A Qualitative and Quantitative Analysis of the Relationship between Community Cohesiveness and Rural Crime

PART 1

By

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Chapter 1

INTRODUCTION

There has been an alarming increase in the rate of crime in rural Australia in recent times. This phenomenon is widespread and involves an increasing range of crimes (Pennings, 1999). While crime may be more accepted as an inevitable part of life in the city, in rural areas, it is an important quality of life measure. An increase in crime may be viewed not only as a break down in law and order but as a threat to the economic future of rural communities (Hobbs, 1994a). Adverse publicity surrounding the social problems within some rural towns in western New South Wales can discourage investors, tourism or potential new community members. Country people have reacted with public meetings, even marched in the street, to express their concern about levels of crime in their townships with the result that law and order has become an important political issue (Hogg and Carrington, 1998).

The increase in crime in rural Australia generally may be symptomatic of the increasing urbanisation and modernisation of rural communities and the accompanying demographic, economic and social changes which are associated with an urban lifestyle and higher crime rates. However, this explanation does not account for the fact that many inland rural communities have experienced negative growth and out-migration as a result of economic decline and a culmination of six or more years of severe drought (Stayner and Crosby, in preparation).

The economic and cultural contributions from rural areas are essential to the well-being of the nation. The characteristics of rural populations, their living conditions, and their problems, differ significantly from their urban counterparts. There is a need to examine those economic and social factors which are characteristic to rural areas and their relationship with crime rates.

Crime in rural Australia has been a little studied phenomenon. Australia is arguably one of the most rural and most urban of all countries. This diametrically opposed logic stems from the converse facts that while 85 per cent of Australians live in cities, most of Australia is sparsely settled

(ABS, 1999a). This conceptual ambiguity may be the basis for the relative absence of analyses of crime in rural Australia. This report presents the findings of the first stage of a two part study of crime in rural Australia which aims to redress the neglect of research into this important issue.

1.2 OBJECTIVES OF THE STUDY

The aim of the present study is to examine the possible associations between the economic and social characteristics of Australian rural communities with . We believe that such analysis will further understanding of both the facts of crime and social structures, and the factors that underlie the social structures and processes that lead to crime. The empirical objective is to calculate the statistical associations between crime rates and demographic and structural characteristics of rural communities. In particular, we wish to assess how important demographic characteristics and community structural characteristics, are in the causation of crime. Personal demographic characteristics include ethnicity, gender, and age. Community structural characteristics are measured by differences in population size, family structure, economic characteristics, and migration. The theoretical objective is to identify how social cohesion and integration, as empirically measured using demographic and community structure data, might explain crime in rural communities. That is, the differentiated effects of community characteristics and the demographic characteristics of community residents will be examined. Lack of cohesion and integration, as a result of social changes within rural communities, is expected to be associated with more crime.

To achieve these objectives, existing data collected in each rural Local Government Area (LGA) in New South Wales will be analysed. Data from the Census of Population and Housing (ABS, 1991; 1996) and crime files from the New South Wales Bureau of Crime Statistics and Research will be analysed to identify relative consistencies and changes in social, economic, and demographic characteristics within the LGAs.

The findings of the present study will extend the large body of overseas research that demonstrate that social disorganisation and control are associated with crime. The unique contribution in this realm will be the focus on community as the unit of analysis. The present study will examine whether social control factors, which are important for the causation and prevention of crime, exist at the community level. The information gathered in this research will provide an invaluable knowledge base to assist social and criminal justice practitioners and investigators in modifying current policies to promote more effective prevention and reduction of crime in rural Australia.

1.3 STRUCTURE OF THE REPORT

In chapter two, the terms 'crime', 'rural', 'community' and 'structures' are defined and the literature on rural crime in Australia is reviewed and discussed. The theory of social disorganisation, upon which the analysis in this study is based, is outlined. Chapter three provides an overview of New South Wales crime statistics. In chapter four, the methodology for analysing crime in rural communities is developed. In chapter five, the predictors of crime in rural New South Wales are identified, and in chapter six, the classification of LGAs in New South Wales into a set of rural community types according to their social characteristics is described. The relationship between these community types and crime is discussed. Chapter seven looks at trends in crime rates over the clusters of community types and across time. Chapters eight, nine and ten examine elements of social disorganisation and crime, namely residential instability, family stability, and ethnic diversity. The findings of the study are summarised in chapter eleven and the implications of these findings are discussed.

Chapter 2

RURAL CRIME

2.1 INTRODUCTION

In this chapter, the literature on rural crime is reviewed and discussed. First, the terms 'crime', 'rural', 'community' and 'structures' which are pertinent to the analysis of rural crime in this study, are clarified. As the theoretical purpose of the analysis in this study is to test whether social disorganisation forms the foundation for the empirical findings, the theory of social disorganisation is outlined. Those social factors which are symptomatic of social disorganisation and characteristic to rural Australia are examined in relation to crime. The development of research in rural crime in Australia is reviewed.

2.2 WHAT IS CRIME?

Matka (1997) defines crime as those activities which are prohibited by law. Activities which are defined as criminal vary over time and are culturally determined (Haralambos and Holborn, 1990). For example, possession of semi-automatic weapons has only recently been defined as criminal behaviour in Australia and is not so defined in other parts of the world. Crime statistics reflect those crimes that are either detected by police or reported to police and found to be genuine (Matka, 1997). The issues surrounding data collection of criminal offences in Australia are reviewed in chapter three.

In criminology, definitions of crime usually depend upon a particular theoretical frame of reference. There appears to be essentially three different, and sometimes contradictory, theoretical frameworks. One theory argues that criminal behaviour is freely chosen, another, that crime is caused by forces beyond the control of the individual, and the third views crime as a function of the way the law is written and enforced (Vold and Bernard, 1986). The approach used in this research follows the second frame of reference as defined in a theory of social disorganisation (Shaw and Mackay, 1942). Within this framework, crime is described as the result of a breakdown of social control that occurs within communities undergoing rapid demographic, economic and social structural characteristics.

2.3 WHAT IS RURAL?

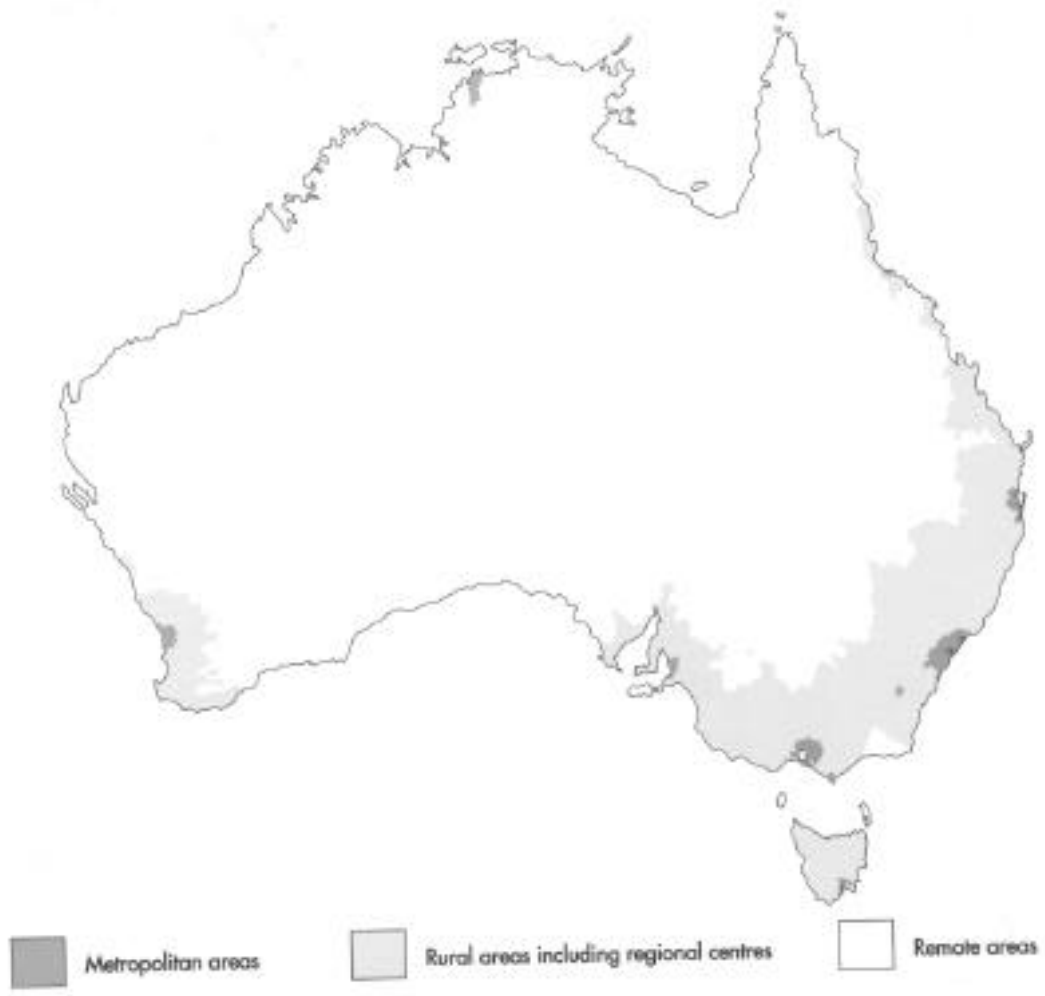
Any examination of rural crime requires a discussion of what is denoted by the term 'rural' or 'community'. Exactly what these terms imply varies enormously, yet both terms are widely used in everyday discussion. Rural can be thought of as a perspective, dependent upon person, place and context. However generally, the term 'rural' is used to describe non-urban or peripheral regions (Dax, 1996).

Demographic definitions emphasise population numbers, density, and geographic isolation. One way of defining rural is determining what it is not. However, this overlooks the heterogeneity of rural areas, with towns that differ in size, proximity to urban centres, ethnic composition or industry base. In Australia, perhaps the most striking contrast between urban and rural areas is one of distance. As of June 1999, Australia had a population of 18.2 million (ABS, 1999a). Most of this population is concentrated in two widely separated coastal regions, the largest of these, in terms of area and population, in the south-east and east, and the smaller in the south-west of the continent. In both coastal regions, the population is concentrated into urban centres, particularly the State and Territory capital cities. Half the area of the continent contains only 0.3 per cent of the population, and the most densely populated 1 per cent of the continent contains 84 per cent of the population (ABS, 1999a). The distribution of population across Australia's metropolitan, rural, regional and remote regions is shown in figure 2.1.

Traditionally the idea of *community* in rural areas was linked to a settlement usually a town (Galpin, 1918). Often the terms 'town' and 'community' are used interchangeably. A community is characterised by its economic base which affects its social organisation, social class structure, demographic composition, leadership, wealth and long-term prospects (Hobbs, 1994a). Hobbs, (1994a) defines a community as:

> *...a social space occupied by members who perceive common traditions and ways of doing things as well as problems that affect the vitality and viability of their community.*

Figure 2.1:
Australia by settlement areas, 1996.



Source: Department of Primary Industries and Energy and Department of Human Services and Health (1994) and Australian Institute of Health and Welfare (1997).

Census data provide a useful overview of a community which allows ready comparisons and contrasts. However, such data do not reveal the senses that the residents of such a place have about themselves and about the relationship with other places, a sense that is derived from a compound of historical and contemporary fact and fiction (Hobbs, 1994a).

Social scientists have disagreed about the meaning of *rural* and *urban* (Dewey, 1960) and *community* (Hillery, 1955) for decades. One of the earliest and most resilient meanings stems from Toennies' (1957) notion of *gemeinschaft*, which contrasted rural community with urban society, *gesellschaft*. *Gemeinschaft* communities have small populations subsisting on local production and services. Their residents know each other well, communicate face-to-face, believe common norms, and share a common identity distinct from other people and places. Emotional obligations and strong group norms help to restrict individuals from behaving in ways that

do not conform to those group norms. Offenders who persist in deviance can be subject to strong exclusionary behaviour and intolerance from other community members.

Gesellschaft relationships are those that are secondary or impersonal (Toennies 1957). They are more formal, rational, limited relationships which are based on fulfilling a limited purpose or task. There is a greater freedom in this type of relationship with a greater choice as to whom and how many one relates to. Thus there is more privacy and more chance of individual self expression and definition. Personal rights replace cooperative obligations. Standards of behaviour are more likely to be set out in normal rules and contracts. However, the negative aspects of society are loneliness, alienation, depersonalisation and a greater possibility of deception because character is not known and interpersonal interactions are superficial (Toennies, 1957; Slater, 1970).

It has traditionally been claimed that *gemeinschaft* relationships are typical of small, stable long established rural communities and *gesellschaft* relationships characterise large transient urban societies (Wilkinson, 1991) . In reality, both types of relationships exist in all contemporary social networks. Individuals use a mixture of the two types of relating. Wilkinson (1991) describes these different styles of interaction as 'strong ties' and 'weak ties'. However, Dewey maintains that the rural/urban distinction is almost meaningless because ubiquitous modernisation has largely eradicated differences between the characteristics of people who live in rural places and their city cousins. Hobbs (1994a), points out that rural people now watch the same television programs, read the same newspapers, consume the same products and often work in the same types of occupations as their urban counterparts. Improvements in transportation systems and communication technology have reduced distances and incorporated rural Australia into a global economy. The rural-urban dichotomy can now be seen as more of a continuum. Dewey contends that while rural and urban populations differ in many respects, such as population density and employment in extractive industries, those differences are relatively unimportant for explaining their respective behaviours. Nevertheless, the more *gemeinschaft* qualities that modern places have, the closer they are to community. Therefore, while it is evident that there is no absolute meaning of rural, nor an absolute distinction between rural and urban, differences between rural and urban, countryside and city do exist and can help to explain crime.

An understanding of crime necessitates an understanding of life within rural communities and the dynamics that confront them. As with the rest of Australian society, rural communities are experiencing social change with a breakdown of traditional family support networks, an increased divorce rate and changes in the roles of men and women. As communities and expectations change, the traditional ways of family life in rural areas also change.

Rural Australia has also experienced significant economic changes in recent times. Over the past two decades, many rural communities have

experienced decline as a result of severe drought, economic forces, and social and technological change (Walker and Battye, 1996). The impact of this economic decline has been extremely stressful for many communities and individuals. As a result of prolonged unemployment and business and farm losses, there have been observed increases in marital and family dysfunction, behavioural problems in children, increases in drug and alcohol problems, depression, and suicide (Lippert, 1992, cited in Walker and Battye, 1996). Many rural families have left the towns and districts for economic and social reasons (Stayner and Crosby, in preparation).

The long-term effects of out-migration from rural areas impact upon social integration within communities. Frequently, the more educated young people are the first to leave in search of employment (Hobbs, 1994b). Consequently, many rural communities have a disproportionately large populations of retirement-age people. This inequity often creates a cultural gap between younger and older residents within the same community. This also reduces the pool of younger and potentially more energetic and creative community leadership (Hobbs, 1994b). The gradual loss of local institutions catering to the young such as schools or sporting clubs, further erode community cohesion.

While migration out of the inland towns has been the typical pattern, some major regional centres which have had the ability to draw upon secondary industry to sustain themselves economically, have experienced population growth. Many coastal communities have experienced rapid growth, benefiting from tourist trade and as locations for retirement communities (Vernon, Olfert and Weinand, 1997). These communities are also subject to adjustment stress. While growth requires change, change may conflict with the preservation of the integrity of the community as it has been (Hobbs, 1994a).

One consequence of these changes is a decrease in the social influence and problem-solving capacity of rural communities (Hobbs, 1994a). Communities are effective when the people within them come together to address and resolve their commonly perceived problems. If a place is both small and rural, it is likely that residents will work to retain a sense of community. However, social and economic changes can disrupt that sense of community and make it difficult to sustain (Knop and Jobes, 1997). Residents within communities which experience population decline and loss of businesses, can develop a fatalistic attitude. Conversely, communities that experience a population growth of retirees or workers, must integrate the new residents into the history and fiction of the old community if it is to be retained, or reinvent it to create a new community (Hobbs, 1994a).

Recent increases in recorded crime rates in rural communities in Australia may be symptomatic of these rapid social and economic changes and the subsequent inability of communities to adjust. The rising crime rates have shattered the Arcadian view of rural life which had persisted in Australia and has led to law and order becoming an important political issue

(Pennings, 1999). Therefore, an analysis of rural crime is both timely and pertinent.

2.4 WHAT IS STRUCTURE?

The empirical objective of the present study is to examine the relationship between crime rates and the structural characteristics of rural communities. Structures, and the processes that occur within them, are assumed to cause crime. The defining characteristic of humans is that they are social: people live in structures. The kinds of structures of which they are part, the kinds of processes that operate within the structures, and the kinds of positions they occupy within the structures largely determine how they engage in crime and other social problems.

In the case of criminals, the types of crimes they commit, at what age they begin committing them, how often they commit, and how long they continue to commit them, are strongly influenced by their position in the social system and the nature of that social system (Blumstein, Cohen, Roth and Visher, 1986). Most rural communities are subject to many ubiquitous influences from urban society (Toennies, 1957). Fischer (1980) maintains that rural areas in urban societies evolve toward and follow urban trends in both social structures and crime. The same structures and processes that influence behaviour in cities are present in many rural areas in a somewhat modified form (Thurman and McGarrell, 1997).

Most established theories in criminology are organised around structural analyses. *Structural Functional,* theories, of course, are devoted to identifying structures and describing how they cause crime (Cohen, 1955; Merton, 1938). The theory of *Differential Association* describes the interaction system that determines how criminal behaviour is learned (Sutherland, 1942). More recent *Social Learning* theories emphasise psychological predispositions for that learning (Bandura, 1973; Burgess and Akers, 1966). *Social Control Theories* identify particular structures, especially family and school, and the processes that subject juveniles to delinquency (Hirschi, 1969). *Conflict Theories* are based on structural analyses, describing how social institutions create differential advantages for members of society (Quinney, 1970). Following Marx and Engels (1842) most conflict theorists assume that the foundation for those institutions is located in an economic struggle between bourgeoisie and proletariat. Hegemony expresses the differential advantage of haves over have-nots. Even some *Social Construction* theorists regard a structural approach as a starting point for analysis, though they seek to answer the essential question of how existing social structure has led to the construction of the meaning of crime and the societal response to that meaning (Kitsuse and Spector, 1973; Gusfield, 1963). Societies continually change their expectations and definitions regarding deviance and its causes. Drug laws and enforcement are largely activities of this century. Similarly, the decriminalisation of

abortion and homosexuality during the past forty years in the West are redefinitions of age-old behaviours.

The associations between causal conditions and levels of crime, incidental to changing definitions of crime, are highly varied. Levels of crime have waxed and waned throughout this century in Australia (Hazlehurst and Braithwaite, 1994; Mukherjee, 1989) and the rest of the industrialised world, despite higher incomes, education, standards of living and life expectancies (Archer and Gartner, 1984). In other words, crime is not declining commensurate with the elimination of general economic and medical disadvantages that are almost universally acknowledged as causes of crime. One implication of the lack of clear correlation between common causal factors of crime, and crime itself, is that it is simplistic to believe that eliminating or reducing such causal factors is going to eliminate crime. There are so many common causal factors, that eliminating one or some, while helpful, will be insufficient to entirely stop crime and social problems. Having made this qualification, the effects of economic factors on the commission of crime have been found to be profound (Brenner, 1976; Smith, 1994). A more crucial theoretical implication is that other, more purely social, structural factors may be influencing the commission and reporting of crime.

2.5 SOCIAL DISORGANISATION THEORY

The theoretical framework upon which the examination of crime rates and the structural characteristics of rural communities in the present study will be based, is the theory of social disorganisation. During the 1920s, a group of sociologists based in Chicago developed an ecological approach to the study of social conditions (Park, Burgess, and McKenzie, 1967). They argued that the growth of cities produced distinctive neighbourhoods, each with its own characteristic lifestyle (Haralambos and Holborn, 1990). Shaw and McKay (1942) applied this theory to the study of deviance. They argued that a high turnover in population, which was characteristic of inner city areas, prevents the formation of a stable community and results in 'social disorganisation'. Symptoms of social disorganisation include alcohol and drug abuse, family breakdown, and violence. In an area of shifting population, informal social controls such as gossip, public opinion, public surveillance, and parental control, are not strong enough to prevent deviant behaviour. Shaw stressed the important distinction that:

> *...delinquency results from the conditions within the community rather than from any inherent delinquency-producing qualities in the population.*
>
> (Shaw and McKay, 1942)

Social disorganisation theory specifies a number of structural factors that govern a community's capacity to develop and maintain a strong social organisation. First, the stability of the population in regard to rapid

population growth, is a potential cause of crime. High rates of in and out migration leads to a lower density of acquaintanceship (Freudenberg, 1986). There are fewer opportunities for residents to develop widespread and strong personal ties to one another and to community organisations, which interferes with the systems of social control. Rapidly growing rural boomtowns may experience a wave of in-migration which is disproportionately young males and other groups which exhibit higher tendencies to commit crimes (Freudenberg and Jones, 1991).

Second, as Thomas and Znaniecki (1958) first indicated, ethnic diversity within a population also presents problems of social disorganisation. Differences in customs and a lack of shared experiences leads to a breakdown in communication and may breed fear and distrust (Samson and Groves, 1989). The relationship between ethnic diversity and its contribution to social disorder is evident in studies of inland rural towns in Australia which consistently record high crime rates and have proportionally large Indigenous populations (Cunneen and Robb, 1986).

Thirdly, Shaw and McKay found a relationship between delinquency rates and economic factors. High delinquency rates and low income levels were characteristic of inner city areas. Within the less socially disorganised outer city suburbs, incomes were higher and crime rates correspondingly lower (Haralambos and Holborn, 1990).

Sampson (1986) has emphasised family breakdown as an important structural indicator of social disorganisation. He argued that single parents are strained for time and money to effectively supervise their children and to interact with other adults. The greater the population of sole parents within a community, the more limited the networks of adult supervision of children.

Several authors have extended the original themes of social disorganisation theory (Kornhauser, 1978; Sampson and Groves, 1989; Bursik and Grasmick, 1993). Kornhauser (1978) extracted a community control model arguing that communities characterised by ethnic and racial heterogeneity, frequent residential mobility and low economic status are unable to achieve effective social controls. Subsequent theoretical development has focused upon systems of social relationships as the source of community level social control. (Bursik and Grasmick, 1993; Sampson, 1987; Sampson and Groves, 1989). Bursik and Grasmick (1993) maintain that this systemic approach is based upon the belief that social control is determined by the extensiveness of three types of formal and informal networks within the neighbourhood that bind the residents together as a social community. These include:

1. A private order of social control based upon intimate, informal primary groups;
2. A parochial system of control through broader local interpersonal networks and the interlocking of local institutions.

3. A public system that provides the ability of the community to secure public goods and services from agencies outside of the community (Bursik and Grasmick, 1993).

Rephann (in press) argues that these systems of relationships are as relevant to crime and delinquency in small town and rural communities as in urban centres. Wilkinson's (1991) notion of strong and weak social ties reflects Bursik and Grasmick's systems of relationships. Wilkinson (1991, cited in Rephann in press), maintained that strong ties would predominate in rural areas due to small population size and density and thus reinforce social controls and reduce levels of crime. At the same time, the lack of weak ties leaves rural communities vulnerable to disruptions in primary networks due to a lack of alternative sources of social support. Thus rural communities are subject to higher rates of suicide and assault.

Most studies of social disorganisation and crime have focused upon urban centres. A few exceptions include a study in Britain, where a comparison of ten-year-old children in inner London and Isle of Wight (Rutter, 1975) found a higher incidence of conduct disorder in the London sample. However, differences between the two areas disappeared when controls were introduced for family adversity based upon parental conflict, family breakdown, criminal parents and large family size. Rutter concluded that any effects of inner city residence on children's anti-social behaviour were indirect and sequential: communities affected families which in turn affected children (Rutter, 1981).

Rephann (in press) in a study of juvenile delinquency in 264 rural communities across four states of America, found that residential instability was associated with higher offence rates. Ethnic diversity was significantly related to violent offences but unrelated to property offences. Family disruption was associated with both property and violent offences. Family disruption was a critical element of social disorganisation, suggesting that adults actively engaged in parental roles are especially critical to the systems of relationships that bring formal and informal controls to bear on the behaviour of children in the community. These studies demonstrate the relevance of social disorganisation theory for explaining crime within rural communities.

2.6 RESEARCH IN CRIME IN RURAL AUSTRALIA

Criminologists in the United States have maintained a limited, yet continual, interest in rural crime since before mid-century (Clinard, 1944). During the past few years, considerable interest in rural crime has been sparked (McDonald, Wood and Phlug, 1996; Thurman and McGarrell, 1997; Weisheit, Wells and Falcone, 1995, 1999). Research on rural social problems had been uncommon in the industrialised world (Summers, 1991) and almost non-existent in Third World nations (Wallerstein, 1975). Until

recently, rural crime research has been especially rare in Australia, despite its immense rural expanses.

The first projects focusing on crime in rural Australia were case studies of small towns published only a decade ago. *Crime in a Rural Community,* by O'Connor and Gray (1989) is a seminal analysis of the small town of Walcha in New South Wales, that precursed much subsequent research in Australia. O'Connor and Gray's predominant finding was that Walcha had relatively little official crime, as might be expected of a small, stable, homogeneous, agricultural community. However, in reviewing comparative statistics from Mukherjee, Walker, Scandia, and Dagger (1987), they suspected that rural areas, overall, had relatively high assault rates. The case study methodologies of these early projects, while fitting for introductory analyses, did not permit comparative or quantitative analyses of rural social structures on crime. At about the same time, Dempsey (1990) was conducting a more conventional investigation of the relationship between community structure and social problems in a small Victorian town. He identified two groups, 'No-hopers' and 'Blockies' who were socially and symbolically excluded from community life. They were perceived to account for most alcohol and drug abuse, and domestic violence, problems that remain common to rural areas.

Two important contributions come from these early works. First, they initiated research that others could build upon, challenge and approach from other perspectives. Second, they implied that not only did rural areas have social structures that distinguished them from cities, they also had diverse social structures that accounted for variations in rural crime. These works acknowledge findings by Mukherjee *et al.,* that violence is higher than in some portions of rural Australia, especially the Northern Territory. They caution that violence accounts for less than four per cent of reported crimes. Although not directed solely toward rural crime, Braithwaite's (1989) influential, *Crime, Shame and Reintegration* drew extensively from a community model that initially evolved from interpretations of rural areas.

The next stage of research on rural crime was a further specification of types and patterns of rural crime. The specification took two separate tangents. One tangent involved analyses of secondary data sets. As will become evident, existing data suggest that rural crime is comparatively serious, though no general summary equivalent to Bachman's (1992) in the United States has been written. General reporting of crimes and criminal victimisation had been initiated by the Australian Bureau of Statistics (ABS, 1984) many years earlier. However, no particular substantive or theoretical interest in rural crime had been established. Official systematic analyses of rural crimes still are not provided by the ABS (ABS, 1998). Devery (1991) analysed statistical comparisons of LGAs in New South Wales that empirically demonstrated the variation and extent of rural crime in New South Wales. Two noteworthy contributions resulted from his statistical analyses. First, he delineated rural areas in New South Wales that had particularly high crime. Second, he began to clarify the complex and disproportionate correlations that Aboriginal populations and poverty had

with crime. Devery's study confirmed the results of overseas research in showing that regional differences in the rate per head of population of proven offenders were closely linked to regional differences in social and economic conditions, for example, level of unemployment, proportion of poor and single parent families. Research currently being conducted by Carrington has focused upon the high rates of violent crime in some communities in New South Wales (Hogg and Carrington, 1998).

The second tangent examined substantive issues, particularly Aboriginality, domestic violence and firearms, in more detail. Studies by Cunneen and Robb (1986), Cunneen (1992), Luke and Cunneen (1993, 1995) identified the high levels of Aboriginal offending in New South Wales and associated them with policing and the criminal justice system. Gale, Bailey-Harris, and Wundersitz (1990) drew similar conclusions, focusing more specifically on levels of differences between Aboriginal and non-Aboriginal youth in South Australia. Broadhurst, Ferrante and Susilo (1991) similarly demonstrated highly disproportionate arrests of Aboriginal youth in Western Australia. The New South Wales Government (1985) had published reports describing the higher incidence of rural domestic assault by the mid-1980s. Poiner (1990) explained rural domestic violence within power relationships that perpetuated traditional male domination. It is now evident that domestic violence appears to be extremely common in rural areas and is also heavily unreported (Devery, 1992b; Indermaur, Atkinson and Blagg, 1999). A call for police to be responsive to issues identified by criminological data soon followed. Social and logistical obstacles to reporting in many country towns are likely to be far greater than those facing city dwellers (Coorey, 1990, cited in Hogg and Carrington, 1998). Butler (1993) called for the development of special services that are sensitive to the cultural needs of Aboriginal youth.

The first examinations of the effects of policies occurred during the early nineties. In a case study of Walgett, New South Wales, Burns (1992) concluded that although there was a reduction of drinking on the street, following the legislation of 'alcohol-free zones', there was no reduction in the rates of recorded assaults, offensive behaviours, or malicious damage. As the Port Arthur Massacre stimulated heated political debate and rigid gun control policies, the higher representation of firearms in rural places became evident. Although not specifically addressing rural distinctions (Polk and Ranson, 1991), had already identified conditions common to rural areas, such as gun ownership, as predisposing factors for homicide.

These studies indicate that crime in rural Australia is extremely diverse. Incidence of crime ranges from relatively low in bucolic communities like Walcha, described by O'Connor and Gray (1989), to comparatively high in a few towns in western New South Wales.

2.7 RATIONALE FOR THIS RESEARCH

Analyses of rural social structure and crime in rural Australia are uncommon. Recent social problems texts illustrate how rural structures and cohesion, particularly geographic mobility, have been almost ignored by Australian criminologists. Braithwaite (1989) theorises that mobility reduces integration and increases crime, but does not measure the relationship. *Crime in a Rural Community,* by O'Connor and Gray (1989) is a case study. Their methodology does not permit quantitative analyses with other rural social structures. Devery (1991, p.10) alludes to geographic mobility once. Chappell and Wilson (1994) and Boss, Edwards and Pittman (1995) summarise literature analysing the relation of immigration and crime. Neither they, nor the following cited texts, refer to geographic mobility or internal migration and crime (Bryett, Craswell, Harrison, and Shaw, 1993; Cunneen and White, 1995; Findlay and Hogg, 1988; Gale *et al.,* 1990; Healey, 1993; Sarre, 1994; Sturma, 1983).

The paucity of empirical research about rural crime is a serious neglect. Research elsewhere has confirmed that rural residents are deeply concerned about crime (Belyea and Zingraff, 1988; Krannich, Berry and Greider, 1989; Saltiel, Gilchrist and Harvie, 1992). The current political and media focus upon the welfare of rural communities demands an objective analytical approach to examine the issues facing rural Australia. Australia is among the most rural areas on earth. If research in the United States is any indication, (Donnermeyer and Phillips, 1984; Gibbons, 1972), rural residents in Australia are especially vulnerable to certain types of crime. The economic and cultural contributions from these areas are essential to the well being of the nation. Demographically, approximately 15 per cent of the population lives in locales with fewer than 1000 residents. The characteristics of rural populations, their living conditions, and their problems, differ significantly from their urban cousins. Rural communities in Australia remain an unstudied crime laboratory for investigating theoretical and methodological issues.

The present study will address the current lack of research into this important issue. The objective of this research is to describe and interpret how the social structures of rural communities are associated with crime. The focus of the analysis is on how levels of cohesion and integration underlie rural crime. Larger, more heterogeneous places and places with more fragmentation and population instability, are expected to be especially at risk.

A social disorganisation orientation has been adopted for the analysis in the present study of crime in rural Australia. Previous research has demonstrated that social disorganisation theory is very effective in providing explanations of crime in rural areas. Social disorganisation is especially appropriate when the unit of analysis is the community (Salamon, 1997). It was the foundation of subsequent structural theories and remains an established and robust orientation for organising data and

describing community structure and crime (Beirne and Messerschmidt, 1995). This versatility makes the social disorganisation perspective valuable for studying geographic regions that have received limited secondary data analysis. Cities, structures that are larger, denser and more heterogeneous, have generally been found to be relatively more disorganised and to have higher crime (Kowalski and Duffield, 1990). Rural areas typically have more intact families, more stable populations, greater homogeneity and social bonding (Gardner and Shoemaker, 1989). They have more meaningful personal interaction, what Freudenberg (1986) terms, 'density of acquaintanceship'.

