level disadvantage. Yet to the best of our knowledge this type of information has seldom, if ever, been used as part of a set of indicators of social disadvantage. The reason may be that it is necessary to gain the cooperation of a number of power companies, a task partly but not entirely successfully facilitated on this occasion by the Energy and Water Ombudsmen of NSW and Victoria. The decision to concentrate on electricity supply was based on the obviously widespread reliance on that form of domestic energy in both states and the reluctance of water providers to disconnect because of the health issues involved.

The consequences of being denied electricity are sufficiently severe for the companies involved to wish to use the measure only as a last resort. There is a statutory provision for warnings to be given followed by a final notice of intent to discontinue the service. The focus of the present study has been upon the issuing of ‘final notices’ (the number of defaulting households as a proportion of each company’s customer households within each postcode area during a specified period). Unfortunately, the ‘commercial in confidence’ nature of part of the information requested – the number of each company’s customer households – has been a problem in both states while one NSW company has yet to supply postcode level data. As a result this item is not available for New South Wales. In Victoria, ‘default’ rates have been calculated using the number of households rather than domestic customers as the divisor, an approach that has not proved satisfactory (see Chapter 4). Nevertheless, it would be worth persevering with the appropriate construction of a ‘cutting off electricity’ indicator for use in future projects of this nature.

PART 3 - INFLUENCE OF PLACE OF RESIDENCE

The notion of strong communities

A major theme of this project is the interplay of disadvantaged circumstances and the social environment of localities. There is a resurgence of interest in this issue but as Forrest and Kearns (2001, p.2125) have recently reminded us, concerns with neighbourhood, community and social cohesion have a long history in social policy and sociology and were of central interest in the first half of the 20th century.

There has been a tendency over the years to equate changes to the structures of living with the demise of social cohesion (Pahl, 1991). It is not the purpose of the present research to adduce evidence for or against the broad claim of diminishing societal cohesion. Rather, the focus in this project is upon the neighbourhood, or at least an approximation to it in the form of post-code areas. It is at that geographic level that the continuities of life, what Forrest and Kearns call “the small scale domesticity of most people’s lives” can more readily be observed. The same authors point out that the strength of social cohesion depends upon what spatial scale one is examining and that it is more apt to speak of ‘neighbourhood transformed’ rather than ‘neighbourhood lost’. They provide evidence of the fact that even the weak ties that predominate in some areas, described by Henning and Lieberg (1996) as

“unpretentious everyday contacts in the neighbourhood” can provide a feeling of home, security and practical as well as social support.

It is the contemporary evidence for the reality of those connections, all things considered, and especially the tools used to explore those relationships that are the focus of this section.

A central issue is whether inequalities between areas are essentially compositional, with individuals’ wellbeing depending on their (or their families’) characteristics? Or is it the case that “a concentration of some disadvantaged groups in particular areas gives rise to externalities with an additional effect on the opportunities, behaviour and wellbeing of (some or all of) the local population” (Buck, 2001, p.2252). At the individual plane: “Does it make my life chances worse if my neighbour is poor rather than rich, or disadvantaged on some other dimension?”

The pursuit of these issues relates to efforts by governments and other organisations to ‘strengthen communities’. The fact that we experience difficulties in answering questions as basic as *How do we recognise a strong community when we see one? How can we best facilitate the development of strong communities?* attests to the early stage of knowledge building that we are at in this field. Two Australian writers (Stone and Hughes, 2002) have asked how existing social theories can help to answer such questions. They see potential in two theoretical perspectives. The first, *social cohesion*, is a characteristic of society concerned with the connections and relations between social units such as individuals, groups and associations. Stone and Hughes argue that “The concept of social cohesion can be seen as incorporating elements such as social connections, ties and commitment to a community. The concept is also concerned with the reduction of social disparities, inequalities, breaks and cleavages”.

A second perspective, *social exclusion*, focuses more on the individual. It contributes to our understanding of strong communities by concentrating on the link between economic and social structures and those who stand outside them. In practical terms it combines economic disadvantage and the inability to participate in social life. Involved is the idea of multiple and/or cumulative deprivation.

So, the ideas of ‘social cohesion’ and ‘inclusiveness’ begin to identify some key characteristics of a ‘strong’ community. The members of communities characterised by cohesiveness and inclusiveness will have effective access to the labour market (which promotes economic integration), the legal system (which promotes civic integration), the welfare system (which promotes social integration), and the family and community system (which promote interpersonal integration). The concepts also imply:

Adequate levels and distribution of human and economic capital and social capital. For government this implies an ongoing commitment to...the provision and distribution of human capital (through education and skills enhancement) and physical capital (including facilitating labour market opportunities). As well, the social exclusion-cohesion approach implies an ongoing role for government in facilitating the bonding, bridging and linking capacities of social capital (Stone and Hughes, 2002).

The 2001 OECD report, *The Well-Being of Nations: The Role of Human and Social Capital*, defines social capital in terms of the networks, norms, values and understandings that facilitate cooperation within or among groups. Research links social capital with improved health, greater self-reported wellbeing, better care for children, lower crime and improved government. The Australian Bureau of Statistics (August, 2002) states that one of the major interests in the topic of social capital is gaining an understanding why some communities adapt better to change than others, “why some communities are able to do better with a given set of resources, and what influences shape community confidence in achieving goals...”(vi).

There are varied definitions of social capital and the ABS has stated its reasons for adopting the OECD (2001) approach that captures important elements of the topic emphasised in the literature, such as networks and shared norms. It adds that work undertaken by Putnam (2000) has identified strong correlations between social capital and education, child welfare, crime and neighbourhood vitality. It is precisely relationships of this kind that the present project aspires to illuminate within the limits of the data available (see Chapter 5). However, sufficient has been said to show the varied perspectives and conceptual tools currently being employed to explore such issues with understandable uncertainties about how these theoretical elements relate to one another. It is outside the scope of the present project to attempt to resolve these matters. Rather, our purposes require that a level of conceptualisation be followed that captures what is basic in the long standing sociological study of social connectedness and that what we attempt be located within the context of current research methodologies.

Our solution to the first of these requirements is to emphasise the theoretical perspective of *social cohesion* believing that at the level of neighbourhood it subsumes some of the important elements of ‘social capital,’ particularly aspects that lend themselves to assessment using existing data. There is no absolute justification for this preference but its reasonableness is supported by the recently released report of the Australian Institute of Health and Welfare, *Australia’s Welfare, 2003*. The Institute’s conceptual framework for organising indicators of Australia’s welfare is based on three components, healthy living, autonomy and participation, and social cohesion. The latter is described as the “connections and relations between societal units such as individuals, groups (and) associations. Embedded within this concept are feelings and attitudes such as shared values, trust and a sense of belonging, which shape and moderate these connections and relations.” (46).

The Institute acknowledges that strengthening social cohesion implies a reduction in social inequality but it emphasises another dimension, namely, the strengthening of social relations, interactions and ties, a dimension that “embraces all aspects which are generally also considered as the social capital of society.” The Institute has a national frame of reference and it regrets the limited data available for measuring relevant variables. Three categories of information that it considers relevant for measurement purposes are *social and support networks* (including access to social support in times of need), *social participation* (as the obverse of social isolation and being cut off from relationships providing friendship and company), and *community engagement* (including volunteering which draws people together to work for the benefit of others). In reference to volunteering, the Institute says “This initial

establishment of ‘social bridges’ may in turn engender other sources of cohesion, such as trust, and the further establishment of support networks and norms.” (55).

These three aspects of *cohesion*, social support, social participation and community engagement (in the sense of volunteering) are elements of existing data that were available to our project. They derived from a continuous survey conducted by the Victorian health authority and another by the Australian Sports Commission. Because of the scarcity of such information no pretence is made to the present study of the effects of social cohesion being more than an exploratory one, although the findings underline the importance of continuing this line of research. Moreover, the measures used are an advance over the surrogate indices derived from censuses upon which the majority of multi-area studies rely. They also serve to illustrate directions in which state governments wishing to monitor community wellbeing could further develop and refine their information systems in the future.

Before focusing on the influence of *place* or what are generally called ‘neighbourhood effects’ on people’s wellbeing, there are two preliminary issues that require clarification. There is a tendency when heightened levels of local problems are discussed to attribute them to a lack of cohesion without specifying the basis for that judgement. The need for conceptual clarity in these matters is discussed in the following section. That discussion is followed by consideration of what is entailed by the idea of ‘economic inequality’, another of the most frequently invoked explanations for variations in community wellbeing. Since this is a field that has seen considerable refinement of research technique in recent times, wherever it is possible and appropriate reference will be made to contemporary studies. A description of the social climate indicators used in the present study follows the literature review.

Social cohesion: the need for conceptual clarity

Many studies have claimed a connection between health, crime and other social problems and a communal quality referred to as ‘social cohesion’. The latter has been defined in a variety of ways including population turnover, social networks, strength of organisational base, housing tenure, family stability, social heterogeneity and income inequality. Research by Hirschfield and Bowers (1997) has specifically examined the relationship between crime and levels of social cohesion within disadvantaged areas. However, many of the issues raised extend beyond attempts to understand the occurrence of crime and are characteristic of the field of area effects research generally. Hirschfield and Bowers have sought an answer to the question: “Do areas of disadvantage with high levels of social cohesion have lower levels of crime than similarly disadvantaged areas with low levels of social cohesion?” (p.1275). The answer to this question has important implications for crime prevention as well as the promotion of community wellbeing. It could be the case that aspects of social cohesion temper levels of crime (and other problems) in areas of disadvantage.

Hirschfield and Bowers’ working definition of social cohesion falls within the broadly accepted bounds of the concept, namely, the level of interaction between residents and their subjective identification with their community (Buckner, 1988). The authors’ operational definition of low social cohesion emphasises the absence of well-defined social networks and residents sharing few common interests. The latter is reflected, they believe, in the absence of local participation in formal and voluntary

organisations. These ideas and the connection between cohesion and crime that they are intended to illuminate are of theoretical and practical importance. Unfortunately the core research question becomes clouded by problems of a logical nature that have long bedevilled the study of 'social disorganisation'. The difficulty is to find measures of social cohesion that are independent of the social problems that you wish to explore. Hirschfield and Bowers fail to get around this problem when they re-name calls for police service as "indications of the demand for formal social control from the public" reflecting "the absence or perhaps the ineffectiveness of facilities and youth diversion schemes" (p.1279).

A second problem is the remoteness of other "indirect" indicators of social cohesion that are employed from the basic concept with which the authors began. The following four indicators were extracted from census sources: lone-parent households, recent migrants, ethnic heterogeneity and social heterogeneity. When composite scores* were applied to two sets of disadvantaged areas some relationships were found between 'cohesion' and levels of certain types of crime. The conclusion is drawn that "The more that an area that is at a disadvantage economically pulls together as a community, the greater its capacity to combat crime" (p.1292). Hirschfield and Bowers' research is an example of an otherwise sophisticated and potentially valuable study being limited by lack of conceptual clarity with respect to the tools employed. The present study reduces this difficulty by using direct manifestations of disadvantage, as previously discussed, and also using more direct measures of social cohesion rather than obliquely related social statistics. These measures are described at the end of the present chapter.

Care must also be taken not to attribute to neighbourhoods effects that emanate from external processes and structures. In their discussion of neighbourhoods that are seen as problematic, Forrest and Kearns state "There is often an implicit view that what separates the 'successful' neighbourhood from the 'unsuccessful' is the degree to which there is social cohesion. The underlying assumption is that disadvantaged neighbourhoods lack the necessary ingredients which foster social cohesion" (Forrest and Kearns, 2001, p.2133). One danger with this approach is that it overlooks the possible influence of external factors that help to shape outcomes in disadvantaged areas. In that regard, Atkinson and Kintrea's (2001) study of deprived and socially mixed localities in Scotland found some support for the contention that it is worse to be poor in a poor area than one that is socially mixed. However, they note that a proportion of the area effects that they observed could be attributed to neighbourhood sorting mechanisms, rather than neighbourhood effects *per se*. In particular, they believe that the system for allocating social housing tends to concentrate the most disadvantaged tenants in the most disadvantaged estates.

This sorting is not confined to social housing; there will normally be variations in population composition as a result of sorting processes in the housing market based on considerations like access to jobs and schools, the quality of the built and natural environment and the distance from poorer people (Buck, 2001). Also, in comparing two deprived areas in different cities, Atkinson and Kintrea (2001) found important differences in outcomes mainly pointed to the significance of the more buoyant labour

* Based on principal components analysis

market (in Edinburgh) in alleviating deprivation thereby lessening neighbourhood effects.

Nature of economic disadvantage

Unequal in Life referred to the conviction of some researchers that the absolute amount of income one receives may be less important in determining differential standards of health than differences in the way wealth is socially distributed and people's awareness of inequalities. This line of theorising has received further attention in recent years with a number of researchers adopting a psychosocial perspective as a way of conceptually linking individual and social pathology. Ellaway, Macintyre and Kearns (2001) have summarised the psychosocial perspective in the following way: "Health inequalities are the product of *perceptions* of relative income, producing negative emotions like shame and distrust which in turn are translated into poorer health at the individual level through psycho-neuroendocrine mechanisms and/or health damaging behaviours" (Ellaway et al. 2001, p.2300). It is further argued that:

Perceptions of relative social position and the negative emotions they foster are translated into anti-social behaviour, reduced civic participation and less social cohesion within the community. In this way, perceptions of social status have negative biological consequences for how individuals interact, and serve as the conceptual link between individual and social pathology.

Many researchers have now applied the *relative deprivation* hypothesis to varied fields. Daniels, Kennedy and Kawachi (1999) have used it in an effort to help explain seeming anomalies in the relationship between country wealth and life expectancy. Countries with more equal income distributions have higher life expectancies than do countries in which wealth is more concentrated, regardless of GDP per capita (p. 222). Wilkinson, Kawachi and Kennedy (1998) preface their study of the connections between homicide, mortality and income distribution with the claim that close associations between income distribution and population mortality rates had, at the time of publication, been reported on independent data at least fifteen times. They believe that the research agenda should move on to identifying which are the more important of a range of social processes that could plausibly contribute to a relationship between mortality and inequality. A number of studies appear to implicate social cohesion but another related factor appears to be homicide. State level studies show that the greater the disparity in household incomes, the higher is the homicide rate. The same correlation has been demonstrated in international comparisons and comparisons between urban neighbourhoods.

Wilkinson, Kawachi and Kennedy's own study was based on state level data and combined information from multiple sources. They found income inequality was closely associated with mortality, homicide, social trust, assault, burglary and robbery but not with property crimes. Further statistical analyses and narrative histories of violent individuals led them to suggest that the social conditions that produce homicide also help us to understand the relationship between income distribution and mortality:

The most pressing aspect of relative deprivation and low relative income is less the shortage of the material goods which others have, as the low social status and the desperate lack of sources of self-esteem which usually go with it. If social cohesion matters to health, then perhaps the component of it which matters most is that people have positions and roles in society which accord them dignity and respect. We infer this from the fact that it is violence rather than property crime that varies so closely with income distribution, social trust and mortality (p.594).