The theoretical assumption underlying the data analyses in the present study is that an absence of social cohesion will increase crime. The cumulative effect of the independent variables: population instability, broken family structures, unemployment, racial discrimination (implied by proportion of Indigenous people), implies lower social cohesion. The cumulative effect of crime is that the more one type of crime is found, the more other types are expected to be found. That is, locations that have higher than average assault may have higher theft, car theft and drug violations. Drug crimes are considered especially interesting in the inter-relationship for two reasons. The media has claimed that drug use has increased disproportionately in rural areas (Williams, 1999). Second, the use of drugs in itself, implies social disorganisation and poor cohesion. Third, the expense of illegal addictive drugs generates property crimes. Accordingly, the following hypotheses are generated:

Hypothesis 1 Social cohesion

In smaller *gemeinschaft* type communities, stronger social bonds and family cohesiveness increases the psychological costs of offending. Therefore:

It is predicted that an absence of social cohesion will be associated with higher rates of crime and that smaller more cohesive communities will be associated with lower levels of crime.

Hypothesis 2 Residential instability

Rapid population growth and high levels of in and out migration weaken community bonds and makes surveillance more difficult. This is a central theme of social disorganisation and system models of urban social organisation (Sampson, 1988) and a major factor contributing to social problems in rural boomtowns (Freudenberg, 1986) Therefore:

It is predicted that high rates of crime will be positively associated with communities which experience high residential instability and will be negatively associated with communities with stable populations.

Hypothesis 3 Family instability

Family breakdown is another indicator of social disorganisation. The greater the population of sole parents the more limited the networks of adult supervision of children within a community. Therefore:

It is predicted that high rates of crime will be positively associated with communities with high family instability and negatively associated with communities with low family instability.

Hypothesis 4 Ethnic diversity

Ethnic diversity presents problems of social disorganisation. Differences in customs and a lack of shared experiences lead to an absence or a breakdown in communication and may breed fear and trust (Sampson and Groves, 1989). Therefore:

It is predicted that high rates of crime will be positively associated with communities with high ethnic diversity and negatively associated with communities with low proportions of ethnic populations.

Hypothesis 5 Economic disadvantage

There is a link between crime and economic factors. If stable, legal opportunities exist to earn money, then residents are less likely to commit crimes. Therefore:

It is predicted that high rates of crime will be positively associated with communities with high economic disadvantage and negatively associated with more affluent communities.

Hypothesis 6 The cumulative effect of crime

There appears to be a contagion effect of crime within socially disorganised communities . For example, the presence of social disorganisation and poor cohesion leads to higher rates of drug abuse, which in turn leads to an increase in the commission of property crimes. Therefore:

It is predicted that a cumulative effect of crime will be evident, in that the more one type of crime is found, the more other types are expected to be found.

2.8 SUMMARY

In this chapter, the terminology of crime, rural, community and structure as is relevant to this research have been presented. We reviewed and discussed the literature on crime in rural areas which highlighted the dearth of research in rural crime in Australia. Theories of social disorganisation upon which the analyses in the research are based were outlined. From this review we drew six hypotheses of social disorganisation and crime in rural areas in Australia. In the next chapter, an overview of crime in rural New South Wales is presented which provides a basis of understanding upon which the subsequent analyses which test the above hypotheses, is founded.

Chapter 3

OFFICIAL CRIME STATISTICS

3.1 INTRODUCTION

In this chapter, the issues surrounding data collection of criminal offences are explained. Since the focus of the study is upon crime in rural New South Wales, some official statistics are presented to provide a statewide profile of recorded crime in New South Wales.

3.2 OFFICIAL CRIME STATISTICS

Crime statistics reflect those crimes that are recorded—crimes that are either detected by police or reported to police and authenticated. However, officially reported crime statistics often underestimate the actual level of crime in the community because they are dependent upon a number of factors which are difficult to control. For example, crime statistics are strongly influenced by the willingness of people to report crime and by the activities and presence of police (Matka, 1997).

Many crimes such as assaults, sexual assaults and robberies are often not reported to police and therefore go unrecorded (BOCSAR, 1998b). The 1997 New South Wales Crime and Safety Survey found that only about 43 per cent of assaults and 71 per cent of completed break-ins in New South Wales are reported to the police. Compared with 1996 data, the rate of reporting assaults to police had increased while the rate of reporting break and enter had remained constant (ABS, 1997a). It is important to note that a small change in the percentage of persons reporting offences such as assault, translates to a large change in the number of assaults reported (Freeman, 1998).

Some crimes are considered minor and not worthwhile reporting. The 1993 National Crime and Safety victimisation study (cited in Matka, 1997) found that respondents believed that 38 per cent of robberies and 35 per cent of assaults were considered too trivial to report.

Offences such as sexual assault may go unreported due to a degree of sensitivity, guilt and shame which may be associated with the incident. In rural areas, the implications of reporting a sexual assault, or any other offence of a sensitive nature, will be more acute in communities where both perpetrator and victim are likely to be widely known (Pennings, 1999). Sexual assault, along with offences such as domestic violence and blackmail, may also go unreported because of fear of reprisal (Matka, 1997). For example, the 1997 New South Wales Crime and Safety Survey found 20 per cent of victims of sexual assault did not report out of fear of revenge (ABS, 1997a).

Crimes without immediate victims such as drug offences are likely to go unreported because those who deal or cultivate drugs do not report upon themselves or their customers (Matka, 1997). Other crimes such as tax fraud, are often unreported because people rarely view such behaviour as a crime (Matka, 1997).

Changes in community attitudes towards some types of crimes also influence crime rates (Matka, 1997). For example, increased public awareness of child sexual assault has encouraged more people to report such crimes (Matka, 1997). The introduction of Apprehended Domestic Violence Orders in 1983 and the subsequent broadening of the legislation in 1990 to include non-domestic disputes has encouraged more victims to seek legal protection and report assaults (Matka, 1997).

Offences which are **most** likely to be reported to police are those which involve loss or damage to property such as motor vehicle theft and break and enter crimes. Apart from the desire to recover stolen property, insurance claims necessitate reporting the incident to police (Matka, 1997). The 1993 National Crime and Safety victimisation survey found 94 per cent of motor vehicle thefts were reported (Matka, 1997).

It is likely that there are communities where people are more likely to report crimes to police than they are in others. Such differences can lead to bias in comparisons of crime statistics between districts (Devery, 1992a). However, research has failed to show that official statistics are rendered invalid for comparisons of relative crime rates by such bias (Gove, Hughes and Geerken, 1985). In reality, the actual offence rates (particularly for assault as noted above) is likely to be considerably higher than the rates actually reported (Devery, 1992).

Recorded crime rates are also influenced by the activity and the number of police in an area (Matka, 1997). Crimes such as drug offences, drink driving offences, offensive behaviour, and receiving stolen goods are usually only discovered when an offender is apprehended (BOCSAR, 1998b). Police crack

downs targeting crimes such as drink driving or offensive behaviour, can also cause fluctuations in recorded crime rates (Matka, 1997).

Law enforcement in Australia is through State-administered police services. As employees of a single police force, all officers in rural areas are obligated to enforce the same laws through the same procedures. A recent study by Jobes (1997) found rural officers in New South Wales used some discretion in their enforcement of the law. While they universally enforced felonies, they varied in the strictness with which they enforced lesser crimes. Three primary reasons motivated officer discretion. First, they enforced minor crimes at levels commensurate with community expectations. Second, they depended upon the support of the community to be able to effectively enforce the law. Third, they wanted to partially resolve strains between being a law enforcer and a good citizen. Nevertheless, since there is a single law enforcement agency, there probably are fewer biases due to differential policing than occur in countries with multiple-policing organisations.

Conflict theorists argue that the law tends to reflect the values and interests of those with the greatest political and economic power in society. Therefore official crime rates of groups within any society tend to be inversely proportional to their degree of political and economic power (Vold and Bernard, 1986). The popularity of Foucault has influenced a generation of scholars who are critical of analytic orientations that are affiliated with government institutions. Foucault was sensitive to more than the direct definition and punishment of individuals for the purposes of control by government. He identified the intrusion of governmental structures of power into every aspect of social control (Foucault, 1979). However, many contemporary scholars, such as Gibbs (1989), are adamant that reliability and prediction through quantitative analyses are the sole appropriate criteria for evaluating research and policy. Others, particularly scholars committed to critical equity (Harding, 1998) and gender issues (Randall and Waylen, 1998; Seidman, 1996), take the position that ethical issues should guide policy, and should determine the nature of research and the interpretations of findings. However, to claim that the use of official crime statistics data constitutes a threat, rather than a contribution to decision-making in social justice, misses the point of scientific analyses in criminology. Pratt (1995) has warned of the dangers that actuarialism poses for analysis of policy formation. Analyses of official crime statistics are merely **one** method for describing the causation of crime and the effectiveness of the criminal justice system. Although they have special capacities of reliably measuring statistical significance representing large numbers of cases, they may be no more valid than other types of analyses.

Crime rates are also influenced by population size (Matka, 1997). An increase generally in the size of a population results in an increase in the overall amount of crime (Matka, 1997). Therefore, when making comparisons in levels of crime across time, or between areas which differ in population size such as major urban centres and small rural towns, it is crucial to discuss crime in relation to population size such as a rate per 100,000 (Matka, 1997).

Nevertheless, even when making comparisons across diverse sized areas using recorded crime *rates,* it is important to note that crime rates are very sensitive to small population sizes. In particular, crime rates in populations under 3000 may be unreliable and should be interpreted with caution (BOCSAR, 1998b). Crime rates in areas with small populations are more variable than in more densely populated regions. This effectively means that in small communities, modest changes in the number of offences or the population can lead to disproportionate changes in the reported crime rate. Although rates are one of the few statistical options available to facilitate a comparative analysis, caution needs to be exercised in their interpretation, particularly where small numbers are involved (Carcach, 1999).

This discussion has highlighted the fact that crime statistics should be regarded critically. However, crime data do not have to be complete to provide useful information about crime trends and patterns (Matka, 1997). Even if only a proportion of all offences are recorded, they may still be a useful indication of trends in crime as long as there is roughly a constant proportion of offences being recorded (Matka, 1997). This report focuses upon small area crime data which makes comparisons of crime offences across time and between communities more unstable than for higher populations. Attention should be directed to general trends and multiple findings as a whole, rather than to single event paired comparisons. Therefore, in regard to the issues raised above, the results of these analyses should be interpreted with caution. Nevertheless, the analyses do provide an indication of patterns and trends in crime across rural New South Wales.

3.3 NEW SOUTH WALES CRIME STATISTICS

Across Australia, crime statistics are usually published nationally and by State or Territory. While administratively expedient, regarding crime patterns and trends as being uniform across a state is self-evidently simplistic (Harding, Morgan, Ferrante, Loh and Fernandez, 1997). Aggregated crime rates are more likely to conceal than to reveal important developments or trends both between and within diverse regions (Harding *et al.,* 1997). In rural areas in particular, the disproportionate distribution of crime across space is a common occurrence (Pennings, 1999). Unfortunately, small area data are unlikely to be available at a national level in the foreseeable future. The ABS currently lacks the technical capacity to present national crime data by regions (Harding *et al.,* 1997).

In New South Wales, the statewide NSW Police Service Computerised Operational Policing System (COPS) enables the collection of criminal incidents reported to police by police district. These data are collated by the New South Wales Bureau of Crime Statistics and Research (BOCSAR) to produce data by Australian Standard Geographical Classifications of Statistical Division, Statistical Sub-Division and LGA across New South Wales (ABS, 1999b). The classification of offences is based on the Australian

National Classification of Offences (ANCO) issued by the ABS. The counting units are recorded criminal incidents, except for murder and manslaughter where the counting units are victims due to the seriousness of such offences and the relatively small numbers of offences.[1]

Data are categorised by date of reporting to police (or date of detection by police) rather than by the actual date of occurrence of the incident. A criminal incident is assigned to the area in which the incident took place. A criminal incident is defined as an activity detected by or reported to police which:

- involved the same offender(s);
- involved the same victims;
- occurred at (or in the case of fires, started at) the one location;
- occurred during one uninterrupted period of time;
- falls into one offence category;
- falls into one incident type.

For example, one offender assaulting two victims would be counted as one criminal incident. Alternatively, extortion accompanied by assault would be classed as two distinct offence types (BOCSAR, 1999a).

3.4 REGIONAL DIFFERENCES IN CRIME RATES

In this section, using BOCSAR data for the years 1996 to 1999, we provide an overview of the regional differences in crime rates across statistical divisions (SDs) in New South Wales. While exploring differences by SD does not account for heterogeneity of regions, the exercise does provide an illustration of the diversity in the distribution of crime across rural regions. Figure 3.1 displays the SDs across New South Wales.

The following figures compare crime rates for selected offences across non-metropolitan SDs in New South Wales for the calendar years 1995 through 1998 (BOCSAR, 1996, 1997, 1998a, 1999a). For the reasons outlined above, crime *rates* are used rather than the number of crime *incidents*, to allow comparison of crime across diverse rural regions. Appendix 1, presents maps of the distribution of crime rates for various crime types across LGAs in New South Wales.

[1] Prior to 1995, the counting units were recorded *offences* rather than incidents (BOCSAR, 1999a).

Figure 3.1:
Statistical Divisions of New South Wales.

3.4.1 Assault

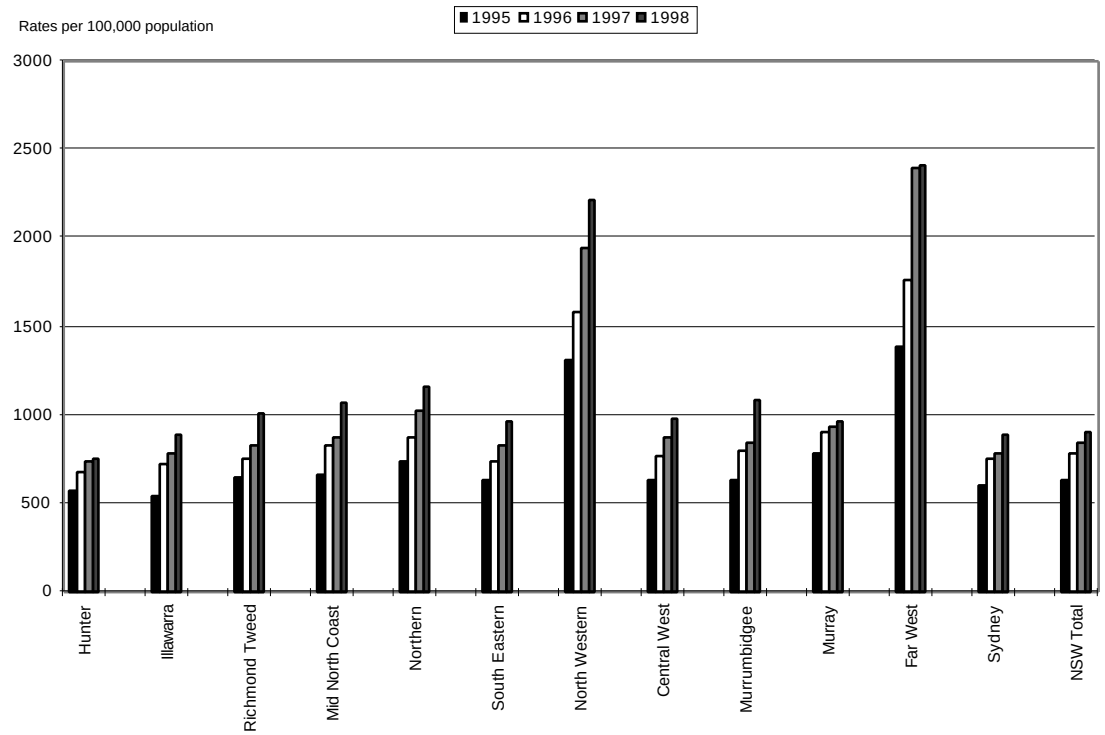
Assaults include threatening another person with force or actually applying force to another person (Jochelson, 1997). Assaults includes common assault, which does not involve actual bodily harm; aggravated assault, which results in actual bodily harm, namely any hurt or injury which affects the health or comfort of the victim; and aggravated assault causing grievous bodily harm, injuries inflicted by a weapon or other instrument resulting in permanent or serious disfigurement or injury to health (Jochelson, 1997). The recorded rate of assaults is strongly affected by the exercise of police discretion and public willingness to report incidents of assault to police. There also tends to be a seasonal variation in the recorded rate of assault, with a peak in summer months. Assault is frequently associated with the use of alcohol (Stevenson, 1996).

A large proportion of assaults include domestic violence incidents. Unpublished data from BOCSAR shows that in 1993, thirty-one per cent of assaults were domestic violence incidents. Research on domestic violence

in rural areas suggests that it is both common and heavily unreported (Indermaur, Atkinson and Blagg, 1999). Obstacles to reporting in many country towns are likely to be considerably greater than those facing city dwellers (Coorey, 1990, cited in Hogg and Carrington, 1998). It is unfortunate that data on those crimes defined as domestic violence were not available for analysis within this report.

Figure 3.2 displays the recorded number of assault offences for the period 1995 to 1998. Statewide there were 57,646 incidents of assault recorded by police in 1998. There was a significant increase of 22.5 per cent between 1995 and 1996, an 8.7 per cent increase in 1996 to 1997 and a 6.2 per cent increase in 1997 to 1998 (BOCSAR, 1999b). All non-metropolitan SDs showed an increase in the rates of assault across the four-year period and the majority show rates in excess of the Sydney SD. The North Western and Far West divisions recorded rates at three times the level recorded in Sydney.

Figure 3.2:
Assault, NSW Statistical Divisions, 1995-98.



Source: NSW Bureau of Crime Statistics and Research (1999), New South Wales Recorded Crime Statistics 1995 to 1998, Sydney

3.4.2 Sexual Offences

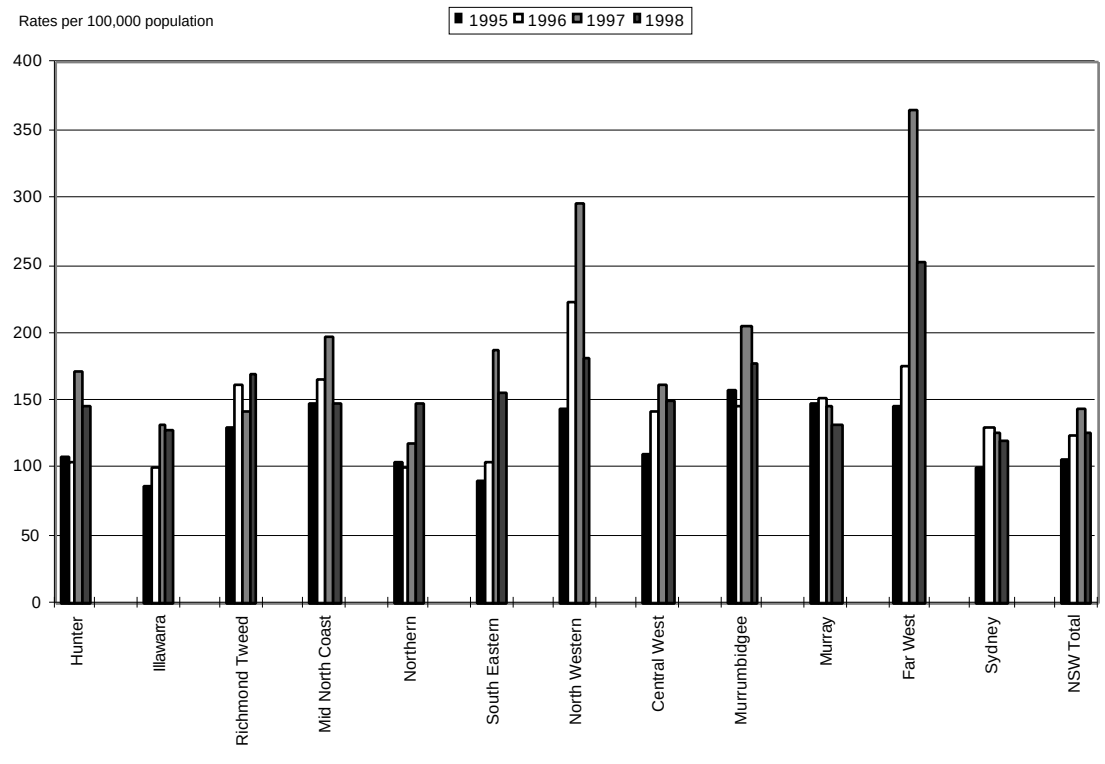
Sexual offences include sexual assault, aggravated sexual assault, assault with intent to have sexual intercourse, indecent assault, act of indecency, and other sexual offences. As stated in section 3.2, sexual assault offences are particularly subject to under-reporting largely due to the sensitivity associated with such offences and the fear of reprisal. These issues may be

exacerbated in small rural communities. The recorded incidence of this type of offence in small communities is particularly subject to distortions in changes in rates in comparisons across regions. Thus these data provide an indication only of trends in sexual offences.

Statewide, there were a total of 6579 recorded incidents involving sexual offences in 1998 in New South Wales. Of these 3092 were sexual assaults and 3487 were indecent assaults and other acts of indecency. For sexual assault, there was an increase of 23.3 per cent in 1995 to 1996, no significant trend in 1996 to 1997 and a decrease of 14.1 per cent in 1997 to 1998. For other sexual offences there was no significant trend between 1995 and 1997, and a decrease of 18.7 per cent in 1997 to 1998 (BOCSAR, 1999b).

Figure 3.3 presents the combined rates of recorded sexual offences for 1995 to 1998 across New South Wales SDs. With the exception of the Murray SD, most non-metropolitan SDs reported an increase in rates over the four-year period. Most non-metropolitan SDs recorded occurrences far outnumbering those in Sydney. The highest rates occurred in the Far West and North West division. The general decrease in reporting in 1998 may be an effect of a levelling out of reporting following the sharp increase in the previous periods resulting from a rise in public awareness of child sexual assault. The increase in the number of reported offences included recent offences as well as those that had occurred in the past.

Figure 3.3:
Sexual assault, NSW Statistical Divisions, 1995-98.



Source: NSW Bureau of Crime Statistics and Research (1999), New South Wales Recorded Crime Statistics 1995 to 1998, Sydney

3.4.3 Break and Enter

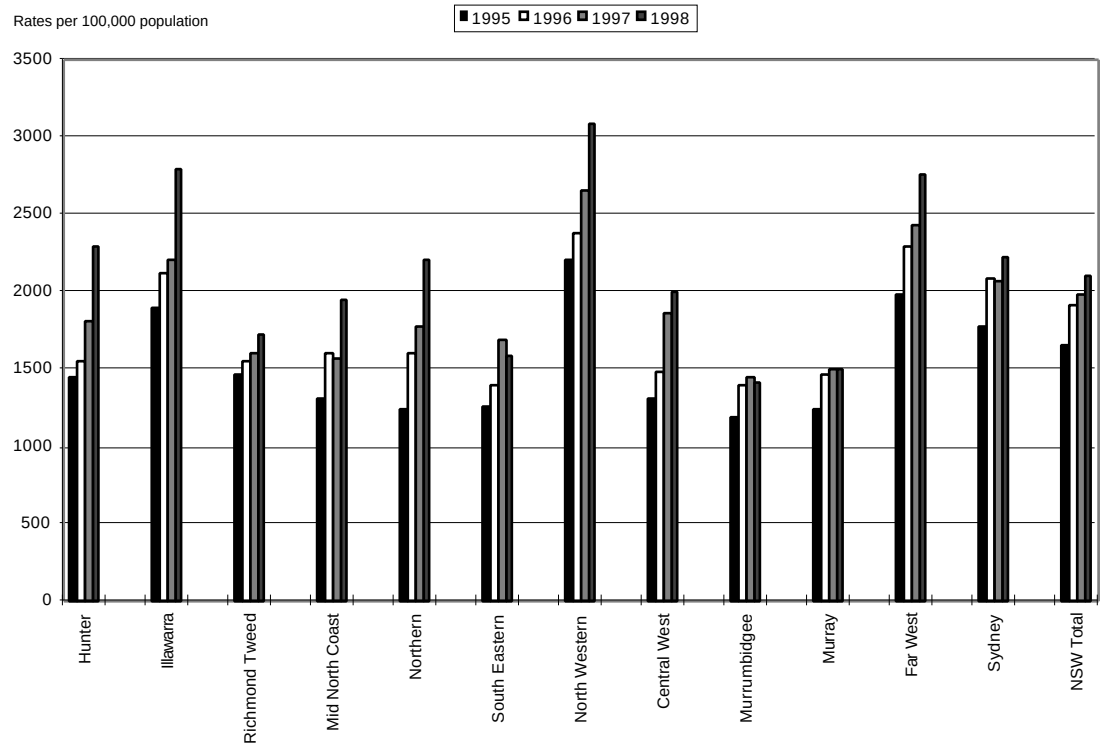
On an incident basis, break and enter is the most voluminous of crimes experienced throughout New South Wales. As noted above, break and enter is an offence where trends in recorded incidents are usually a reasonable indication of actual trends in break and enter incidents (BOCSAR, 1998b). In 1997, 5.6 per cent of New South Wales households experienced a break and enter up from 4.6 per cent in 1996 (ABS, 1997a). The National Roads and Motorists' Association (NRMA) Insurance Ltd (1998) report that the cost of paying household burglary claims reached a record high in New South Wales in 1996 to 1997 financial year of $43.4 million. Rural New South Wales also had a 21 per cent increase in the cost of theft (NRMA, 1998). The increase in cost is an effect of the increase in the number of consumer goods kept in the home such as computers, cameras, video recorders, stereos, televisions and other electrical equipment. Jewellery is the most popular item for thieves, and is stolen in a third of all burglaries. Jewellery is followed by video recorders, video cameras and cash (NRMA, 1998).

In 1998, statewide there were 133,935 incidents of break and enter recorded by police. Of these, 85,396 (64%) were household break-ins and the remainder, 48,539 were break-ins of non-dwelling premises. Trend analysis reveals that for break and enter for dwellings in 1995 to 1996, there was an increase of 20.9 per cent, in 1996 to 1997 an increase of 6.5 per cent, and in 1997 to 1998 an increase of 7 per cent. For break and enter of non-dwellings there was an increase of 7 per cent in 1995 to 1996, an increase of 3.4 per cent in 1996 to 1997, and a 6.8 per cent increase in 1997 to 1998 (BOCSAR, 1999b).

Figure 3.4 displays the rate of recorded break and enters for both dwellings and non-dwellings for the period 1995 to 1998 across SSDs. The North Western and Far West areas continue to have the highest rate of break and enter with the cost of theft more than double the country average (NRMA, 1998). The Illawarra and Hunter regions experienced a significant increase in this type of offence in 1998. All four regions exhibited rates in excess of Sydney. All SDs in New South Wales saw increases in the rate of break and enter offences since 1995 although the south eastern and Murrumbidgee areas experienced declines since 1997. The south eastern area had the lowest risk of theft yet the cost of claims were quite high (NRMA, 1998). This indicates that while fewer homes are targeted, the amount stolen is on average much higher (NRMA, 1998).

Pennings (1999) notes that the high rates of break and enter in rural areas are unusual, given that it can be presumed that opportunities to offend would be significantly less compared to metropolitan areas. However, in low populated areas, there are less people to keep watch. Pennings suggests that rural residents may be more complacent about the likelihood of their homes being broken into and are thus less vigilant, leaving premises unsecured or not bothering to encode their household property with serial numbers.

Figure 3.4:
Break and enter, NSW Statistical Divisions, 1995-98.



Source: NSW Bureau of Crime Statistics and Research (1999), New South Wales Recorded Crime Statistics 1995 to 1998, Sydney

3.4.4 Robbery

Robbery is defined as the taking of money or property by force, or by threat of force. Therefore, robbery is an offence against the person as well as an offence against property. A robbery offence becomes more serious when injury is inflicted or a weapon is carried. Offences are classified into three distinct types, robbery without a weapon, robbery with a firearm and robbery with a weapon, not a firearm. The latter type includes robberies with knives, sticks, syringes, bricks and other objects (Jochelson, 1997).

There were 11,763 robberies recorded in 1998 across New South Wales. Of these, 5299 (45%) involved the use of weapons (either firearm or another weapon). Armed robbery rose 15 per cent to 5721 in 1998. New South Wales has the highest rate of robbery offences compared to other states (BOCSAR, 1999b). Weatherburn (cited in Humphries, 1999) maintains the rise in recorded robberies reflects the increase in the numbers of heroin addicts in this country.

With regard to the relatively recent issue of gun control in Australia, out of interest we present in figure 3.5, the rates of recorded of robbery incidents categorised by type of robbery, including offences with a firearm, with a weapon not a firearm, and robbery without a weapon. Sydney recorded the

highest rates for all types of robbery offences in New South Wales and the greatest increase over the four-year period (figure 3.5). All remaining non-metropolitan divisions had rates in 1998 at a third or less than that of Sydney. Despite this, the Hunter, Illawarra, Northern and North Western SDs have shown significant rises over the period. This is obviously a concern for police since robberies are a phenomenon that have previously been relatively rare in rural communities (Pennings, 1999).

Although the prevalence of gun ownership is relatively higher in country areas, armed robbery is consistently higher in metropolitan areas (Polk and Ranson, 1991). Pennings (1999) suggests that the anonymity afforded to offenders in metropolitan areas may be one reason for the excessive rates of robbery in the city. In rural areas, strangers are more easily identified. However this is not the case in all rural areas. In tourist areas or in districts where there is a high need for seasonal workers, there may be a significant number of people unknown to the community entering and leaving the area (Pennings, 1999).

3.4.5 Motor Vehicle Theft

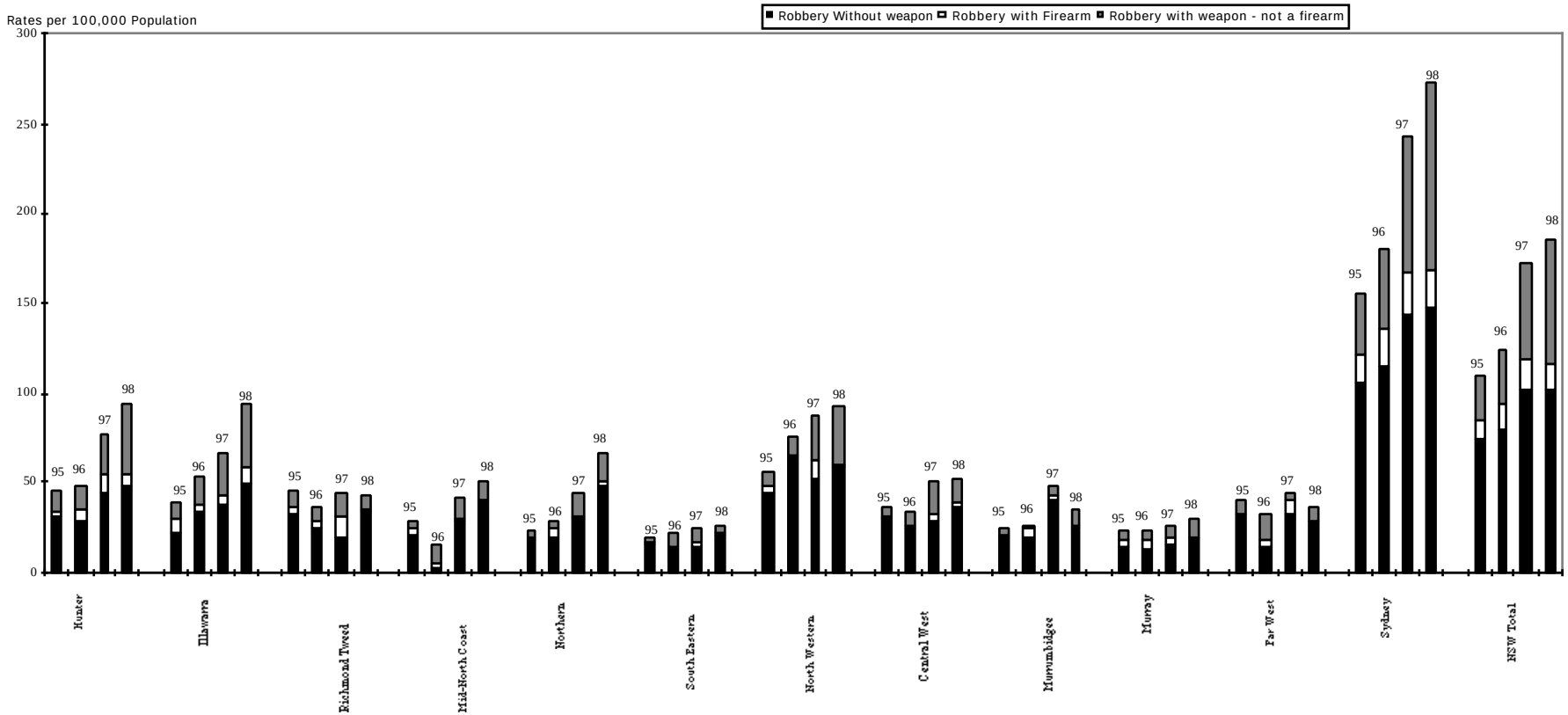
Motor vehicle theft includes the theft of cars, vans, trucks, buses and motor cycles or scooters. This type of theft is a common occurrence. In 1996, 130,406 motor vehicles were stolen nationally (ABS, 1998) at a cost of $654 million. This type of crime contributed to 3.3 per cent of the total estimated cost of crime and justice in Australia (Walker, 1992). Given that a very high proportion of motor vehicle thefts are reported to police for insurance purposes, the recorded rate of motor vehicle theft is usually an accurate index of the actual rate of the offence (BOCSAR, 1998b).