One of the most influential researchers in this field, Richard G Wilkinson, in a recent publication *Mind the Gap* (2000) has drawn attention to the biological costs of sustained stress. Instead of thinking of health primarily in terms of exposure to infectious agents or other environmental hazards, he says we should be concentrating more on what affects the body's defences resulting from a wide range of potentially harmful circumstances (p.380). Prominent among those potential threats is the individual experience of chronic stress arising from social anxiety associated with what we think and feel about our relative material and social circumstances.

DO NEIGHBOURHOODS HAVE INDEPENDENT EFFECTS?

This section reviews the present state of knowledge about the effects *place* can exert on people's lives. We review a number of contemporary studies that illustrate the fact that neighbourhoods can have independent effects. To avoid misunderstanding, it is as well to reiterate briefly several points made in Chapter 1, especially that area effects do not invariably influence all aspects of health or personal and social functioning but they are of sufficient importance to warrant continued attention. Atkinson and Kintrea (2001) have provided a succinct overview of the scholarly evidence that also summarises the present investigators' position. Influences other than area effects, such as macroeconomic factors, can be important sources of inequality and concentrations of poverty. However, research also shows that neighbourhood poverty is important in addition to individual circumstances. There are causal associations between poor neighbourhoods and other social problems that are more than the consequences of macroeconomic forces and household characteristics. Indeed, a recent authoritative review by Sampson, Morenoff and Gannon-Rowley (2002) included the following statement within a summary of the major findings of 40 sophisticated studies of community effects since the mid-1990s:

Although some studies show that social and institutional processes mediate the association of neighbourhood structural factors with crime and other aspects of wellbeing, in many cases they do not explain all or even most of the traditional correlations. Factors such as concentrated disadvantage, affluence, and stability remain direct predictors of many outcomes...Moreover, neighbourhood mechanisms are not produced in a vacuum; some social processes, particularly those related to the idea of collective efficacy, appear to emerge mainly in environments with a sufficient endowment of socio-economic resources and residential stability (p.465).

The general practical implication of such findings is that in cases where an accumulation of problems is making a serious impact upon the wellbeing of residents

of a disadvantaged area, locality-specific measures may be needed to supplement general social policy.

Neighbourhoods matter

Small and Newman (2001) have outlined some of the conceptual and methodological difficulties that beset research into neighbourhood effects. These include the need for longitudinal data, the problem of disentangling neighbourhood from school effects, the fact that people are not randomly distributed across neighbourhoods, and difficulties with defining and measuring the very units – neighbourhoods – that form the basis of studies in this field. Yet, notwithstanding these complexities, the studies reviewed in this section testify to the fact that neighbourhoods matter with respect to certain variables. Most of the studies cited are quite recent and they have employed methods of considerable sophistication. They include some work that is alluded to by Small and Newman (2001) in their compelling review of the field, and some studies that are not. However, the summaries presented here illustrate the accuracy of Small and Newman's summary statement about our present and emerging knowledge of neighbourhood effects:

- (a) neighbourhoods affect life chances during early childhood and late adolescence,
- (b) most neighbourhood effects are not as strong as family effects, and
- (c) social networks, which sometimes are linked to neighbourhoods but often transcend them, are critical (p.32).

The possibility that neighbourhood effects are stronger at certain times in people's development is indicated by the findings of Brooks-Gunn, Duncan, Klebanov and Sealand, (1993). These researchers have used two data sets to examine how both neighbourhood and family characteristics influence outcomes at two age points – early childhood and late adolescence. The studies employed two broad domains of development, cognitive/school functioning and social/emotional functioning. They found that there were significant associations between having more affluent neighbours and better scores on all of the development outcomes. At the level of the family, income and mother's education were powerful predictors of the four developmental outcomes. Important, however, from the point of view of local area influences was the fact that the effects of affluent neighbourhoods on childhood IQ, teenage births and school leaving persisted even after adjustments were made for differences in the socio-economic characteristics of families (p.374). Brooks-Gunn et al concluded:

Taken as a whole, our results indicate that the number of affluent, high occupational status and, perhaps, two-parent families are key dimensions of neighbourhood economic and social structure most likely to affect children and adolescent behaviour over and above family resources (p.377).

Very recent Finnish research into the effects of neighbourhood characteristics upon mortality also adjusted for individual characteristics (Martikainen, Kauppinen and Valkonen, 2003). So far as individual characteristics are concerned, low education, low occupation-based social class, non-ownership of housing, living in crowded accommodation, and not living with a partner were related to high mortality. Social

cohesion was expressed as a standard score calculated on the basis of three factors: the proportion of men over fifteen living with a partner, the percentage that voted in the previous municipal elections, and the proportion of over fifteen year old men who did not live in the same area five years earlier. Of the area characteristics included in the study, low social cohesion, a high proportion of manual workers and a high proportion of over sixty year olds were associated with high mortality. Overall the associations of individual characteristics with total mortality were much larger than those of area based measures (Martikainen et al., p.3). The researchers themselves were caused to wonder whether these modest effects might be stronger in societies characterised by more extreme area differentiation. They believe that in study populations where geographical socio-economic differentiation is strong and where inner city poverty is prevalent, area effects are more likely to occur. They cite several studies of mortality to illustrate that the “risk of mortality is particularly sensitive to more intensive concentrations of poverty”.

Ross and Mirowsky (2001) focus on another aspect of disadvantage to help explain the association between health and the socio-economic status of an area. They contend that health correlates negatively with neighbourhood disadvantage after adjusting for personal disadvantage, and that neighbourhood disorder mediates the association. Put simply, daily exposure to a threatening, noxious environment may erode health. This environment may be characterised by crime, harassment, danger and incivility that can undermine physical health in several ways. One possible way is that the environment described can discourage the physical activity needed to maintain health. Another is that it can encourage psychophysiological responses that undermine health. Ross and Mirowsky employ the following key measures: an index of self-reported health, a measure of physical functioning, an index of chronic health problems, an index of objective neighbourhood disadvantage (that adds the prevalence of poverty and of mother-only households and subtracts the prevalence of home ownership and college educated residents), perceived neighbourhood disorder (of physical and social kinds), walking and fear.

At a general level, Ross and Mirowsky’s evidence supports the idea that individuals who live in disadvantaged neighbourhoods appear to suffer worse health as a result of the environment in which they live. However, they found that despite being more afraid of being victimised, people in poor neighbourhoods walk more than those living in better off areas. Hence, one part of the researchers’ explanation for the association between neighbourhood disadvantage and health was not supported. Moreover, approximately half of the apparent correlation between neighbourhood and health was due to individual disadvantage. Thereafter, the breakdown of social control and order in disadvantaged neighbourhoods appears to form the major link to individual health:

People who report that there is a lot of crime, graffiti, vandalism, trouble, drug use, dirt, and danger in their neighbourhood have more chronic health problems, worse self-reported health, and worse physical functioning than people in neighbourhoods typified by order and safety (p.266).

The results indicate that physical disorder has a less negative impact on health than the effect of social disorder. Somewhat parallel findings have been reported by Aneshensel and Sucoff (1996) following their study of area effects and adolescent

mental health. The researchers found that adolescents' experience of living in a neighbourhood – especially their exposure to ambient hazards – is associated with their mental health. “As the neighbourhood becomes more threatening, symptoms of depression, anxiety, oppositional defiant disorder, and conduct disorder increase” (p.305). However, the neighbourhood and individual-level socio-economic and demographic factors that are associated with symptoms of psychiatric disorder appear to be selective. The authors hypothesise that the impact of neighbourhood is contingent upon attributes of the individual and vice versa.

A recent study of neighbourhood effects on mental disorders followed in the tradition of the classical work of Faris and Dunham (1939) but employed far more sophisticated methods of analysis. The recent study (Silver, Mulvey and Swanson, 2002) controlled for individual characteristics when estimating the effects of neighbourhood conditions. The study focused on three mental disorder variables: schizophrenia, major depression and substance abuse disorder. It was found that neighbourhood disadvantage (net of individual SES) was associated with higher rates of major depression and substance abuse, and that neighbourhood residential mobility was associated with higher rates of schizophrenia, major depression and substance abuse. However, the effect of neighbourhood disadvantage on schizophrenia became non-significant when individual SES was controlled. In looking for an explanation of these community effects, Silver et al (2002) believe that in highly mobile and disadvantaged neighbourhoods, where social integration is weak, individuals may find it difficult to sustain supportive social contacts with others. As a result, “Those who are predisposed to mental disorder will manifest symptoms” (p. 1467).

Can local social climate interact with family conditions to generate local problems? Two Australian researchers believe that residing in an ‘offender-prone’ place can lead to juveniles becoming involved in crime provided a certain socio-economic context exists. That context is not the immediate cause of offending but can trigger non-linear, more rapid growth in crime beyond what they call an “epidemic threshold” that resembles the concept of a community *tipping point* discussed more fully in the next section. Weatherburn and Lind (1998), on the basis of rates calculated for New South Wales postcode areas, have shown that economic and social stress are strongly related to child maltreatment and to crime. First they observed a strong relationship between the level of child neglect/abuse and the level of juvenile participation in crime. Path analysis was then used to assess how important child maltreatment is as a mediator of the relationship between economic and social stress and crime.

For the purposes of the analysis the posited causes of juvenile participation in crime were the variables poverty, single parent families, crowded dwellings, neglect and abuse. The findings indicated that neglect had the greatest causal influence. Moreover, the path coefficients linking economic and social stress to neglect were larger than those linking economic and social stress directly to juvenile participation in crime. “These findings suggest that economic and social stress exert most of their effects on crime, at least in urban areas, by increasing the risk of child neglect” (p.4). However, the researchers believe that the causal connections are a little more complex. They hypothesise that economic stress disrupts the parenting process thereby rendering juveniles more susceptible to delinquent peer influences. Juveniles in this situation are more likely to become involved in crime if they reside in ‘offender-prone’ neighbourhoods. In a line of theorising reminiscent of the ‘tipping

point' approach, Weatherburn and Lind argue that the prevalence of juvenile crime does not increase until the level of economic stress is of a magnitude to push the number of juveniles susceptible to crime past a certain limit. They call that limit the 'epidemic threshold':

Once this limit is crossed, growth in the young offender population, instead of being linear, accelerates rapidly past what would have been expected if equal increments in economic stress produced equal increments in juvenile involvement in crime (p.4).

A cause for caution with regard to this theory is its reliance on the categories 'poverty', 'neglect', and 'abuse' having more distinct meanings than is warranted on the basis of field practice. Nonetheless, the researchers cite evidence from a Western Australia study to support their theory (Zubrick, Silburn, Garton, Burton, Dalby, Carlton, Shepherd, and Lawrence, 1995). Comparing the frequency with which juveniles are "allowed out any evening" within 'crime prone' and 'not crime prone' neighbourhoods suggests that being allowed out "Very often" any evening is associated with a significantly higher likelihood of involvement in crime only for those who reside in crime prone neighbourhoods.

Sampson (1997) has also attempted to identify the factors that link what Weatherburn and Lind call 'economic stress' and crime in the form of violence. The methodology used by Sampson is of particular relevance to the approach to the study of the effects of social cohesion presented in Chapter 5 of this report. The association between socio-economic status and violence is well known but Sampson asks: What are the social processes that might explain or mediate this relation? He proposes that neighbourhoods vary in their ability to realise a common human goal in the form of being able to live in a safe and orderly environment that is free of predatory crime especially interpersonal violence. He argues that the capacity of residents to control group-level processes and visible signs of social disorder, as well as the ability to maintain resources and public services, is a key mechanism influencing opportunities for interpersonal crime in a neighbourhood:

...Socially cohesive neighbourhoods will prove the most fertile contexts for the realisation of informal social control. In sum, it is the linkage of mutual trust and the willingness to intervene for the common good that defines the neighbourhood context of collective efficacy (p.918).

In his research Sampson viewed neighbourhood efficacy as being reflected in the capacity to supervise children and maintain public order. He found that *social cohesion* (variations on the idea of a close-knit and trusting neighbourhood and willingness to intervene to promote the best interests of the community), and *social control* (people's willingness to intervene to control or correct young people's misbehaviour) are closely associated across neighbourhoods. Sampson concluded that the two measures were tapping aspects of the same latent construct and combined them into a summary measure called *collective efficacy*. Concentrated disadvantage, immigration concentration and residential stability explained 70% of the neighbourhood variation in collective efficacy. In turn, collective efficacy mediated a substantial portion of the association of residential stability and disadvantage with measures of violence. After adjustment for various confounding factors, "the

combined measure of informal social control and cohesion and trust remained a robust predictor of lower rates of violence” (p. 923). Sampson concludes that there is a neighbourhood effect of reduced crime in the presence of a high level of social organisation and collective efficacy, regardless of the level of poverty in an area. According to this view, it is because poor neighbourhoods tend to have less social organisation and collective efficacy that their crime rates are high (Small and Newman, 2001).

Browning and Cagney (2002) have also employed collective efficacy theory to test hypotheses concerning the effects of neighbourhood characteristics on health. Specifically, the investigators build on Sampson’s work to derive a collective efficacy perspective on three things - structural disadvantage, social capital, and community mobilization capacity – and their impact on the health of urban neighbourhood residents. The authors acknowledge that while the prevalence and density of networks and the level of participation in community based organisations may contribute to collective efficacy, “It is the sense of attachment to community in combination with the willingness on the part of residents to intervene on each other’s behalf ...that is critical to the community level capacity to implement shared objectives” (p.385).

By combining data from a number of sources Browning and Cagney’s research design allowed them to address a number of limitations of previous research on neighbourhood effects and health. They controlled for a range of individual level factors known to correlate with self-rated physical health. By using measures of the prior health of residents and other means they enhanced confidence that the observed effects of collective efficacy on health were a function of emergent properties of the neighbourhood rather than reflecting individual level social characteristics. A seven item scale of health-related collective efficacy was based on survey items assessing people’s willingness to help their neighbours generally and in times of sickness, their sense of mutual trust and ‘closeness’, and their willingness to ‘watch out’ that children are safe and do not get into trouble. The researchers found that while education was strongly associated with better health in high collective efficacy neighbourhoods, this effect largely disappeared in neighbourhoods with low collective efficacy. They concluded that:

The benefits of education for health, which have proved robust and substantial across a range of studies, are dependent upon social context. Deficits in neighbourhood collective efficacy wipe out the health returns to education (p.395).

The foregoing review indicates a lively, increasingly sophisticated interest in researching area effects. The cited projects illustrate the occasionally selective nature of these effects and the fact that they are sometimes of modest scale. Nevertheless, the influence of area effects in diminishing human wellbeing is sufficiently widespread to warrant the continued interest of researchers and community practitioners. Of particular concern is the possibility of thresholds existing beyond which the impact of a community-level attribute has a much-accelerated affect, for better or for worse. We turn now to the consideration of this phenomenon.

The idea of a community ‘tipping point’

Is there a point in the accumulation of negative community influences beyond which dysfunctions become more entrenched and pervasive? The idea of a ‘tipping point’ has been widely used in recent decades in the discussion of community issues but its employment has often relied on general impressions rather than tight analysis. Much of the popularity of the term is attributable to its application by Gladwell (2000) to a wide range of fields, from fashion and illness to epidemics and crime. Gladwell’s basic idea is that behaviours and trends often arise in society like epidemics, starting slowly and then exploding, non-linearly, to infect a sizeable segment of the population. A few people propagate a trend with the ‘contagion’ effect depending on the ‘stickiness’ of the idea or behaviour, how well connected and persuasive the people are who pass things along, and the social context in which this all takes place (Soderstrom, 2003)⁴.