In 1998, there were 53,722 vehicles recorded stolen across New South Wales. Figure 3.6 presents the number of recorded incidents of motor vehicle theft for 1995 to 1998. Analysis of trends over the period 1995 to 1998 reveals that there was an increase of 4.1 per cent in 1995 to 1996, a 12.5 per cent increase in 1996 to 1997, but no significant difference in the period 1997 to 1998 (BOCSAR, 1999b).

Figure 3.6 reveals that motor vehicle theft was one of the few offences where rates in Sydney were significantly greater than all non-metropolitan areas. However, the Hunter and Illawarra divisions did experience substantial increases in rates of motor vehicle theft over the four year period.

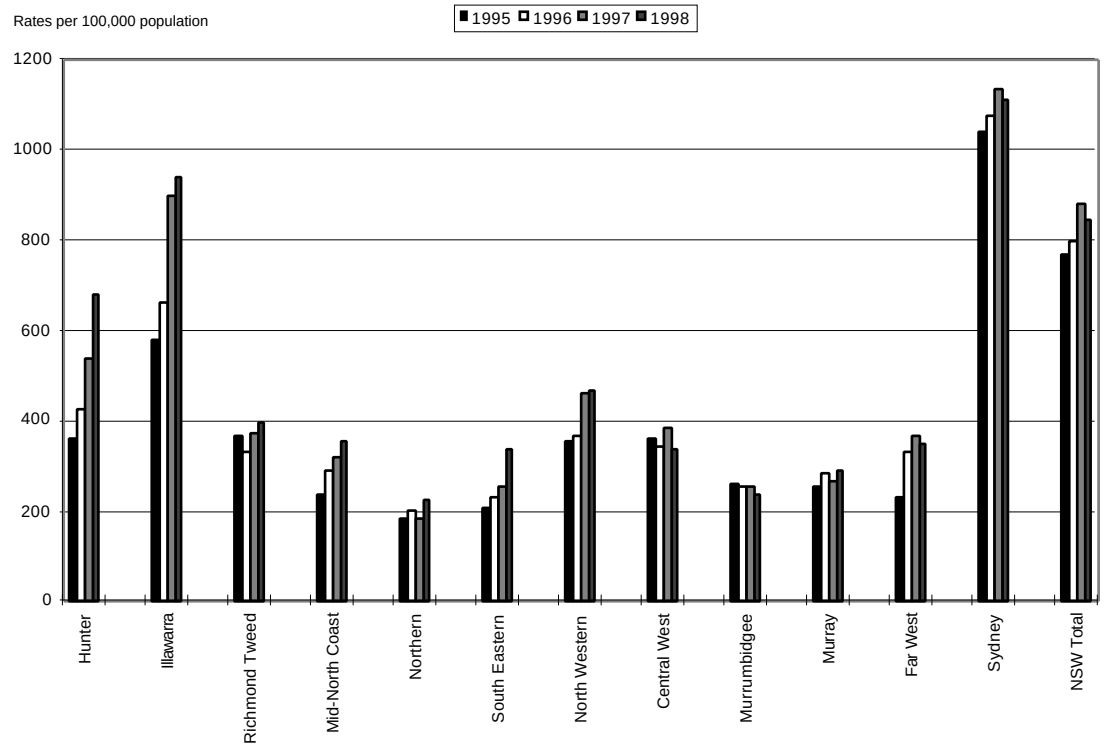
Most SDs did see an increase in the rate of offences except for the Central West and Murrumbidgee SDs, which experienced a decrease in rates over 1995 levels. The higher rates of motor vehicle theft offences in the Sydney SD is likely to be a result of the fact that there are more motor vehicles to steal and there are more opportunities.

Figure 3.5:
Robbery offences, NSW Statistical Divisions, 1995-98.



Source: NSW Bureau of Crime Statistics and Research (1999), New South Wales Recorded Crime Statistics 1995 to 1998, Sydney

Figure 3.6:
Motor vehicle theft offences, NSW Statistical Divisions, 1995-98.



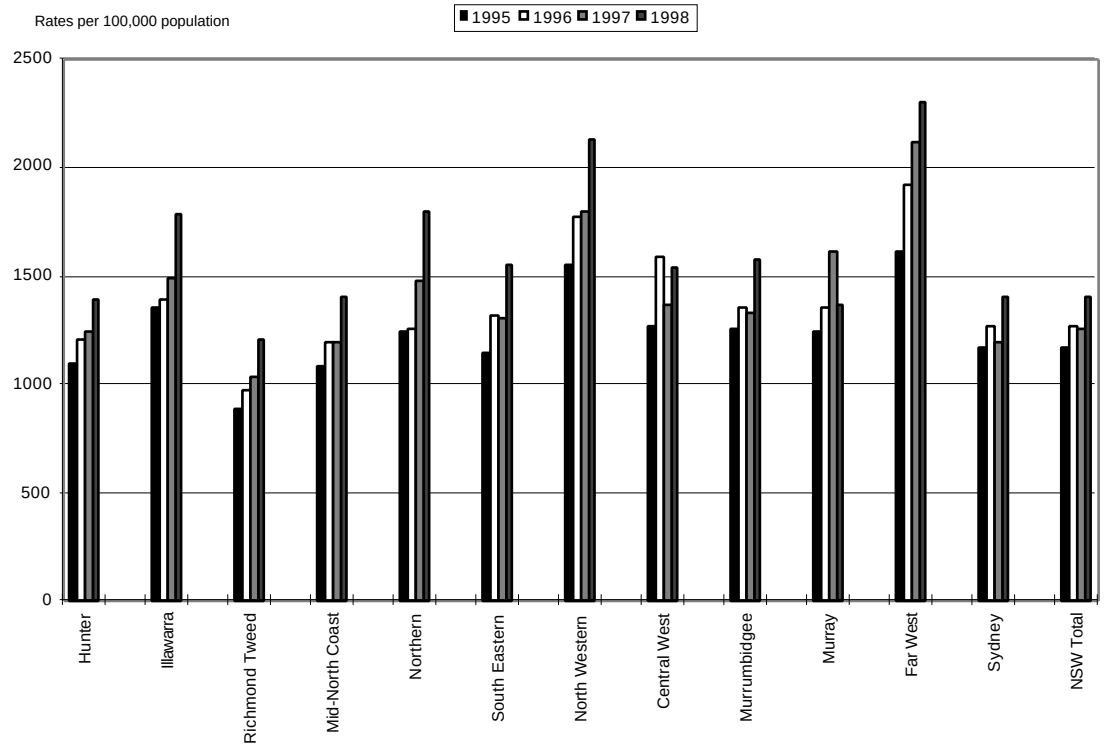
Source: NSW Bureau of Crime Statistics and Research (1999), New South Wales Recorded Crime Statistics 1995 to 1998, Sydney

Commuters may have to park their vehicles some distance from their destination and for considerable periods of time. Such situations are rare in rural areas (Pennings, 1999). The anonymity of urban life also makes the identification of particular vehicles with particular owners less visible than in rural places. Motor vehicle theft in rural areas could be attributed to a lack of vigilance on the part of car owners to deter potential thieves (Pennings, 1999).

3.4.6 Malicious Damage

Figure 3.7 shows the number of recorded incidents of malicious damage to property (other than arson) in New South Wales between 1995 and 1998 across SSDs. Statewide there was a significant increase of 9 per cent in the period 1995 to 1996, no significant trend in 1996 to 1997 an increase of 11.9 per cent in 1997 to 1998. Occurrences of malicious damage appear to be fairly evenly distributed across the State with the exceptions of the North Western and Far West divisions where rates were significantly higher. Most SDs experienced an increase in rates of malicious damage over the period. The exception was the Murray region which experienced a decline on 1997 levels. The Illawarra and Northern regions experienced a sharp increase in 1998.

Figure 3.7:
Malicious damage, NSW Statistical Divisions, 1995-98.



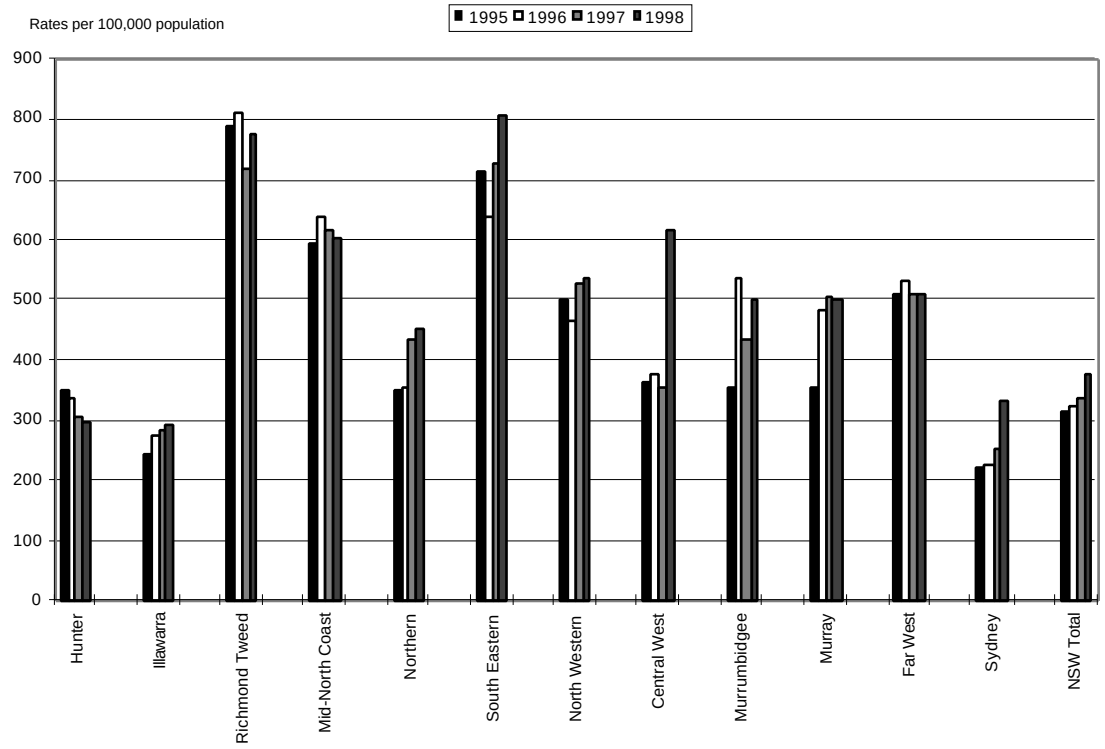
Source: NSW Bureau of Crime Statistics and Research (1998), New South Wales Recorded Crime Statistics 1999, Sydney

3.4.7 Drug Offences

The range of drug offences includes the possession, dealing, cultivation and importation of illegal drugs. There was a total of 20,866 recorded criminal incidents involving drugs offences in 1998. The possession, use and trafficking of cannabis accounted for 69 per cent of all recorded drug offences. A higher number of cannabis offences are recorded over the summer months (BOCSAR, 1998b). As stated in the previous section, there is some question as to whether reported drug offences provide an accurate depiction of actual offences. Clearly, a sustained drug operation by police in a single location can directly affect the rate of drug offences in the area. However, large scale drug cultivation and drug importation may be prevalent in isolated rural areas and police must be on the alert to such occurrences (Pennings, 1999).

Figure 3.8 reveals that the lowest rates for total drug offences were in the Sydney SD with the majority of non-metropolitan divisions exhibiting rates significantly higher. The coastal regions of Richmond-Tweed, Mid-North and South Eastern coastal divisions recorded the highest rates. It may be possible that a concentration of people who use drugs as a lifestyle are greater in some coastal areas. The central west experienced a sharp rise in rates in 1998.

Figure 3.8:
Drug offences, NSW Statistical Divisions, 1995-98.



Source: NSW Bureau of Crime Statistics and Research (1998), New South Wales Recorded Crime Statistics 1999, Sydney

3.5 SUMMARY

This chapter has highlighted the fact that official crime statistics can be strongly influenced by changes in the willingness of people to report crime and by changes in the priorities and effectiveness of policing various offences. More specifically, the relationship between the level of recorded crime and the actual level of crime in the community is influenced by community attitudes, levels of policing and legislative change (Matka, 1997). These concerns must be noted in any analysis of crime rates across diverse regions. This is especially relevant to the analysis in this report. Nevertheless, the overview of crime across rural SDs has revealed differences in the rates of crimes between regions. The regional distribution of recorded crime also varies according to the type of offence. The Sydney SD contains approximately 62 per cent of the total population of New South Wales and accounted for 62 per cent of the recorded criminal incidents in 1998. The Sydney SD recorded the highest rates of robbery and motor vehicle theft. The Richmond Tweed and South Eastern SDs had the highest rates of drug offences. The Far West recorded the highest rates of assault, sexual assault and malicious damage while the North West SD had the highest recorded rate of break and enter offences. These differences need to be further explored to isolate those issues surrounding criminal offences which are peculiar to rural regions.

Chapter 4

METHODOLOGY

4.1 INTRODUCTION

In this chapter, a description is provided of the data sets used in the analysis, the definitions of the measures used and how these measures were defined, the statistical analyses employed to examine the data, and the methodological issues pertinent to the analysis.

4.2 THE DATA SETS

Data for this study were drawn from two main data sources:

1. **Official crime statistics:** obtained from the New South Wales Bureau of Crime Statistics and Research (BOCSAR) for 1991 through to 1998, and

2. **Census data:** drawn from the 1996 Australian Bureau of Statistics' Census of Population and Housing.

4.2.1 Crime Statistics

Crime data include all incidents reported to, and recorded by New South Wales Police. It is important to note that prior to 1995, the counting units were recorded *offences* rather than incidents (BOCSAR, 1999). Where more than one offence was recorded from a single incident, each offence was counted separately. Therefore, although we have included comparisons between 1991 data and 1995 to 1998 data, the differences in collection methods must be taken into account.

In chapter three, we provide a detailed description of crime statistics in New South Wales and outline the possible sources of error in official crime data. Therefore, the results of these analyses should be interpreted with caution. Yet, the analyses do provide an indication of patterns and trends in crime across rural New South Wales.

4.2.2 Census Data

Measures of social cohesion used in the analysis were drawn from Census of Population and Housing (ABS, 1997c) using CDATA96. The Census of Population and Housing is the largest statistical collection undertaken by the ABS and aims to measure the number and key characteristics of people in Australia on census night (ABS, 1996).

Despite all efforts of quality assurance, the census, like all statistical collections, is subject to a number of sources of error (ABS, 1996). These include:

- **Undercounting:** Despite efforts to obtain full coverage of people and dwellings, it is inevitable that a small number of people will be missed and some will be counted more than once. As well as affecting the total population counts, undercounting can bias other census statistics because the characteristics of missed people are different from those of counted people. In Australia, rates of undercounting vary significantly for different population groups depending on factors such as age, sex and geographic area.

- **Partial response:** People do not necessarily answer all the questions which apply to them. However, this element is generally low. A 'not stated' code is allocated to missing data, with the exception of non-response to age, sex, marital status and the statistical local area of usual residence. These variables are imputed, using other information on the census form and specially constructed random tables based on the distribution of the population according to these variables at the previous census.

- **Respondent error**: Computer-editing procedures are used to detect and correct obvious errors made by individuals in completing the form.

- **Processing error:** Errors created during the processing of the census are kept at an acceptable level by means of quality assurance procedures (ABS, 1996).

4.3 DATA ANALYSIS

4.3.1 Basic Aim and Measures of the Analyses

A social disorganisation orientation has been adopted for the analyses conducted in the present study of crime in rural Australia. Social disorganisation is an established and robust orientation for organising data and describing community structure and crime and is especially appropriate when the unit of analysis is the community (Salamon, 1997; Beirne and Messerschmidt, 1995). The object of the analysis is to describe the relationship between crime and the current rural social structure of Australia to seek an understanding of both the facts of crime and social structure, and the factors that underlie the social structures and processes that lead to crime in rural areas. The theoretical assumption underlying the data analyses is that an absence of social cohesion will increase crime. A cumulative effect among measures of low social cohesion is expected to increase crime. The cumulative effect of the independent variables: population instability, broken family structures, unemployment, racial discrimination, implies lower social cohesion. A cumulative effect of crimes also is tested, that is whether increases in one type of crime vary with increases with other types of crime.

4.3.2 Unit of Analysis

To select a unit of analysis for this research, we were guided by the definition used by the Australian Standard Geographical Classification (ASGC) (ABS, 1999b). Widely used, this classification refers to 'rural' in the geographical sense and is synonymous with 'non-urban'. The ASGC defines five 'sections of State' as follows:

- Major urban—all urban centres with a population of 100,000 and over
- Other urban—all urban centres with a population of 1000 to 99,999.
- Locality—all localities with a population of 200 to 999.
- Rural balance—the remainder of the State/Territory.
- Off-shore and migratory.

Units of analysis are:

- LGA— Local Government Area.
- SLA— Statistical Local Area.
- SD— Statistical Division
- SSD— Statistical Sub -Division.
- CD— Collection District.

The unit of analysis selected for this research which was compatible to both the Census data and the Crime data, was the LGA. An LGA is the smallest unit of government in Australia. Usually a LGA represents a municipality and surrounding rural areas, but it can be a municipality only, or a rural district adjacent to a regional centre. In most non-metropolitan regions, most SLAs are identical to LGAs. An LGA consists of one or more Statistical Local Areas (SLAs) as defined by the ABS. A LGA/SLA in turn is comprised of one or more Census Collection Districts (CDs). LGAs/SLAs are grouped to form a State or Territory.

As the focus of this study is upon rural communities, all data from the metropolitan SSDs of Sydney, Newcastle, Wollongong, Tweed and Queanbeyan were excluded from the analysis. This left the sample composed of 123 LGAs in New South Wales with fewer than 50,000 residents.

It is important to note that the selection of rural LGAs in New South Wales is not a random sample and therefore the results of these analyses can only be interpreted as being characteristic of New South Wales. Statistically significant differences identified in the analyses are therefore in fact, real differences within the data for the New South Wales population and therefore cannot be generalised to the whole of rural Australia.

4.3.3 Definitions of the Measures Used

All the data measures were calculated for each LGA in rural New South Wales.

4.3.3.1 Crime Rates

For the purpose of the analysis, five main crime types were of interest, assault, break and enter, drug offences, motor vehicle theft and malicious damage. Break and enters for both dwellings and non-dwellings were combined to provide one measure for analysis. Drug offences were also a total of six categories of drug crimes in the data. All data were expressed as rates per 100,000 population.

Rather than one summary measure, these five measures are analysed in order to examine whether structural variations across different types of crime are occurring. These allow measurement of the diverse and complex nature of rural crime. Since crimes against persons such as assault, receive disproportionate attention while property crimes account for most criminal acts, it is important to distinguish the two. Break and enter and motor vehicle theft are measured because they reflect different patterns of property crime. Drugs are measured because drug use is ubiquitous and receives considerable media attention as a motivating factor for other crimes (Cronk and Sarvela, 1997). Their use also has been described as a victimless life style (Inciardi, 1992). The use of drugs in itself, implies

social disorganisation and poor cohesion. Malicious damage is measured because it is neither theft nor personal assault, and occurs frequently and without economic incentives.

Restricting analyses to rural crimes serves several purposes. Most importantly, the neglected subject of rural crime merits analysis in its own right. Examination of rural crime may help to understand crime in the rest of society. Understanding crime in one context contributes to understanding crime in others. Rural areas in modern nations are extremely varied. They have structures that range from being closely similar to those in cities to being extremely different. In effect, comparisons of rural areas permit a natural quasi-experiment for discovering some of the causal factors for any social settings, including urban areas (Cook and Campbell, 1979).

4.3.3.2 Social Variables

Explanatory social variables were extracted from the 1996 Census data to equate measures of social disorganisation. To reduce the problem of high correlation between census variables, all variables were converted to proportions of the total population. For example, rather than using raw data to describe the population of people born overseas, they are measured as their proportion of the total population. The measure of social disorganisation were defined as follows:

- **Residential instability:**
  - *Stable families:*
    The proportion of people living in a home.
  - *Mobile families:*
    The proportion of people living in a caravan
  - *Community growth:*
    The average population growth of communities between the 1991 census and the 1996 census.
  - *Population size:*
    Total population.
  - *High in-migration:*
    The proportion of persons in the population who moved from a different SLA since the 1991 census.
  - *Residential stability:*
    The proportion of persons in the population who are residing at the same address as the previous five years

- **Family instability:**
  The measures of family stability obtained from the 1996 census included:
  - *Marriage:*
    The proportion of married persons.
  - *Separation:*
    The proportion of separated persons.
  - *Divorce:*
    The proportion of divorced persons
  - *Sole parent families:*
    The proportion of single parent families with dependent offspring.
  - *Couple families:*
    The number of couple families with dependent offspring.

- **Ethnic diversity:**
  - The proportion of Aboriginal and Torres Strait Islanders.
  - The proportion of overseas-born persons.

- **Economic disadvantage:**
  - *Income:*
    Median individual income and median household income.
  - *Poverty:*
    The proportion of persons with an annual income of less that $25,000.
  - *Employment:*
    The proportion of unemployed persons.
    Aboriginal labour force participation as a proportion of the total labour force.
    *The proportion of people working in agriculture.
  - *Education:*
    The proportion of persons with tertiary qualifications.
    The proportion of persons with skilled vocations.
    The proportion of persons with basic qualifications.
    The proportion of persons who left school under the age of 14, 15 and 16 years.

The above variables have been reported to be reliable indicators of social organisation (Bursick, 1986), as well as predisposing factors to crime (Devery, 1991).

Demographic characteristics included were:

- **Age:**
  Median age.

- *__Gender:__
  Sex ratio of persons across age groups 10 to 19, 20 to 29, 30 to 39, 40 to 49, and 50 and over.

(NOTE: Those variables indicated by a * were used as descriptors of communities only and were not included in the main statistical analyses.)

4.3.4 Data Screening

Prior to analysis, it was necessary to examine and prepare both the crime data and the census data to meet the requirements of multivariate analyses. All variables were screened for normality, the presence of outliers, multicolinearity and linearity. All of the variables produced skewed data, which is a consequence of the highly varied size and structure of rural communities in Australia. They range from large urban towns to small isolated communities. They also range from being culturally and socially homogenous to displaying a largely ethnic population. One case, the Unincorporated Far West was found to be a consistent outlier. This area is sparsely populated thus creating extremes among most of the variables. As this area was considered unlikely to contribute greatly to the understanding of crime in rural areas, this case was deleted from the analysis. To correct for skewness in the data, logarithmic transformations were successfully performed with the five dependent variables and six of the independent variables. The remainder proved unsuitable for transformation and therefore extremes among the data were re-coded to bring the variables closer to normality (Tabachnick and Fidell, 1989). This left an analysable sample of 122 rural LGAs. No cases had missing data.

A standard regression was conducted with the identification number for the LGAs as a dummy dependent variable and the census variables as predictors. Inspection of the intercorrelations between variables and calculations of variance inflation factors revealed no evidence of multicolinearity within the data. Inspection of the standardised residuals histogram and the standardised scatterplot of predicted scores against residual scores revealed the presence of multivariate outliers and slight deviation in linearity between variables. However, the majority of the variables were fairly evenly centred around zero. Three computations, Regressions 1, 2 and 5, required removing one extreme multivariate outlier leaving a sample size of 121 for these analyses. Removal of further multivariate outliers only produced more outliers. Therefore, it was decided to retain all remaining outliers as Tabachnick and Fidell (1989) point out that with a large sample

size, the standard error is reduced accordingly. Nevertheless, results must be interpreted with caution.

4.3.5 Statistical Analyses

Data analysis was performed using the Statistical Package for the Social Sciences (SPSSx) on the University of New England's mainframe computer. Four multivariate statistical approaches were used to examine the quantitative empirical relationships between the structural variables being examined. First, regression analyses tested the relationship between measures of social structures and crime. Regression is a dependence technique used to analyse the relationship between a single dependent variable and several independent variables (Hair, Anderson, Tatham and Black, 1995). Each regression model expressed the particular crime type (the dependent variable) as a linear function of one or more of the social variables (predictors).

Second, cluster analysis examined whether distinct categories of communities could be distinguished according to structural characteristics. Cluster analysis can be used as both a deductive and an inductive statistical technique (Kaufman and Rousseeuw, 1990; Hair *et al.*, 1995). Given the diversity in the social structure and size of rural communities in New South Wales, we needed a means of condensing this diversity into a small number of community types which could then be used to analyse the relationship between diverse socio-demographic and community structural characteristics and crime.

Once a typology of rural communities was identified, it was possible to measure their respective levels and types of crime by submitting them to analyses of variance. Analyses of variance allows comparison of differences between groups across a set of dependent variables.

Discriminant analysis and analyses of variance were then employed to evaluate the strength of social disorganisation theory by examining the factors of residential instability, family instability and ethnic diversity across the clusters of rural communities. Discriminant analysis is a useful tool for determining which predictor variables contributes most to the separation of groups. The use of four distinct methods of analysis provides a sound basis for examining whether the theoretical orientation is sound (Denzin, 1978).

4.4 SUMMARY

In this chapter, the procedure for the analysis in this study was outlined. The sources of data were described, the types of measures used were defined and the statistical analyses employed to examine the data and the methodological issues pertinent to the analysis were outlined. The following chapters provide a description of the results of the analysis.

Chapter 5

PREDICTORS OF CRIME

5.1 INTRODUCTION

In this chapter, the results of the first stage of the analysis of the relationship between a range of social variables and the incidence of crime across rural communities in New South Wales are presented. The initial task of this analysis was to identify those social factors which are strongly associated with higher rates of crime. Five individual standard multiple regressions were performed using five types of crime as the dependent variables and a range of social variables drawn from the 1996 Census as the independent variables. Those factors which were significantly predictive of higher crime rates are identified and the implications of these findings are discussed.

5.2 REGRESSION ANALYSES

Five individual standard multiple regressions were performed to identify those social variables which were predictive of higher rates of crime. All variables were transformed to z-scores to equate the variables in the measurement scales. The dependent variables for the regressions were the rate of assault, break and enter, drug offences, motor vehicle theft and malicious damage. The independent variables for all five regressions included the Census data of: average growth; educational qualifications, namely tertiary qualifications, vocational skills and basic qualifications and age at leaving school; home ownership and caravan dwellers; migration, that is persons with a different address in another SLA[2] since the 1991 Census; unemployment; median individual and household income; median age; family structure, namely married, separated and divorced persons and proportion of sole parent families; proportion of Indigenous people in the community and the local labour force; and proportion of those

[2] Statistical Local Areas closely resemble Local Government Areas (ABS, 1996).

born overseas. In all, 19 independent variables were used in the regression analyses. The proportions of variance explained ranged from approximately 20 per cent to 45 per cent and is similar to the analyses performed by Rephann (1999) on 1995 rural US data.

5.2.1 Assault

In Regression 1, we sought to identify those variables which were associated with higher rates of assault crimes. R for regression was significantly different from zero (R2=0.537, F(19,101=6.15, p<0.0001). Adjusted squared multiple R was 0.449. Therefore 45 per cent of the variability in the rate of assault across rural New South Wales can be predicted by these social variables. Three of the social variables, proportion of Indigenous people in the population, proportion of persons living in their own home and the average growth of communities, contributed significantly to the prediction of assault scores. Together they uniquely contributed 9 per cent of the variability in the rate of assault. Table 5.1 displays those significant factors, the semi-partial correlations (SR2) and the significant t statistic. These results indicate that higher rates of assault occurred in communities with proportionately more Indigenous people, fewer people living in their own homes, and lower average growth.

Table 5.1:
Significant predictors in standard multiple regression of census variables on rate of assault.

Census Variables	SR2	t-statistic	
Proportion of Indigenous population	0.048	3.251, p<0.002	R2=0.537
Proportion of persons living in their own home	0.019	-2.084,p<0.04	Adjusted R2=0.449
Average growth of communities	0.019	-2.086,p<0.04	R=0.732, p<0.0001

5.2.2 Break and Enter

Regression 2 investigated the relationship between the social variables and higher rates of break and entering. The R for the regression was significantly different from zero (R2=0.459, F(19,101)=4.51, p<0.0001). Adjusted squared multiple R was 0.358. Table 5.2 indicates that three variables contributed significantly to the prediction of break and enter scores, explaining about 13 per cent of the variance. The proportion of sole parents was of borderline significance but is also reported.

These findings suggest that communities with higher proportions of Indigenous people, more in-migrants, and fewer people living in their own homes are associated with higher rates of break and enter offences.

Table 5.2:
Significant predictors in standard multiple regression of census variables on rate of break and enter.

Census Variables	SR2	t-statistic	
Proportion of Indigenous population	0.034	2.507, p=0.01	R2=0.459
Proportion of persons living in their own home	0.053	-3.153, p=0.002	Adjusted R2=0.358
Persons with different address (different SLA) since the 1991 census	0.022	2.006, p=0.04	R=.677, p<0.0001
*Proportion of sole parents	0.017	1.814, p=0.07	

The results are similar to those for assault crimes. Low levels of home ownership and more people moving into an area combined with low or negative growth in a community may be indicative of less community affiliation and higher rates of both in and out migration. They suggest that proportionately low commitment and investment in the community are associated with Assault and breaking and entering. Rural and remote communities with a high proportion of Indigenous people such as Moree or Walgett are also centres for large agricultural industries, such as the cotton industry which require large numbers of seasonal labourers. The higher crime rate in such centres can be viewed as a consequence of the higher degree of social disorganisation and instability. More sole parents imply more family disruption. These factors may be seen as leading to higher rates of break and enter and assault crimes.

5.2.3 Motor Vehicle Theft

Although 29 per cent of the variability in the rate of motor vehicle theft across rural New South Wales was explained by the independent variables, no specific variable contributed significantly to the prediction of motor vehicle theft scores. The R for regression was significantly different from zero (R2=0.397, F(19,102)=3.54, p<0.0001). The relationship between these variables and motor vehicle theft will be explored further in the cluster analysis.

5.2.4 Malicious Damage Offences

The fourth regression aimed to identify those variables which were associated with higher rates of malicious damage offences. The adjusted squared multiple R was 0.299, indicating that 30 per cent of the variability across rural New South Wales can be predicted by the various independent variables. The R for regression was significantly different from zero (R2=0.41, F(19,101)=3.695, p=0.0001). Two of these variables contributed significantly to the prediction of malicious damage scores. Another, the proportion of persons married, was of borderline significance. These

variables uniquely contributed 8 per cent of the variability in the rate of malicious damage. Table 5.3 displays the results.

Table 5.3:
Significant predictors in standard multiple regression of census variables on rate of malicious damage offences.

Census Variables	SR2	t-statistic	
Persons with different address (different SLA) since the 1991 census	0.031	2.290 p<0.02	R2=0.41
Average Growth	0.031	-2.290, p<0.02	Adjusted R2=0.299
*Proportion of persons married	0.02	-1.838, p=0.06	R=0.640, p<0.0001

These findings indicate that a high proportion of people moving into a community, yet with an overall lower rate of growth, was associated with higher rates of malicious damage offences. This suggests that many people are moving in and few are staying. A high transient population will have less 'sense of place' or emotional attachment to their locale. Vandalism therefore, may be symptomatic of high levels of social disruption caused by high residential mobility combined with high levels of family breakdown, which can lead to feelings of alienation among some residents.

5.2.5 Drug Offences

The final regression investigated those variables which were predictive of higher rates of drug offences. Twenty per cent of the variance (adjusted R2) in the rate of drug offences across rural new South Wales was predicted. The R for regression was significantly different from zero (R2=0.322, F(19,102)=2.55, p=0.001). Drug violations have the lowest proportion of explained variance among the five crimes examined in this analysis.

Five variables contributed significantly to the prediction of drug scores, explaining 17 per cent of the variability in the rate of drug offences. Median individual income was significant at the 0.10 level and is also included. Table 5.4 displays those significant factors, the semi-partial correlations (SR2) and the significant t statistic.

Higher drug offences were associated with a higher average growth in a community, an older population, and a lower proportion of married people in the population, fewer people with skilled vocations and a higher proportion of persons born overseas. In contrast to the previous crimes, drug offences were associated with rapidly growing communities. This implies that the larger regional centres and coastal communities where there are more retirees (and fewer children), more people moving into the areas and higher populations of overseas born, were associated with more drug offences.

Table 5.4:
Significant predictors in standard multiple regression of census variables on rate of drug offences.

Census Variables	SR2	t-statistic	
Proportion of population born overseas	0.029	2.083, p<0.04	
Proportion of persons married	0.033	-2.238, p<0.03	R2=0.322
Median age	0.027	2.003, p<0.05	Adjusted R2=0.196
Proportion of persons with skilled vocations	0.039	-2.418, p<0.02	R=0.570, p<0.01
Average growth	0.026	1.977, p<0.05	
*Median individual income	0.021	1.766,p=0.08*	

5.3 DISCUSSION

The regression analyses have identified several prediction factors which consistently explain variations in crime rates across rural LGAs. LGAs with high in- and out-migration, indicated by either the growth rate of a community or more people moving into an area, experience higher crime rates. Areas that have a low level of persons living in their own home, suggesting less community affiliation and high mobility, are associated with more crime. Family instability, indicated by a low proportion of married people and more sole parents, was also associated with higher crime rates. In terms of social disorganisation theory, this suggests that the stability that a marriage partnership provides and the presence of two parents in a family, are important in providing stability within a home and the wider community.

A high proportion of Indigenous people in a population was associated with higher rates of assault and break and enter crimes. This suggests that communities with a diverse ethnic base experience more social disorganisation and thus more crime. However, the strong effect of high mobility and family breakdown qualifies this finding. The dynamics among all these factors contribute to high rates of crime. It is of interest to note that no economic measures were significantly associated with any of these crimes.

5.4 SUMMARY

In this chapter, the relationship between a range of social variables and the incidence of crime across rural communities in New South Wales was investigated. Factors predictive of crime varied according to the type of crime. These findings suggest that social disorganisation theory is

appropriate for explaining crime in rural communities through structural analyses. Residential instability, family instability and ethnic heterogeneity were clearly associated with higher crime rates in rural LGAs. The dynamics between these factors will be further explored in subsequent chapters.

Chapter 6

A TYPOLOGY OF RURAL COMMUNITIES AND CRIME

6.1 INTRODUCTION

The extraordinary diversity amongst rural communities in Australia which is expressed in the high variability in the data, encouraged us to explore the existence of a typology of rural communities. Our objective was to seek a simple but useful summary of the diverse nature of rural communities which could then be used as a basis for further analysis of crime data.

In this chapter, cluster analysis was employed to group LGAs according to their scores on a range of social variables drawn from the 1996 Census. The characteristics of each group are then described. This typology of rural communities is then examined across five types of crime.

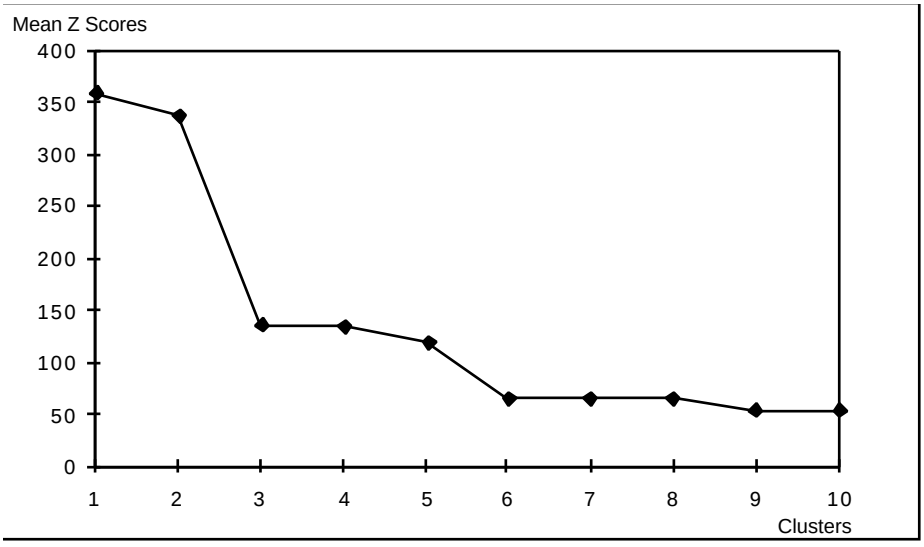
6.2 CLUSTER ANALYSIS

Cluster analysis can be used as both a deductive and an inductive statistical technique (Kaufman and Rousseeuw, 1990; Hair *et al.,* 1995). It may be used deductively to test hypothesised relationships between independent and dependent variables. It also may be used inductively to identify relationships between variables. The inductive function is particularly valuable because findings reflect relationships that emerge from the data under the assumptions of the statistic with minimal interference by the investigator. As such, the analyses may be regarded as independent tests that corroborate or challenge previous findings.

Our aim in this second part of the analysis was to summarise the diversity of rural communities according to their differences across several census variables to provide a basis for further analysis of crime statistics. Since levels of social cohesion were posited to be associated with crime, emerging clusters provide an empirical test of those hypotheses.

A hierarchal cluster analysis was performed to group LGAs based upon the similarities and differences they display in the various social aspects measured by 22 variables drawn from the 1996 Census data. The use of standardised scores permitted comparisons of diverse distributions within the analysis. Ward's minimum variance cluster analysis was employed with dissimilarities between LGAs defined by squared Euclidean distance (Aldenderfer and Blashfield, 1984). Inspection of the dendogram and scree plot resulting from the clustering procedure suggested the presence of at least three, possibly six clusters (see figure 6.1). The scree plot is formed by plotting the reduction in the residual sum of squares at each partitioning of the data. The residual sum of squares is a measure of the degree of dissimilarity between the LGAs in each cluster, summed across all the clusters (Aldenderfer and Blashfield, 1984, 56). A substantial decrease in the residual sum of squares at a partition suggests that, before the partition, two relatively dissimilar clusters had been combined into one, larger cluster. The scree plot reveals substantial reductions in the residual sum of squares at the formation of the third and the sixth clusters. Trivial changes occurred in the sum of squares at subsequent partitions. After examining the characteristics of the clusters we chose to retain the solution of six clusters for further analysis.

Figure 6.1:
Partitioning value of clusters.



6.3 THE CLUSTERS

The clustering procedure identified six groups of communities with similar geographical locations. The clustering inductively substantiates that social structures exist across geographic areas. These clusters also differentiate the distribution of crime. Labels were applied to each cluster according to their most salient features. Figure 6.2 displays a map of the clusters in New South Wales. Table 6.1 displays the means and standard deviations for the six clusters for the 22 census variables used in the clustering procedure. A list of the various communities assigned to each cluster is presented in Appendix 2.

The following description of the clusters provides a profile of the six types of communities drawing on those variables used in the cluster analysis as well as some additional census variables which were analysed post hoc according to the cluster solution.

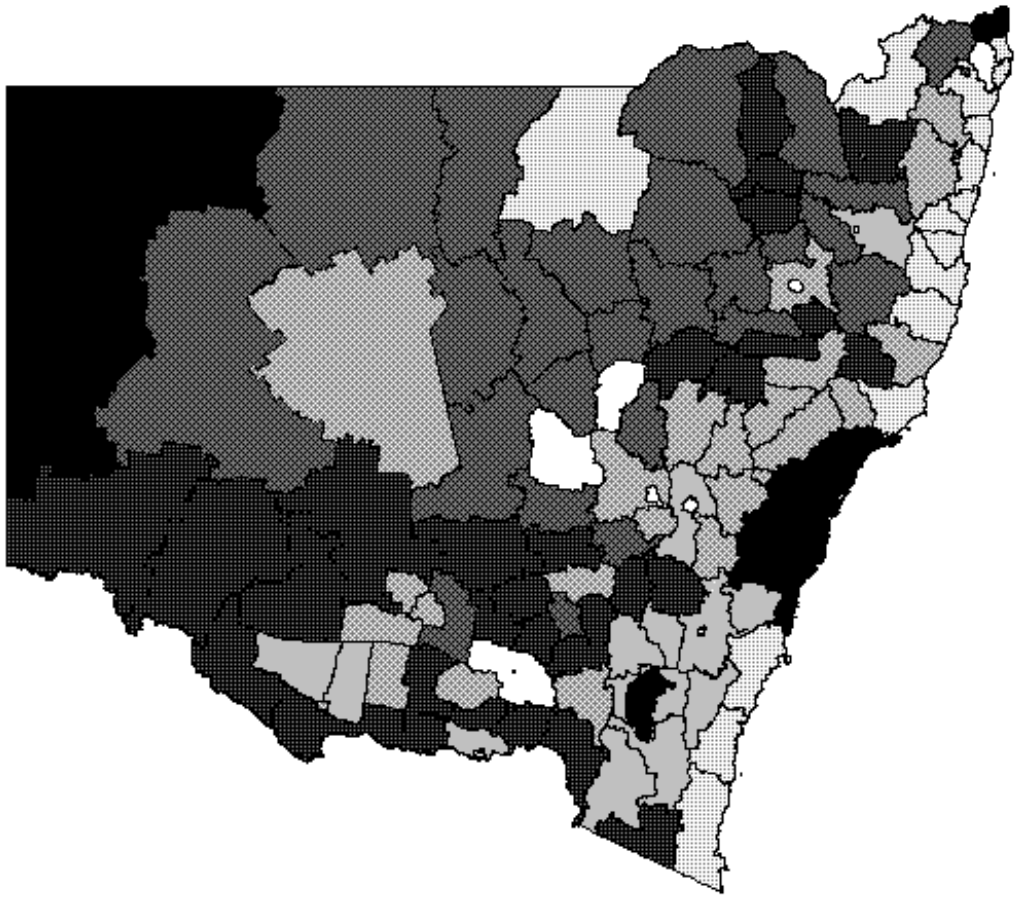
6.3.1 Cluster One: Large Urban Centres (N=10, 8% of the sample)

These LGAs were regional centres with an average population of 33,251. There were more females than males, an overall younger age group, and a higher rate of people moving into the area but only a slightly above average growth rate. These locations had a higher level of education among the residents, less unemployment, and higher rates of income. There were average numbers of people living in their own home, but fewer couple families and more sole parents. There were fewer people married and a higher rate of separation and divorce. There were higher proportions of Indigenous people and of people born overseas.

6.3.2 Cluster Two: Coastal Communities (N=17, 13% of the sample)

Most of the LGAs in this cluster were located along the coast. Their mean population size was 27,925, slightly less than cluster one. There were slightly more females than males, and an above-average median age reflecting the large numbers of retirees in coastal regions. Average growth for these communities was the highest of all clusters and there were greater numbers of in-migrants. There were higher proportions of skilled workers, average numbers of persons with tertiary and basic qualifications, and higher proportions of people who left school under 14 or 15 years. Unemployment was the highest of all the clusters with a corresponding lower average income. There were high numbers of people resident in caravans and fewer people living in their own homes. The proportions of separated and divorced people were higher. Consequently, the proportions of sole parents were higher, and of married couples, lower. There were average proportions of Indigenous people but higher proportions of people born overseas.

Figure 6.2:
Map of New South Wales displaying the clusters of social variables.



Metropolitan areas and Unincorporated Far West*

Cluster 1: Urban Centres

Cluster 2: Coastal Communities

Cluster 3: Satellite Communities

Cluster 4: Medium Stable Communities

Cluster 5: Medium Declining Communities

Cluster 6: Small Farming Communities

*Areas excluded from the analysis

Table 6.1:
Means and standard deviations for census variables* for the six clusters.

Census Variables used in the Cluster Solution	Cluster 1 Large Urban Centres		Cluster 2 Coastal Communities		Cluster 3 Satellite Communities		Cluster 4 Medium Stable Communities		Cluster 5 Medium Declining Communities		Cluster 6 Small Farming Communities	
	Mean	Standard Dev	Mean	Standard Dev	Mean	Standard Dev	Mean	Standard Dev	Mean	Standard Dev	Mean	Standard Dev
Population	33251.00	12076.63	27925.38	20637.64	8484.54	9669.33	11045.9	9009.49	8115.48	941.97	3982.45	818.65
Tertiary qualifications	13.0	1.0	11.0	2.0	14.0	.01	11.0	1.0	10.0	1.0	9.0	1.0
Vocational skills	11.0	1.0	12.0	1.0	12.0	2.0	12.0	1.0	9.0	1.0	9.0	1.0
Basic qualifications	3.0	1.0	3.0	.01	4.0	.01	3.0	1.0	3.0	.01	3.0	1.0
Left school aged 14	11.0	2.0	16.0	2.0	10.0	2.0	13.0	2.0	14.0	2.0	15.0	2.0
Left school aged 15	22.0	2.0	27.0	3.0	21.0	3.0	26.0	2.0	26.0	2.0	25.0	3.0
Left school aged 16	22.0	2.0	22.0	1.0	22.0	2.0	25.0	1.0	23.0	1.0	22.0	2.0
Unemployment rate	9.75	2.03	16.54	2.76	6.60	1.49	8.91	3.41	10.98	2.17	8.72	1.97
Median age	31.20	2.20	38.63	2.83	34.85	2.54	34.43	2.33	34.93	2.48	37.03	2.37
Median income	260.00	31.62	223.75	35.00	296.15	77.63	273.04	48.94	243.79	31.89	234.19	29.75
Proportion sole parents	12.0	1.0	11.0	2.0	7.0	2.0	9.0	2.0	11.0	2.0	8.0	1.0
Proportion people in caravans	1.0	1.0	4.0	1.0	1.0	1.0	2.0	1.0	2.0	1.0	1.0	1.0
Proportion people in ownhome	75.0	4.0	68.0	4.0	76.0	7.0	78.0	4.0	77.0	3.0	76.0	4.0
Proportion people married	52.0	2.0	57.0	4.0	60.0	4.0	58.0	4.0	56.0	3.0	60.0	3.0
Proportion people separated	4.0	0.0	4.0	1.0	3.0	1.0	3.0	1.0	3.0	.01	3.0	1.0
Proportion people divorced	6.0	1.0	7.0	.01	5.0	1.0	6.0	1.0	5.0	1.0	5.0	1.0
Proportion indigenous people	4.0	1.0	3.0	1.0	1.0	1.0	2.0	1.0	5.0	1.0	2.0	1.0
Proportion people born overseas	8.0	2.0	9.0	2.0	9.0	2.0	7.0	2.0	4.0	1.0	5.0	1.0
Median household income	600.00	0.01	400.00	.01	600.00	115.47	565.22	115.24	455.17	90.97	425.81	68.16
Proportion people from different area	21.0	4.0	0.22	3.0	24.0	6.0	19.0	4.0	16.0	2.0	18.0	3.0
Average growth of community	0.70	0.70	1.98	1.12	0.73	1.17	0.52	0.73	-0.96	0.83	-0.53	0.85

**Census variables are the percentages of the relevant populations.*

6.3.3 Cluster Three: Satellite Communities (N=13, 11% of the sample)

This cluster consisted of communities that lie close to a major metropolitan area (with populations less than 50,000). The average population is 8484. These communities had above average growth rates and the highest proportion of in-migrants. The median age was below average with more young women but more men in the 30 years and above age groups. The residents in this group had the highest level of tertiary qualifications and above average vocational skills and basic skills. Fewer people left school under the ages of 14, 15 or 16 in these locales. Unemployment in these communities was the lowest across all clusters. Consequently this cluster had the highest medium individual and household incomes. Family stability was evident with fewer sole parents, more couple families, more people married, an average proportion of people who were separated and fewer who are divorced. More of the residents live in their own homes and fewer in caravans. There were proportionately fewer Indigenous people but more people born overseas.

6.3.4 Cluster Four: Medium Stable Communities (N=23, 19% of the sample)

These communities had an average size population of 11,046. They had above average growth but only average proportions of people moving into the area. These communities also had higher proportions of males across all ages. There were average proportions of tertiary qualified and basic skilled persons with above average numbers of people with skilled vocations. These communities contained fewer people who left school under the age of 14 but more who left school under age 15 or 16. Unemployment was quite low and the median individual and household incomes were high in comparison to other clusters. The median age was also quite low. There were more couple families and average numbers of sole parents, and persons who were married, divorced, or separated. Slightly more of the residents live in their own home and average numbers of people live in caravans. These communities had slightly below average proportions of Indigenous people and slightly above average proportions of people born overseas. This cluster had the highest number of persons employed in the mining industry. The effects of stable, well-paid employment undoubtedly contributed to many of the characteristics of these communities.

6.3.5 Cluster Five: Medium Declining Communities (N=29, 24% of the sample)

These LGAs had a population size averaging 8115, and had the highest negative growth rate. Few people were moving into these areas. These communities had a higher proportion of males in the 40 to 49 age range but slightly more females in the other age groups. The median age was slightly below average. Education levels were also lower with average proportions

of people who left school under 14, 15 or 16 years. The unemployment rate was slightly above average while the median individual and household incomes are low. The proportion of sole parents was above average; there were fewer couple families and married persons but average rates of separation and less divorce. The numbers of people living in caravans was average and there were slightly more people living in their own homes. These communities had the highest proportion of Indigenous people and the lowest proportion of persons born overseas.

6.3.6 Cluster Six: Small Farming Communities (N=31, 25% of the sample)

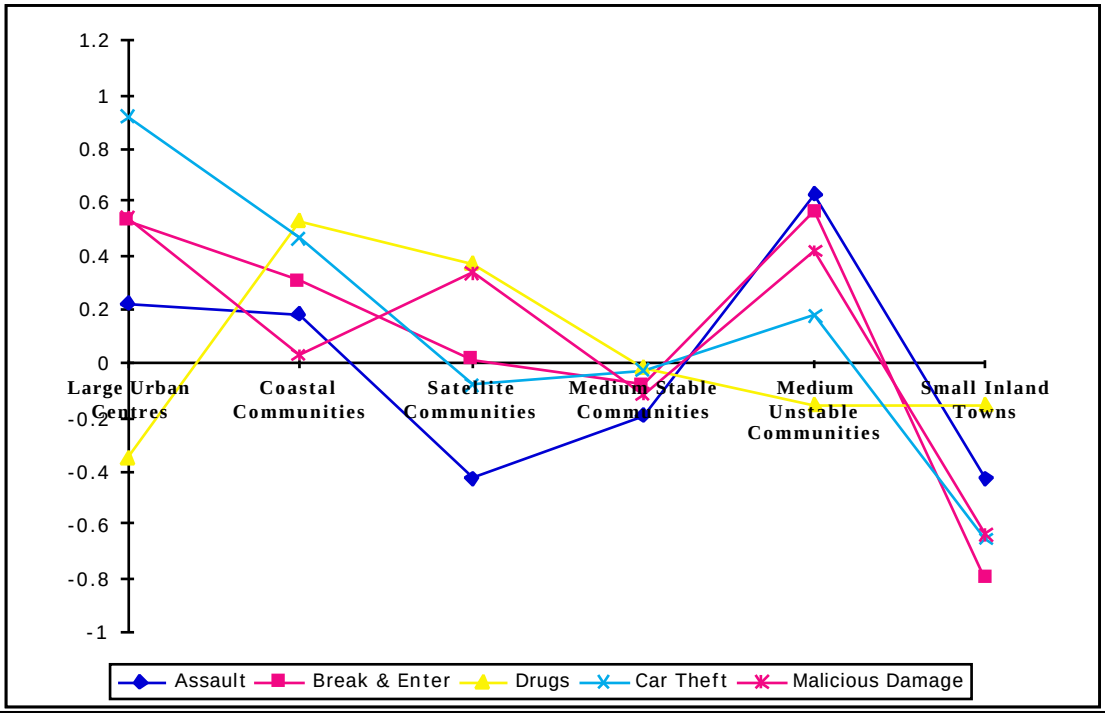
This group had an average population of 3982 and had the highest rate of agricultural industry. Typical of small agricultural communities, there were higher proportions of males across all age groups, and an above average median age. There was a negative growth rate with fewer in-migrants. There were fewer people with tertiary or vocational skills but average numbers of people with basic skills. The proportions of those leaving school under 14, 15 or 16 years was very high. Correspondingly, the income levels were the lowest across all clusters. Nevertheless, unemployment was below average. There were more couple families and married people, and more people living in their own homes and, correspondingly, less family breakdown. These communities had slightly below average proportions of Indigenous people and people born overseas.

6.4 EXAMINATION OF THE CLUSTERS AND CRIME

A posthoc one-way multivariate analysis of variance was conducted to internally validate the six cluster solution and compare them across the five types of crime. A significant multivariate difference was found amongst the clusters (Wilks Λ=0.48163, approx F(25,418)=3.63, p<0.0001). The multivariate effect size was 0.136. Therefore 14% of the variance between the clusters can be explained by the difference in crime types. Posthoc univariate F-tests revealed significant differences between the clusters for assault (F(5,116)=4.99, p<0.0001, n2=0.177), break and enter (F(5,116)=8.96, p<0.0001, n2=0.279), motor vehicle theft (F(5,116)=6.386, p<0.0001, 0.216) and malicious damage (F(5,116)=5.32, p<0.0001, n2=0.187) but not for drug offences. The latter finding suggests that drug offences are fairly universally distributed across rural communities in New South Wales. Figure 6.3 graphically displays the mean standardised score profiles for each of the six clusters. Clusters are arranged along an urbanity continuum by population size with one exception. The satellite cluster is in the third position because its proximity to cities makes it arguably more urbane.

Posthoc Tukey's HSD on the crime variables were significant for assault, break and enter, motor vehicle theft, and malicious damage but not for drug offences.

Figure 6.3:
Mean standardised profile scores for the five crime types.



For assault, medium declining communities were found to have significantly higher rates of assault than small farming communities, medium stable communities and satellite communities. For break and enter, large urban centres, coastal communities, medium stable communities and medium declining communities experienced significantly more offences than small farming communities.

For motor vehicle theft, large urban centres, coastal communities and medium declining communities exhibited more crime than small farming communities. Although not evident in the regression analysis above, the trend in these results suggests that larger communities, which experience more instability due to family breakdown and in and out migration, experience more motor vehicle theft. As noted in chapter three, motor vehicle theft was much more prevalent in more urban regions than in rural areas, and was particularly prevalent in the Sydney SD. Urban centres present more opportunities to offend and more vehicles to steal.

Large urban centres, medium declining communities and satellite communities experienced significantly more malicious damage than small farming communities. The largest cluster had significantly more motor vehicle theft, break and enter and malicious damage than at least one cluster of smaller communities. The second largest cluster followed close behind. Satellite communities did not fit clearly along the continuum by size. They were anomalies because satellite LGAs resemble prosperous urban suburbs despite their rural location. They had wide variation in

crimes. Their assaults and vehicle thefts were below average while drugs and malicious damage were above average. They were unlike other clusters with high variation in crime, one and five, that had very high overall crime, but less drug crime.

The results of the clustering procedure indicate that underlying social structures were highly associated with crime. Two especially important variations in crime patterns among the clusters were demonstrated. First, the larger the LGA, generally, the higher the crime. This finding corresponds to previous research that found urban levels of crime to exceed rural levels (Sampson, 1986; Rephann, in press). It supports classical notions (Wirth, 1938) that the larger, denser, and more heterogeneous populations had more crime because they had less social integration and cohesion. The measures that emerged to create the clusters further validate that notion. Higher crime clusters were more heterogeneous and had greater extremes, such as more early school-dropouts and higher educational skills. Despite being relatively wealthier, larger areas generally had higher levels of migration, and more residents who were ethnic minorities, divorced or separated, single parents.

Second, medium declining communities (cluster 5) had crime patterns that were completely out of synchrony with the urban-rural continuum. Despite the small size and relative remoteness of communities in cluster five, their crime rates equalled or exceeded those of the largest urban centres. This apparent irregularity occurred because cluster five communities were especially disorganised in comparison to other clusters. They are rural counterparts of the extreme concentration of disadvantage that Wilson (1987) and others (Krivo and Peterson, 1996) have identified as the source of crime in truly disadvantaged urban areas. They were consistently disadvantaged in their levels of education, employment, and income. They had proportionately more of a severely disadvantaged Indigenous population, of sole parents and of divorced and separated people. Like the other small community clusters, more people owned homes. Unlike the others, however, caravans also were more common. The findings support the hypothesis that lower social cohesion was associated with more crime. Medium stable communities (cluster 4) and small farming communities (cluster 6) clearly comprise the safest communities. Conversely, medium declining communities (cluster 5), urban centres (cluster 1), and coastal communities (cluster 2) sequentially experienced greater levels of crime. These findings strongly support a social disorganisation orientation.

6.5 DISCUSSION

The foregoing analyses clearly identify crucial social factors that are associated with crime, and the locations in which those social factors are present. Association, of course, does not imply causation. The high variance in the data that is characteristic of the heterogeneity of rural communities means that caution should be exercised in generalising from these results to other populations. The most important general finding is that crime is related to social structures that vary across identifiable types of geographic locations. To speak of rural crime is insufficient. Rural crime is a complex phenomenon that merits complex analyses and explanations. The areas with highest crime vary, ironically, from the largest to nearly the smallest in the study. This finding indicates the enormous diversity of the relationship between social and geographic factors and crime. It dispels the notion that small communities have less crime than larger urban centres. The further finding that medium stable communities and small farming communities have the lowest crime rates indicates that size of town is important, because social factors creating cohesion and integration are present in those locations.

Measures of social disorganisation accounted for much more crime than did economic measures. Rephann (in press) in a study of juvenile delinquency in 264 rural communities across four states of America also found no relationship between economic status and unemployment and levels of crime. However, economic measures may be a dark figure responsible for some community characteristics that in turn predispose crime. For example, the high unemployment of Australia may lead some people to be migratory. However, the places where they are most likely to move may (large urban centres and coastal communities) or may not (satellite communities) have higher crime. Poor economic conditions exist in small farming communities, which have the lowest crime. However, coastal communities and medium declining communities suffer from the 'double whammy' of high social disorganisation and high economic disadvantage, and their high levels of crime are the consequence.

A notable finding is that rates of assault in communities in cluster five are significantly higher than in the other clusters composed of small communities, that is, clusters three, four and six. This means that rural places, *per se*, do not have high assault. Rather, small town assaults are concentrated in the small number of highly disorganised communities. The findings further indicate that the five measures of crime are operating somewhat independently of each other. This is important because the types of crimes are more than just measures of particular violations. Each crime may be a marker of causal factors that led to their commission. While the overall crime rates for some clusters are similar, the frequencies with which particular crimes are committed are very different. For example, the overall crimes in large urban centres and in medium declining communities are both high, but those averages mask the differences in frequencies of particular types of crime. Medium declining communities have

comparatively (and absolutely) high assault while large urban centres have comparatively high car theft.

6.6 SUMMARY

Our objective in this chapter was to seek a typology of rural communities which would provide a useful summary of the enormous diversity of rural areas. Local Government Areas were classified into six clusters according to their scores on a range of social variables drawn from the 1996 Census of Population and Housing. These six clusters appear to group according to similar geographical locations irrespective of the fact that no geographical indicators were included in the analysis. This would be a useful focus for further research across a range of social issues. Levels of crime were clearly differentiated across the clusters which suggests that crime is related to social structures that vary across diverse geographical locations.

There are clear trends indicated within the results that can guide further analysis. The finding that drug violations are ubiquitous and are interacting with other types of crimes in extremely different ways, is especially worthy of further pursuit. Quantitative analysis of crime rates can lead to a clearer understanding of social trends associated with crime. The high variability in the data indicates a need for conducting qualitative case studies of individual communities in order to gain a deeper understanding of the dynamics of crime and social factors within a community.

Social disorganisation proved to be a suitable orientation of organising and interpreting these analyses. Clusters with high residential instability, high family instability and ethnic diversity were associated with higher crime rates. These three aspects of social disorganisation will be explored in later chapters. Rural data appear to be a promising source of information for conducting systematic tests of competing theories.

Chapter 7

TRENDS ACROSS THE CLUSTERS

7.1 INTRODUCTION

In chapter five, emerging clusters clearly delineated between rural areas with diverse social characteristics. The clusters also display marked differences in rates of crime. In this chapter, trends in crime across the clusters for the years 1991 and 1995 through to 1998 are overviewed. Changes in the social characteristics of the clusters between the 1991 and 1996 census years are also compared. For these social characteristics, the focus is upon the predictive variables of social disorganisation, namely residential and family instability, ethnic diversity and economic disadvantage. The relationship between trends in crime rates and trends in the social variables is discussed.

7.2 TRENDS IN CRIME ACROSS THE CLUSTERS

Crime rates fluctuate over time (Matka, 1997). However, any analysis of trends across time begs the question as to how much variation can be considered normal and when does change become significant? In chapter three, we reviewed several factors which impact on the recording of official crime statistics that can lead to an underestimation of the actual level of crime in the community. These factors include the willingness of the public to report crimes to police, the activity and number of police in an area, fluctuations in the size of the population, and changes in community attitudes regarding some types of crimes. Since the recorded rate of some offences, such as drug offences, poorly reflect actual rates of crime, some trend analyses can be meaningless. Drug offences are rarely reported to

police and are also influenced by enforcement of the law (Matka, 1997). Therefore, any analysis of trends in crime statistics should be regarded critically. However, as Matka (1997) points out, crime data do not have to be complete to provide beneficial information about crime trends and patterns.

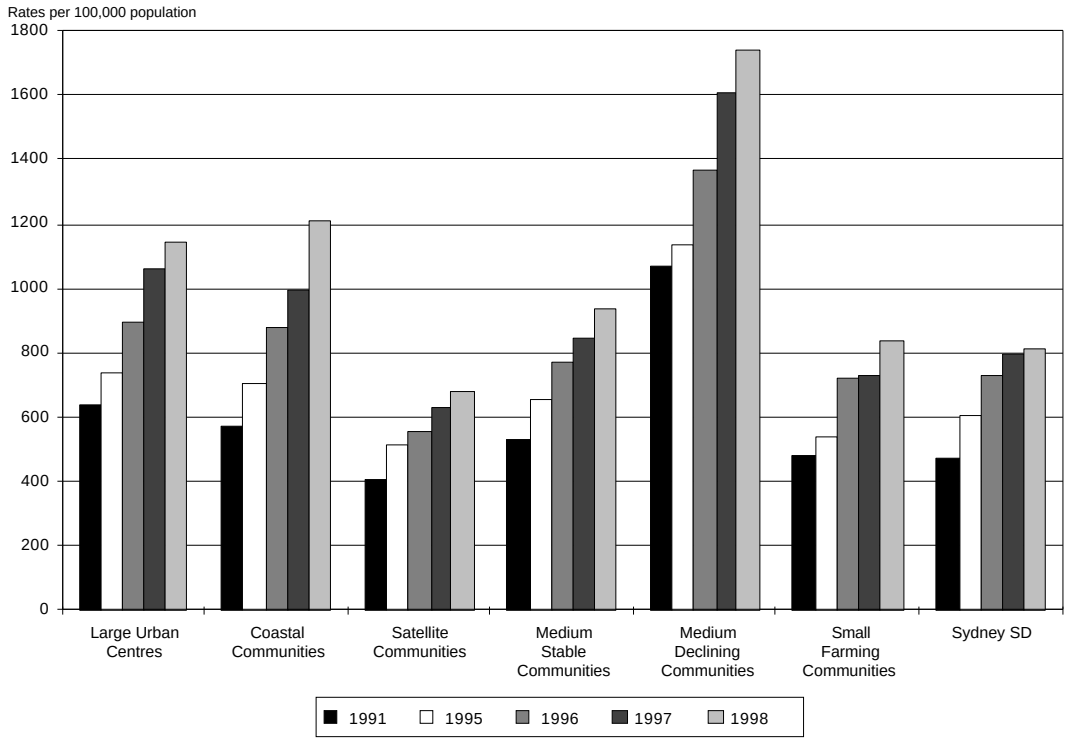
In this section, we provide an overview of trends in crime across the six clusters of rural communities for 1991 and 1995 through to 1998. Data for the Sydney SD are also included to allow a comparison of trends between the metropolitan areas and the clusters of rural communities. The figures presented here can be compared with those provided in chapter three which display an overview of official crime statistics by SSD across New South Wales. It is interesting to compare crime across communities which are grouped according to similarities in social conditions against geographically defined areas. It is intriguing that the clustering procedure based upon social factors, grouped communities with similar geographical locations. This finding substantiates the theory that social structures do exist and differentiate across geographic areas. The clusters do approximate the geographical locations of SSDs. In particular, the North Western and Far West SSDs approximate cluster five communities (medium declining communities), the Murray and Murrumbidgee SDs approximate cluster six (small inland communities), while Richmond Tweed, Mid North Coast, Hunter, Illawarra and South Eastern SDs comprise the coastal communities of cluster two. However, the principal difference between the clusters and the geographical divisions is that latter incorporates the clusters of major urban centres and satellite communities.

For the comparisons of trends in crime across the clusters, the numbers of crime incidents for each crime type were aggregated for each cluster. The crime rate for each cluster was computed per 100,000 population. The use of crime *rates* rather than the number of crime *incidents* allows comparison of crime across time and across diverse rural areas. It is important to note that prior to 1995, the counting units of crime data were recorded *offences* rather than incidents (BOCSAR, 1999). Where more than one offence was recorded from a single incident, each offence was counted separately. Therefore, although we have included comparisons between 1991 data and 1995 to 1998 data, the differences in collection methods must be taken into account. Taking these differences into consideration, the graphs do provide an indication of patterns and trends in crime across time.