There are three main characteristics that Gladwell ascribes to a system with the potential of reaching a ‘tipping point’, which may allow us to identify the means by which non-linear change occurs in communities. In ‘tipping point’ scenarios there must be a contagiousness of the influence, there must be an environment in which small causes can have larger effects and tipping point-like change is not gradual but dramatic. If these circumstances occur, there is a likelihood of a greatly disproportional effect. Some American criminologists believe that the criminal justice system itself can produce a rapidly accelerated increase in negative neighbourhood effects. Street (2001) advances the argument that certain US communities have reached a curious criminal justice tipping point at which repressive state policies actually drive up crime rates. “When 1 percent or more of a neighbourhood’s residents are imprisoned per year...mass incarceration incapacitates neighbourhood social networks to the point where they can no longer keep crime under control” (p. 7). These communities that are ‘tipped’ by criminal justice policies are located in a relatively small number of postcodes and it is to these communities that released prisoners return.

One field to have attracted the use of the tipping point perspective is the socialisation of children. Rothstein (2000) asserts that social capital can be increased in cohesive neighbourhoods where many adults contribute to the supervision of children. On the other hand, positive influences in poor neighbourhoods can weaken if more stable families move to more affluent communities, leaving the remaining children with fewer successful adult role models, or with fewer networks that are connected with economic opportunities, in the fashion described in Wilson’s (1987) highly influential work, *The Truly Disadvantaged*. Rothstein declares:

The contribution of social capital to educational outcomes may not be linear: neighbourhoods with negative (or positive) characteristics may require these characteristics in a minimum quantity before a ‘tipping point’ is reached and they influence student achievement. (p.3)

⁴ What Gladwell popularised was at least anticipated decades earlier by Smelser (1962) who explored the ‘craze’ in his work on collective behaviour and described the ‘turning point’ in the collective take up of an idea. Gladwell also owes a considerable debt to Penrose (1952) who compared the unfolding of a craze to the epidemiology of a disease.

Social isolation has also been the focus of a study by Tigges, Browne and Green (1998). Their research has been directed to the question of whether African American urban poor are socially isolated in the ways described in Wilson's (1987) thesis and whether they have relationships that might help to compensate for their marketplace disadvantages. Basically, according to Wilson, one's neighbourhood matters because one's residence influences whom one knows, including people connected to the economic mainstream. The exclusivity of social relationships to the neighbourhood realm reinforces the social isolation of the urban underclass. Similar observations have been made in relation to the social networks of Australian parents living in an area with a high level of confirmed child abuse (Vinson, Baldry and Hargreaves, 1996).

The methods used by Tigges et al (1998) to pursue these issues include focusing on individuals outside of people's households with whom they discuss important matters – people referred to as 'discussion partners' - as well as other measures of social isolation. The researchers found that neighbourhood poverty levels exerted independent effects on social relationships over and above the race and class of individuals (p.16). Important for the present discussion is the testing of Wilson's (1987) assertion that a high concentration of neighbourhood poverty will have disproportionate consequences on the social isolation of residents. Tigges et al found strong evidence that high neighbourhood poverty increases blacks' social isolation and decreases their access to social resources. For example, after carefully controlling for other influences, living in a high-poverty neighbourhood decreases the likelihood of having an employed close tie by 57% compared with residents in a low poverty neighbourhood. Residence in neighbourhoods with high concentrations of poverty reduces residents' probability of having a college-educated discussion partner by 61% compared with other levels of neighbourhood poverty. "The tipping effect of concentrated neighbourhood poverty for poor blacks most clearly appears in the significant step down in the (log-) odds of having an employed discussion partner" (p. 18).

This question has been researched in a highly technical and detailed way by Buck (2001). The British sample used in this project is representative of the range of neighbourhood experience in Britain. The basic form of the analysis is measurement of the direct association between an area characteristic, normally a deprivation measure, and an outcome measure controlling for individual characteristics that may influence that outcome. The evidence for accelerated or more entrenched community effects was expected to take the form of non-linear relationships between area characteristics and outcomes with a rapid worsening at the top end of the distribution. On the question of community 'tipping' it was found that only in one case, 'poverty exit', was there clear evidence that the association was non-linear with a marked deterioration in the worst areas. There was some contradictory and non-significant evidence of such an association for a non-monetary poverty indicator and for entry into work.

In summary, the idea of a community tipping point seems to describe the circumstances of severely disadvantaged neighbourhoods. The claim that the criminal justice system itself can undermine neighbourhood social networks and drive up crime rates by imprisoning large numbers of people within a limited number of areas is a contention that bears examination in the Australian context. The descriptions

provided by overseas studies of the movement out of disadvantaged neighbourhoods of people who are connected with the mainstream society and economy, and the accelerating effect this has on social problems and the social climate of an area, appears to match the experience of some severely disadvantaged Australian communities. This seems to be especially true of what Buck (2001) described as ‘poverty exit’ or the capacity of residents to re-connect with mainstream structures that afford them an opportunity to leave the ranks of the disadvantaged. The hypothesised tipping effect on juvenile crime rates of a combination of ‘neglect’ and crime-prone neighbourhoods (Weatherburn and Lind, 1998) awaits further refined testing. Overall, we conclude that there is considerable evidence suggestive of the non-linear impact of some variables on what we have referred to as *place effects* but that research in this field is still at an early stage and that, at least for the present, the impact of different influences needs to be separately appraised.

Available indicators for assessing neighbourhood social cohesion

Exploration of the influence of neighbourhoods on the wellbeing of their residents requires that account be taken of local social climate. Many of the issues concerned have been canvassed in this chapter. Unfortunately, it is much easier to think of data that would be relevant for the appraisal of social cohesion than to find it in existing form across some 1200 post-code areas of Victoria and New South Wales. For example, in the preceding literature review it was mentioned that participation in local elections is one sign of neighbourhood cohesion. It is currently not possible to obtain post-code level data to assess such participation.

This is but one of numerous possibilities explored without success in the present project. However, as earlier mentioned, there are two main on-going sources of survey data relating to social cohesion that have been made available for our purposes. The Victorian Population Health Survey program was established in 1998 to provide state and regional information about the health of Victorians and determinants of that health. The results of two questions of the Victorian survey, expressed at post-code level, have been incorporated in the present study:

- Can you get help from friends when you need it?
- Do you help out a local group as a volunteer?

Second, a continuous survey conducted by the Australian Sports Commission with the support of States and Territories collects information on Australians’ participation in physical activity for exercise, recreation and sport. Since 2001 the survey has been conducted quarterly and for the present study the findings for 2001 and 2002 have been aggregated and expressed at post-code level. In addition, the results obtained by over-sampling by the Victorian authorities have been added to the data pool. One of the questions within the Sports Commission Survey asked about the basis on which respondents participated in physical activities or exercise:

- Was any of this activity organised by a club, association or other type of organisation?

In this chapter we have briefly reviewed the indicators that were used in the initial *Unequal in Life* study and an expanded set of indicators of disadvantage, as well as the local social climate indicators described immediately above. From this point, the main emphasis is upon the revised and expanded indicator set and in Chapter 3 we

begin to present the findings obtained when those indicators are applied to 647 post-code areas in Victoria and 587 post-code areas in NSW. This chapter closes on the next page with a summary table of the indicators employed in the expanded study.

CHAPTER 3: CONCENTRATIONS OF DISADVANTAGE

Two aspects of concentration

As discussed in Chapter 2, there are potential strategic benefits in identifying geographic concentrations of disadvantage. In *Unequal in Life* the compacting of disadvantage involved calculating the rates of occurrence of different forms of disadvantage. The calculation of those rates took into account the number of people in each locality to whom the problem could apply by virtue of their gender, age or some other characteristic. This approach enabled us to capture an aspect of the concentration of disadvantage that could be vital for those living in a neighbourhood regardless of the total size of the population of that area.

The approach is also crucial for gaining an understanding of the way disadvantages may accumulate and the way in which they are distributed across society. For example, *Unequal in Life* found that a good proportion of the multiply disadvantaged postcode areas of New South Wales and, to a slightly lesser degree, Victoria, had populations of less than a thousand people. Recognition of that fact, particularly if it is reaffirmed by the present study, is not a distortion of the geographic distribution of disadvantage in the two states but rather an acknowledgment of the varied locations (hamlets, rural towns, suburbs, isolated communities) in which disadvantage is manifested.

However, there is another aspect of ‘concentration’ of practical importance that was not described in *Unequal in Life*. It concerns the sheer magnitude of instances of a form of disadvantage that occurs within geographic or spatial units like postcodes. This perspective affords the opportunity of being able to mount appropriate interventions in locations where problems occur in large numbers. There is, as always, the issue of the root causes of these events or conditions and the choice of the most appropriate social level at which to intervene, as discussed in Chapter 2. But over and beyond that recurring issue the disproportionate distribution of social disadvantages across different locations is an important second way of considering the question of *concentration*. It has to be acknowledged that there are variations in the physical size and populations of postcodes. Even so, the degree to which many of the disadvantages considered in the present study are compressed within a small proportion of Victorian and New South Wales postcodes is remarkable and strategically compelling.

The present analysis takes account of both the *accumulated disadvantage* and *proportionate distribution* aspects of concentrated disadvantage. In this chapter we present a non-technical overview of how the 647 postcode areas in Victoria and 587 areas in New South Wales fared on the 15 and 14 disadvantage indicators respectively, that were initially employed in each state⁵. Some of the main questions considered include:

⁵ For reasons that emerge in the course of the study, the number of disadvantage indicators used in both states became 13.

- What minimum number of postcode areas accounted for 25% and 50% of instances of the different forms of disadvantage considered?
- To what extent did the same postcode areas re-appear in listings of the localities most affected by the different forms of disadvantage?
- What were the main shared characteristics of the postcodes most beset by multiple problems?

Obtaining the answers to these questions requires nothing more than simple arithmetic calculations. This means that an important perspective on the distribution of disadvantage can be explored without venturing into unfamiliar technical territory. However, the next stage (Chapter 4), involving questions of the extent to which the scores attained by locations on one indicator parallel those attained on another (*correlation analysis*) and the underlying structure to those correlations (*principal components analysis*), are necessarily more technical. The presentation will be kept as simple as possible but it may assist the non-technically minded reader to know that the ultimate destination of this statistical excursion is to try and arrive at a single *factor score* for each locality. This score attempts to summarise each area's general susceptibility to the range of problems under consideration. Then, in Chapter 5, some possible impacts of local social climate on disadvantage will be examined.

SPATIAL COMPRESSION OF DISADVANTAGE

This section addresses the question of whether a small number of postcode areas account for a large proportion of instances of different types of disadvantage.

Table 3.1 - Percentage of postcode areas needed to account for 25% and 50% of instances of each form of disadvantage

	VICTORIA (N=647)		NSW (N=587)	
	TO REACH 25%	TO REACH 50%	TO REACH 25%	TO REACH 50%
UNEMPLOYMENT	4.1	11.3	4.9	14.7
LONG TERM UNEMPLOY.	2.9	8.9	4.1	12.1
LOW INCOME	4.5	12.9	5.1	15.0
LESS SKILLED WORKERS	4.2	11.6	5.3	16.5
DISABILITY/SICKNESS	3.6	11.2	5.1	14.1
EARLY SCHOOL LEAVING	4.4	12.4	5.3	15.2
YR. 12 INCOMPLETE /NO FURTHER TRAINING	3.9	11.8	4.9	14.1
CRIMINAL OFFENCES	3.9	11.1	4.6	14.0
IMPRISONMENT	2.1	7.3	3.2	9.7
LOW BIRTH WEIGHT	3.9	11.6	4.8	14.1
CHILD ABUSE	2.7	8.3	3.4	11.0
CHILD INJURIES	4.7	13.2	5.1	15.3
PSYCHIATRIC HOSP. ADMISSIONS	3.5	10.6	5.1	14.0
MORTALITY	4.8	13.3	5.9	16.8
FINAL ELECTRICITY	1.5	4.1	-	-

Victoria

Table 3.1 shows that in every instance 25% of the total on each variable in Victoria could be accounted for by 5% of postcodes. Indeed, in four of the fifteen cases it required less than 3% of postcode areas to cover the 25%; in a further five cases it needed less than 4% to account for the same proportion. The compression was particularly striking in the case of imprisonment (2.1%), child abuse (2.7%), long-term unemployment (2.9%) and the disconnection of electricity supply (1.5%). Even at this early stage the dissimilarity between the Victorian postcodes that ranked highly on ‘electricity disconnection’ and the findings for the other 14 indicators encouraged reluctance to attach too much significance to this finding. This issue is further discussed in Chapter 4 where the correlations between the different variables are considered. Meanwhile, the focus here is upon the Victorian postcodes that amounted to less than 3% of the state’s total of 647 but accounted for 25% of the cases of imprisonment, child abuse and long-term unemployment.

Obviously some of the postcodes highlighted by this analysis were of substantial size. Eight of the 14 that yielded a quarter of the prisoners had populations of 30,000 or more (average = 32,972) and the same was true of ten of the 18 areas that yielded a quarter of the child abuse cases (average = 32,791). The populations of the 19 areas that accounted for 25% of the long-term unemployment cases were somewhat smaller with an average of 17,200. However, to simply attribute the concentration of a significant proportion of the cases of imprisonment, child abuse and long-term unemployment apparent in Table 3.1 to the size of the postcode areas involved would be to overlook some important strategic insights. First, the combined populations of the areas that yield 25% of the three types of cases are a fraction of what would be expected on a *pro rata* basis:

Table 3.2: Concentration of disadvantage within Victorian postcodes accounting for 25% of specified cases

	Urban/rural ratio	Share of total popn. of all 647 postcodes (4,640,151)	Over-representation On share of population basis
Imprisonment (14 postcodes; 461,615 people)	11:3	9.9%	2.5 times
Child abuse (18 postcodes; 590,236 people)	10:8	12.7%	Approx. 2 times
Long-term unemployment (19 postcodes; 326,809 people)	17:2	7.0%	3.5 times

The concentration of problems beyond the share of population is sustained when the range of issues is broadened. To varying degrees this is true of the 24 postcodes that accounted for 25% of psychiatric hospital admissions and disability/sickness benefits,

and the 26 areas that accounted for 25% of the young people who are neither in high school nor undergoing training:

Psychiatric hospital admissions: 1.7 times the share of population;
 Disability/sickness support: 1.5 times the share of population;
 Year 12 incomplete/no further training: 1.3 times the share of population.

The importance of the foregoing patterns of concentration is enhanced by consideration of another factor. Many of the same postcodes re-appear among the localities that contribute the greatest number of instances of different forms of disadvantage. While not always the case and with the notable exception of long-term unemployment, it is striking the number of times the same places appear on the lists of postcodes yielding the greatest number of instances of the six problems discussed above. The following Victorian data highlights the potential value of integrating human services and focusing their delivery on areas that account for a high proportion of a range of problems. A total of 125 postcode areas accounted for 25% of the six forms of disadvantage discussed above and specified in Table 3.3 (below). But not all of the 125 areas were distinct. Two-thirds (68.8%) of them actually involved multiple appearances by just 23 postcodes. Indeed, eight areas between them accounted for just under a third (32%) of the total number of localities involved:

Table 3.3: Victorian postcodes accounting for 25% of instances of six types of social disadvantage

	Psych admiss. N=24	Disability /sickness N=24	Yr 12 incomplet no training N=26	Child abuse N=18	Prison Admiss N=14	Long- term Unemply N=19	Total no. p'codes Covered N=125
3021 St Albans	√	√	√	√	√	-	5
3020 Albion	√	√	√	√	√	-	5
3199 Frankston	√	√	√	√	√	-	5
3175 Dandenong South	√	√	√	√	√	-	5
3174 Noble Park	√	√	√	√	√	-	5
3500 Mildura	√	√	√	√	√	-	5
3214 Corio/Norlane	√	√	√	√	√	-	5
3550 Bendigo	√	√	√	√	√	-	5
3073 Reservoir	-	√	√	√	√	-	4
3030 Werribee	√	√	√	√	-	-	4
3047 Broadmeadows	√	√	√	√	-	-	4
3350 Newington	√	√	√	√	-	-	4
3630 Shepparton North	√	√	√	√	-	-	4
3072 Preston	√	√	-	-	√	-	3
3216 Belmont	√	√	√	-	-	-	3
3280 Warrnambool	√	√	√	-	-	-	3
3690 Wodonga	-	√	√	√	-	-	3
3977 Cranbourne	-	√	√	√	-	-	3
3840 Morwell	-	-	-	√	√	√	3
3825 Moe	-	√	-	√	-	-	2
3844 Traralgon	-	-	√	√	-	-	2
3058 Coburg	√	√	-	-	-	-	2
3182 St Kilda	√	-	-	-	√	-	2
							86
Postcodes appearing once							39
						Total	125

New South Wales

Table 3.1 showed that the concentration of disadvantages within a relatively small number of NSW postcodes did not quite achieve the same degree of compactness as in Victoria. Nevertheless, 5.9% or less of postcodes in every instance accounted for 25% of the total for each variable. In three instances – imprisonment (3.2%), child abuse (3.4%) and long-term unemployment (4.1%) – it required around 4% or less to cover a quarter of the cases. Again, many of the postcodes were of considerable size. Nine of the 19 areas that yielded a quarter of the prisoners had populations of 40,000 or more (average = 41,552). The same was true of nine of the 20 areas that yielded a quarter of the child abuse cases (average = 40,259) and 12 of the 24 areas that accounted for 25% of the long-term unemployment cases (average = 41,613). But just as in Victoria, the concentration of disadvantage within certain postcodes is not simply attributable to the scale of population involved. The combined populations of the areas that yielded 25% of the instances of imprisonment, child abuse and long term unemployment were well below what would be expected on a share of population basis:

Table 3.4: Concentration of disadvantage within limited number of NSW postcodes accounting for 25% of specified cases

	Urban/rural ratio	Share of total popn. of all 587 postcodes (6,376,300)	Over-representation on share of population basis
Imprisonment (19 postcodes; 789,493 people)	12:7	12.4%	2 times
Child abuse (20 postcodes; 805,174 people)	9:11	12.6%	2 times
Long-term unemployment (24 postcodes; 998,718 people)	11:13	15.7%	1.6 times

Table 3.5 (below) shows that, just as in Victoria, a number of postcodes re-appeared several times in the lists of areas with the greatest number of instances of the three problems discussed immediately above. Seventeen areas provided precisely two-thirds of the 63 localities needed to account for 25% of the instances of imprisonment, long-term unemployment and child abuse. Eight areas provided well over a third (38.1%) of the 63 required:

Table 3.5: NSW postcodes accounting for 25% of instances of three types of social disadvantage

	Long-term Unempl.	Prison Admiss.	Child Abuse	Total no. postcodes covered
	N=24	N=19	N=20	N=63
2166 Cabramatta	√	√	√	3
2170 Liverpool	√	√	√	3
2259 Wyong	√	√	√	3
2450 Coffs Harbour	√	√	√	3
2480 Lismore	√	√	√	3
2560 Campbeltown	√	√	√	3
2650 W. Wagga	√	√	√	3
2770 Mt Druitt	√	√	√	3
2566 Minto	-	√	√	2
2830 Dubbo	-	√	√	2
2800 Orange	-	√	-	2
2430 Taree	√	√	-	2
2440 Kempsey	√	√	-	2
2200 Hurstville	√	√	-	2
2261 The Entrance	√	-	√	2
2168 Green Valley	√	√	-	2
2165 Fairfield	√	-	√	2
				42
Postcodes appearing once				21
			Total	63

The foregoing analyses show that ranking postcodes according to the volume of different forms of disadvantage that occur within them can reveal more than the simple effects of population sizes. If a state's intention is to mount large-scale interventions while maintaining a clear sense of focus, then the geographic concentration of high volumes of problems can be an appropriate starting point. The utility of this approach is further enhanced when, as we have seen in the results for both NSW and Victoria, many localities are the sites of concentrations of several forms of disadvantage inviting more integrative service delivery arrangements.

However, the volume of problems in a locality is not everything. Some areas call out for attention not because of the numbers of people affected by different forms of disadvantage but because of the presence of over-lapping, multiple problems. These can constitute a 'web of disadvantage' that constrains people's efforts to use life opportunities that are generally available to individuals, families and communities. We turn now to this second perspective on the concentration of disadvantage within postcode areas with its emphasis upon the susceptibility of local populations to a range of problems that are often interrelated.

CUMULATIVE DISADVANTAGE

A simple method of assessing concentrations of social disadvantage is to examine the extent to which a relatively small number of postcode areas carry the burden of comparatively high scores on a range of indicators. Thirteen social indicators were used for this purpose in Victoria ('electricity disconnection' and childhood accidents were not included for reasons discussed in Chapter 4). Fourteen indicators were studied in New South Wales. A simple first step was to identify for each indicator the localities that occupy the 30 highest-ranking positions (approximately 5% of the total number of postcodes). The raw results for each area were expressed as a rate per thousand of the relevant population base (the number of children, the number of people over eighteen years, whatever was appropriate and consistent with the scheme outlined in Chapter 2).⁶

Concentration of 'Top 30' rank positions

Since 13 indicators were used in Victoria the first question is to see what proportion of the 30 x 13 top ranks on the indicators (equal to 390 positions) is accounted for by a core of multiply disadvantaged areas. Apart from the use of 14 indicators, the same question can be asked of NSW using the threshold in both cases of postcodes that appeared four or more times in the top 30 lists.

VICTORIA (647 postcodes)	NEW SOUTH WALES (587 postcodes)
31 areas or 4.8% of all postcodes account for 149 (38.2%) of 390 top positions	36 areas or 6.1% of all postcodes account for 203 (48.3%) of 420 top positions

This means that in both Victoria and New South Wales a relatively small proportion of postcode areas (4.8% and 6.1%, respectively) occupy eight times their share of the top 30 places. It is also possible to compare the present results with those obtained in 1999:

Victoria

1999

6.4% of postcodes = 48.7% of top positions
1.1% of postcodes = 12.3% of top positions

2003

6.4% of postcodes = 45.1% of top positions
1.1% of postcodes = 11.5% of top positions

New South Wales

1999

5.4% of postcodes = 49.6% of top positions
1.2% of postcodes = 17.0% of top positions

2003

5.5% of postcodes = 44.5% of top positions
1.2% of postcodes = 13.8% of top positions

⁶ Frequencies below the level approved by source organisations for release – generally below 5 – were ranked on the basis of averaged scores.

These figures are one indication of a considerable degree of geographic concentration of social disadvantage in Victoria and NSW. This is further illustrated by consideration of the frequency with which individual postcodes appeared in the top 30 rankings and the comparative stability of high rankings between 1999 and 2003. In accordance with the approach outlined in the *Preliminary Information* section at the outset of this report, the postcodes are grouped in four bands and where areas are named they are listed alphabetically. For reasons of compression, a single name is attached to each of the listed postcodes. The compact disk accompanying this report contains the detailed results for all areas including a more comprehensive list of the places located within each postcode:

Table 3.6: Frequency of appearance of Victorian postcode areas in Top 30 rank positions on 13 indicators

Number of times Listed	Number of Areas	Names of areas (alphabetical order)
6 -9	6	Korangvale (3520); Nowa Nowa (3887); Nyah (3594); Seaspray (3851); Thorpdale (3835);Ultima (3544)
4 or 5	25	Heathcote (3523); Balintore (3254); Bealiba (3475); Bena (3946); Braybrook (3019); Broadmeadow (3047); Cabbage Tree Creek (3889); Colbinabbin (3559); Collingwood (3066); Cressy (3322); Crossover (3821); Dalyston (3992); Goroke (3412); Jeparit (3423); Koondrook (3580); Linton (3360); Marong (3515); Moyhu (3732); Minyip (3392); Nyah West (3595); Port Franklin (3964); Thornton (3712); Port Watchem (3482); Welshpool (3965); Wood Wood (3596)
2 or 3	66	Albion (3020); Altona Nth. (3025); Ampitheatre (3468); Avoca (3467); Berriwillock (3531); Bet Bet (3472); Birregurra (3242); Bonnie Doon (3720); Boxwood (3725); Branhholme (3302); Brim (3391); Campbellfield (3061); Caresbrook (3464); Casterton (3311); Churchill (3842); Clunes (3370); Cokum (3542); Coldermead (3984); Coolaroo (3048); Corio (3214); Docklands (3000); Doveton (3177); Dunolly (3472); Eagle Point (3878); Eildon (3713); Elmore (3558); Ensay (3895); Morwell (3840); Footscray (3011); Frankston Nth. (3200); Hedley (3967); Heyfield (3858); Korumburra (3950); Lalor (3075); Lindenow (3865); Lismore (3324); Lockington (3563); Lowers Hill (3237); Malmsbury (3446); Mildura (3500); Mitiamo (3573); Moe (3825); Narbethong (3778); Neuarcurr (3413); Newmerella (3886); Ninewnook (3540); Noojee (3833); Patho (3562); Peterborough (3270); Preston (3072); Rainbow (3424); Springvale (3171); St. Albans (3021); St Kilda (3182); Swan Reach (3903); Tallangatta Valley (3701); Tankerton (3921); Taradale (3447); Tawonga (3697); Tempy (3491); Terip Terip (3719); Thomastown (3074); Toora (3962); Wedderburn (3518); West Heidelberg (3081); Willert (3750); Woomelang (3485)
ONCE	94	

Consistency of results – Victoria

Apart from anything else, the increase in the range of indicators from 10 in 1999 to 13 in the present study could be expected to result in some differences in the picture of top ranking Victorian postcodes. However, in as brief an interval as just a few years it would raise questions about the appropriateness of the indicators used if the pictures bore no resemblance. This was not the case. The pattern was one of considerable stability. Of the 31 locations that appeared at least four times in the current Top 30 lists, one had a different postcode identity in 1999. Twenty two of the remaining 30 had appeared at least once, fourteen had appeared three times and eight had been listed four or more times⁷:

⁷ In 1999 there were 17 postcodes that were listed four or more times.

Table 3.7: Number of times 30* highest ranking postcodes in 2003 appeared in 1999

Postcode	Frequency in 2003	Frequency in 1999
Korong Vale 3520	6 or more	Four times
Nowa Nowa (3887)	6 or more	Three times
Nyah (3594)	6 or more	Six times
Thorpdale (3835)	6 or more	Five times
Seaspray (3851)	6 or more	Three times
Heathcote (3523)	4 or 5	Three times
Bealiba (3475)	4 or 5	Five times
Bena (3946)	4 or 5	-
Braybrook (3019)	4 or 5	Six times
Broadmeadow (3047)	4 or 5	Three times
Collingwood (3066)	4 or 5	Five times
Cabbage Tree Creek (3889)	4 or 5	Twice
Colbinabbin (3559)	4 or 5	-
Cressy (3322)	4 or 5	-
Crossover (3821)	4 or 5	Five times
Balintore (3254)	4 or 5	Twice
Dalyston (3992)	4 or 5	Twice
Goroke (3412)	4 or 5	-
Jeparit (3423)	4 or 5	Once
Koondrook (3580)	4 or 5	Once
Linton (3360)	4 or 5	Three times
Marong (3515)	4 or 5	-
Moyhu (3732)	4 or 5	-
Minyip (3392)	4 or 5	-
Nyah West (3595)	4 or 5	Four times
Port Franklin (3964)	4 or 5	Twice
Thornton (3712)	4 or 5	Once
Port Welshpool (3965)	4 or 5	Three times
Watchem (3482)	4 or 5	-
Wood Wood (3596)	4 or 5	-

*One postcode (*Ultima, 3544*) was not included in 1999

Consistency of results – New South Wales

Table 3.8 (below) summarises the number of times different NSW localities appeared among the top ranking positions on the 14 indicators for which data was available in 2003. The results are again grouped in bands one notable difference from the Victorian result being that eleven localities appeared seven or more times, there being only two postcodes that appeared seven or more times in Victoria:

Table 3.8: Frequency of appearance of NSW postcode areas in top 30 rank positions on 14 indicators

Number of Times listed	Number Of areas	Names of areas (alphabetical order)
7 - 11	11	Barmedman (2668); Claymore (2559); Brewarrina (2839); Capertree (2846); Galong (2585); Gunnedah – Forward (2381); Koorawatha (2807); Lightning Ridge (2834); Tingha (2369); Waterloo (2017); Windale (2306);
4-6	25	Ashford (2361); Bogan Gate (2876); Boggabilla (2409); Bourke (2840); Bowraville (2449); Carrington (2294); Coopernook (2426); Harrington (2427); Iluka (2466); Mendooran (2842); Menindee (2879); Mid North Coast MSC (2441); Mount Druitt (2770); Mount George (2424); Mungindi (2406); Northern Rivers MSC (2469); Port Kembla (2505); Stockinbingal (2725); Stroud Road (2415); Tighes Hill (2297); Ulmarra (2462); Walgett (2832); Warrawong (2502); Western Plains MSC (2831); Wilcannia (2836);
2 or 3	45	Balranald (2715); Baradine (2396); Batlow (2730); Bendick Murrell (2803); Binalong (2584); Bingara (2404); Binnaway (2395); Broken Hill (2880); Cabramatta (2166); Collarenebri (2833); Dareton (2717); Darlington Point (2706); Deepwater (2371); Evans Head (2473); Glebe (2037); Glen Innes (2370); Gulargambone (2828); Harwood Island (2465); Hillston (2675); Islington (2296); Kandos (2848); Kempsey (2440); Lake Cargelligo (2672); Laurieton (2443); Mayfield (2304); Moonbi (2353); Moree (2400); Mullaley (2379); Mullumbimby (2482); Murrurundi (2338); Nambucca Heads (2448); Narooma (2546); Quandialla (2721); Stockton (2295); Urbenville (2475); Urunga (2455); Villawood (2163); Waverly (2024); Wentworth (2648); Werris Creek (2341); West Newcastle (2302); Wickham (2293); Woodstock (2793); Wyangla (2808); Yanco (2703);
Once	100	

The consistency of the above results with those of the 1999 study can be seen from a comparison of the 36 postcodes that currently appear four or more times among the ‘top 30’ ranking positions and their 1999 rank positions:

Table 3.9: Number of times 36 highest-ranking postcodes in 2003 appeared in 1999

Postcode	Frequency in 2003	Frequency in 1999
Barmedman (2668)	7-11	-
Blairmount./Claymore (2559)	7-11	Four times
Brewarrina (2839)	7-11	Twice
Capertree (2846)	7-11	-
Galong (2585)	7-11	-
Gunnedah-Forward (2381)	7-11	Four times
Koorawatha (2807)	7-11	Six times
Lightning Ridge (2834)	7-11	Six times
Tingha (2369)	7-11	Six times
Waterloo (2017)	7-11	Four times
Windale (2306)	7-11	Nine times
Ashford (2361)	4-6	Once
Bogan Gate (2876)	4-6	Twice
Boggabilla (2409)	4-6	Twice
Bourke (2840)	4-6	Once
Bowraville (2449)	4-6	Five times
Carrington (2294)	4-6	Six times
Cooperook (2426)	4-6	Four times
Harrington (2427)	4-6	Twice
Iluka (2466)	4-6	Twice
Mendooran (2842)	4-6	Three times
Menindee (2879)	4-6	Six times
Mid North Coast MSC (2441)	4-6	Twice
Mount Druitt (2770)	4-6	Once
Mount George (2424)	4-6	Three times
Mungindi (2406)	4-6	-
Northern Rivers MSC (2469)	4-6	Four times
Port Kembla (2505)	4-6	-
Stockinbingal (2725)	4-6	Four times
Stroud Road (2415)	4-6	Three times
Tighes Hill (2297)	4-6	Four times
Ulmarra (2462)	4-6	Four times
Walgett (2832)	4-6	Twice
Warrawong (2502)	4-6	Once
Western Plains MSC (2831)	4-6	Once
Wilcannia (2836)	4-6	Three times

Of the 36 locations that appeared at least four times in the current NSW top 30 lists, all but five had appeared at least once, 26 had previously appeared at least twice, fifteen had appeared at least four times and seven had been listed five or more times (when just nine indicators had been used in 1999). How stable were the NSW results between 1999 and 2003? After allowing for the fact that in 1999 only nine indicators

were employed, compared with 14 on this occasion, the pattern was again one of marked stability.