7.2.1 Assault

Figure 7.1 displays the recorded number of assault offences for the period 1991 and 1995 to 1998. There has been a steady increase in assault offences across all the rural clusters over the time period. However, the assault rate remained relatively stable within the Sydney SD between 1997 and 1998.

Figure 7.1
Assault across the clusters, 1991, 1995 to 1998.



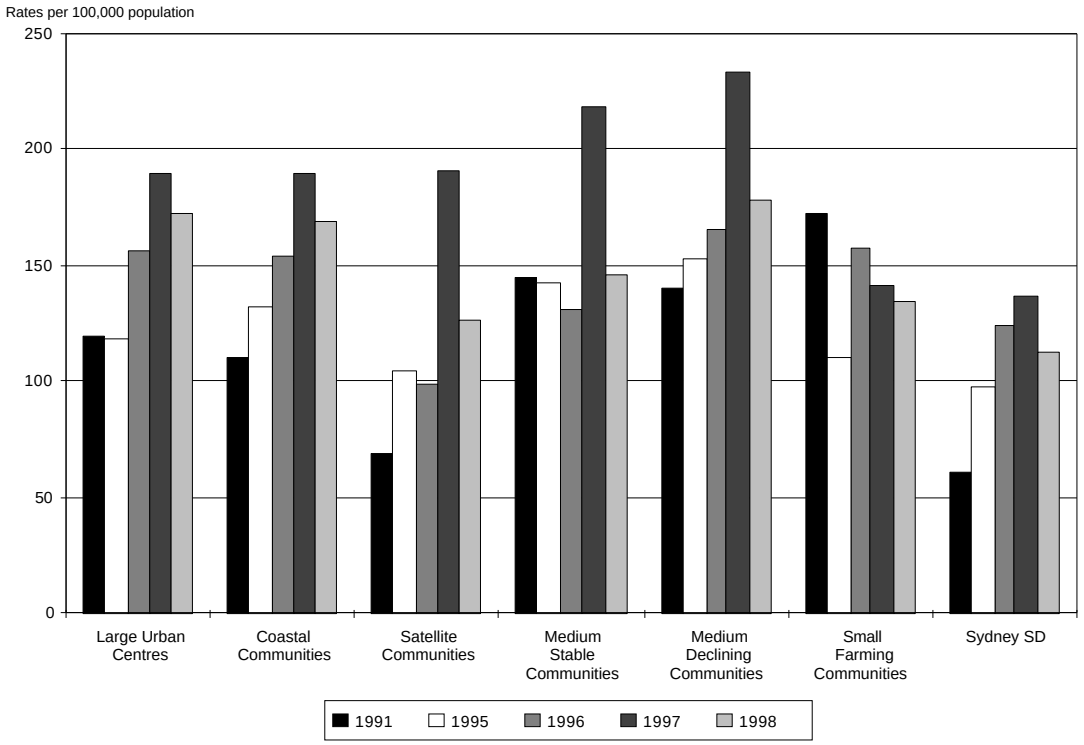
Consistently, the greatest number of offences have occurred in the medium declining communities. This cluster recorded rates more than twice that of the Sydney SD and which were double the rate for the whole of New South Wales (909.0 per 100,000 (BOCSAR, 1999)). Urban centres, coastal communities and medium stable communities also recorded rates higher than those of Sydney SD. The lowest rates of assault were in satellite communities and the Sydney SD.

7.2.2 Sexual Assault

Figure 7.2 displays the combined rates of recorded sexual assaults, indecent assaults and other acts of indecency offences for the period 1991 and 1995 to 1998. There was a significant decrease in these types of offences in 1998 compared to 1997 across all clusters and the Sydney SD. In 1998, the highest rates of sexual offences occurred in urban centres, coastal communities and medium declining communities. Overall, the rural areas recorded higher rates of sexual offences than the Sydney SD.

The graphs reflect the sharp increase in reported offences in 1997, the highest number being in the medium declining communities followed by median stable communities.

Figure 7.2
Sexual assault across the clusters, 1991, 1995 to 1998.

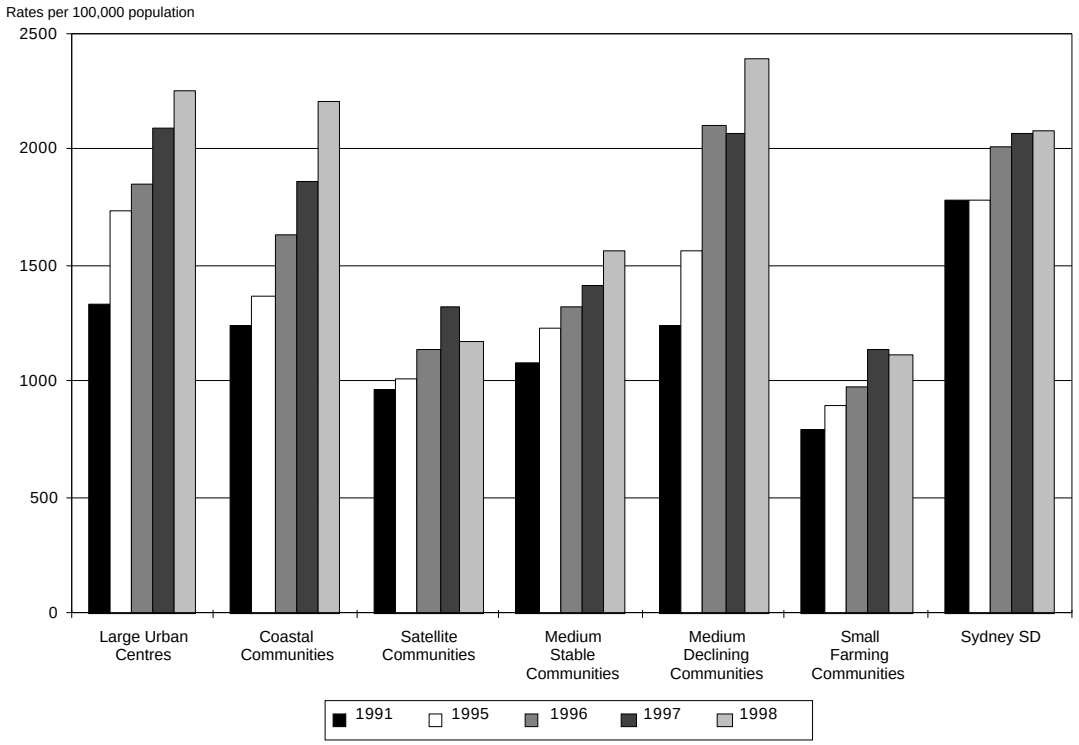


As discussed in chapter three, this may be an effect of the increased public awareness of the incidence of child sexual assault and the resulting policies designed to encourage the reporting of offences. Such increased awareness may have been especially effective in communities that previously had been less aware, or less vigilant, regarding sexual assaults. If this assumption is correct, the decline in reported offences in 1998 may imply that a temporary "catching up" with previously unidentified sexual offences may have occurred.

7.2.3 Break and Enter

Figure 7.3 displays the rate of recorded break and enters for both dwellings and non-dwellings for the period 1991 and 1995 to 1998 across the clusters. There has been a rise of break and enter crimes across most regions with the exception of satellite communities and small farming communities which experienced a decline in 1998 from 1997 rates. Sydney rates were relatively stable across the entire period especially between 1997 and 1998. Note that at the beginning of the period, Sydney had proportionately more break and enters than any rural cluster. By 1998, three clusters had more than Sydney.

Figure 7.3:
Break and enter across the clusters, 1991, 1995 to 1998.



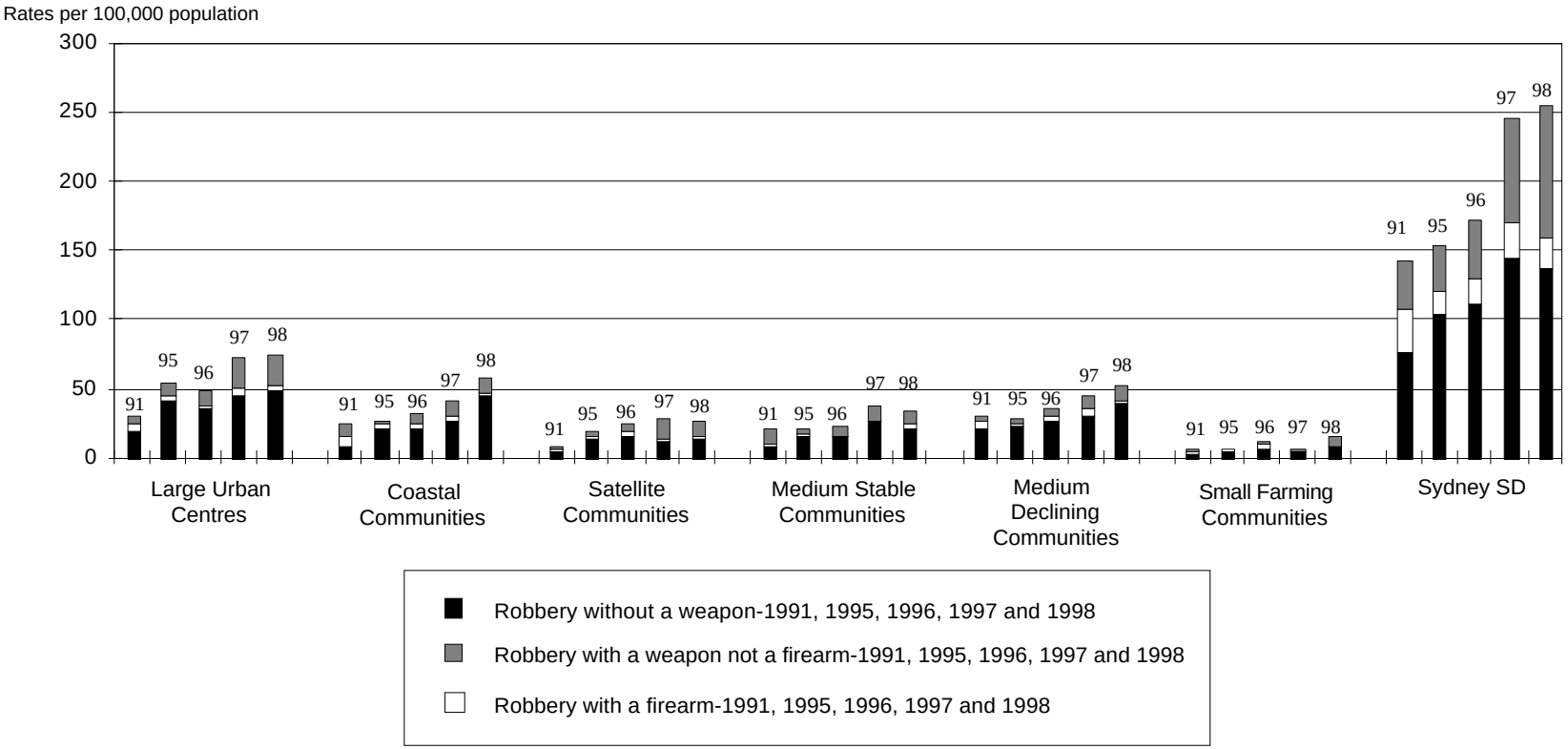
Medium declining communities display the greatest increase in this type of offence with rates higher than that recorded in the Sydney SD. Large urban centres also record rates higher than those of Sydney in 1998.

7.2.4 Robbery

Figure 7.4 presents the rate of recorded robbery offences for the period 1991 and 1995 to 1998 across the clusters. For each year, the proportion of robberies without a weapon, robberies with a firearm, and robberies with a weapon other than a firearm are presented. The proportion of all types of robbery offences in the Sydney SD far outweighs the proportions within any of the rural clusters. Small farming communities have the lowest rates of all categories of robbery offences.

Sydney's rate of robbery without a weapon was thirteen times that of small farming communities. For the rural communities, urban centres, medium declining communities and coastal communities recorded the highest rates of robbery without a weapon. Most areas reported an increase in this offence with the exception of medium stable communities and the Sydney SD where there was a decrease in the rate of this offence in 1998.

Figure 7.4: Robery across the clusters, 1991, 1995 to 1998.



Robbery with a firearm is the least prevalent of the robbery offences in New South Wales. The highest rates occurred in the Sydney SD. Sydney's rates were on average more than ten times that of the rural clusters.

Coastal communities had the highest rates of robbery with a firearm for the rural clusters. Statewide, the number of robberies with a firearm have declined, possibly as an effect of the *National Guns Agreement.*

The recorded rate of robbery with a weapon other than a firearm has generally increased across the whole of New South Wales particularly in 1997 and 1998. In the Sydney SD during 1998, the recorded rate of this offence was more than four times the rate of the country areas (BOCSAR, 1999) and was sixteen times that of small farming communities. Across the rural clusters, urban centres recorded the highest rates of robbery with a weapon other than a firearm.

7.2.5 Motor Vehicle Theft

Figure 7.5 displays the rate of recorded motor vehicle theft for the period 1991 and 1995 to 1998 across the clusters. The Sydney SD recorded significantly higher rates of motor vehicle theft than for all the clusters of rural communities. This is largely a function of density, as in the city there are more motor vehicles and more opportunities to steal than in rural areas. The anonymity of urban life makes the familiar identification of particular vehicles with particular owners less visible than in rural places. However, between 1997 and 1998, the rate of motor vehicle theft decreased within the Sydney SD while the rural clusters all experienced an increase in this type of offence. Large urban centres recorded the highest rates of motor vehicle theft across the six clusters.

Comparisons with 1991 data indicates that the incidence of motor vehicle theft has declined in recent times. Graycar (1999), noted that currently Motor vehicle theft is around 700 per 100,000 less than it was in 1990. Modern cars are designed to be more difficult to steal.

7.2.6 Malicious Damage

Figure 7.6 shows the number of recorded incidents of malicious damage to property (other than arson) in New South Wales in 1991 and between 1995 and 1998 across the clusters. There has been an escalation of this type of offence in 1998 in the Sydney SD and across most of the clusters. The one exception was the small farming communities which recorded a decrease between 1997 and 1998. The percentage increase recorded for this offence across all rural areas collectively was higher than for the Sydney SD (BOCSAR, 1999).

Figure 7.5:
Motor vehicle theft across the clusters, 1991, 1995 to 1998.

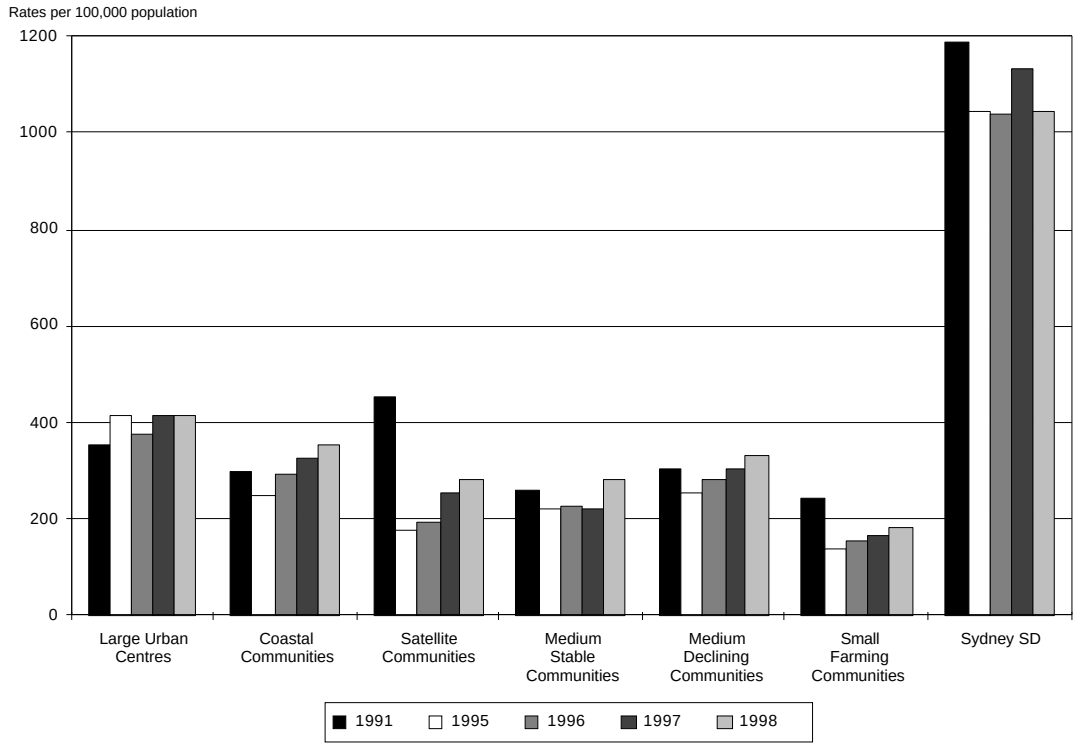
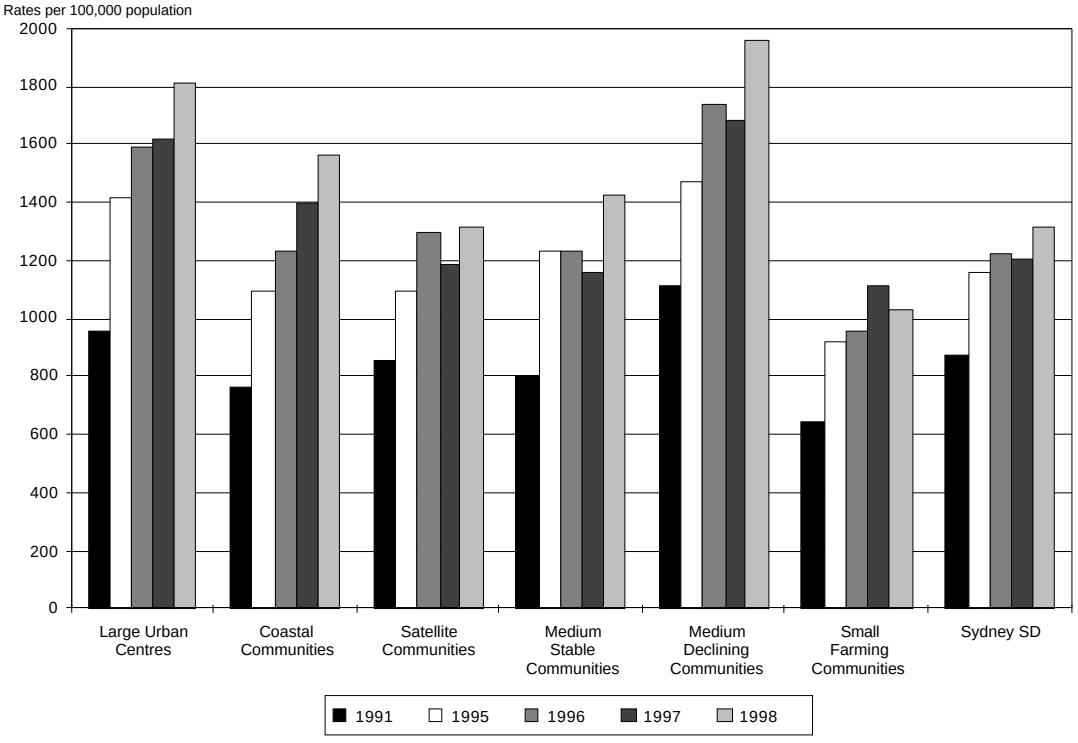


Figure 7.6:
Malicious damage across the clusters, 1991, 1995 to 1998.



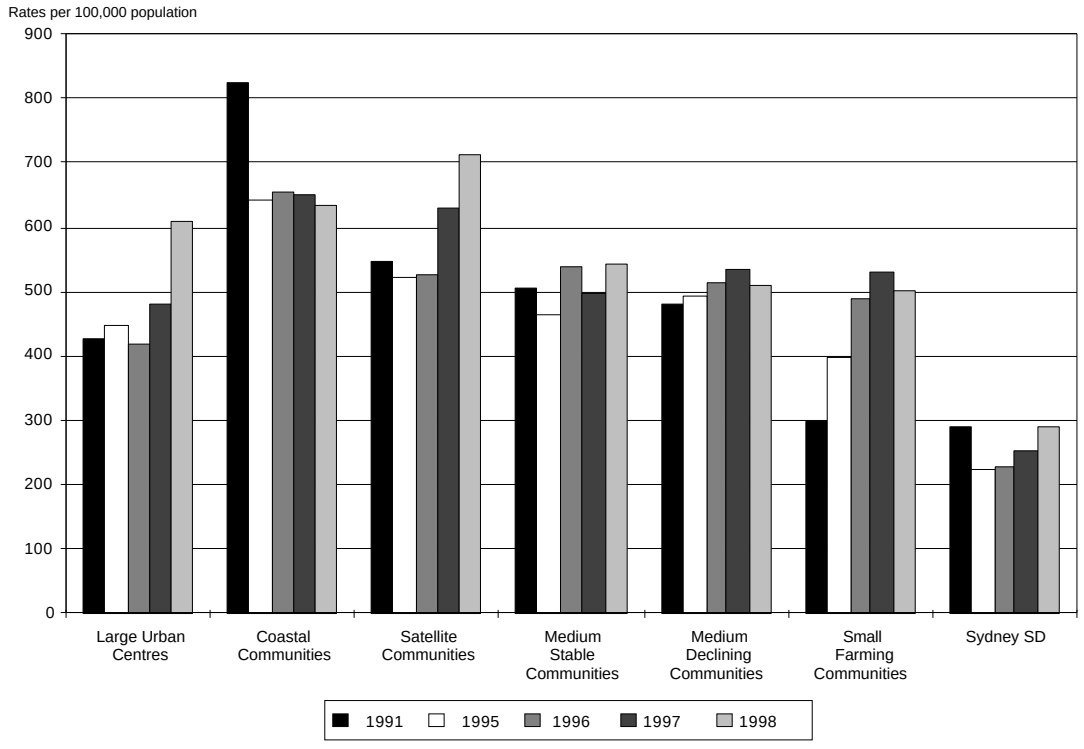
Medium declining communities recorded the highest rates of malicious damage and the greatest increase in 1998. Urban centres recorded the second highest rates and also a large percentage increase in rates in 1998. In 1991, only large urban centres and medium declining communities had higher levels of malicious damage than did Sydney. By 1998, Sydney had lower rates than every type of rural community except for small farming communities.

7.2.7 Drug Offences

Figure 7.7 shows the rate of recorded drug offences in 1991 and between 1995 and 1998 across the clusters of rural communities. Since drug arrests are highly associated with law enforcement policies and procedures, they often are less reliable indicators of violations than are rates of other types of crime (Matka, 1997).

The lowest rates for drug offences were in the Sydney SD. Rates in coastal communities and satellite communities were the highest across the rural clusters. Satellite communities, urban centres and small farming communities recorded the highest increases in offences particularly in 1997 and 1998. In other areas rates were fairly static across time.

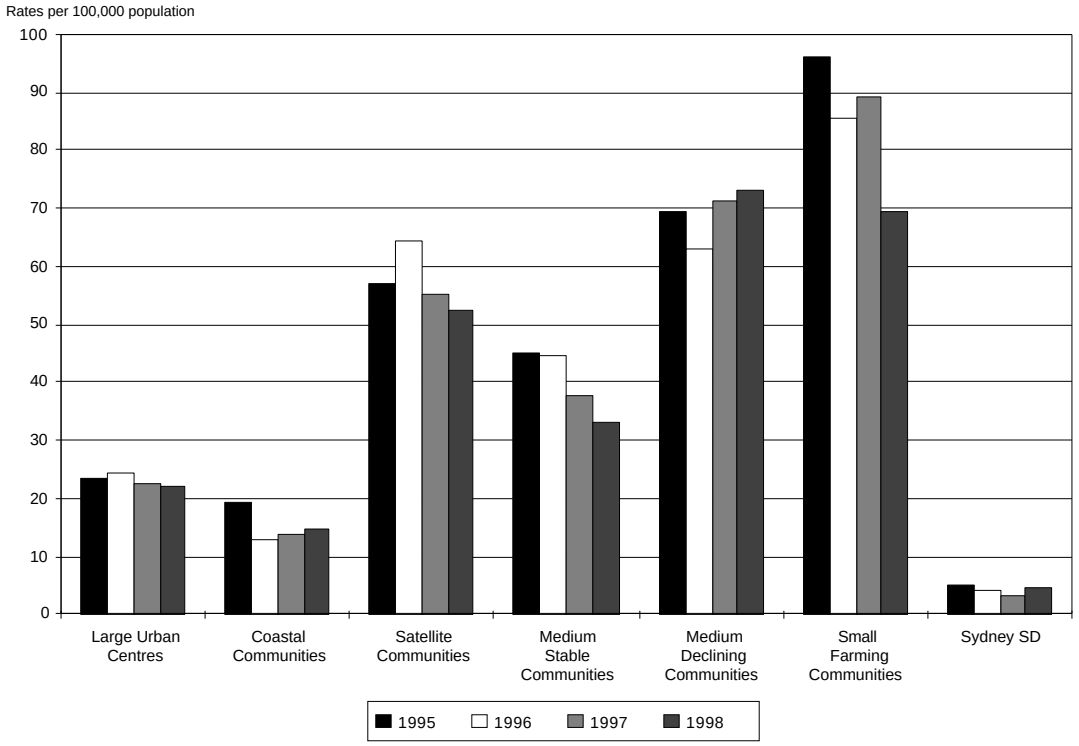
Figure 7.7:
Drug offences across the clusters, 1991, 1995 to 1998.



7.2.8 Stock Theft

As the above figures have demonstrated, rural communities are subject to many of the same types of crime that occur in metropolitan areas. However, rural communities must also contend with crimes which are peculiar to country areas such as stock, chemical, fuel, machinery and equipment theft, as well as vandalism, trespass, and arson. As data is available for stock theft for the years 1995 to 1998 we present an overview of stock theft across the clusters and for the Sydney SD in figure 7.8 to demonstrate how specific and idiosyncratic rural crime can be.

Figure 7.8:
Stock theft across the clusters, 1991, 1995 to 1998.



Stock theft in the Sydney area is minimal in comparison with the rural clusters. Animal theft in metropolitan areas is likely to involve pet-napping for reward or for sales to laboratories. Stock theft is inversely associated with population density. For the rural areas, the greater proportion of stock theft occurred in the inland rural communities. The small farming communities recorded the highest rates. The vastness and isolation of many of these south-western areas combined with the small population sizes, facilitates the commission of stock theft. Medium declining communities recorded an overall increase in stock theft. Other clusters recorded a decrease in rates of this offence. There is no common pattern of increase or decrease. This may be a result of the fact that increases and decreases in stock theft reflect the rise and fall of stock prices.

Recent media reports (Dietz, *The Land,* March 1999), indicate that the incidence of stock theft is increasing and recorded offences may greatly underestimate the actual occurrence of stock theft. The isolation of many properties, the ease of access to most farms, and the portable nature of livestock and equipment, mean farms are an inviting target for thieves and makes policing stock theft extremely difficult. Farmers may be unaware of small stock losses, or if they are, do not bother to report them. It is likely that police are only notified when large numbers of stock or expensive equipment are stolen or damaged.

7.3 TRENDS IN SOCIAL CHARACTERISTICS ACROSS THE CLUSTERS

In this section we compare trends in social characteristics across the clusters between the 1991 and 1996 census years. We focus principally upon the predictive variables of social disorganisation, namely residential and family instability, ethnic diversity, and economic disadvantage. The numbers for each variable were aggregated for each cluster and a percentage rate was calculated as a proportion of the population total. These percentage rates were then graphed to compare differences between clusters and across time.

7.3.1 Residential Instability

Figure 7.9a displays the trends in residential instability across the clusters between 1991 and 1996 census years. There has been an overall increase in the proportion of people living at the same address from the previous census across all clusters. Much of this increase would be an effect of the natural population growth of the country.

Small farming communities record the greatest proportion of people living at the same address from the previous census across all clusters, and the greatest proportional increase over time. Urban centres and coastal communities have the lowest proportions of people living at the same address.

The proportions of people who were living within a different SLA at the previous census remained stable in the urban centres and coastal communities while satellite communities, medium stable communities, and medium declining communities experienced a slight decrease in in-migration. In 1996, small farming communities recorded a slight increase for in-migration.

The most dramatic difference between the clusters in this aspect of residential instability is population growth. Figure 7.9b displays the trends in average population growth across the clusters between 1991 and 1996 census years.

Figure 7.9a:
Residential instability across the clusters.

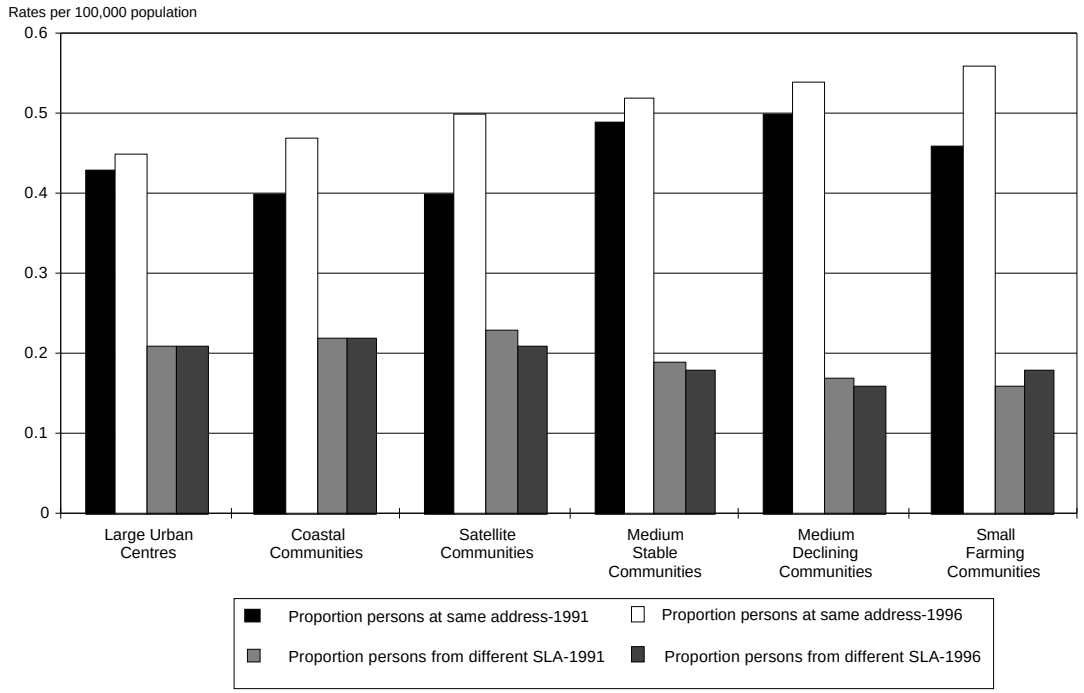
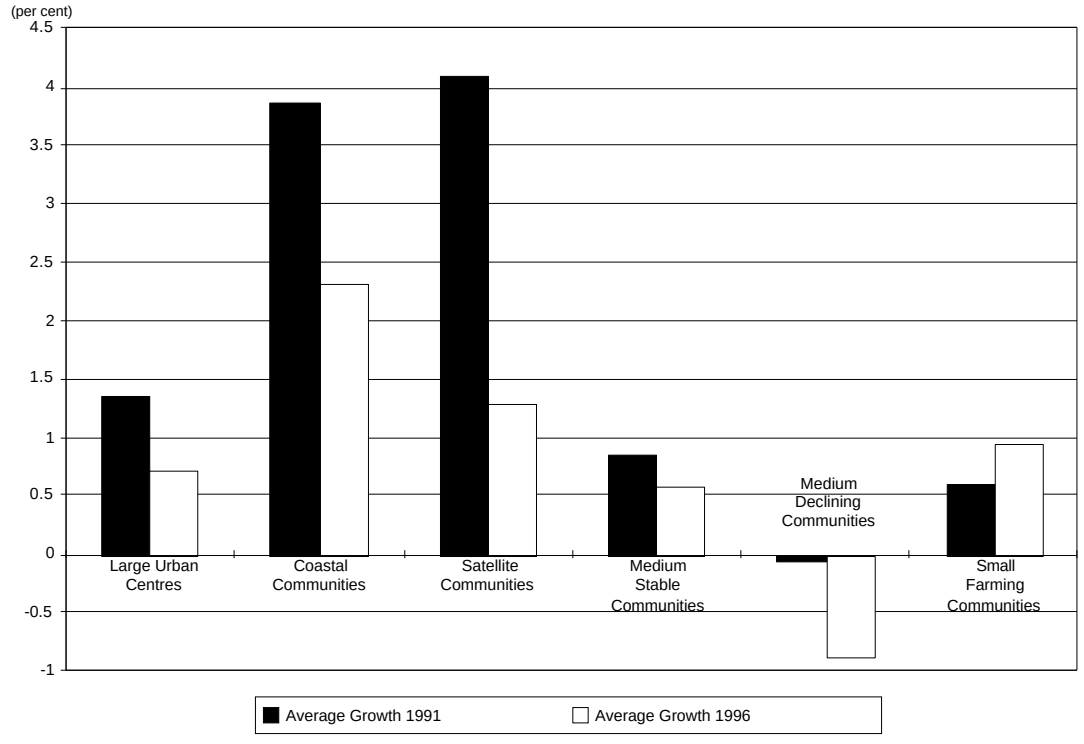


Figure 7.9b:
Average population growth across the clusters.