Distinctive features

Were there features of the profiles of the most frequently high-ranking areas that helped to set them apart from the others? We will attempt to answer this question with greater statistical precision in the next chapter but we can provide a preliminary answer on the basis of the information considered so far. The 31 areas that appeared at least four times in the lists of high-ranking postcode areas in Victoria (see Table 3.6 above) displayed some characteristics more than others:

- A majority (17/21) scored highly on unemployment;
- Twelve ranked highly on ‘disability/sickness benefits’ and low income, and
- 10 on ‘early school leaving’.

These were the most prominent features of the multiply disadvantaged areas in Victoria by the criterion of ‘top 30’ rank positions.⁸ Apart from these characteristics, nine localities scored highly on ‘low skill workers’, seven on childhood injuries and child abuse, six on admissions to psychiatric hospitals and imprisonment, and five on ‘Year 12 incomplete/ no further training’. The remaining indicators appeared three or fewer times in the profiles of the other 31 high-ranking postcode areas.

The comparison of these findings with the profiles of the 36 NSW postcode areas that appeared at least four times in the top 30 lists revealed similarities but also some differences. Just as had been the case in Victoria, unemployment was a prominent feature of the area profiles with 19 of the 34 localities scoring highly on this variable. However, this result was exceeded in NSW by the results for two other indicators, court convictions (22/34) and long term unemployment (20/34) both of which had been much less prominent in the Victorian findings. The same was true of prison admissions, 15 of the 34 high-ranking postcode areas being in the top 30 list on this variable.

A similarity in the findings for the two states was that half (17/34) of the NSW localities scored highly on disability/sickness support, low income and early school leaving but ‘Year 12 incomplete’ was more prominent in NSW. Two other differences were that just 1 and 4, respectively, of the 34 NSW localities ranked highly on ‘low skill’ and psychiatric hospital admissions compared with 9/21 and 6/21 of the Victorian counterpart areas. Approximately a third of the high-ranking postcode areas in both states occupied top 30 rank positions in the child abuse, low birth weight babies and child injury lists.

Overall, the results suggest that a wider range of indicators than is the case in Victoria may be involved in the identification of highly disadvantaged localities in New South Wales. At this stage, the most salient variables seem to include:

⁸ Another perspective is afforded by statistical procedures that simultaneously take account of a postcode’s position on all of the indicators. These procedures are described in Chapter 4.

**VIC/NSW CONSISTENTLY HIGH RANKING AREAS –
PROFILES COMPARED**

VICTORIA	NEW SOUTH WALES
<ul style="list-style-type: none"> • Unemployment • Disability/Sickness Support • Low Income • Early School Leavers • Low Skill Workers <ul style="list-style-type: none"> • Child Abuse, Low Birth Weight, Childhood Injuries 	<ul style="list-style-type: none"> • Criminal Court Convictions • Long Term Unemployment • Unemployment • Low Income • Disability/Sickness Support • Early School Leavers • Year 12 Incomplete • Prison Admissions <ul style="list-style-type: none"> • Child Abuse, Low Birth Weight, Childhood Injuries

We now turn to an examination of the inter-connections between the indicators and employ formal statistical techniques for this purpose.

CHAPTER 4: THE INTERCONNECTIONS BETWEEN INDICATORS

The picture presented to this point has been derived mainly from the postcodes that most frequently occupied the top ranking positions on the fifteen indicators initially used in the study of disadvantage in Victoria and the fourteen used in New South Wales. It was appropriate to begin by focusing upon areas characterised by several forms of disadvantage and by profiling these areas. It is now time to employ statistical techniques that use the results for all 647 Victorian and 587 NSW postcodes included in the study. This should enable us to arrive at a more general characterisation of what is involved in cumulative disadvantage and its distribution across the two states.

The first step is to examine the extent to which the various measures of disadvantage that we have used increase or decrease together across the neighbourhoods studied. This will assist decisions about what variables to include in a second phase of the analysis. The goal of that second phase is the reduction of the different strands of information about each postcode represented by its set of indicator scores to a unitary measure of each area's overall relative social disadvantage.

Associations between the indicators (correlation analysis)

To what extent do areas with 'high', 'middling' or 'low' scores on one indicator tend to have similar scores on the other indicators used in the study? To answer this question we take advantage of an index of co-variation, the correlation coefficient that is known as r . The correlation coefficient lies between 1.00 and -1.00. When r is 0 we say there is 'no correlation' between two variables (in this case pairs of indicators). Where r is -1.00 there is a perfect negative correlation; that is, when X increases, Y decreases. Where r is +1.00 there is a perfect positive correlation; when X increases, Y increases.

CORRELATIONS BETWEEN VICTORIAN INDICATORS

With three exceptions, the correlation coefficients presented in Table 4.1 (below) reflect a relatively high degree of inter-connectedness between the indicators. Of the 105 pairings of indicators, the correlation coefficients were significant at the .05 level or higher in 93 instances. Two variables that detracted from the positive associations between the indicators were *electricity disconnections* and *child accidents*. The differences between the postcodes that ranked highly on *electricity disconnections* and those highlighted by other indicators was self-evident and commented upon earlier in Chapter 3. Seven of the correlation coefficients for this variable were negative and two were of a zero order. This evidence in combination with doubts about the denominator used to calculate the rate of disconnections (occupied dwellings in each postcode rather than the number of dwellings supplied by the power companies) caused us to eliminate this indicator from subsequent analyses. We decided to take the same action with respect to *child accidents*, not because of shortcomings in the nature of the indicator but because of doubts about the derivation of the Victorian data. It correlated negatively with five of the other indicators three of which – limited education (leaving school early; Year 12 incomplete/no further training) and low income – have frequently been shown to be associated with childhood accidents (see

Chapter 2). A third indicator, *low birth weight*, also correlated negatively with five of the others but had the redeeming feature of being positively and significantly associated with variables – education, income and unemployment – that have been shown by much research to be relevant to low birth weight. Moreover, the removal of the child accident and ‘electricity disconnection’ variables reduced the number of low birth weight negative correlations by two. Given the particular effort on this occasion to build up the number of cases of low birth weight, it was decided to leave the variable in the remaining analyses to assess its place in the overall picture of social disadvantage.

Table 4.1: Correlations between indicators (Victoria)

	Ch Acc	Ch Ab	Dis- conn	Disab/ Sick suppt	Early Sch leav	Low birth wt	Low inc	Low skill	Crt. conv	Yr 12	Pris Ad	Psy adm	LT Unem	Mort	Unem- ploymt
Ch Accident		.247 **	.515 **	-.163 **	-.250 **	-.680 **	-.308 **	.126 **	.194 **	-.357 **	.621 **	.309 **	.172 **	.537 **	.079
Ch Abuse			.124 **	.376 **	.285 **	-.033	.328 **	.340 **	.481 **	.251 **	.381 **	.306 **	.405 **	.084 **	.444 **
Dis- Connect				-.297 **	-.461 **	-.409 **	-.350 **	-.143 **	.071	-.414 **	.395 **	.185 **	.029	-.366 **	.040
Disab/sick Support					.671 **	.256 **	.682 **	.417 **	.369 **	.443 **	.091 *	.303 **	.499 **	.416 **	.697 **
Early school Leaving						.351 **	.713 **	.567 **	.317 **	.596 **	-.024	.095 *	.332 **	.349 **	.551 **
Low birth Wt							.376 **	.107 **	-.029	.396 **	-.395 **	-.225 **	.016	.459 **	.289 **
Low Income								.389 **	.339 **	.532 **	.003	.172 **	.483 **	.366 **	.743 **
Low skilled Workers									.374 **	.456 **	.216 **	.133 **	.486 **	.092 *	.046
Court Convictions.										.257 **	.359 **	.336 **	.433 **	.097 *	.596 **
Yr 12 Incomplete											-.144 **	.013	.209 **	.398 **	.485 **
Prison Admissions												.428 **	.341 **	-.249 **	.404 **
Psych Admissions													.330 **	.041	-.167 **
LT Unemployt														.065	.778 **
Mortality ratio															.353 **
Unemployt															

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

On the positive side, the most consistently correlating indicators, for the greater part, resembled the earlier identified characteristics of the high-ranking postcode areas (see section *Distinctive Features*, Chapter 3). Following the deletion of the ‘disconnections’ and ‘accidents’ variables:

- *Disability/sickness support*, *low skill* and *low income* were positively correlated with the remaining indicators,
- *Early school leaving* and *unemployment* were positively correlated with all but one of the remaining indicators.

These were five features that were earlier identified as characteristic of multiply disadvantaged areas. In addition it is evident from Table 4.1 that *child abuse* and *court convictions* correlated positively with all but one of the other indicators. The same was true of *psychiatric hospital admissions* but in some instances the association was negligible. Was the same pattern of association evident among the variables used in New South Wales? To answer that question we must now examine the correlation matrix for the fourteen indicators used in that state:

Table 4.2: Correlations between indicators (NSW)

	Ch Acc	Ch Ab	Disab/sick suppt	Early Sch Leave	Low birth wt	Low inc	Low skill	Crt. con	Yr 12	Pris Ad	Psych Adm	LT Unem	Mort	Unemployment
Ch Accident		.110 **	.252 **	.277 **	.118 **	.223 **	.168 **	.339 **	.359 **	.135 **	-.089 *	.225 **	.258 **	.088 *
Ch Abuse			.338 **	.179 **	.288 **	.236 **	.325 **	.457 **	.186 **	.462 **	.093 *	.300 **	.307 **	.392 **
Disab/sick Suppt				.767 **	.236 **	.861 **	.602 **	.699 **	.638 **	.471 **	-.172 **	.832 **	.490 **	.754 **
Early school Leaving					.167 **	.829 **	.712 **	.616 **	.776 **	.375 **	-.380 **	.716 **	.393 **	.583 **
Low birth Wt						.230 **	.228 **	.318 **	.132 **	.379 **	.225 **	.252 **	.336 **	.372 **
Low Income							.617 **	.655 **	.705 **	.414 **	-.268 **	.837 **	.390 **	.774 **
Low skilled Workers								.567 **	.646 **	.390 **	-.278 **	.583 **	.354 **	.606 **
Court Convictions.									.530 **	.613 **	-.089 *	.680 **	.499 **	.636 **
Yr 12 Incomplete										.316 **	-.471 **	.595 **	.344 **	.501 **
Prison Admissions											.103 *	.497 **	.453 **	.530 **
Psych Admissions												-.180 **	.029	-.045
LT Unemployment													.415 **	.825 **
Mortality ratio														.376 **
Unemployment														

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

One indicator (psychiatric hospital admissions) correlated poorly or negatively with the other thirteen indicators. This finding and the fact that some postcodes with high absolute numbers of admissions also contained psychiatric facilities strengthened our initial concern about the authenticity of this variable. Since the intent was to calculate rates for all indicators based on the usual place of residence of the individuals concerned, the psychiatric hospital admissions variable was eliminated from all further analyses. With that variable removed, Table 4.1 shows a generally high degree of positive association between the other indicators. Indeed, the relationships between them were all in a positive direction. Using the size of correlations as a guide, several variables appear outstanding in their degree of interconnectedness with the other NSW indicators. They were:

Highly inter-correlating variables⁹ –

Low income
Disability/sickness
Early school leaving
Court convictions
Long-term unemployment
Low skill
Unemployment
Year 12 incomplete

Basically these are the same variables that were highlighted by the Victorian analysis the differences being that child abuse was not as prominent in NSW and long-term unemployment and ‘Year 12 incomplete’ were more to the fore in the latter state. A major aim of the analyses that lie ahead in this chapter is to calculate the general degree of disadvantage experienced by different localities. Although the statistical device used for this purpose may be a technical one, the weights that it assigns to different indicators should in part reflect what we now know about their mutual ebb and flow and their relative prominence in the profiles of localities that rank highly on a number of indicators of disadvantage. Therefore, a brief summary of what has been learned to this point should provide a less technical baseline against which to assess the meaning of the measurement devices that are described in the next section. It might be expected that a general disadvantage score would:

- Give particular weight to *unemployment, low income, early school leaving* and *disability/sickness benefit* in both states;
- Place modest emphasis on *low birth weight*,
- Vary somewhat between the two states to reflect differences in regional disadvantage (for example, *long term unemployment, ‘Year 12 incomplete’, court convictions, prison admissions* and *child injuries* in NSW, and *child abuse, low skill* and *psychiatric admissions* in Victoria).

⁹

	At/above .40	At/above .70
<i>Low income</i>	nine times	five times
<i>Disability/sickness</i>	nine times	five times
<i>Early school leaving</i>	eight times	five times
<i>Court convictions</i>	ten times	once
<i>Long term unemployment</i>	nine times	four times
<i>Low skill</i>	seven times	five times
<i>Unemployment</i>	eight times	three times
<i>Year 12 incomplete</i>	seven times	twice

DISADVANTAGE FACTOR

Next we want to see whether all of the 647 postcodes used in Victoria and the 587 used in New South Wales can be graded according to their overall degree of cumulative disadvantage. We want to arrange them in an array, like beads on a string, ranging from the area that is most generally vulnerable to the problems represented by our indicators, to the one that is least vulnerable. For the reasons stated earlier, we will then group like-positioned areas into bands. This is to avoid singling out localities for concentrated public comment without losing sight of the priority needs associated with a high ranking on the general disadvantage index or ‘factor’.

A statistical technique that can help us to achieve this goal is Principal Components Analysis. This is a way of examining the structure that underlies the correlations presented in Tables 4.1 and 4.2. If what is called the first *component* accounts for a sufficiently high percentage of the total variance of the remaining thirteen Victorian indicators and thirteen NSW indicators the issue of arranging postcode areas according to their degree of susceptibility to disadvantage is reduced to examining scores along a single dimension.

Invitation to the non-technical reader:

Inevitably there must now be some technical discussion of the means by which a single disadvantage score can be derived for each postcode area. Readers wishing to by-pass these details might proceed to the section *New South Wales: Disadvantage scores for postcode areas* where they will see the practical outcome of the statistical exercises.

The findings for Victoria on this occasion were a little more complicated than in 1999 but the principal components analysis resulted in the extraction of a major factor that accounted for 31.8% of the total variance of the 13 indicators across the 647 Victorian postcodes. The proportion of the variance accounted for by the first component was slightly below the equivalent finding in 1999 (34.7%). Nevertheless we are justified in treating this first component as a ‘general disadvantage’ factor that captures along a single dimension many aspects of disadvantage previously reflected in thirteen indicator scores.

This does not mean that all of the indicators are reflected to an equal extent by the Victorian ‘disadvantage’ factor. Eight variables correlated with this factor at the .50 level or higher. (To limit the statistical density of this part of the report the table displaying the relevant data can be found at Appendix A – Table 1). Outstanding among these indicators were ones shown in the previous section to correlate positively with many other indicators and to form a significant part of the profile of consistently high-ranking localities (Chapter 3). Disability/sickness support, unemployment, low income families, low skills, early school leavers, court convictions and child abuse correlated with the general factor at the .65 level or above with psychiatric hospital admissions, imprisonment and low birth weight babies correlating positively at somewhat lower levels. There is also a strong echo here of the 1999 results with respect to variables included on both occasions. In the earlier study it was noted that

four indicators¹⁰ correlated with ‘disadvantage’ at above the .60 level. The same four indicators were among the six repeated variables with the same level of correlation with ‘disadvantage’ on this occasion:

Victoria 1999	Victoria 2003
Court defendants (.80)	Court convictions (.68)
Unemployment (.74)	Unemployment (.74)
Low skill workers (.63)	Low skill workers (.68)
Low income (.60)	Low income (.72)
.....	Early school leavers (.68)
Early school leavers (.57)	Child abuse (.66)
Child abuse (.54)

A difference between the present and the 1999 findings is that in the earlier study no other component than the first (general disadvantage) one accounted for more than 19.1% of the total variance. In this study a second component accounted for 25.4 % of the variance. The labelling of this second component, as is often the case, is somewhat arbitrary but is not entirely without a rationale. Table 1 of Appendix A shows that there are four Victorian variables that correlate moderately or highly with Factor 2 (they are shaded in the table). They are:

Year 12 incomplete
Imprisonment
Mortality ratio, and
Low birth weight.

One of these four variables concerns death (mortality ratio) and another concerns one of the major determinants of early physical wellbeing (birth weight). Apart from the concentration of incapacity and ill health within our prisons, their use is generally a response to the extremes of social dysfunction. Finally, the duration of secondary education completed is one of the best predictors of adult physical and mental health and, as discussed in Chapter 2, can exert a powerful influence on whether someone is incarcerated in their young adult life. However one labels component 2 it represents a second dimension of disadvantage over and beyond the emphasis in Factor 1 upon an early departure from school and its sequelae of unemployment, low skills, low income, appearing before the courts and child abuse. The information yielded by the second *medico-social health factor* usefully supplements that provided by the general disadvantage component. However, because of its link to our main objective, we continue to treat component 1 as our primary concern. The disadvantage factor represents an attempt to capture what the indicators measure *in common*, rather than an attempt to summarise *all* of the information conveyed by the whole set of indicators. All of the indicators with the exception of mortality ratio correlate positively with the first principal component encouraging the view that the disadvantage factor is a meaningful concept.

¹⁰ Child injuries also correlated with the risk factor at the .63 level but as earlier noted this indicator was eliminated from the variables included in the factor analysis on this occasion.

In the case of NSW the first principal component accounts for 52.3% of the variance and well serves the purpose of summarising the disadvantage experienced by different postcode areas. The second component accounted for 11.2% of the variance. All of the indicators correlated positively and significantly with the first component. The coefficients exceeded .70 in eight of the thirteen instances (see final column of Table 1 – Appendix A). They exceeded .80 in six cases. These involved the majority of the variables previously noted as prominent in the profiles of repeatedly high-ranking localities and also strongly associated with many other indicators in the correlation analyses. These variables were *disability/sickness benefit*, *low income*, *unemployment*, *early school leaving* and *court convictions with low work skills* and *Year 12 incomplete* being just below the .80 threshold (.76 and .75 respectively). In addition, *long-term unemployment* correlated with the first component at the .88 level, a not unexpected result in view of the variable's high level of correlation with the other NSW indicators.

The foregoing analyses clear the way for the final step in our calculation of scores that summarise the degree of disadvantage experienced by different postcode populations.

CALCULATING DISADVANTAGE SCORES FOR POSTCODE AREAS IN VICTORIA AND NEW SOUTH WALES

A postcode's position along the disadvantage continuum is determined by weighting each of its 13 indicator scores by a value that reflects that particular indicator's loading on the general disadvantage factor for its state (see the Technical Appendix for the weights assigned). The final score for the locality then becomes the weighted sum of indices. Weighted scores for all Victorian and NSW postcodes are presented in the compact disk accompanying this report. For the purposes of those comprehensive tables the range of scores for postcodes in each state have been sub-divided into 20 equal parts and are expressed in terms of quintile bands. The 5% of postcode areas that are most disadvantaged are designated *1st quintile*, those occupying positions between 5 and 10% are labelled *2nd quintile*, and so on up to the last 5% (*20th quintile*).

Since a practical aim of the project is to highlight locations in need of particular assistance and renewal, Table 4.3 and Table 4.4 (below) present lists of the forty most disadvantaged postcode areas in NSW and Victoria determined according to the general disadvantage factor in each state¹¹. The claims of these areas to priority assistance are supported by their relative position without singling them out for public comment. They are listed in groups of six in descending order of disadvantage save for the last band that includes 10 postcodes. Within each group the places are listed alphabetically and we also show the population size and the number of times each location appeared among the 'top 30' rankings on the indicators (Chapter 3). For Victoria we also bring into play the supplementary information afforded by the second *Medico-Social Health* factor (Component 2) that has already been discussed.

¹¹ The number of places listed has increased from 30 in the 1999 publication to 40 on this occasion because of the greater number of postcodes used in the study and because of the minor differences between the scores ranked 31-40 and those immediately preceding them. The result is still a sharp focus upon the most disadvantaged localities. The forty Victorian postcodes represent just 6.2% of the total for the state and the forty NSW postcodes account for 6.8% of that state's total.

It assists the presentation of our findings to begin with the top 40 factor scores for New South Wales before presenting the same information for Victoria.

New South Wales: Disadvantage scores for postcode areas

The reader who wants only to concentrate on a single general disadvantage score identifying the most socially disadvantaged postcodes need look no further than the first three columns of Table 4.3 (below). They locate each of the forty postcodes within six bands of comparative degrees of disadvantage, band 1 being the most severe. These rankings are based upon the weighting of 13 indicators¹² according to the structure of the first principal component or *General Disadvantage Factor*. Because of the proportion of the total variance accounted for by this NSW first principal component (see earlier section, *Disadvantage Factor*) we have used it to derive the state-wide factor scores that reflect each location's general susceptibility to the problems studied. Principal components have also been calculated for urban and rural areas but their use added very little to the overall picture and no further reference is made to them. The structures of both components are presented in the Technical Appendix.

There was a close connection between post-codes occupying top 30 positions in the ranking on indicators (Chapter 3) and scoring highly on the disadvantage factor. Almost two-thirds (26/40) of the localities presented in Table 4.3 had appeared four or more times in the top 30 lists. Only eight had appeared less than three times and all had appeared at least once. When areas that had appeared just once were further examined it was usually found that they occupied comparatively low rank (that is, disadvantaged) positions on a number of variables, some of which were heavily weighted on the Disadvantage Factor that takes account of scores on *all* of the indicators. For example, in addition to ranking 21st on low skill, Kurri Kurri was 43rd on early school leaving, 46th on disability/sickness support, 49th on mortality ratio, 52nd on unemployment, 66th on long-term unemployment, 93rd on child abuse and 98th on low birth weight. Similarly, in addition to ranking 10th on low skill, Berkeley was 46th on unemployment, 59th on mortality ratio, 60th on early school leaving, 63rd on long-term unemployment, 75th on court convictions and 76th on low income. Both locations obtained scores on the disadvantage factor that placed them in the third band of Table 4.3.

The fact that results on all of the indicators are taken into account can also work in the other direction. Post-code 2381 (Gunnedah-Forward) appeared seven times in the top 30 lists and, therefore, was expected to be placed among the 40 localities included in Table 4.3. However, on two variables its rank position exceeded 500, on two others it ranked 367th and 366th with the consequence of restricting its overall disadvantage score. Nevertheless, as already stated, there was a generally high degree of congruence between the disadvantage factor scores and the top 30 rankings.

¹² Psychiatric hospital admissions was eliminated from the initial list of 14 indicators for the reasons presented earlier in this chapter in the section *Disadvantage Factor*.

Table 4.3: New South Wales - Forty highest-ranking postcode areas on general disadvantage factor

Band	Post-code	LOCALITIES ARRANGED ALPHABETICALLY IN EACH BAND	Total Popn.	Region	Times in top 30
	2839	Brewarrina , Narran Lake, Collerina, The Marra	1,563	Rural	7
	2807	Koorawatha	292	Rural	8+
1 (most disadvantaged)	2834	Lightning Ridge	3,349	Rural	7
	2369	Tingha , Bassenden	861	Rural	8+
	2462	Ulmorra , Clarenza, Swan Creek, Minnie Water, Wooli, Lavadia	1,729	Rural	5
	2306	Windale	2,932	Urban	8+
	2449	Bowraville , Argents Hill, Buckra Bendinni, Giralong, Killiekrankie, Missabotti, South Arm, Utungun, Yarranbella	2,286	Rural	4
	2559	Claymore , Blairmount, Woodbine,	4,141	Urban	7
	2585	Galong	136	Rural	8+
2	2440	Kempsey , Aldavilla, Austral Eden, Bellbrook, Bellimbopinni, Belmore river, Bonville, Bundagen, Burnt Bridge, Clybucca, Collombatti, Corangula, Crescent Head, Deep Creek, East Kempsey, Euroka, Fishermans Reach, Frederickton, Gladstone, Green Hill, Hampden Hall, Hat Head, Hickeys Creek, Jerseyville, Kinchela, Millbank, Mooneba, Moparrabah, Mungay Creek, North Bonville, Old Station, Pola Creek, Rainbow Reach, Seven Oaks, Sherwood, Skillion Flat, Smithtown, South Kempsey, Summer Island, Temagog, Toorooka, Turners Flat, Verges Creek, West Kempsey, Willawarrin, Willi Willi, Wittitirin, Yarravel, Yessabah	22,325	Rural	2
	2502	Warrawong , Cringila, Lake Heights	11,798	Urban	6
	2820	Wellington , Apsley, Arthurville, Bakers Swamp, Cundumbul, Dripstone, Eurimbula, Falls Road, Lake Burrendong, Montefiores, Mount Arthur, Mumbil, Nanima, Neurea, Ponto, Spicers Creek, Suntop, Terrabella, Twelve Mile, Wuuluman,	6,385	Rural	3
	2506	Berkeley	7,498	Urban	1
	2846	Capertree , Ben Bullen, Blackmans Flat, Glen Davis, Newnes, Round Swamp	241	Rural	8+
3	2848	Kandos , Boguee, Brogans Creek, Charbon	1,682	Rural	5
	2327	Kurri Kurri	7,142	Rural	1
	2770	Mount Druitt , Bidwill, Blackett, Dharruk, Emerton, Hebersham, Lethbridge Park, Minchinbury, Shalvey, Tregear, Whalan	57,169	Urban	6
	2017	Waterloo , Beaconsfield, Zetland	5,787	Urban	8+

Band	Post-code	Localities included	Total Popn.	Region	Times in top 30
	2361	Ashford , Atholwood, Bonshaw, Limestone, Rocky Creek, Texas, Yellow Dam	1,006	Rural	5
	2880	Broken Hill , Broughams Gate, Fowlers Gap, Little Topar, Milparinka, Mootwingee, Packsaddle, Silverton, South Broken Hill, Thackaringa, Tibooburra	21,345	Rural	3
4	2294	Carrington	1,603	Urban	6
	2505	Port Kembla , Kemblawarra, North Point Kembla	5,150	Urban	5
	2832	Walgett , Buena Vista, Come By Chance, Cumborah	3,148	Rural	5
	2831	Western Plains MSC , Angledool, Babinda, Bogan, Coolabah, Eremerang, Gongolgon, Goodooga, Hermidale, Honeybugle, Nymagee, Shuttleton, Talawanta, Weilmoringle	915	Rural	6
	2395	Binnaway , Box Ridge, Ropers Road, Ulamambri, Weetaliba	910	Rural	4
	2470	Casino , Babyl Creek, Backmede, Bora Ridge, Busbys Flat, Clovass, Dobies Blkight, Doubtful Creek, Dyraaba Central, Edenville, Fairy Hill, Gibberage, Irton Pot Creek, Irvington, Jacky Bulbin, Mongogarrie, Moonem, Myrtle Creek, Naughtons Gap, North Casino, Piora, Sextonville, Shannon Brook, Spring Grove, Stratheden, Upper Mongogarrie, Whipore, Woodview, Woolners Arm	13,492	Rural	2
5	2304	Mayfield , Kooragang Island, Mayfield East, Mayfield North, Mayfield West, Sandgate, Warabrook	14,562	Urban	2
	2441	Mid-North Coast MSC , Allgoonera, Ballengarra, Barraganyatti, Bril Bril, Cooperabung, Dondingalong, Eungai, Gearys Flat, Grassy Head, Gum Scrub, Kippara, Kundabung, Marlo Merrican, Rollands Plains, Stuarts Point, Tambar, Telegraph Point, Upper Rollands Plains/Glen Esk, Yarrhapinni,	3,893	Rural	5
	2448	Nambucca Heads , Newee Creek, Tewinga, Valla, Valla Beach	8,728	Rural	3
	2455	Urunga , Newry Island, Pickett Hill, South Urunga, Wenonah Head	2,941	Rural	5

Band (final ten post-codes)	Post-code	Localities included	Total Popn.	Region	Times in top 30
	2668	Barmedman	375	Rural	7
	2876	Bogan Gate , Gunningbland	284	Rural	5
	2325	Cessnock , Abermain, Abernethy, Allandale, Bellbird, Bellbird Heights, Campbell, Cedar Creek, Congewai, Ellalong, Elrington, Greta Main, Heaton, Kearsley, Keinbah, Kitchener, Lovedale, Millfield, Mount View, Mount Vincent, Paxton, Pelaw Main, Pelton, Pokolbin, Quorrobolong, Watagan Forest, Wollombi	24,446	Rural	1
	2551	Eden , Boydtown, Edrom, Green Cape, Kiah, Nadgee, Timbillica, Wonboyn, Woynboyn Lake, Wonboyn North	3,508	Rural	3
6	2879	Menindee	749	Rural	6
	2452	Sawtell , Toorimina	9,645	Rural	3
	2430	Taree , Bohnock, Bootawa, Brimbin, Burrell Creek, Cabbage Tree Island, Croki, Cundletown, Darawank, Diamond Beach, Dumaresq Island, Failford, Ghinni Ghinni, Glenthorne, Hallidays Point, Harrington, Hillville, Jones Island, Kiwarrak, Koorainghat, Kundle Kundle, Langley Vale, Lansdowne, Manning Point, Melinga, Mitchells Island, Mondrook, Moto, Old Bar, Oxley Island, Pampoolah, Possum Brush, Purfleet, Rainbow Flat, Red Head, Saltwater, Taree South, The Bight, Tinonee, Upper Lansdowne, Waitui, Wallabi Point	30,615	Rural	1
	2793	Woodstock , Mount McDonald, Roseberg	759	Rural	3
	2341	Werris Creek	1,446	Rural	4
	2326	Weston , Loxford, Neath, Sawyers Gully	6,125	Rural	1

The addition of Band 6 (positions ranging from 31 to 40) has drawn in nine locations that were not included last time (1999). Two of them were the lower Hunter postcodes of Cessnock and Weston. They join nearby Kurri Kurri (Band 3) and a number of Newcastle suburbs (Windale, Carrington and Mayfield) on the list of disadvantaged areas. The one area in Band 6 that appeared in 1999 is Menindee, which has undergone a major re-location from its former 2nd rank position. Two Wollongong postcodes, Warrawang and Port Kembla have appeared for the first time. Overall, 13 of the top 30 locations in 1999 appear in the current list of 40 most disadvantaged postcodes in NSW.