The effect of drought upon inland communities and the resulting out-migration from these areas is clearly reflected within the medium declining communities. Many of the communities within the cluster of small farming communities also experienced high negative growth. While the aggregated growth rate for this cluster was a positive rate, the scope of average growth rates within this cluster ranged from -1.77 to 2.05 with a mean of -0.053 and a standard deviation of 0.85. Therefore, many of the communities within this cluster would be experiencing the same degree of out-migration as medium declining communities.

The rapid growth of coastal communities and satellite communities particularly between 1986 and 1991 is evident. Although this growth had levelled off by 1996, coastal communities were still experiencing greater population growth in comparison with other clusters.

Figure 7.9c displays the proportion of people living in a home and a caravan. Medium stable communities have the highest proportion of persons living in a home while coastal communities have the lowest. There has been a very slight decrease in home residence across all clusters. This is a noteworthy within the medium declining communities, in that the proportion of more stable residents is not represented in the negative growth of those areas. The out-migration from these communities must therefore comprise more transient people, for example, those in rental accommodation. The impact of the rationalisation of government services in these areas would be reflected in the out-migration data.

The proportion of people living in caravans is relatively low across all clusters with the highest rates being in the coastal communities followed by medium declining communities. There was an overall slight decrease in the proportion of people living in caravans across all clusters.

Thus residential instability is evident in clusters one, two, three, and five. Cluster four, medium stable communities and cluster six, small farming communities, are the most stable.

7.3.2 Family Instability

Figure 7.10a displays the trends in family instability across the clusters between 1991 and 1996 census years. A decline in the numbers of married persons and a corresponding rise in divorce is reflected across all clusters. The proportions of those separated appear to be quite low in comparison and remain stable across most clusters, with only slight increases in proportions within urban centres and coastal communities.

Figure 7.10b displays the trends in family types across the clusters between 1991 and 1996 census years. The rise in the proportions of sole parent families corresponds with the decline in couple families and this pattern is reflected across all clusters.

Figure 7.9c:
Residential instability—homes and caravans.

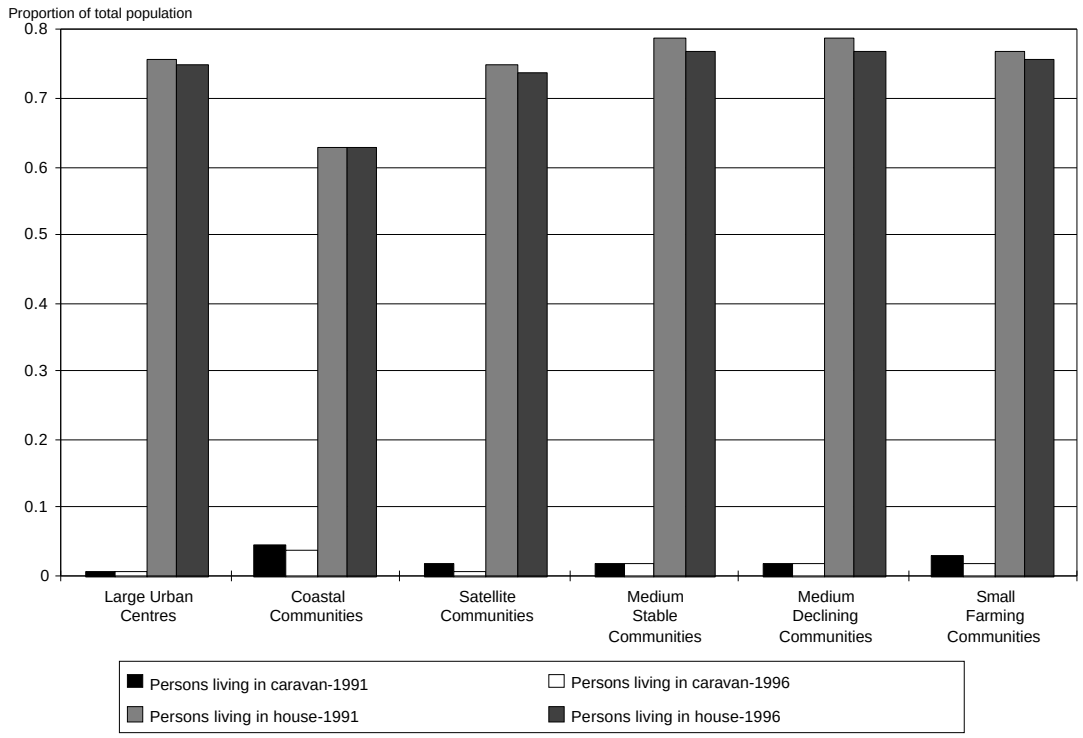


Figure 7.10a:
Family instability across the clusters.

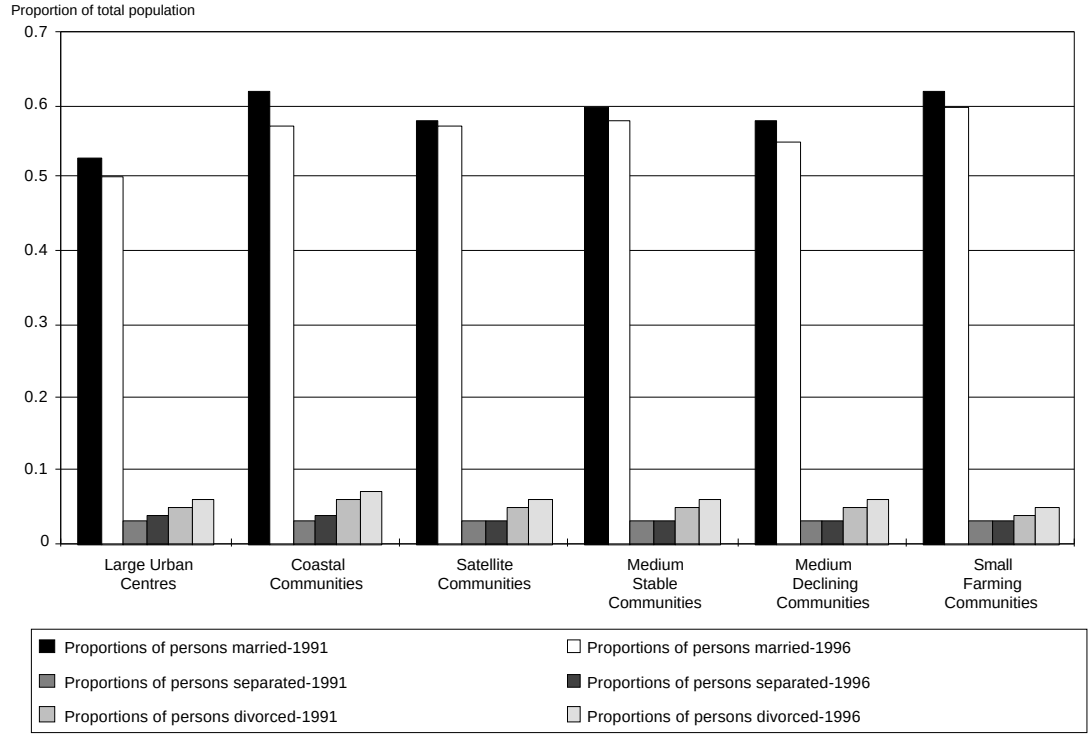
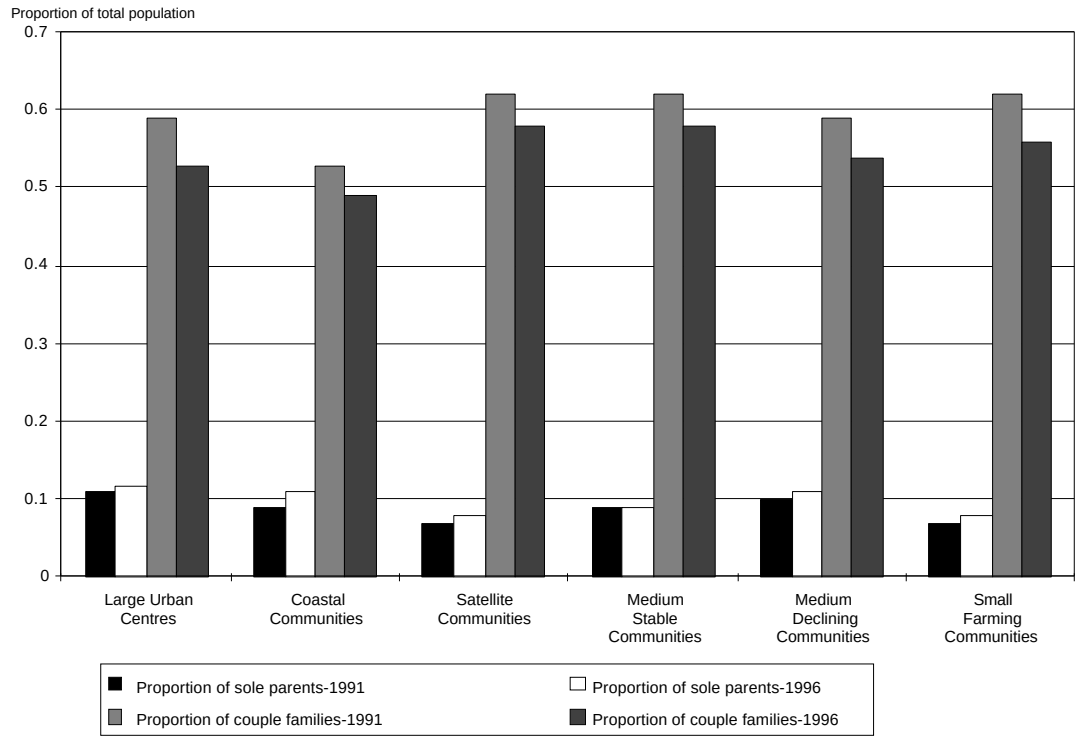


Figure 7.10b:
Family instability: diversity in family types.



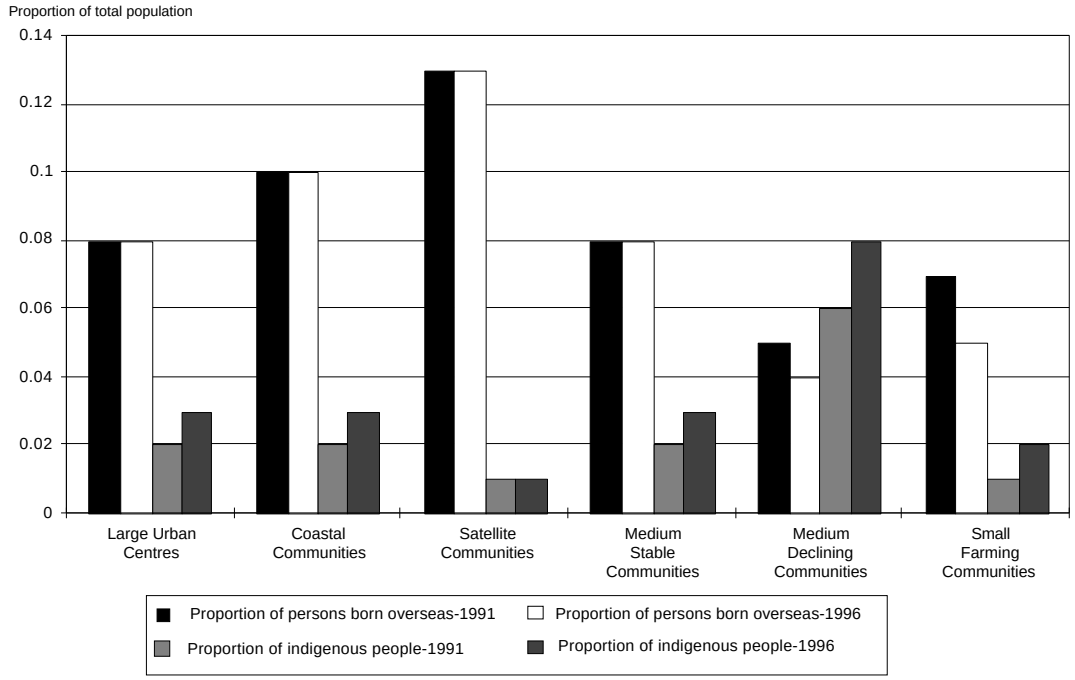
Small farming communities reflect the greatest degree of family stability with the highest proportion of married persons and the lowest proportions of sole parents, separated and divorced persons. Urban centres and medium declining communities have the lowest proportions of married people and the highest rates of sole parents, and thus display the greatest degree of family instability. Coastal communities have the highest proportion of divorced persons, yet they also have high proportions of married couples. Therefore, this cluster reflects the greatest diversity in family types across the clusters.

Satellite communities have the highest proportions of couple families, possibly reflecting a large number of young married couples establishing their first home in the growing outlying suburbs of urban centres. Medium stable communities also has a high proportion of couple families and married people.

7.3.3 Ethnic Diversity

In figure 7.11, the proportion of Indigenous people and overseas born within the populations of the various clusters is compared for 1991 and 1996 census years. We have extracted these variables to approximate the degree

Figure 7.11:
Ethnic diversity across clusters.



of ethnic diversity within the clusters. The proportion of Indigenous people within the populations has increased across all of the clusters with the exception of satellite communities where there has been a slight decrease in the Indigenous population in 1996. This cluster has the lowest proportion of Indigenous people across all clusters. Cluster five, medium declining communities, records the highest proportion of Indigenous people and records the greatest increase in that population across time.

Overseas-born persons are represented across all clusters reflecting the multicultural nature of Australia's population. Coastal communities and satellite communities have the highest proportions of overseas born. The proportions of overseas born living in urban centres, coastal communities, satellite communities and medium stable communities has been stable across time. Conversely, there has been a decrease in proportions within medium declining communities and small farming communities, possibly due to the drought and economic decline experienced in these regions. Median stable communities have a sizeable proportion of overseas people probably employed in the mining industries within this cluster. The inland clusters, medium unstable and small farming communities have the lowest proportions of overseas born. Therefore, ethnic diversity is common to all clusters. However, cluster five is distinguished by its large Indigenous population.

7.3.4 Economic Disadvantage

Figure 7.12a displays the trends in economic factors across the clusters between 1991 and 1996 census years. We have selected some economic variables to present an overview of economic disadvantage across the clusters. There has been a significant increase in unemployment across all clusters with the greatest proportion being within the coastal communities. Satellite communities have the lowest rate of unemployment. Correspondingly, poverty rates are highest in coastal communities and the lowest in satellite communities. Inland communities, small farming communities, and medium declining communities also have higher rates of poverty, a possible effect of the economic decline experienced in these regions. In general, there has been a fall in the proportion of persons with individual incomes less than $16,000 over the period across all clusters despite more unemployment. The effect of a general rise in wages may be reflected in this decrease in lower wage earners.

In figure 7.12b, the levels of education are compared across the populations of the various clusters for 1991 and 1996 census years. Education affects the economic opportunities for individuals and ultimately the wider community.

Figure 7.12a:
Economic disadvantage across clusters.

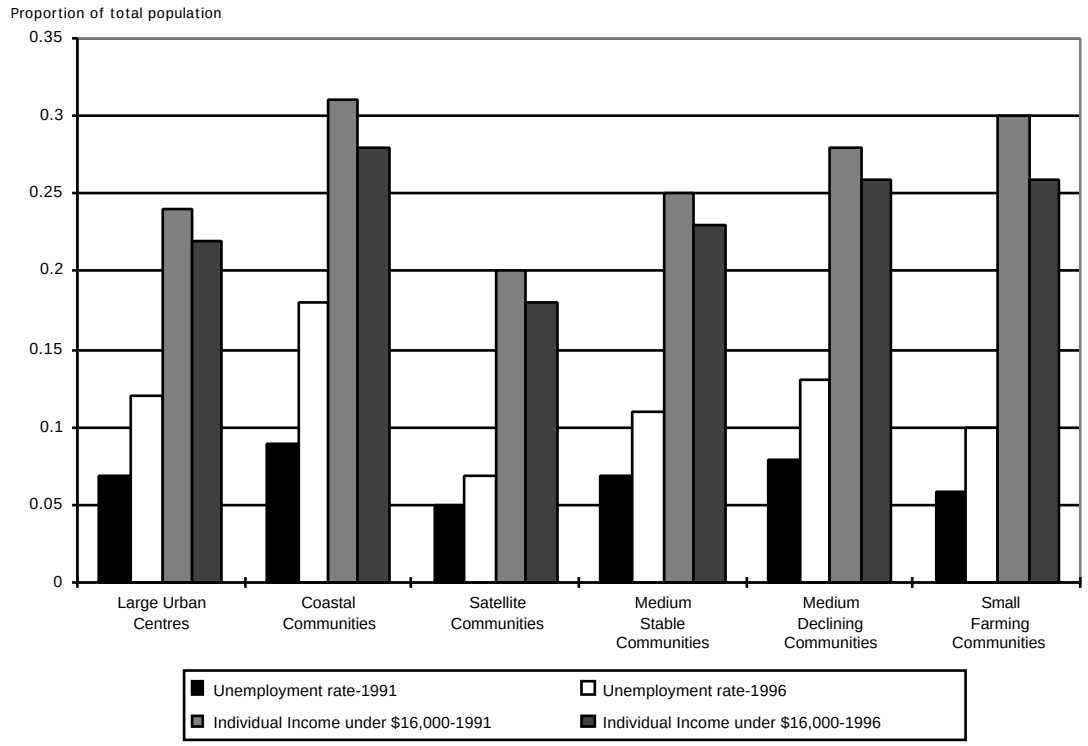
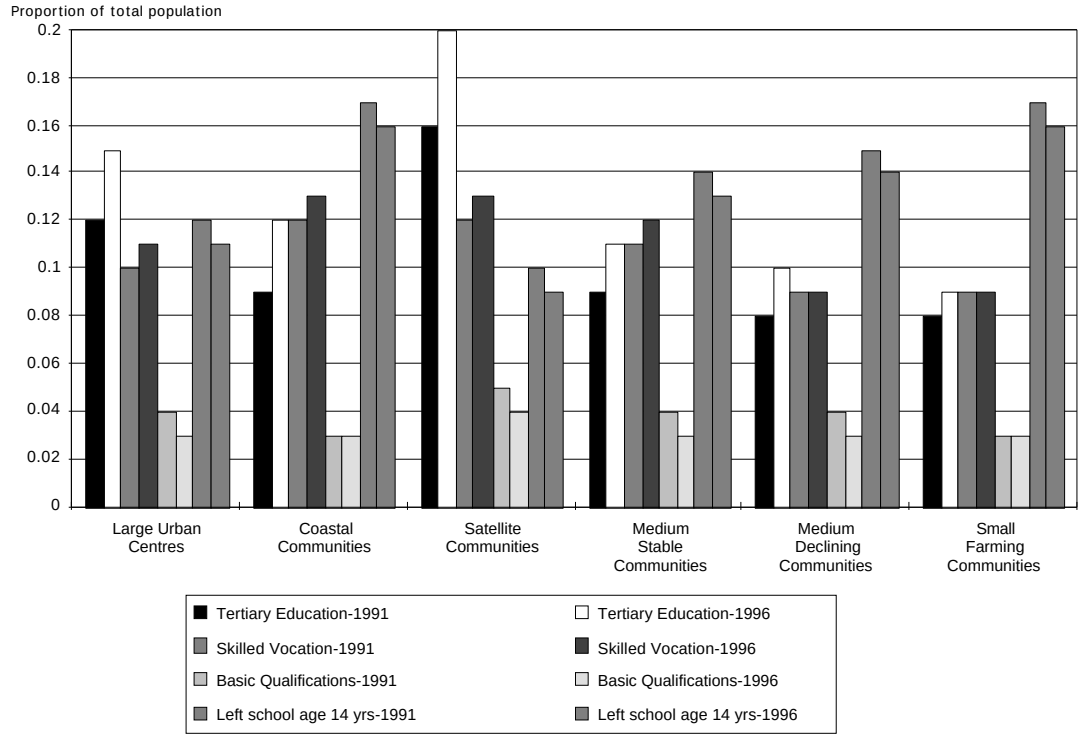


Figure 7.12b:
Education levels across the clusters.



Satellite communities have the highest proportions of tertiary educated persons followed by urban centres. There has been a general increase in the proportions of those with university qualifications across all clusters reflecting the trend toward higher average education. Coastal communities and satellite communities equally show the highest proportions of persons with skilled vocations while the inland communities, clusters five and six, have equally the lowest proportions. Satellite communities have the highest rates of persons with basic skills, but there is a fairly even distribution of these skills across all clusters. Both small farming communities and coastal communities have equally high proportions of uneducated persons, followed by medium declining communities and then medium stable communities. Much of the employment on properties and industries within these inland regions do not require qualifications. However, the high proportions of those who left school under the age of fourteen in the coastal regions may reflect the high numbers of retirees in the region for whom leaving school at this age was a common occurrence. There were also higher numbers of unemployed in this cluster.

7.4 DISCUSSION

The comparison of trends in crime across the six clusters of rural communities suggests an overall increase in crime to 1998. In particular,

assault, sexual assault, break and enter, and malicious damage offences, increased steadily across the time period within the rural clusters. These types of offences occurred in greater proportions in some rural clusters in comparison with the Sydney metropolitan area. Medium declining communities in particular, recorded much higher increases in rates of these offences than did Sydney. However, Sydney recorded exceedingly higher rates of motor vehicle theft and robbery offences in comparison with all rural areas.

The overall increase in rates of crime may be influenced by a number of factors which can impact upon official crime rates. Comparisons of official crime statistics and victim surveys reveal there has been a significant increase in the proportion of crimes which are reported to police (Walker, 1994). In response to public pressure, police have increasingly adopted policies to encourage the reporting of crime, particularly for domestic violence and sexual assault offences (Walker, 1994). In particular, the rise in public awareness of child sexual assault and police campaigns such as *Operation Paradox* which encourages the anonymous reporting of suspected offences, have led to an increase in reporting.

The increasing numbers of people who own motor vehicles, combined with the increasing proportion of women in the workforce, has given rise to greater numbers of motor vehicles to steal and more opportunities to do so. In addition, residential properties are left unattended for much of the working day, which has created more opportunities for break and enter crimes (Walker, 1994). As insurance companies usually require policy-holders to report thefts to police before they will pay on the losses, many small thefts are now being reported, whereas previously people may not have bothered to do so. In addition, an increase in police numbers over this period would inevitably increase crime statistics (Walker, 1994). These factors must be taken into account when assessing the rise in crime across this period.

The comparison of factors across the clusters revealed that most clusters experienced some degree of social disorganisation. Those clusters with higher proportions of factors of social disorganisation were those associated with higher crime rates, namely urban centres, coastal communities, and medium declining communities.

Urban centres display average degrees of social disorganisation with average proportions of residential instability, low proportions of married persons, average proportions of divorced and separated persons, and couple families, but high proportions of sole parents. There are average proportions of overseas born and Indigenous people and average degrees of economic disadvantage. This cluster experiences some of the highest rates of robberies, break and enter offences and motor vehicle theft, that are characteristic of more urban areas.

Coastal communities have high residential instability with the highest growth rate across all clusters, average proportions of people living at the

same address from the previous census and consistently high rates of in-migration. This cluster has the lowest proportion of persons living in a home and more caravan residence. There are high proportions of sole parents, divorced and separated persons. This cluster has the lowest proportion of couple families across clusters. Yet there are more married people. There are consistent high proportions of overseas born. This cluster has the highest degree of economic disadvantage with the highest rates of unemployment and poverty. Accordingly, this cluster records high rates of crime across all types of crime, particularly drug offences.

Satellite communities experience factors that indicate both high and low degrees of social disorganisation. There are increasing proportions of people living at the same address from the previous census in this cluster. Yet there are high rates of in-migration from other areas. This cluster had the highest growth rate in 1991 and the greatest decrease in that rate in 1996 across the clusters. There is higher family stability with the highest rates of couple families. There are average proportions of married persons as well as average proportions of divorced and separated persons. This cluster also has the highest proportions of overseas born persons yet the lowest proportions of Indigenous people. There is less economic disadvantage with low unemployment and poverty levels in comparison with other clusters. Education levels are the highest within this cluster. Crime rates vary across time and between types of crime within satellite communities. This cluster has some of the highest rates of drug offences particularly in 1998, average rates of malicious damage, and inconsistent trends in sexual assault.

Medium stable communities have the highest degrees of residential stability and family stability, average proportions of ethnic diversity and economic disadvantage. This cluster records low to average rates of crime across all crime types.

Medium declining communities appear to experience high levels of social disorganisation that are qualitatively different from other clusters. High residential instability is experienced in the form of a high negative growth rate, as opposed to the overall positive growth in other clusters. This cluster experiences high family instability, with high proportions of sole parents and divorced persons. Ethnic diversity is experienced in the very high proportions of Indigenous populations in comparison with other clusters. There are high rates of unemployment and poverty within this cluster. This cluster records some of the highest rates of crime, particularly assault, sexual assault, break and enter and malicious damage.

The high rates of crime in these declining communities may reflect an association with disintegrating levels of informal social controls which is allowing more opportunities for the commission of crime (Carter, 1982). Carter maintains that increasing awareness of crime in rural areas encourages an attitude of distrust and increases fear which can lead to a breakdown in interpersonal ties within a community. The resulting

decline in social controls leads to an increase in crime as restraints of criminal behaviour are released (Carter, 1982).

Small farming communities consistently record the lowest rates of crime across the clusters with the exception of stock theft. This cluster has the highest degree of residential stability, family stability and average degrees of ethnic diversity. However this cluster has high proportions of poverty, average proportions of unemployment, average proportions of educational and vocational qualifications, but high proportions of persons who left school under the age of fourteen years.

The themes of social disorganisation theory appear to generalise well to rural communities within Australia. Clusters with high residential instability, high family instability and ethnic diversity were associated with higher crime rates. Economic factors do not appear to be as strongly associated with higher crime rates. Similar results have been reported in overseas studies (Rephann, in press). Devery (1991), in a mapping study of Local Court conviction rates across 176 New South Wales LGAs, also found no relationship between socio-economic variables and conviction rates in country areas. Conversely, in Sydney, there was a strong positive correlation between conviction rates and areas with poor families, high unemployment, and a high ratio of labourers to professionals. Devery suggests this finding may be due to the fact that different income groups tend to live in different LGAs in Sydney, whereas country LGAs are not so differentiated. Furthermore, some primary producers may report low incomes in census returns suggesting large numbers of farm families who are asset rich but income poor. Such families are juxtaposed with large, wealthy agribusinesses within the same regions. In addition, the differences in real costs of living in rural areas are less than in cities. This means that low incomes extend further in rural areas.

7.5 SUMMARY

This chapter has been concerned with trends in rates of crime across the six clusters of rural communities in New South Wales between 1991, 1995 and 1998, and the corresponding trends in social characteristics between the census years of 1991 and 1996. There appears to be an overall increase in the rates of crime across most crime types. These increases have often been at higher levels than those increases that have occurred in Sydney. This phenomenon may be mediated by factors which affect trends in crime rates such as the propensity of people to report crimes to police, the activities and number of police in an area, fluctuations in the size of the population, and changes in community attitudes regarding some types of crimes.

The figures presented in this chapter suggest that the themes of social disorganisation theory, which were developed in comparisons within urban environments, are equally applicable to rural areas within Australia. In particular, high residential instability, high family instability, and ethnic

diversity were associated with clusters with higher crime rates. Economic measures did not display strong relationships with higher crime rates. A more detailed analysis of these three aspects of social disorganisation will be provided in chapters eight, nine and ten of this report.

Chapter 8

CRIME AND RESIDENTIAL INSTABILITY

8.1 INTRODUCTION

Results of regression analyses and cluster analysis have supported theories of social disorganisation as an explanation of crime in rural communities. In particular, identified elements of social disorganisation, namely residential instability, family instability and ethnic diversity have been found to be associated with higher crime rates in the sample. In the next three chapters, these aspects of social disorganisation will be more closely examined to further clarify the relationship between these factors and crime. In this chapter, the relationship between five dimensions of residential instability and crime is investigated. Using discriminant analysis, the differences between the six clusters of rural communities according to their scores on measures of residential instability are examined. The impact of migration upon levels of crime in rural communities is discussed.

8.2 MIGRATION IN AUSTRALIA

From the arrival of the first white settlers to Australia, the transportation of convicts and the inundation of hopeful prospectors of the gold rush years, migration has played a major part in shaping the economic, cultural and social development of this country. Since the beginning of Australia's post war migration program in 1945, almost 5.5 million people have come to Australia from approximately 170 countries (Batrouney and Stone, 1998). During this period Australia's population has risen from about seven million to 17,892,423 (ABS, 1997c).

The development of rural communities has also been greatly influenced by migration. Historically, most inland rural communities have developed from an economic base of primary agriculture, forestry and mining industries, all of which have required an influx of labour. Retail trade and services developed around transportation and distribution centres to serve the primary sectors (Vernon, Olfert and Weinand, 1997).

Modern Australians continue to be a very mobile population moving between states, and to and from rural and urban areas (Eddy, 1998). The rate of internal migration between states is around 400,000 per year (ABS, 1999b). Australians also move residence within a region for a wide range of social reasons, some of which include age, employment, family reasons, education or availability of accommodation (either rental or owned) (Eddy, 1998).

In Western Australia, a survey of 1500 people in regional areas (West Australian Department of Commerce and Trade, 1999), found a great propensity for continued in- and out- migration. Only half of the regional population surveyed planned to stay in their areas. Yet there were great differences between regions. More migration was characteristic of mining areas in contrast to more settled farming areas. The survey found that only 16% of respondents had grown up in the area in which they now live. More than half had been in their current region for ten years or less and a third for five years or less. One in five reported moving three or more times in the past ten years. Results suggested that about a third of people who moved to interior regions came from Perth and a quarter from overseas or interstate. The remainder moves from within their current region or from another Western Australian region. Employment was the key factor prompting movement, followed by family/marriage influences, and then lifestyle (West Australian Department of Commerce and Trade, 1999).

Economic factors have been instrumental in an increase in out-migration from many rural communities, particularly in the eastern part of Australia over the past two decades. Severe drought and economic decline, as well as social and technological change has been devastating for farm families and many have left the land. The rural downturn has contributed to closure and shrinkage of business and health/community services in rural towns leading to an increase in unemployment and more people leaving the district (Walker and Battye, 1996).

However, there has been considerable diversity in the migratory experience of country towns. Net migration out of the smallest inland towns has been the typical pattern. However, some major regional centres, which have had the ability to draw upon secondary industry to sustain themselves economically, have experienced population growth. Many coastal communities have experienced rapid growth, benefiting from tourist trade and as locations for retirement communities (Vernon, Olfert and Weinand, 1997).

Therefore, residential instability appears to be a common factor in many rural areas in Australia. However, the degree of instability differs between regions. The Chicago school believed that major social problems such as crime stemmed from the disruption of the social fabric that occurred as a result of in-migration to urban areas. Shaw and McKay (1969) examined urban areas with highly transient immigrant populations and concluded that the lack of stability, community organisation and identity are related to higher rates of delinquency. High levels of in and out-migration mean there is less opportunity for residents to develop widespread and strong personal ties to one another and to community organisations. This is a central theme of social disorganisation (Sampson, 1988) and a major factor contributing to problems identified in research of rural towns experiencing rapid, resource related community growth (Freudenburg and Jones, 1991).

Factors, such as size and distance from metropolitan areas, influence community structures, that, in turn, are associated with problems in rural areas (Goudy, 1990; Jobes, 1999). Migration and types of community structures are two of the most important causal factors for explaining social problems in rural areas (Jobes, 1999). The relationship between social cohesion, integration, and crime has two distinct components (Jobes, 1999). One is the high commission of crime by some migrants and the other is the commission of crime in relation to the integration and cohesion of communities (Jobes, 1999). Residential instability may reflect low cohesion not only for migrants, but for locals as well (Jobes, 1999). Rephann (in press) in a study of juvenile delinquency in 264 rural communities across four states of America found that residential instability was associated with higher offence rates. Jobes (1999), in a study of the effect of migration on levels of crime in rural towns in Montana, found that recent migrants accounted for a highly disproportionate amount of crime. Migrants committed a higher percentage of crimes in recreational towns than in agricultural towns for every type of offence (Jobes, 1999). An important finding was that small towns comparatively had much more crime, whether long-term or recent residents committed it (Jobes, 1999). Although the frequency of felonies was higher in larger towns, their felony rates were considerably lower. This finding conflicts with the hypothesis that small towns, being more cohesive, would have less crime and demonstrates the problem of over-simplification of rural-urban distinctions (Jobes, 1999).

Therefore, it appears necessary to clarify the relationship between crime and residential instability among the clusters of rural communities identified in the present study. It is expected that communities, which experience high residential instability, and will therefore, have low integration and cohesion, will also experience high rates of crime.

8.3 THE ANALYSIS

To examine the issue of residential instability and crime, a discriminant analysis was performed using the six clusters as the dependent variable and five measures of residential instability as the independent variables. These included the average population growth of communities between the 1991 census and the 1996 census, the proportion of persons in the population who moved from a different SLA since the 1991 census, the proportion of persons in the population who were residing at the same address as the previous five years, and the proportion of persons living in their own home and in caravans.

The assumptions of normality, linearity and collinearity were met for discriminant analysis. Results revealed that Wilk's Lambda was significant for all five variables, indicating that all five aspects of residential instability were useful for discriminating between the clusters. The overall statistical significance of the analysis is summarised in Table 8.1. An examination of the table revealed that four significant discriminant functions were identified. Together these functions accounted for approximately 99.6 per cent of the variance in the data.

Table 8.1:
Canonical discriminant functions.

	Discriminant Functions				
	One	Two	Three	Four	Five
Eigenvalue	2.19	0.89	0.37	0.10	0.01
Variance (%)	61.30	24.99	10.40	2.92	0.39
Canonical correlation	0.83	0.69	0.52	0.31	0.12
Wilks' Lambda	0.11	0.35	0.65	0.89	0.98
Chi-square	257.06	123.16	49.53	13.07	1.61
Probability	0.00	0.00	0.00	0.01	0.20

The nature of these four functions can be interpreted with reference to Table 8.2, which displays the correlation between each of the discriminant functions and the independent variables used in the analysis. Only correlations greater than 0.20 in absolute value are reported as we only accepted correlations of 0.30 or higher in absolute value as sufficient for interpretation (Tabachnik and Fidell, 1989:539).

The first function was strongly related to high average growth in a community. This function was also positively correlated with more persons living in caravans and more in migration. It was negatively correlated with residential stability and the proportion of people living in their own home. Therefore this function is an example of high residential instability.

Table 8.2:
Pooled within group's correlations.

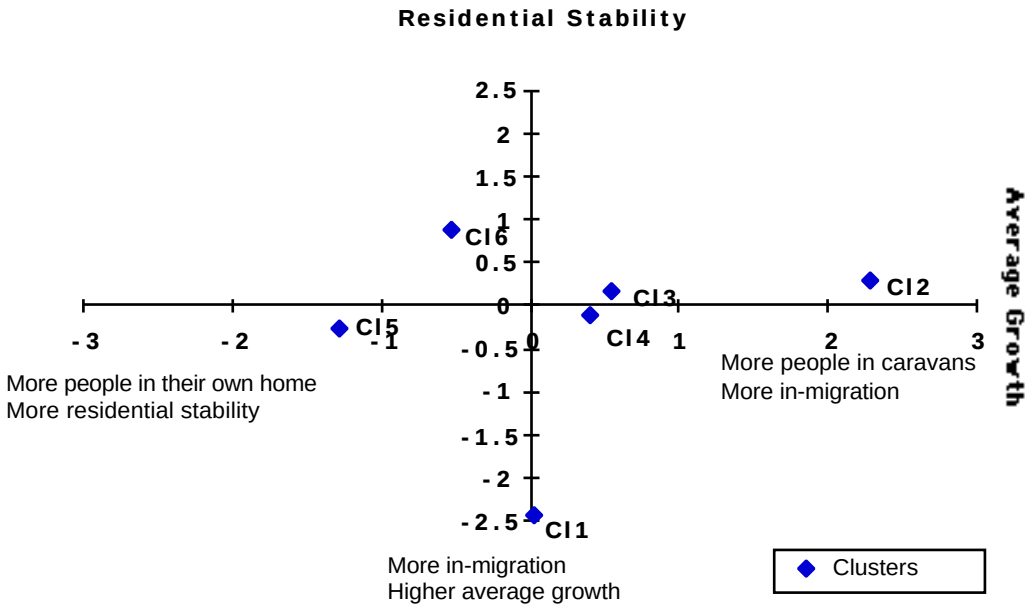
	Function				
Attribute	One	Two	Three	Four	Five
Average growth	0.68312*	-0.45400		0.56639	
Residential stability	-0.26560	0.74612*	0.59991		
Persons in caravans	0.38418		-0.67255*		0.60870
Persons in own home	-0.44960		0.36964	0.77339*	0.25112
In-migration	0.34045	-0.36326	0.53240		0.68208*

The second function was related to more residential stability being positively correlated to the degree of stability amongst residents in a community and negatively correlated to average growth and the proportion of in-migration. The third function was negatively correlated with the proportion of persons living in caravans in a community and was positively correlated with high residential stability, more persons living in their own home but also more people moving into the area. The fourth function was positively correlated with the proportion of persons living in their own home and also with high average growth in a community. The fifth function represented more instability being positively correlated with more persons moving into an area from a different region since the last census. This function was also positively correlated with more persons in their own home and more persons living in caravans.

The implications of the analysis can be understood by reference to Figures 8.1 to 8.4. In the figures, the centroids or the means of each cluster are plotted in terms of the discriminant functions. The horizontal axis in the figure represents the first function, which is the strongest discriminator between the clusters on residential instability. The spread of the points along the horizontal axis indicates the degree of population growth between 1991 and 1996 across the clusters. The vertical axis in each figure represents the second, third, fourth and fifth functions respectively. The functions are labelled according to the correlations discussed above.

In Figure 8.1, the spread of points vertically indicates the degree the second function distinguishes the clusters according to the degree of residential stability. In this instance, cluster one (large urban centres), had an average growth rate but high residential instability. Cluster two (coastal communities) had the highest rate of growth and average rates of stability. Both these clusters report higher than average rates of crime. Cluster five (medium declining communities) had a slightly below average residential stability and the lowest rate of growth. This cluster also had a high rate of crime. Clusters three and four (satellite communities and medium stable communities) displayed average rates of stability and slightly above average growth rates.

Figure 8.1:
Average growth and residential stability.

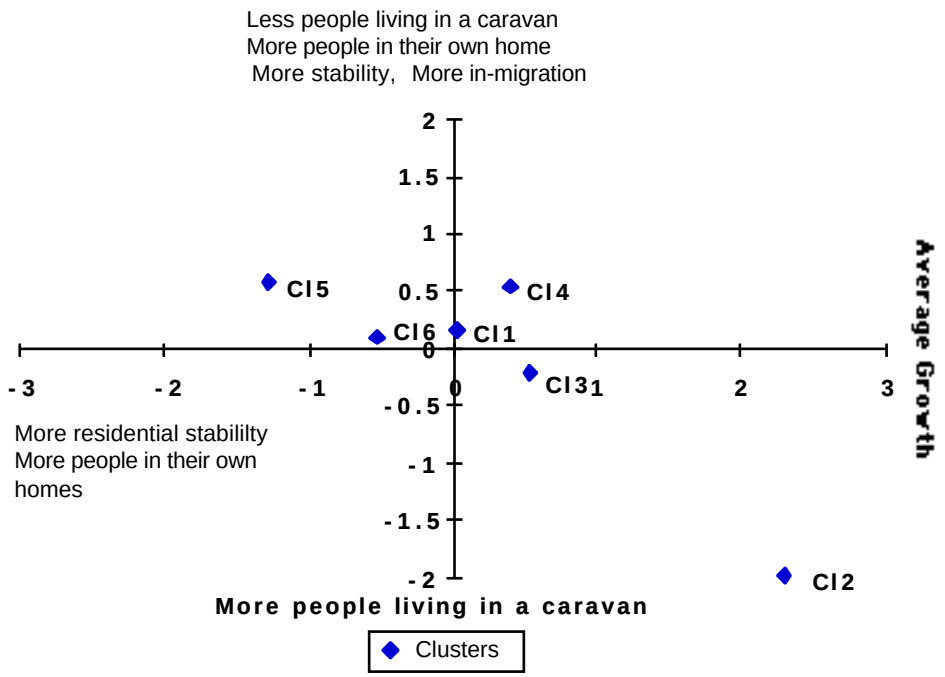


Cluster 1	Large urban centres	Cluster 4	Medium stable communities
Cluster 2	Coastal communities	Cluster 5	Medium declining communities
Cluster 3	Satellite communities	Cluster 6	Small farming communities

Cluster six, (small farming communities) has the highest rate of residential stability but a negative growth rate. This cluster recorded the lowest rates of crime across all crime types. The third function was significantly and negatively correlated with the proportion of people living in caravans in each cluster. Figure 8.2 displays the degree the third function distinguishes the clusters along the vertical spread of points. Cluster two (coastal communities) was the only cluster with an above average rate of caravan dwellers and thus was negatively related to this function. Being tourist centres, this is a logical finding. Satellite communities, large urban centres and small farming communities hovered around the mean for caravan dwellers. Medium declining communities and medium stable communities had the least number of people living in caravans.

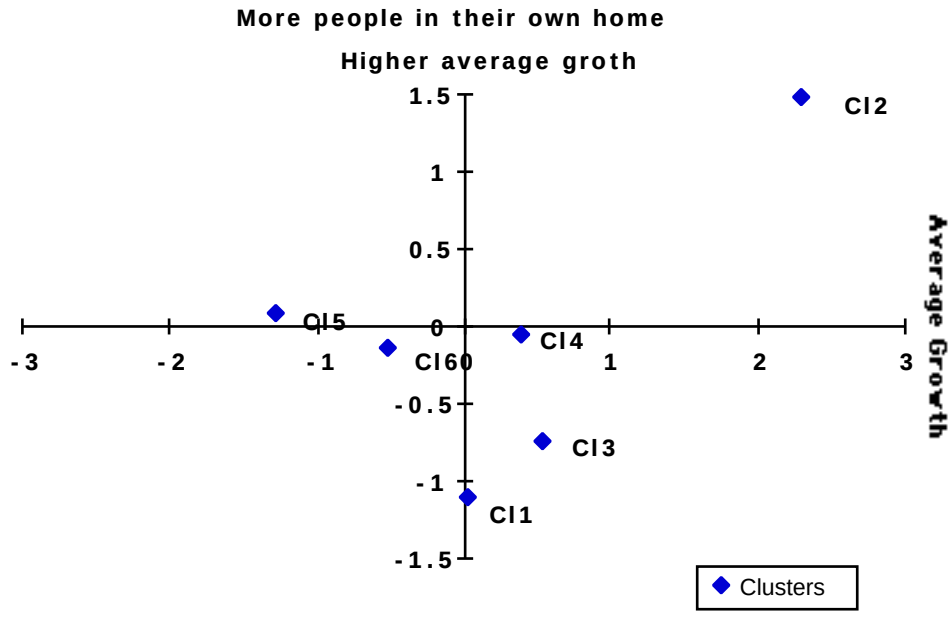
In Figure 8.3, the spread of points vertically displays the degree the fourth function distinguished the clusters according to the proportion of people living in their own homes in each cluster. Large urban centres and satellite communities had less own home residency. Cluster two (coastal communities) were high on own home residency and had the highest rate of growth on this function. Medium stable communities, small farming communities and medium declining communities were around average on own home residence.

Figure 8.2:
Average growth and proportion of persons living in caravans.



Cluster 1 Large urban centres
Cluster 2 Coastal communities
Cluster 3 Satellite communities
Cluster 4 Medium stable communities
Cluster 5 Medium declining communities
Cluster 6 Small farming communities

Figure 8.3:
Average growth and proportion of persons in their own home.

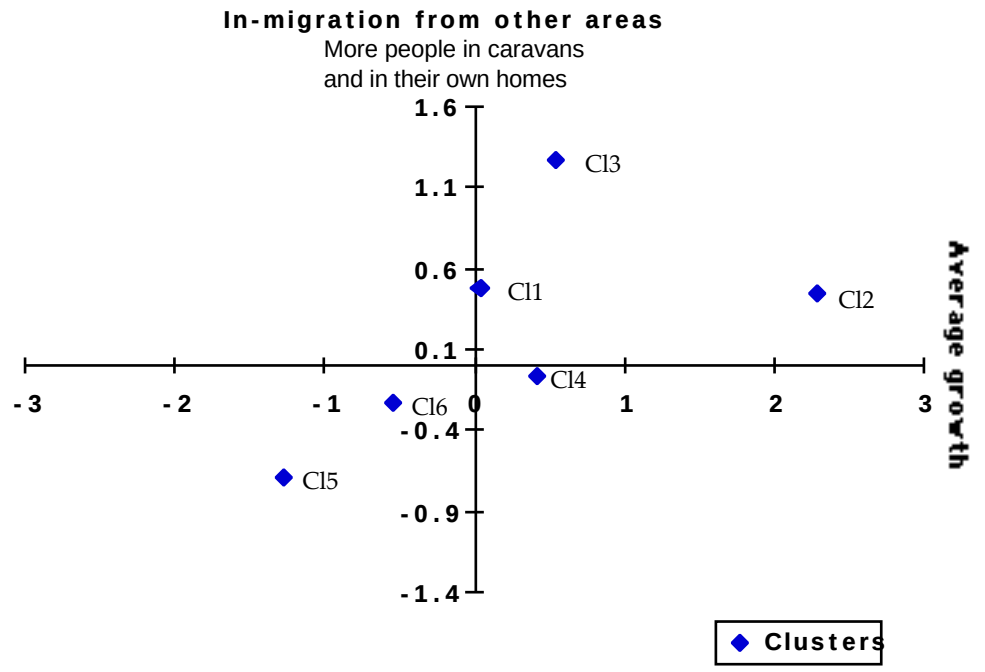


Cluster 1 Large urban centres
Cluster 2 Coastal communities
Cluster 3 Satellite communities
Cluster 4 Medium stable communities
Cluster 5 Medium declining communities
Cluster 6 Small farming communities

Figure 8.4 displays the spread of points vertically which shows the degree the fifth function distinguished the clusters according to the degree of in-migration from other areas. Satellite communities had the highest rate of in-migration in the sample followed by urban centres and coastal regions. These three clusters also had above average growth and thus represented high residential instability. These clusters were all associated with higher rates of crime. Medium stable communities, which had a low rate of crime, had an average rate of in-migration and only slightly above average growth rate. Medium declining communities and small farming communities had a negative rate of in-migration and a negative growth rate. Yet they recorded the highest and the lowest rates of crime respectively in the sample. Therefore, there are clearly other dynamics at work in cluster five, which were associated with the higher rate of crime.

In Table 8.3, the results of the predictive discriminant analysis are summarised. An indication of the explanatory power, the reliability of the discriminant analysis is evident by the fact that 69 per cent of the LGAs were correctly classified. Press's Q statistical test for the discriminatory power (Hair *et al.*, 1995, p. 205) revealed that this result was significantly greater than the 17 per cent of cases that would be expected to be correctly classified by chance alone.

Figure 8.4:
Average growth and proportion of in-migration.



Cluster 1 Large urban centres	Cluster 4 Medium stable communities
Cluster 2 Coastal communities	Cluster 5 Medium declining communities
Cluster 3 Satellite communities	Cluster 6 Small farming communities

Table 8.3 :
Classification results.

		Predicted Cluster					
Actual	No. of Cases	One	Two	Three	Four	Five	Six
Cluster 1	10	9	0	0	1	0	0
		90.0%	0.0%	0.0%	10.0%	0.0%	0.0%
Cluster 2	16	0	13	1	2	0	0
		0.0%	81.3%	6.2%	12.5%	0.0%	0.0%
Cluster 3	31	0	1	24	3	2	1
		0.0%	3.2%	77.4%	9.7%	6.5%	3.2%
Cluster 4	23	4	1	5	10	1	2
		17.4%	4.3%	21.7%	43.5%	4.3%	8.7%
Cluster 5	29	1	0	6	3	19	0
		3.4%	0.0%	20.7%	10.3%	65.5%	0.0%
Cluster 6	13	0	1	0	3	0	9
		0.0%	7.7%	0.0%	23.1%	0.0%	69.2%

8.4 DISCUSSION

The discriminant analysis sought to clarify the impact of residential instability upon crime rates among the six types of rural communities. The major factor discriminating between clusters in residential instability was the rate of population growth. High population growth, combined with low population stability, more in-migration from other areas and less home ownership reflects high residential instability. Cluster one (urban centres) clearly displayed these characteristics. This group also recorded high rates of crime. Cluster two (coastal regions), which also experienced high crime, had the highest rate of community growth and caravan dwelling and high rates of in-migration. Yet this cluster was also high on the fourth function which was strongly correlated with home ownership. This cluster exemplifies communities undergoing rapid growth with increasing numbers of retirees moving in and settling, along with a high transient and tourist populations.

Cluster three (satellite communities) had the highest rate of in-migration, less people living in their own home, and average rates of stability and caravans dwellers. Cluster four (medium stable communities) appeared to record average rates across the majority of measures of residential stability with the exception of a lower rate of own caravan residence. This cluster also had low rates of crime in comparison with other clusters. Cluster six (small farming communities) clearly represented the most stable of the

clusters with high residential stability, average rates of caravan and own-home dwelling and less in-migration, and recorded the lowest rate of crime. These combined results would suggest a clear relationship between residential instability and high crime. However, cluster five (medium declining communities) displayed scores which question these findings.

Consistently, cluster five and cluster six (small farming communities) had negative growth rates and yet these clusters were associated with the highest and the lowest crime rates respectively in the sample. Both clusters had very similar levels of own home residency but there were some differences among the other measures of stability. Cluster five had lower rates of community growth and in-migration than cluster six. Cluster six had the highest rate of residential stability while cluster five has slightly below average rates. Cluster five had less caravan dwellers while cluster six records average rates. Therefore, in general, cluster six displayed a higher degree of residential stability in comparison to cluster five.

Although cluster five had a negative growth rate and slightly below average residential stability, low in-migration and average rates of own home residence, these communities may be experiencing the effects of transient migration. That is, many were moving in but few were staying. These areas had large agricultural industries such as cotton, which require a great number of seasonal workers. The actual experience of transient migration in these areas will require closer qualitative research.

Today, people with mobile lifestyles move with their families (Eddy, 1998). This contrasts with historical patterns during the depression years when men and women would leave their families for long periods of time to seek work (Eddy, 1998). To date, the impact that transience has on family life and on individuals in families has received little attention from researchers (Eddy, 1998). Data on details on transient families is difficult to collect as such populations are difficult to identify (Eddy, 1998). While the *Australian Census of Population and Housing* collects data on caravan populations, this does not account for those families who move within the five year census period. The distinction between tourist and transient is blurred and the precise proportion of transients among residents is unknown across communities (Jobes, 1999). The more transient a population, the more the census figures underestimate the migratory population (Jobes, 1999).

Identification of transient populations is difficult because they can belong to any socio-economic or ethnic group and any age cohort and live in all parts of Australia (Eddy, 1998). Mobile people are often employed, but they can also be itinerant workers, unemployed or retired (Eddy, 1998). Examples of transient populations include Aboriginal people moving from place to place on traditional or family business; older people from southern States moving north for the winter months or travelling around Australia; agricultural workers following the picking seasons; shearers; agricultural show and field day people; mining and construction workers (Eddy, 1998). Yet transients in rural/remote areas also include health, community service and government department workers, defence force personnel and their

families, bank officials, teachers and pastors who move in and out of rural areas on a regular basis due to career moves, reduction in government spending and personal reasons (Eddy, 1998).

The University of Newcastle Family Action Centre's twelve-year ongoing study of the health and social needs of caravan park families has found that there are particular problems for families who move regularly throughout rural and remote Australia (Eddy, 1998). Information gathered has been supported by the 1991 and 1996 *Australian Census of Population and Housing* in that families living in caravan parks tend to be poorer, have lower educational qualifications and are less likely to be employed than other families in the total population (ABS, 1994). Families move for many reasons and have varying patterns of movement, but unless they are able to maximise the opportunities available or to create their own, the experience can result in social isolation and social disconnectedness. Children in particular who have not had secure housing or ongoing education find it difficult to develop social skills. Furthermore, the impact of transience on families can have an effect long after they stop moving (Eddy, 1998). There is a need to further investigate the social impact of transience upon families and upon rural communities.

8.5 SUMMARY

In this chapter, the relationship between various aspects of residential instability and crime across the six types of rural communities was investigated. As the populations of coastal community areas are rapidly multiplying, the impact upon levels of crime should be more closely researched. It is evident that while residential instability is clearly associated with higher rates of crime, it is not a sufficient predictor. Cluster five presents a profile that does not clearly delineate residential instability as being associated with high crime rates. The impact of transience populations upon stability within the families themselves and upon the communities they pass through cannot be accounted for in the data. Further research could investigate the impact of high family mobility on children's social integration and development and the impact of transient populations on crime in rural areas. The difficulties in the collection of data on transient populations could also be further examined.

Chapter 9

CRIME AND FAMILY INSTABILITY

9.1 INTRODUCTION

In this chapter, the issue of family instability and crime is explored. The changing role of the family within Australian society is discussed and the literature focusing upon the relationship between family breakdown and crime is reviewed. Using discriminant analysis, four types of family structures are examined across the six clusters to evaluate the association between family breakdown and crime within New South Wales communities.

9.2 FAMILY INSTABILITY

Most sociologists have regarded the family as the cornerstone of society (Haralambos and Holborn, 1990). Traditionally, the nuclear family is promoted as the ideal-typical institution in which the generalised roles of its members are clearly defined according to the imperatives of the natural social order (Hil, 1998). New perspectives of the family today have challenged many of the assumptions of the traditional view. There are now wide variations in family structure, household type and patterns of kinship networks, as well as great diversity in the roles of family members (Haralambos and Holborn, 1990).

Important social and political change in the early 1970s, saw the introduction of the sole parent pension and no fault divorce, the removal of illegitimacy as a legal term, and the lawful recognition of *de facto* relationships. These changes transformed the nature of families within Australia and have led to a dramatic change in the way children are reared (Daley, 1998). The Australian Bureau of Statistics, *1997 Family*

Characteristics Survey found that of Australia's 4.6 million children aged under eighteen, 1.1 million children live with only one of their natural parents, usually as a result of relationship or marriage breakdown (ABS, 1997b). Eighteen per cent of children were in one-parent families and 8 per cent were in step or blended families. The majority of children, who had a natural parent living elsewhere, were in the sole care of the parent with whom they lived, while 3 per cent of children had parents who shared care between them (ABS, 1997b).

This revolution in the nature of Australian families is a reflection of similar changes occurring within families in other western societies. Nevertheless, the stereotypical nuclear family persists as the dominant ideological representation of tradition and stability. Consequently, any variation upon this family norm is seen as a threat to social order (Hil, 1998). Much of the research has followed the social disorganisation perspectives discussed earlier, and the control perspectives that Gottfriedson and Hirshi describe.

In Australia, as in other western parts of the world, there is growing concern that the decline of the family underlies some of the corresponding rise in juvenile crime. From this perspective, it is the family, through the actions of individual members and its apparent failure to exercise effective care and control, that has contributed to the rise in juvenile offending (Hil, 1998). There has been a call for the return to the stability of traditional family life to prevent the perceived erosion of traditional parenting responsibilities (Hil, 1998). In Australia, politicians and social commentators have named family breakdown and growing parental indifference as leading to diminished care and supervision of children and ultimately the breakdown of social order (Gilding, 1991, cited in Hil, 1998).

Studies have consistently highlighted the link between family breakdown and juvenile delinquency. A meta analysis of 50 research studies (Wells and Rankin, 1991) found a strong relationship between juvenile delinquency and parental separation and divorce. In Canada, the Ontario Child Health Study of 3300 children aged 4 to 16 years discovered children of sole parent families were prone to substance abuse and conduct disorders (Boyle and Offord, 1986). Kolvin, Miller, Fleeting and Kolvin (1988), in a study of 1000 British families found that family breakdown in a boy's first five years predicted his later convictions up to the age of 32 years. More recently, Rephann (in press) in a study of juvenile delinquency in 264 rural communities across four states of America, determined that family breakdown was strongly associated with both property and violent offences.

Studies in Australia have also shown that family breakdown plays a significant role in the development and maintenance of juvenile offending. Sullivan (1997) observed that change in family structure and functioning in Australia, such as divorce, ex-nuptial birth, sole parenting, and women's employment trends, appear to be closely related to increasing crime. Sullivan suggests the findings indicate an association between inadequate socialisation of children and potential offending. In a study of the

relationship between economic and social disadvantage and juvenile delinquency, Weatherburn and Lind (1997) found sole parent families were significantly predictive of juvenile participation in crime.

The 1996 New South Wales Juvenile Crime Prevention Division Consultative Forum with Young People, Local Government and Key Non-government Agencies discovered that participants believed that many young offenders came from dysfunctional families and that the lack of support for families, particularly those in difficulty was a cause for concern. It was suggested that absent fathers and the lack of a positive role model within the family may contribute to juvenile offending. Several of the young people interviewed did not live at home and were also unemployed, and spoke of the difficulty of managing on social security payments. Some young men in detention expressed concern that they may have no home to go to once they left detention (New South Wales Attorney General's Department, 1996).

Family breakdown has been identified as a structural indicator of social disorganisation. Sampson (1987) argued that marital and family disruption decreases informal social controls at the community level. Increased time and financial pressures upon single parents can limit their ability to interact with the wider community and effectively supervise their children. Levels of family disruption within such households is likely to be high. Two-parent households are better able to provide increased supervision and guardianship not only for their own children and household property but also for general activities within the wider community. From this perspective, the supervision of children is not dependent upon one child's family but on a network of family control (Sampson and Groves, 1989). Rephann (in press) found that family breakdown was a critical element of social disorganisation in rural areas suggesting that adults actively engaged in parental roles are especially critical to the systems of relationships that bring formal and informal controls to bear on the behaviour of children in the community.

It appears relevant to the analysis in the present study that we examine the relationship between crime and family instability among the identified clusters of rural communities. It is expected that communities which experience high family instability and therefore have low social cohesion will also experience high rates of crime.

9.3 THE ANALYSIS

Discriminant analysis was employed to examine the relationship between family instability and crime using the six types of communities as the dependent variable and four measures of family instability as the independent variables. These included the proportion or persons married within a community, the proportions who are separated and divorced, and the proportion of sole parents.

The assumptions of normality, linearity and collinearity were established. Wilk's Lambda was significant for all four variables, which indicates that these four aspects of family instability were able to effectively discriminate between the clusters. The overall statistical significance of the analysis is summarised in Table 9.1. Three significant discriminant functions were identified which together accounted for approximately 99.5 per cent of the variance in the data.

Table 9.1:
Canonical discriminant functions.

	Discriminant Functions			
	One	Two	Three	Four
Eigenvalue	1.23	0.38	0.14	0.009
Variance (%)	69.66	21.69	8.12	0.54
Canonical correlation	0.74	0.53	0.35	0.10
Wilks' Lambda	0.282	0.627	0.867	0.991
Chi-square	147.01	54.12	16.6	1.09
Probability	0.00	0.00	0.01	0.58

The character of these three functions can be understood by referring to Table 9.2 which displays the correlations between each of the discriminant functions and the independent variables used in the analysis. Only correlations greater than 0.20 in absolute value are reported as only correlations of 0.30 or higher in absolute value were accepted as sufficient for interpretation (Tabachnik and Fidell, 1989:539).

Table 9.2:
Pooled within group's correlations.

	Function			
Attribute	One	Two	Three	Four
Proportion sole parents	0.96604*			
Proportion of persons divorced	0.29377	0.80440*	-0.41240	-0.31076
Proportion of persons married	-0.61311		0.76402*	
Proportion of persons separated	0.41293	0.39340	-0.26983	0.77583*

The first function was strongly correlated with a high proportion of sole parents in a community. Logically, this function was also positively correlated with more separated and divorced persons and negatively correlated with the proportion of married people in a community. Therefore, this function represented high family instability. The second function was strongly related to a high proportion of divorced persons in a community and was also positively related to the proportion of separated persons. The third function was positively correlated with the proportion

of married persons living in a community and negatively correlated with the remaining variables, and thus represented communities with strong family stability. The fourth function, which was not significant, was positively correlated with the proportion of persons who were separated and negatively correlated with the proportion who were divorced.

The implications of these findings can be understood by reference to figures 9.1 to 9.3. In the figures, the centroids or the means of each cluster are plotted in terms of the discriminant functions. The horizontal axis in the figure represents the first function, and the vertical axis the second, third, and fourth functions respectively, in each figure. The functions are labelled according to the correlations described above. In each figure, the spread of the points along the horizontal axis (the first function) indicates the proportion of sole parents within the population across the clusters.

In Figure 9.1, the spread of points vertically indicates the degree the second function distinguishes the clusters according to the proportion of divorced persons. Here, clusters one, two and five (large urban centres, coastal communities and medium declining communities) had the highest on the proportion of sole parents in their communities. These three clusters recorded the highest rates of crime. Cluster two had more divorced persons, cluster one had average rates, while cluster five had less. Clusters three and four (satellite communities and medium stable communities) had average rates of divorced persons and less sole parents. Cluster three had the least number of sole parents. Cluster six (small farming communities) had less divorced persons and sole parents.

Figure 9.2 displays the spread of points vertically which indicates the degree the third function distinguishes the clusters according to the proportion of married persons. Here, clusters two, three, and six (coastal communities, satellite communities, and small farming communities) had a higher rate of married persons. Cluster four (medium stable communities) had an average rates of married persons but less sole parents. Clusters one and five (large urban centres and medium declining communities had lower proportions of married people with cluster one having the least.

Figure 9.3 displays the spread of points vertically which indicates the degree the fourth function distinguishes the clusters according to the proportion of separated people. Clusters one, two, and five (large urban centres, coastal communities, and medium declining communities) had the highest rate of separated persons and sole parent families, while clusters three, six and four (satellite communities, small farming communities, and medium stable communities) had less.

Figure 9.1:
Proportion of divorced persons and sole parents.

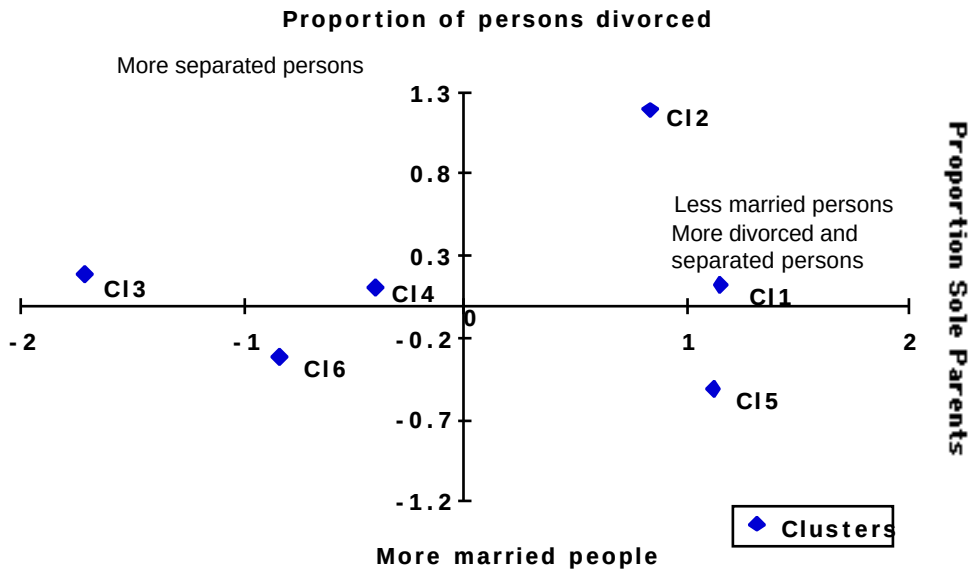


Figure 9.2:
Proportion of married persons and sole parents.