How similar was this list of the highest-ranking postcodes to the comparable list in 1999? Twelve of the 30 NSW places listed in 2003 were in the 1999 list. An asterisk marks them (below) and the overlap can be seen to be particularly strong among the top ranking locations. Seven of the ten first-ranked postcodes in 2003 appeared in the 30 highest-ranking locations in 1999:

2839* (Brewarrina), 2807* (Koorawatha), 2834* (Lightning Ridge), 2369* (Tingha), 2462 (Ulmarra), 2306* (Windale), 2449* (Bowraville), 2559* (Claymore), 2585 (Galong), 2440 (Kempsey), 2502 (Warrawang), 2820 (Wellington), 2506 (Berkeley), 2846 (Capertree), 2848 (Kandos), 2327 (Kurri Kurri), 2770 (Mount Druitt), 2017* (Waterloo), 2361 (Ashford), 2880 (Broken Hill), 2294*

(Carrington), 2505 (Port Kembla), 2832* (Walgett), 2831 (Western Plains MSC), 2395 (Binnaway), 2470 (Casino), 2304 (Mayfield), 2441* (Mid -North Coast MSC), 2448* (Nambucca heads), 2455 (Urunga).

Another way of considering the consistency of the rank order of postcodes on the disadvantage factor in 1999 and 2003 involves the use of the correlation coefficient (known as r). In Chapter 3 it was pointed out that this coefficient lies between 1.00 and -1.00 . When r is 0 we say there is 'no correlation' between two variables (in this case pairs of disadvantage scores). Where r is -1.00 there is a perfect negative correlation; that is, when X increases, Y decreases. Where r is $+1.00$ there is a perfect positive correlation; when X increases, Y increases. In the case of the two sets of disadvantage scores for NSW (1999 and 2003) the correlation was significantly high at .862. The 2003 results also correlated highly with the ABS *Index of Relative Social Disadvantage* ($r = .867$). The latter result was similar to the result in 1999 ($r = .913$).

Victoria

Disadvantage scores for postcode areas

A similar general risk factor was used to identify the 40 most disadvantaged postcodes in Victoria. Full details are presented in Table 4.4 but the 30 highest - ranking postcodes on the general disadvantage factor were:

3523 (Heathcote/Argyle), 3019* (Braybrook), 3177* (Doveton), 3520* (Korong Vale), 3887* (Nowa Nowa), 3594* (Nyah), 3889* (Cabbage Tree Creek), 3984* (Corinella), 3515 (Marong), 3595* (Nyah West), 3962 (Toora Toora), 3081* (West Heidelberg), 3047* (Broadmeadows), 3214* (Corio), 3472 (Dunolly), 3915* (Hastings), 3965 (Port Welshpool), 3835 (Thorpdale), 3890 (Cann River), 3556* (Comet Hill), 3821 (Crossover), 3423 (Jeparit), 3465 (Maryborough), 3840* (Morwell), 3858 (Heyfield), 3950* (Korumburra), 3909 (Lakes Entrance), 3851 (Longford), 3701 (Tallangatta Valley) and 3995 (Wonthaggi).

The similarity between the 2003 and 1999 lists of the highest-ranking postcodes was slightly more marked in the case of Victoria. Fifteen of the 30 places listed in 2003 were in the 1999 list. An asterisk marks them above and the overlap is again particularly strong among the top ranking locations. Eight of the ten first-ranked postcodes in 2003 appeared in the 30 highest-ranking locations in 1999. However the correlation between the 1999 and 2003 results was marginally below the comparable result for NSW at $r = .781$. The correlation between the 2003 results and the ABS Index of Relative Social Disadvantage ($r = .839$) was virtually the same as in 1999 (.828).

Again, the reader who wants only to concentrate on a single summary disadvantage score identifying the most socially disadvantaged postcodes need look no further than the first three columns of Table 4.4 (below). It will be seen that the most disadvantaged postcodes are a combination of urban and rural areas. The 40 most disadvantaged locations are again placed within six bands of scores on the general disadvantage factor. A difference from the NSW results is the additional inclusion of quintile scores on the second *Medico-social health factor*. It should be recalled that four variables shaped the character of this factor:

Year 12 incomplete
Imprisonment
Mortality ratio, and
Low birth weight.

Table 4.4: Victoria - Forty highest-ranking postcode areas on general disadvantage factor

Band	Post-code	LOCALITIES ARRANGED ALPHABETICALLY IN EACH BAND	Quintile Factor 2	Total Popn.	Region	Times in top 30
	3523	Argyle , Costerfield, Derrinal, Heathcote, Heathcote South, Knowsley, Ladys Pass, Moornbool, West, Mount Camel, Redcastle	6	2,901	Rural	4
	3019	Braybrook , Braybrook North, Robinson	10	6,579	Urban	4
1 (most disadvantaged)	3177	Doveton , Eumemmerring	12	9,790	Urban	3
	3520	Korong Vale , Kinypanial, South Kinypanial	10	183	Rural	9
	3887	Nowa Nowa , Lake Tyers, Wairewa	9	452	Rural	7
	3594	Nyah ,	7	315	Rural	6
	3889	Cabbage Tree Creek ,	13	152	Rural	5
	3984	Corinella , Adams Estate, Caldermeade, Coronet Bay, Grantville Jam, Jerrup, Lang Lang, East Monomeith, Pioneer Bay, Queensferry, Tenby Point, The Gurdies	8	2,826	Urban	2
2	3515	Marong , Wilsons Hall	9	269	Rural	5
	3595	Nyah West	8	541	Rural	5
	3962	Toora Toora , Agnes, Christies, Grand Ridge, North Wonyip, Woorarra Woorarra East	14	786	Rural	3
	3081	West Heidelberg , Bellfield, Heidelberg Heights	13	13,123	Urban	2
	3047	Broadmeadows , Dallas, Jacana	20	18,544	Urban	4
	3214	Corio , Norlane, North Shore	20	23,989	Urban	3
3	3472	Dunolly , Bet Bet, Betley, Bromley, Dunluce, Eddington, Goldsborough, Inkerman, McIntyre, Moliagul, Mount Hooghly	6	1,752	Rural	2
	3915	Hastings , Tuerong	9	7,145	Urban	1
	3965	Port Welshpool	12	216	Rural	4
	3835	Thorpdale	15	155	Rural	6

Band	Postcode	LOCALITIES ARRANGED ALPHABETICALLY IN EACH BAND	Quintile Factor 2	Total Popn.	Region	Times in top 30
	3890	Cann River , Buldah, Chandlers Creek, Noorinbee, Noorinbee North, Tamboon, Tonghi Creek, Weeragua	8	442	Rural	1
	3556	Comet Hill , California Gully, Campbells Forest, Eaglehawk, Eaglehawk North, Jackass Flat, Myers Flat, Sailors Gully, Sebastian, Whipstick, Woodvale	18	10,518	Rural	--
4	3821	Crossover , Brandy Creek, Buln Buln, Buln Buln East, Ellinbank, Ferndale, Lardner, Nayook, Neerim, Nilma Nilma, Rokeby, Seaview, Shady Creek, Tetoora Road, Warragul South, Warragul West	9	201	Rural	4
	3423	Jeparit , Lake Hindmarsh	1	598	Rural	5
	3465	Maryborough , Adelaide Lead Alma, Bowenvale, Bung Bong, Cotswold, Craige, Daisy Hill, Flagstaff, Golden Point, Havelock, Lower Homebush, Majorca, Moolort, Moonlight Flat, Yallock, Rathscar, Rodborough, Simson, Timor, Wareek	10	8,680	Rural	1
	3840	Morwell , Driffield, Hazelwood, Jeeralang, Maryvale	18	16,949	Rural	2
	3858	Heyfield , Dawson, Denison, Glen Falloch, Glenmaggie, Licola Licola, North Seaton, Tamboritha, Winnindoo	15	2,030	Rural	2
	3950	Korumburra , Kardella South, Strzelecki, Whitelaw	14	3,037	Rural	2
5	3909	Lakes Entrance , Kalimna, Lake Bunga, Lake Tyres Beach, Nungurner, Nyerimilang, Toorloo Arm	17	7,193	Rural	1
	3851	Longford , Airly, Bundalaguah, Clydebank, Cobains, Darriman, Dutson, Flamingo Beach, Fulham, Giffard West, Glomar Beach, Golden Beach, Kilmany Lake, Wellington, Loch Sport	10	2,165	Rural	6
	3701	Tallangatta Valley , Dartmouth, Eskdale, Fernvale, Granite Flat, Granya, Mitta Mitta, Shelley	7	275	Rural	3
	3995	Wonthaggi , Anderson, Archies Creek, Cape Paterson, Harmers Haven, Hicksborough, Kilcunda, Lance Creek, Powlett River, South Dudley, St Clair, Wattle Bank, Woolamai	10	8,164	Rural	1

	3370	Clunes , Glengower, Mount Cameron	15	1,653	Rural	2
	3250	Colac , Colac East, Colac West, Elliminyt	7	8,719	Rural	1
	3066	Collingwood , Collingwood North	13	5,175	Urban	5
	3713	Eildon , Lake Eildon	14	758	Rural	3
	3200	Frankston North , Pines Forest	17	9,058	Urban	2
	3580	Koondrook	4	666	Rural	4
	3584	Lake Bogo , Tresco West	13	679	Rural	--
6 (ten post-codes)	3825	Moe , Aberfeldy, Amor, Caringal, Coalville, Coopers Creek, Erica, Fumina, Hernes, Oak Hill, Jacob Creek, Moondarra, Newborough, Rawson, Tanjil, Thaloo, Thomson, Walhalla, Westbury, Willow Grove, Yallourn	18	19,812	Rural	2
	3732	Moyhu , Myrree	16	234	Rural	4
	3478	St Arnaud , Avon Plains, Beazleys Bridge, Berrimal West, Carapooee, Coonoer Bridge, Darkbonnee, Dooboobetic, Elberton, Gooroc, Gowar East, Gre Gre, Kooreh, Medlyn, Mitchells Hill, Moolerr, Moonambel, Redbank, Slaty Creek, Stuart Mill, Sutherland, Swanwater, Tottington, Traynors Lagoon, Tulkara, Yawong Hills	7	3,150	Rural	--

Separate urban and rural disadvantage factors have been calculated and there are some differences in the structure of these factors, details of which are presented in the Technical Appendix. However, the differences in results were not of sufficient magnitude to warrant their inclusion in Table 4.4.

Nine of the ten top ranking localities on the disadvantage factor in 1999 appeared in the expanded current list of top 40 postcodes. Of the ten Seymour was the place that did not reappear. Other notable omissions included Mildura, Churchill, Bealiba and Shepparton (respectively 11th, 12th, 16th and 19th in 1999). Overall, twenty of the 30 top locations in 1999 re-appear in the present top 40 based on general disadvantage factor scores.

CHAPTER 5: TOWARDS THE ASSESSMENT OF SOCIAL COHESION

While the degree of disadvantage of a locality may limit the life opportunities of its residents, some communities burdened by disadvantage appear more resilient than others in overcoming adversities. Some of the earliest sociological theorising was about variations in the quality of the social bonds between people and the sentiments and other social resources that they share including trust, reciprocity and a common identity. In today's parlance these 'assets' have come to be known by terms like *social capital* and *social cohesion*. The research into 'place effects' reviewed in Chapter 2, as well as practice experience in a number of fields including community work, indicate the influence of aspects of local social climate over and beyond the individual and household attributes of people living in an area. However, the research to-date, while of increasing sophistication, has afforded glimpses rather than a clear vision of the underlying nature of these locality influences.

What we have is a bundle of qualities - affinity, shared identity, reciprocity, trust, informal social control, and willingness to act for the good of the group, to name a few – that are thought to be linked to some broader underlying factor or factors. One researcher to have probed the structure of the influences at play is Sampson's (1997) work on *collective efficacy*. The earlier review of this work (see Chapter 2) showed the researcher's attempt to study the linkages between different facets of local social climate. Sampson satisfied himself that *social cohesion* (involving measures of how closely people are connected and the degree of trust between them) and *social control* (people's willingness to intervene to control young people's behaviour) were closely associated across neighbourhoods. He did this by using statistical measures of association or correlation of the kind described in Chapter 3 of this report. The results for social cohesion and social control waxed and waned together, that is, they were significantly positively correlated. Sampson felt justified in concluding that they were aspects of the same thing and devised the term *collective efficacy* to signify that communality.¹³

A simple explanation of what is meant by the correlation coefficient (r) is repeated at this point because an understanding of the measure is vital if the reader is to follow the research strategy used in this chapter.

When r is 0 we say there is 'no correlation' between two variables (in this case pairs of variables). Where r is -1.00 there is a perfect negative correlation; that is, when X increases, Y decreases. Where r is $+1.00$ there is a perfect positive correlation; when X increases, Y increases.

There is an understandable desire to include assessments of local strengths, as well as disadvantages, in periodic audits of the state of our communities. Any report of progress in the case study projects reported in Chapter 1 would be incomplete without reference to social cohesion in the localities concerned. In the present project we have attempted to contribute to the furtherance of that aim by using procedures

¹³ This naming involved an element of interpretation beyond the more prosaic conclusion that the two measures 'tapped aspects of the same latent construct'.

similar to those adopted by Sampson. We have derived unified *social cohesion* scores for postcode areas by combining a few scarce elements of relevant information that are available.

Notwithstanding the strikingly consistent and practice-relevant results yielded by these procedures they are still very much in the experimental stage. The present exercise must be regarded as exploratory. Yet although much more work needs to be done to extend the range of data used and to refine the analytic procedures, the findings suggest just how fruitful such analyses are likely to be in future.

Unfortunately, the present study of social cohesion is confined to Victoria where the authorities have provided answers to a question concerning participation in volunteering and another on the availability of informal sources of help. In addition the Australian Institute of Sport, which conducts continuous national surveys, has cooperated by providing responses to a question about whether individuals' recreational activities are taken in a group setting.¹⁴ The number of respondents in the Health Department survey was 14,994 and 23,892 people were interviewed in the Australian Institute of Sport study. In both instances the results for successive years (2001/2002) were aggregated and the AIS results were supplemented by a special additional Victorian sample. Both samples were statewide and as a result there was considerable variation in the number of respondents within each of the 647 Victorian postcode areas. To ensure an adequate numeric basis for the analysis, for a postcode to be included in the social cohesion sub-sample it was necessary for there to be at least ten respondents from each of the two data sets.

Two hundred and seventy seven postcodes met this requirement. The next step was to see whether the three items of information – volunteering, group recreation and expectations of informal help - could reasonably be combined into a single score for each of the eligible postcodes. Following the example of Sampson (1997) the degrees of correlation between the three variables were calculated and found to be positive and significant.¹⁵ Thereafter, the three components were given equal weight in determining a single cohesion score for each of the 276 relevant postcodes. The scores thus produced appeared independent of the disadvantage factor scores, the correlation between social cohesion and disadvantage being negligible (.08).

Next the 276 postcodes were divided into three strata, 83 with low social cohesion scores (accounting for 30% of the total), 120 with 'middling' scores (43.3%) and 74 with high cohesion scores (26.7%). The strategy thereafter turned on the fact that our pool of data replicated some well established research connections between circumstances like unemployment, limited work skills, early departure from schooling, and low income and states of affairs like low birth weight, court convictions, imprisonment and not completing high school or undertaking further training. Within our modified sample of 276 postcode areas (those that met our data requirements) the usual significant correlations occurred across the board, as can be seen from the first column of Table 5.1 (coloured grey). The crucial question was whether when the correlations between, say, unemployment and imprisonment were calculated **within** groups representing 'low' 'medium' and 'high' levels of social

¹⁴ See Chapter 2 for details.

¹⁵ Volunteering/informal help .95 (significant at the .01 level); informal help/organised recreation .58 (significant at .01 level); volunteering/organised recreation .47 (significant at .01 level).

cohesion the connection between being unemployed and the risk of imprisonment varied in some consistent fashion. The issue is reminiscent of the Weatherburn and Lind (1998) proposition, considered in Chapter 2, that the link between poverty and crime, so far as juveniles are concerned, is parental neglect. The authors questioned whether *neglect* mediates the association between poverty and delinquency. The question faced here is the extent to which *cohesion* mediates the association between variables like unemployment and low income and the disadvantageous social and medical outcomes with which they are frequently positively correlated. Table 5.1 describes the relationship between 12 such pairs of variables in terms of their correlation coefficient. As mentioned, the first column shows the degree of association between each pair of variables across the entire sub-sample of 277 post-code areas and the coefficient usually (but not necessarily) falls within the range of coefficient values that appear in the three cohesion columns.¹⁶

To take the first example listed, many studies attest to an association between unemployment and low birth weight (see Chapter 2). In the present case that association is reflected in a correlation of .46 between the two variables across the entire sub-set of 277 postcodes. However, the coefficient varies across the three degrees of cohesion from a peak of .56 in the low cohesion category to .16 in the case of the high cohesion category. The trend is not always uniform. In two instances – the two pertaining to child abuse - the correlation coefficient in the medium social cohesion category substantially exceeds that in the low cohesion category.

However, the arresting feature of the results is the contrast between the extremes of social cohesion: **in every instance the correlation between the antecedent and outcome variables is higher in the low cohesion category than in the high cohesion category, frequently by a wide margin.**

Where this is so it would seem that ‘cohesion’ buffers or contains the deleterious influence of factors that in earlier chapters were shown to be the recurrent features of highly disadvantaged areas – limited education, low income, unemployment and poor work skills. These were vital elements of the profile of post-codes that repeatedly occupied ‘top 30’ positions on the disadvantage indicators (Chapter 3), they were prominent in the correlations between indicators (Chapter 4) and correlated highly with the general risk factor (Chapter 4):

¹⁶ The magnitude of the correlation coefficient varies with the degree of heterogeneity of the variables being correlated.

Table 5.1 – correlations between antecedent and outcome variables for different degrees of social cohesion in Victoria

	Overall correlation (Vic sub-sample) N=277	Low social cohesion N=83	Medium social cohesion N=120	High social cohesion N=74
Unemployment/low birth wt	.46**	.46	.39	.28
Early school leaving/low birth wt	.45**	.56	.36	.16
Year 12 incomplete/low birth wt	.45**	.55	.38	.12
Unemployment/imprisonment	.65**	.75	.64	.22
Unemployment/early school leaving	.64**	.63	.65	.28
Unemployment/court convictions	.73**	.70	.73	.50
Early school leaving/imprisonment	.47**	.46	.43	.11
Low family income/imprisonment	.55**	.62	.52	.18
Year 12 incomplete /imprisonment	.35**	.26	.32	.03
Low work skills/imprisonment	.47**	.46	.44	.10
Unemployment/child abuse	.68**	.56	.72	.40
Low family income/child abuse	.68**	.53	.72	.45

These findings are so striking that they inevitably raise questions about the location of the high and low cohesion groups (see the relevant map). It must be remembered that the localities involved are not a random sample of Victorian postcodes. A threshold of at least ten respondents for each of the three cohesion assessment items was set and this may have had some effect on the sample. Nonetheless, the difference in the results for urban and rural postcodes was of such a magnitude as to make one conclusion inescapable:

Table 5.2: location of low, medium and high social cohesion postcodes

	URBAN	RURAL
Low social cohesion (N=83)	79 (47.6%)	4 (3.6%)
Medium social cohesion (N=120)	72 (43.4%)	48 (43.2%)
High social cohesion (N=74)	15 (9.0%)	59 (53.2%)
	166 (100.0%)	111 (100.0%)

The low cohesion category accounted for a negligible proportion of the rural postcode areas but almost half of the urban areas; the balance was reversed within the high cohesion category. This difference was highly statistically significant.¹⁷ Varied forms of disadvantage may burden many rural areas but Table 5.2 suggests that compensatory inner strengths may be a formidable ally to community renewal initiatives. Indeed, the primary aim in many instances might be to utilise those existing strengths within initiatives designed to increase local economic opportunities and/or develop partnerships with external sources of capital and material assistance. Lack of social cohesion may not be where the problem lies. However, the above tabulations are of a general, exploratory nature and in each individual case it would be necessary to 'take the pulse' of the local community before developing renewal strategies. The important point brought home by the present results is that developing social cohesion need not always be a protracted first step in the effective strengthening of rural communities.

Recognising that social cohesion matters does not negate the importance of the variations in the severity of localised disadvantage documented in earlier chapters. We have been at pains throughout this report to argue that what happens in neighbourhoods is partly shaped by macroeconomic factors and that the remedying of some, if not many forms of localised inequalities depends on initiatives taken in the broader political economy. A community's capacity to identify its needs and negotiate solutions to them with external sources remains a vital element in improving community wellbeing. What needs to be obtained may range from the most tangible of investments – for example, improved educational and training facilities and more experienced teachers, community facilities and greater work opportunities, - to more problem solving and supportive attitudes and practices on the part of governmental authorities. The latter were illustrated within the three case studies presented in Chapter 1.

Nevertheless, the fruitful impact of investments won from external sources may be affected by the inner state of a neighbourhood. The interplay of what some sociologists have referred to as the internal and external aspects of community systems has long been recognised. Fifty years ago George C Homans (1951) in his seminal study of *The Human Group* described the way one aspect can feed back upon the other in the decline of a community. A contraction in the economy of the community and the running down of resources and influence triggers a loss of confidence and social cohesion that, in turn, feeds back (negatively) upon the adaptive capacity of the community...and so the spiral continues.

For movement to occur in the opposite direction requires that attention be paid to both the neighbourhood's internal and external functioning. The capacity to set goals, marshal resources, form strategic alliances and attract and use external support interacts with certain inner strengths or shortcomings. It is not appropriate here to detail the measures that need to be taken but the broad framework is grounded in research and documented community practice. It includes a *modus operandi* that is purposefully directed towards meeting community needs while simultaneously strengthening community sentiment and patterns of cooperation and integration, the

¹⁷ Chi square ...less than .001 (2 df).

promotion of collective goals over individual grievances and the exercise of personal power, and the effective management of conflict. It takes time for these qualities to be developed. While governments show an increasing interest in helping to strengthen disadvantaged and non-cohesive communities some authorities have no sooner embarked upon a renewal program than they are devising an 'exit plan'. When disadvantage has become entrenched in a community over many years, even decades, matters cannot be put right in three years. Something nearer to twice that period may be more realistic and avoid the worst of outcomes, namely, a community left even more dispirited as a result of hopes being raised and left unfulfilled.

It is intended that work will continue on the existing 'cohesion' data and the results of further statistical analyses will be published in a research bulletin published around mid-2004. The refinement of this type of social climate information depends in considerable measure upon identifying additional sources of relevant data held by different authorities and gaining their cooperation in providing access to the data. The ultimate usefulness of audits of community wellbeing is the intelligence they provide for 'whole-of-government' participation in planned community strengthening projects. Contributing to the pool of relevant information needed for purposeful action in this field and sharing in its interpretation can be the foundation for the authentic across-portfolios approach that is required.

The stage may now have been reached where particular expertise and authority needs to be vested in a lead agency to promote and refine on-going audits of community wellbeing. Following the approach used in the present report, the work of this agency would include, as a minimum, assessments of relative disadvantage and aspects of social climate bearing on the resilience of neighbourhood populations. An agency given this mandate could work consistently to develop an array of indicators that build upon those used in the present project and its predecessor study, *Unequal in Life*.

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APPENDICES

APPENDIX A

Table 1: (i) correlations between the Victorian general disadvantage (component 1) and medico-social health factor (component 2) and the indicators;
(ii) correlations between the NSW general disadvantage factor (component 1) and the indicators

	Victoria	Victoria	New South Wales
	Component 1	Component 2	Component 1
Disability/sickness benefit	.76	-.39	.90
Unemployment	.74		.84
Low income	.72	-.47	.89
Low skills	.68		.76
Early school leavers	.68	-.49	.84
Court convictions	.68	.16	.83
Child abuse	.66	.21	.46
Psychiatric hospital admissions	.50	.31	--
Year 12 incomplete	.20	.90	.75
Imprisonment	.44	.68	.64
Long term unemployment		-.66	.88
Mortality ratio	-.26	.66	.58
Low birth weight babies	.34	.61	.38

APPENDIX B - TECHNICAL APPENDIX

The data presented in this appendix relate to:

- (1) Correlations between indicators and state-wide, urban and rural principal components,
- (2) Weightings used to calculate factor scores.

1(a) Correlations between Victorian indicators and statewide, urban and rural principal components

	General Disadvt. Comp. 1	General Disadvt. Comp. 2	Urban Disadvt. Comp. 1	Urban Disadvt. Comp. 2	Rural Disadvt. Comp. 1	Rural Disadvt. Comp. 2
Disab./sickness Benefit	.76	-.39	.87	-.19	.45	.24
Unemployt.	.74		.87		.62	.10
Low income	.72	-.47	.86	-.22	.41	.22
Low skills	.68		.71		.59	.04
School leavers	.68	-.49	.78		.38	.23
Court convict.	.68	.16	.79	-.12	.67	.02
Child abuse	.66	.21	.77		.67	-.01
Psych. Hospit. Admissions	.50	.31	.65		.54	-.01
Year 12 Incomplt.	.20	.90	.60	.64	.63	-.24
Imprison.	.44	.68	.75	.18	.70	-.11
Long term Unemployt		-.66		-.69	-.31	.22
Mortality ratio	-.26	.66		.79		-.24
Low birth weight babies	.34	.61	.62	.19	.52	-.15

1(b) Correlations between NSW indicators and statewide, urban and rural principal components

	General Disadvt. Comp. 1	General Disadvt. Comp. 2	Urban Disadvt. Comp. 1	Urban Disadvt. Comp. 2	Rural Disadvt. Comp. 1	Rural Disadvt. Comp. 2
Disab./sickness Benefit	.90	-.13	.93	-.01	.79	-.29
Unemploymt.	.84	.07	.91	-.22	.76	-.22
Low income	.89	-.27	.91	-.18	.78	-.44
Low skills	.76	-.14	.82	-.22	.53	.12
School leavers	.84	-.37	.85	-.25	.72	-.20
Court convict.	.83	.17	.87	.16	.77	.19
Child abuse	.46	.58	.60	.34	.45	.46
Psych. Hospit. Admissions	--	--	--	--	--	--
Year 12 Incomplete	.75	-.38	.71	.07	.59	-.02
Imprison.	.64	.49	.83	.09	.59	.42
Long term Unemploymt	.88	-.11	.93	-.11	.75	-.35
Mortality ratio	.58	.32	.65	.35	.46	.50
Low birth weight babies	.38	.58	.64	.19	.39	.41

(2) CALCULATING FACTOR SCORES

2 (a) Component score coefficient matrix - Victoria

	State: Comp. 1	State: Comp.2	Urban: Comp. 1	Urban: Comp. 2	Rural: Comp. 1	Rural: Comp.2
Ch. Abuse	.161	.064	.122	-.159	.181	-.002
Crt. Convicts	.164	.049	.126	-.070	.180	.021
Disab/sick	.184	-.117	.138	-.109	.123	.240
Sch. leavers	.164	-.147	.124	-.041	.102	.226
Low bt. Wt	.082	.186	.098	.110	.140	-.147
Low income	.173	-.141	.136	-.128	.111	.220
Low skills	.165	.000	.113	.035	.160	.041
L T unempl.	.012	-.200	-.005	-.405	-.084	.219
Yr 12 incompl.	.047	.273	.094	.379	.171	-.241
Imprisonmt.	.107	.206	.119	.106	.190	-.113
Psych. Admiss.	.120	.092	.103	-.042	.147	-.001
Unemployment	.180	.030	.139	-.019	.168	.098
Mortality ratio	-.063	.199	-.011	.465	.006	-.244

2 (b) Component score coefficient matrix - NSW

	State: Comp. 1	State: Comp.2	Urban: Comp. 1	Urban: Comp. 2	Rural: Comp. 1	Rural: Comp.2
Ch. Abuse	.095	.203	.098	.189	.103	.245
Crt. Convicts	.129	.093	.117	.017	.157	.087
Disab/sick	.143	-.081	.125	-.179	.168	-.118
Sch. leavers	.132	-.192	.109	-.205	.145	-.227
Low bt. Wt	.055	.313	.084	.404	.071	.222
Low income	.141	-.149	.121	-.155	.167	-.202
Low skills	-.019	.455	.048	.704	.031	.444
L T unempl.	.139	-.076	.124	-.057	.159	-.139
Yr 12 incompl.	.121	-.193	.097	-.345	.113	-.129
Imprisonmt.	.104	.272	.113	.194	.128	.260
Psych. Admiss.	-	-	-	-	-	-
Unemployment	.131	.064	.121	.012	.162	.002
Mortality ratio	.092	.170	.092	-.080	.091	.227