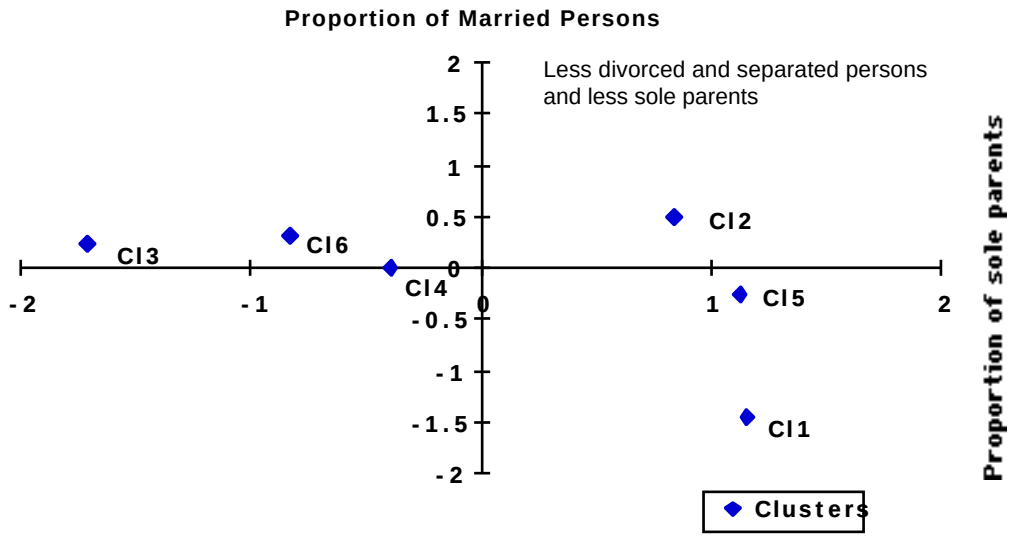
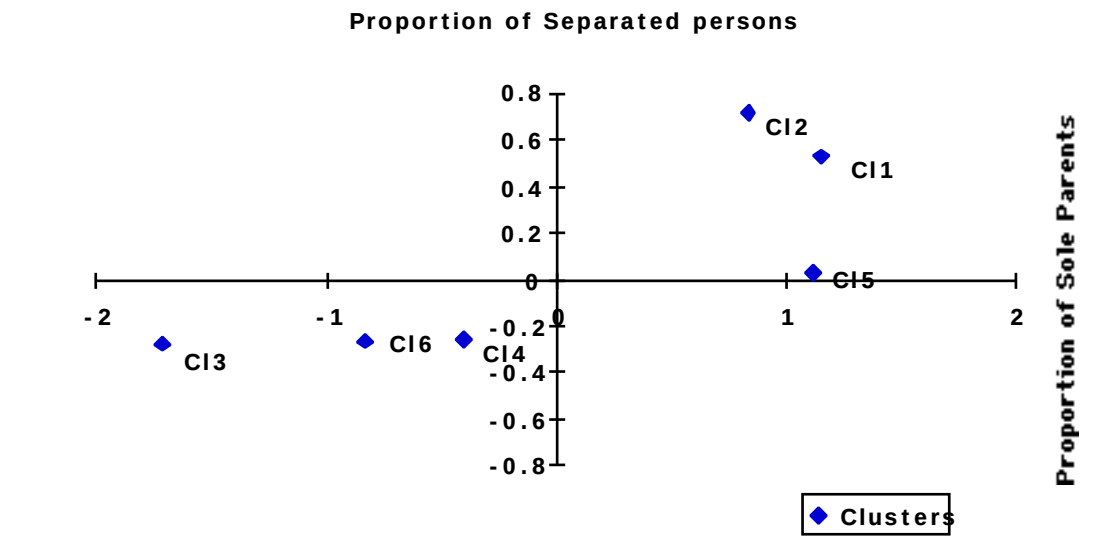


Figure 9.3:
Proportion of separated persons and sole parents.



In Table 9.3, the results of the predictive discriminant analysis are summarised. An indication of the explanatory power, the reliability of the discriminant analysis, is evident by the fact that 51 per cent of the LGAs were correctly classified. Press's Q statistical test for the discriminatory power (Hair *et al.*, 1995, p. 205) revealed that this result was significantly greater than the 17 per cent of cases that would be expected to be correctly classified by chance alone.

Table 9.3 :
Classification results.

		Predicted Cluster					
Actual	No. of Cases	One	Two	Three	Four	Five	Six
Cluster 1	10	7	1	0	1	1	0
		70.0%	10.0%	0.0%	10.0%	10.0%	0.0%
Cluster 2	16	2	12	0	2	0	0
		12.5%	75.0%	0.0%	12.5%	0.0%	0.0%
Cluster 3	31	2	0	13	8	1	7
		6.5%	0.0%	41.9%	25.8%	3.2%	22.6%
Cluster 4	23	0	2	6	9	2	4
		0.0%	8.7%	26.1%	39.1%	8.7%	17.4%
Cluster 5	29	4	2	2	7	14	0
		13.8%	6.9%	6.9%	24.1%	48.3%	0.0%
Cluster 6	13	0	2	3	1	0	7
		0.0%	15.4%	23.1%	7.7%	0.0%	53.8%

9.5 DISCUSSION

The analysis clearly differentiated those clusters which experienced high family instability and correspondingly high rates of crime. Those clusters where there were high proportions of sole parents and separated persons, namely clusters one, two and five (urban centres, coastal communities, and medium declining communities), were associated with higher rates of crime. In contrast, clusters four and six (medium stable communities and small farming communities), had more family stability and also reported lower rates of crime. Clusters one and two had more divorced people while cluster five had less. Satellite communities had the lowest proportion of sole parents but at the same time had more divorced and separated people than clusters four and six. It is likely that many of these satellite communities comprise new suburbs of young families establishing their first home.

Cluster two featured high proportions of married persons as well as divorced and separated people and sole parent families. These findings demonstrate the eclectic mix of people within coastal communities which includes a large proportion of retirees, transient populations, and young people. Cluster five featured high proportions of sole parents, but only average proportions of married and separated persons and had the lowest rate of divorcees. Perhaps there were less couples choosing to marry in this cluster. High rates of crime are associated with this cluster.

Consistently, cluster six (small faming communities), demonstrated the greatest degree of family stability and this cluster reported the lowest rate of crime. These results clearly demonstrate the significant relationship between higher rates of crime and family breakdown, which supports a social disorganisation explanation about the impact of family instability within a community upon levels of crime.

In particular, the analysis identified the strong relationship between the proportion of sole parent families and high rates of crime. Community concern over the decline of the traditional family has frequently pointed the finger at single mothers. Single parent households have been linked with a propensity towards maladjustment, delinquency, and other anti-social behaviours on the part of young people (Hil, 1998). A stereotypical view of a single mother is that she is young, uneducated, poor, with no stable partner, too many children, and dependent on welfare. However, statistics show that the average single mother is 33 years of age, has one or two children, and is divorced (Swinbourne, cited in Daley, 1998).

Jeffs and Smith (cited in Hil, 1998) maintain that the obsession with linking character deficiency and inadequate socialisation to the experience of a single parent home life acts as a smokescreen to obscure the problem of poverty among this group. Studies have shown that poverty is the discriminating factor within the relationship between crime and sole parent families (Weatherburn and Lind, 1997). Weatherburn and Lind (1997)

found children's propensity to become involved in crime was strongly associated with families earning less than $16,000, irrespective of whether they came from one or two parent families. Therefore, family instability as an indicator of social disorganisation may, in fact, be more indicative of economic factors impacting upon levels of crime in a community.

Children raised by a sole parent has been a persistent phenomenon in Australian society. In the past, wars have kept fathers from their families for years. During the depression years, men travelled to seek work leaving their families for long periods of time (Eddy, 1998). Sailors, oil riggers, truck drivers and drovers are occupations which continue to separate men from their children. Swinbourne (cited in Daley, 1998) claims there has never been a period in time where all fathers were around their children all of the time. From the perspective of our study, the crucial finding is that particular types of communities have constellations of family structures that are linked to the amount of crime experienced within them.

Nevertheless, the increasing concern over the decline of family stability is pervasive in society and has underscored many recent developments in juvenile crime control (Hil, 1998). Calls have been made for the return of child care and welfare `back' to the domain of the family where it belongs and for more government support services to encourage greater family self-regulation (Carney, 1984; Simpson, 1991, cited in Hil, 1998). An increasing number of family group conferences, curfews, community panels and a range of family-based crime prevention projects have sought to co-opt or coerce families into an alliance with schools, communities and the state against rising crime (Hil, 1998). For example, over recent years, curfews have been established in many rural towns and cities across Australia. They arise in response to concerns about children and young people 'roaming the streets' at night and in conjunction with rising levels of crime in particular locations. Curfews imply that parents are expected to keep their children indoors after dark and that they are responsible for their behaviour. When children and young people do offend, it is the parents and guardians who are blamed for failing to discharge their responsibilities of care and control (Hil and Bessant, 1998) .

Implicit within this focus on family centred crime management is the assertion that the ultimate cause of crime is not government mismanagement or structural inequality, but rather the moral or interactional failings of individuals and families (Hil, 1998). Failing families, exemplified as sole parent families, are thus perceived as an antithesis to the traditional model of a good stable home. The marginalisation of 'problem families' fails to recognise the responsible and successful sole parent families within the community and evades the need for government support for the percentage of families who do need assistance (Hil, 1998). As such, 'responsibility' is defined narrowly in terms of the apparent culpable actions of parents, while other mitigating factors such as material hardship, poverty, unemployment and socioeconomic disadvantage are pushed to the background. Rather than assisting parents to deal with problems more effectively, calls for increased responsibility may

simply place more pressure on many already over-burdened families (Hil, 1998).

The above discussion indicates that there is widespread disagreement and uncertainty throughout the community as to where, or how much responsibility for crime control should be apportioned to individuals, to families, to the community, and to the state. However, pointing the finger of blame at 'failing families' merely divides communities into 'good people' and 'those people' (Hobbs, 1994b). Such social divisions can lead to a system of segmentation and discrimination, a diminished sense of community, and ultimately increased levels of social disorganisation. The proponents of social disorganisation theory emphasise the community aspect of disorganisation and crime, in that delinquency results from the conditions within the community rather than from any inherent failing within individuals or families. From this perspective, crime should be viewed as a community problem and crime control measures should take an holistic approach.

The changing nature of the family is as much a factor in the continuing evolution of Australian society as is multiculturalism. Consequently, family instability is a fact of modern life and communities need to incorporate these changes into their community if solidarity is to be retained. The concerned advocates of a return to the traditional family can take heart in the fact that young people are still choosing to marry although the percentages have been declining (ABS, 1997c). However, one consequence of modern family life is the loss of the available support of extended family networks. For those families who face difficulties, communities need to provide support rather than blame particular groups within society.

One excellent example of a community support program to assist single parent families is the new 'Uncle Project', developed by Michael Light and based in Byron Bay in northern New South Wales. The project aims to assist the emotional development of boys aged 4 to 15 years in families where no father is present, through extensive mentoring by carefully screened and highly committed male volunteers. By developing constant, supportive relationships through one-to-one interaction with the boys, the 'Uncles' assist them to become emotionally mature, responsible members of society. The effectiveness of the Uncle Project in reversing the propensity for problems will take several years to assess, though initial personal evaluations by the boys, their mothers, and the men who volunteer their services, have been very favourable. The greatest limitation of the program is that requests by single mothers for 'Uncles' to help their sons have been much greater than the availability of acceptable volunteers (Light, 1999).

9.5 SUMMARY

In this chapter, the relationship between rates of crime and family instability was examined. The growing community concern with the decline of the modern family and the corresponding rise in crime has been discussed. The results of analysis of crime and family instability across the clusters of rural communities in New South Wales demonstrates the relevance of social disorganisation theory as an explanation for crime.

The results also support previous research which links family breakdown with higher rates of crime, particularly juvenile crime. Recent community-based crime control policies which focus upon the family as both the source of, and the solution to the problem of juvenile crime, are designed to encourage families to take greater responsibility to combat rising crime. Yet the outcomes of such policies may label and isolate already overburdened families. There needs to be a more holistic approach to understanding crime within communities, and in the planning of community-based crime control initiatives.

Chapter 10

CRIME AND ETHNICITY

10.1 INTRODUCTION

In the previous two chapters, the relationship of residential instability and family breakdown to higher crime rates in rural communities was demonstrated. In this chapter, the issue of ethnic diversity and crime, as it is experienced within Australian rural communities, is examined.

Ethnic diversity in this study is represented by the proportion of Indigenous people and overseas born within the population. The regression analyses described in chapter five found high proportions of overseas born were predictive of higher rates of drug offences in rural communities, while high proportions of Indigenous people were predictive of assault and break and enter crimes, but not motor vehicle theft, malicious damage or drug offences. In chapter seven, trends in ethnic diversity between the clusters revealed that overseas born people were well represented across all clusters of rural communities. Medium declining communities had the lowest proportions of overseas born but had the highest proportions of Indigenous populations. This cluster also had some of the highest crime rates. Previous studies also have shown that rural towns in western New South Wales, which comprise much of cluster five communities, have proportionally large Indigenous populations and have been consistently shown to have high recorded crime rates (Cunneen and Robb, 1987).

In Australia, there is considerable concern within the criminal justice system, governments, researchers, and the wider community regarding the degree of over-representation of Indigenous people in the criminal justice system. Therefore, for the analysis of ethnic diversity in this study, a decision was made to focus upon comparisons of crime between communities with high and low proportions of Indigenous populations, while controlling for factors of social disorganisation. It is very likely that

ethnic diversity, represented by Indigenous populations within these communities, is associated with higher crime rates. However, the real question is whether it is a simple matter that ethnicity is sufficient to predict levels of crime in these communities, or if the ethnicity-crime relationship is more subtle and complex. Therefore, in this chapter, the dynamics between the significant factors of social disorganisation, ethnicity, family breakdown, residential instability, poverty and unemployment are examined to clarify the role of ethnicity upon levels of crime in rural communities.

10.2 INDIGENOUS PEOPLE AND THE CRIMINAL JUSTICE SYSTEM

It is well established that Indigenous people are over-represented in their contact with the criminal justice system in Australia, from arrests through to prison sentences. For juveniles, the degree of over representation is of particular concern. In 1993, for those aged 10 to 17 years, Indigenous persons were 24.2 times more likely to be in custody than non-Indigenous persons, while for those aged 18 to 21 years, the over-representation rate was 9.6 (Dagger, 1993). As the greater proportion of appearances by Indigenous people before courts involve children, Indigenous adults receive harsher sentences due to their prior convictions (Wilson, 1988, cited in Hogg and Carrington, 1998).

Within prison populations, Indigenous people are the most over-represented in offence types involving violence, breaking and entering, breaches of justice procedures and driving offences, but are less represented in fraud and drug offence categories (Walker and Salloom, 1993). Cunneen and White (1995), in an evaluation of the level of Indigenous contact with the criminal justice system compared to non-Indigenous persons, found Indigenous youth tend to commit similar levels of property crimes as do non-Indigenous youth, but that Indigenous youth commit more serious break and enters and are arrested for more public order offences. The authors suggest that these differences are probably due to several factors, such as the exercise of police discretion, different environmental opportunities between urban and rural areas, a culture of resistance against non-Indigenous persons and property, and the level of disadvantage Indigenous people experience with regard to health, economic position, education and welfare dependency (Cunneen and White, 1995).

Several Australian studies have examined the social and economic issues of Indigenous offending in rural towns in western New South Wales, which have been consistently shown to have high recorded crime rates. Some of these towns have the highest rates of assault, break and enter, and public order offences in the State (Carrington, 1996, cited in Hogg and Carrington, 1998). Cunneen and Robb (1987) published among the earliest and most comprehensive analyses of the relationship between Indigenous status and crime. Public order offences constituted the single most common crime for

which Indigenous persons were charged and convicted in these towns (Cunneen, 1992; Cunneen and Robb, 1987).

Historically, in north-west New South Wales, Indigenous people have been consistently viewed as a problem by sections of the non-Indigenous population. Central to this view has been the attribution to all Indigenous people, collectively, the blame for various forms of social disorder (Hogg and Carrington, 1998). Cunneen and Robb (1987) found the Indigenous people in these communities did not see the problem as an Indigenous problem and strongly resented the implication that it was. From their perspective, the problem was a town problem and involved the lack of acceptability of Indigenous people in the town, both socially and economically. Indigenous people also claimed that they were victims of discriminatory practices in the administration of justice. They expressed concern for the future of Indigenous children in the area, where there were very few employment or opportunities available (Cunneen and Robb, 1987).

Cunneen and Robb found there was no substantive evidence for the existence of a supposed crime wave in the region. Large-scale over-representation of Indigenous persons was a distinctive feature of the criminal justice system, particularly for Indigenous youth. There was considerable hostility apparent between police and Indigenous juveniles. Arrests for assault were almost exclusive to the Indigenous community. Violence appeared to be largely contained within the Indigenous community and within that, to a smaller number of people who were involved as victims or offenders (Cunneen and Robb, 1987).

The authors suggest that the high crime rates in these regions could be a result of the fact that local residents were more likely to report crimes than the average Australian, and to view crime more seriously. This concern with crime had led to unrealistic fears about the likelihood of being a victim of crime. Considerable attention by the press given to the alleged crime wave clearly influenced both individual opinion and the level of community concern on various issues related to crime. This resulted in more incidents being perceived as crimes and reported to police. Thus the crime wave became a self-fulfilling prophecy as more reporting resulted in a higher crime rate. Increased police activity in response to public concerns about the breakdown in law and order also led to an increase in the recorded crime rates. In addition, there were higher numbers of police stationed in these regions (Cunneen and Robb, 1987).

Cunneen and Robb (1987) found the lack of work and the social effects of unemployment were recurrent themes in the concerns of Indigenous people interviewed. The poor economic position of Indigenous people was sustained by extremely high unemployment, particularly among younger people, long term unemployment, lower labour force participation, high concentration in low status jobs, and lower median family and individual incomes. The employment situation had deteriorated in these regions due to the economic downturn in rural areas and technological change in agriculture (Cunneen and Robb, 1987).

The study found a large number of juvenile offenders were unemployed at the time of their offence. Educational and vocational qualifications for Indigenous children are much lower than the general community. Frequently, public institutions such as schools were the target of juvenile crime symptomatic of the poor relationship between the Indigenous community and the education system (Cunneen and Robb, 1987).

The region had a higher proportion of single parent families and they formed a higher proportion of all families with children under the age of sixteen years. This combined with the fact that there is a large proportion dependent upon welfare incomes means that poverty is particular strong among Indigenous children. The authors concluded that in areas of housing, health, education, and dependence upon welfare support, Indigenous people (particularly the children and young people), are severely disadvantaged (Cunneen and Robb, 1987).

There appears to be little change in the social climate of these communities since the time of this report. Carrington (1996, cited in Hogg and Carrington, 1998) found the north-west region has the highest rates of assault, break and enter and public order offences in the State. A study of the policing of summary offences in Bourke and Wilcannia for 1994 and 1995 undertaken by the Western Aboriginal Legal Centre found that Indigenous people comprised 94 per cent of those arrested for these offences in those towns (WALS, 1996, cited in Hogg and Carrington, 1998). Race appears to persist as the criterion of local experiences and explanations of crime and is perceived to threaten an otherwise peaceful existence. Significant political activity around issues of law and order continues to be a feature of these regions. The construction of crime as an Indigenous problem serves to enforce the racial divide in these towns and, thus, law and order campaigns become part of the problem rather than a solution. The fact that the overwhelming majority of Indigenous people are not involved in crime of any type is often overlooked. In fact, in many of these western towns, Indigenous leaders are actively involved in trying to solve crime-related problems within their community (Hogg and Carrington, 1998).

Themes of social disorganisation theory are evident in these studies of crime in these rural towns in Australia. An important feature of Shaw and Mckay's (1942) research was that ethnic diversity presents problems of social disorganisation. Kornhauser (1978) building upon Shaw and McKay's model, argued that communities characterised by ethnic and racial heterogeneity, frequent residential mobility, and low economic status are unable to achieve effective social controls. Sampson and Groves (1989) claimed that differences in customs and a lack of shared experience leads to a breakdown in communication and often breeds fear and distrust. Division between primary groups constitutes a lack of social cohesion. It is important to note the distinction between ethnic heterogeneity within a community and its contribution to social disorder, as opposed to simple ethnic differences in offence rates, which have different ramifications.

Therefore, in the following analysis, we will examine the impact of ethnic diversity on crime in rural communities in New South Wales, while controlling for other elements of social disorganisation, such as family and residential instability and economic disadvantage.

10.3 THE ANALYSIS

To examine the significance of ethnicity in rural communities, we chose to examine the differences in levels of crime, comparing communities where there are high and low proportions of Indigenous people, while controlling for other effects of other forms of social disorganisation, namely residential instability, family instability, poverty and unemployment. To achieve this goal, the sample was divided into two groups having high and low residential stability respectively. Analyses of variance were conducted, first using the sample of high residential stability, and second using the sample of low residential stability. The five types of crime (assault, break and enter, motor vehicle theft, drug offences, and malicious damage) were used as the dependent variables and high and low proportions of Indigenous people in the community were used as the independent variables. These analyses of variance were then repeated using a sample of the data divided into high or low family stability and high and low economic disadvantage. Standardised scores were used to permit comparisons of diverse distributions across the analyses.

10.3.1 Residential Stability

To examine the relationship between residential instability and crime across Indigenous populations, we divided the sample into high and low average growth rate. Average growth was strongly associated with the first function of the discriminant analysis which examined residential instability, described in chapter seven. For the sample of communities with low community growth, results were significant (Wilks Λ =0.75408, approx. F(5,63)=4.109, p<0.003), which explained 25 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences for assault (F(1,67)=14.609, p<0.0001, n2=0.18); break and enter (F(1,67)=11.0474, p<0.001, n2=0.14); motor vehicle theft (F(1,67)=5.3049, p=0.02, n2=0.07), and malicious damage (F(1,67)=5.1634, p<0.02, n2=0.07). However, there were no significant differences found for drug offences.

For the sample of communities with high community growth, results were also significant (Wilks Λ =0.77039, approx. F(5,47)=2.80166, p<0.03), explaining 23 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences for assault (F(1,51)=11.6642 , p<0.001, n2=0.19); motor vehicle theft (F(1,51)=9.452, p=0.003, n2=0.17); and malicious damage (F(1,5)=3.9819, p=0.05, n2=0.07).

No significant differences were observed for break and enter or for drug offences in the high growth areas. Figure 10.1 and figure 10.2 display the results.

Figure 10.1:
Differences in means of standardised scores of rates of crimes committed in low growth communities with high proportions and low proportions of Indigenous populations.

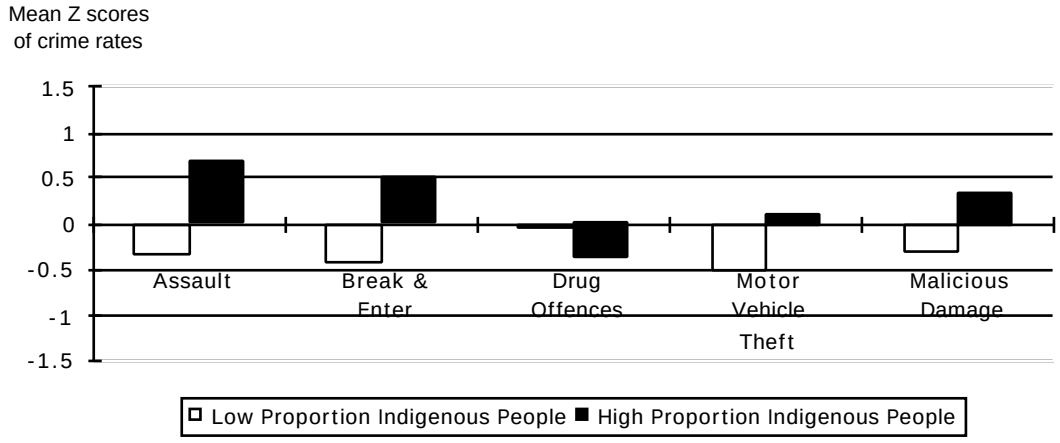
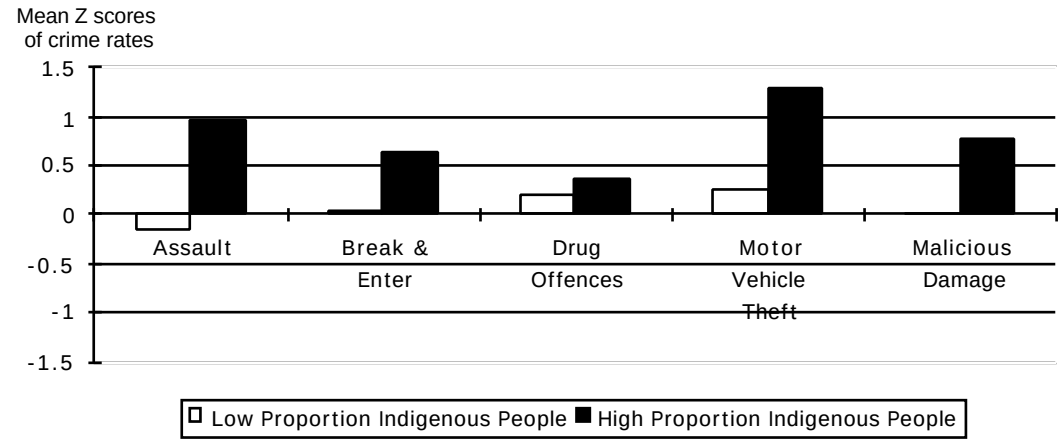


Figure 10.2:
Differences in means of standardised scores of rates of crimes committed in high growth communities with high proportions and low proportions of Indigenous populations.



The results indicate that within communities with a negative growth rate, those communities with high proportions of Indigenous populations are more likely to experience crime than those communities with low proportions of Indigenous people (see figure 10.1). Comparing figures 10.1 and 10.2 reveals, however, a substantial difference in crime among communities with high proportions of Indigenous populations between high and low growth areas. Also communities with higher growth rates, experience more crime than those with low growth rates, irrespective of the size of their Indigenous populations.

To verify these results, the sample was divided into high and low residential stability, that is, the proportion of people who had the same residential address compared to the previous census. Residential stability was the strongest variable associated with the second function in the discriminant analysis described in chapter seven. A significant result was found for the sample of high residential stability communities (Wilks Λ =0.8149, approx. $F(5,64)=2.91$, $p<0.02$) and explained 19 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences for assault ($F(1,68)=11.572$, $p<0.001$, n2=0.15) and break and enter ($F(1,68)=4.345$, $p=0.04$, n2=0.06). No significant differences were measured for drug offences, motor vehicle theft or malicious damage.

For low residential stability communities, the results were also significant (Wilks Λ =0.62785, approx. $F(5,46)=5.453$, $p<0.01$), and explained 37 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences for assault ($F(1,50)=17.868$, $p<0.0001$, n2=.26); break and enter ($F(1,50)=11.449$, $p<0.001$, n2=.19); motor vehicle theft ($F(1,50)=6.659$, $p=0.01$, n2=.12) and malicious damage ($F(1,50)=8.81$, $p<0.005$, n2=.15). No significant differences were measured for drug offences. Figure 10. 3 and figure 10.4 display the means.

Significant differences were found between communities with high and low Indigenous populations, in communities with high residential stability as well as in those with low stability. However, it is evident that areas with low stability experience more crime within communities with high proportions of Indigenous populations, particularly motor vehicle theft and malicious damage.

10.3.2 Family Stability

To examine the relationship between family stability, ethnicity and crime, the sample was divided into high and low family stability, around the mean of the proportion of sole parents in the community. The proportion of sole parents in the community was found to strongly discriminate between clusters in the first function of the discriminant analysis described in chapter eight. We conducted two analyses of variance between crime and communities with high and low Indigenous populations.

Figure 10.3:
Differences in means of standardised scores of rates of crimes committed in communities with high residential stability with high proportions and low proportions of Indigenous populations.

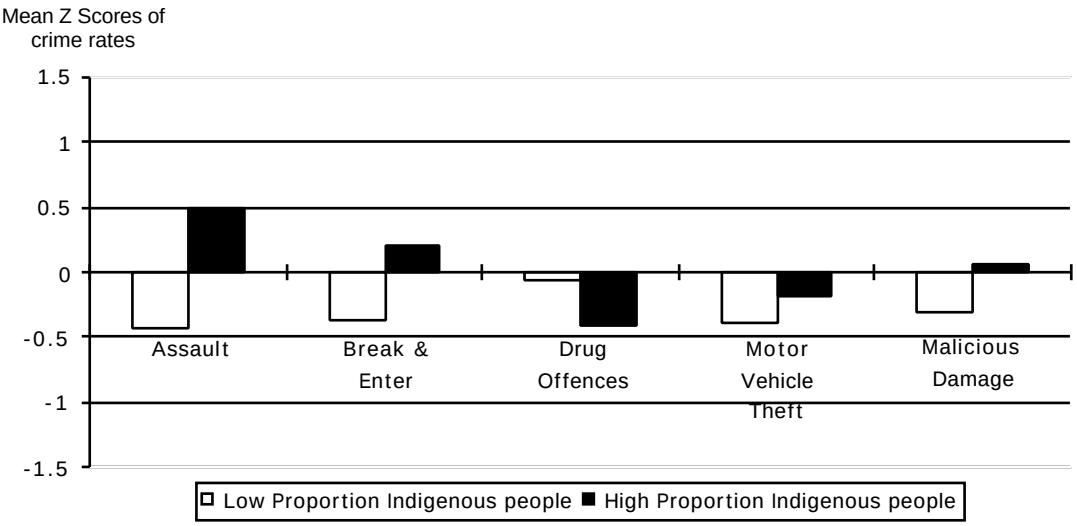
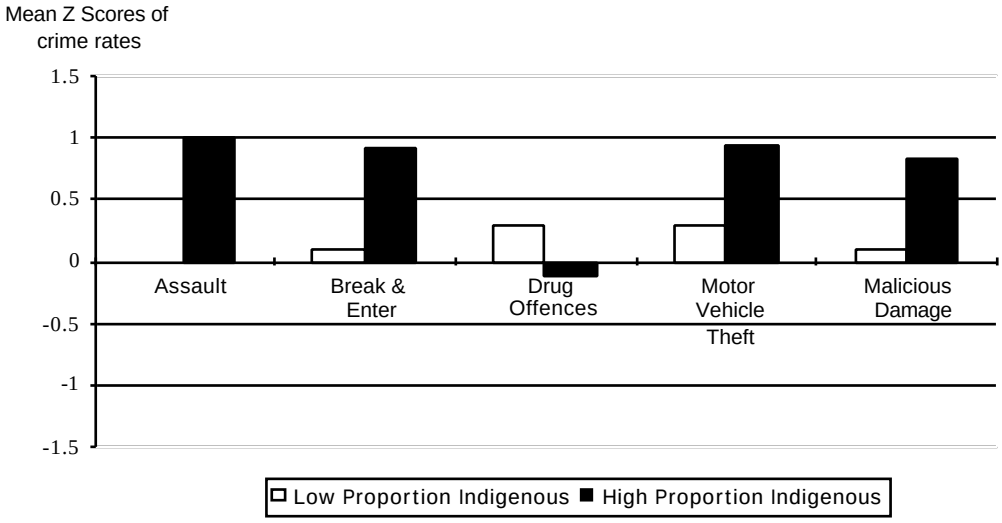


Figure 10.4:
Differences in means of standardised scores of rates of crimes committed in communities with low residential stability with high proportions and low proportions of Indigenous populations.



For the sample of communities with low proportions of sole parent families, no significant difference was found between high or low proportions of Indigenous people in the community across any of the five types of crime. Neither were any significant results found for any of the *post hoc* univariate F-tests for each crime type. In Figure 10.5, trends in the results, show there are differences between high or low proportions of Indigenous people in the community, for assault and malicious damage crimes.

For communities where there were high proportions of sole parents, the results were significant (Wilks Λ =0.59926, approx. F(5,52)=6.95469, p<0.0001) and explained 40 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences for assault (F(1,56)=11.08224 , p<0.002, n2=0.17) and drug offences (F(1,59)=5.08768, p>0.03,n2=0.08). Results were of borderline significance for break and enter (F(1,56)=3.75196, p=0.058, n2=0.06). No significant results were found for motor vehicle theft and malicious damage. Figure 10.5 and figure 10.6 display the results.

To double check these results, similar analyses were conducted using communities where there were high and low levels of married people in the population. In communities where there were high proportions of married people, no real difference was found between high or low proportions of Indigenous people in the community across all five types of crime. Likewise, no significant results were found for the *post hoc* univariate F-tests for each of the crime types.

However, in the second analysis with communities with low levels of married people, the results were significant (Wilks Λ =0.64881, approx. F(5,55)=5.954, p<0.0001) and explained 35 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences for assault(F(1,59)=19.574, p<0.0001, n2=0.25); break and enter (F(1,59)=15.48354, p<0.0001, n2=0.21) and malicious damage (F(1,59)=7.975, p=0.006, n2=0.12). Results were only of borderline significance for drug offences (F(1,59)=3.751, p=0.058, n2=0.06) and motor vehicle theft (F(1,59)=3.155, p=0.08, n2=0.05). Figure 10.7 and figure 10.8 display the means of the interaction.

These findings indicate that ethnicity may be significant but it is not a necessary predictor of crime. Clearly in communities where there is widespread family stability, less crime is reported regardless of the proportion of Indigenous people in the community.

Figure 10.5:
Differences in means of standardised scores of rates of crimes committed in communities with low proportions of sole parent families with high proportions and low proportions of Indigenous populations.

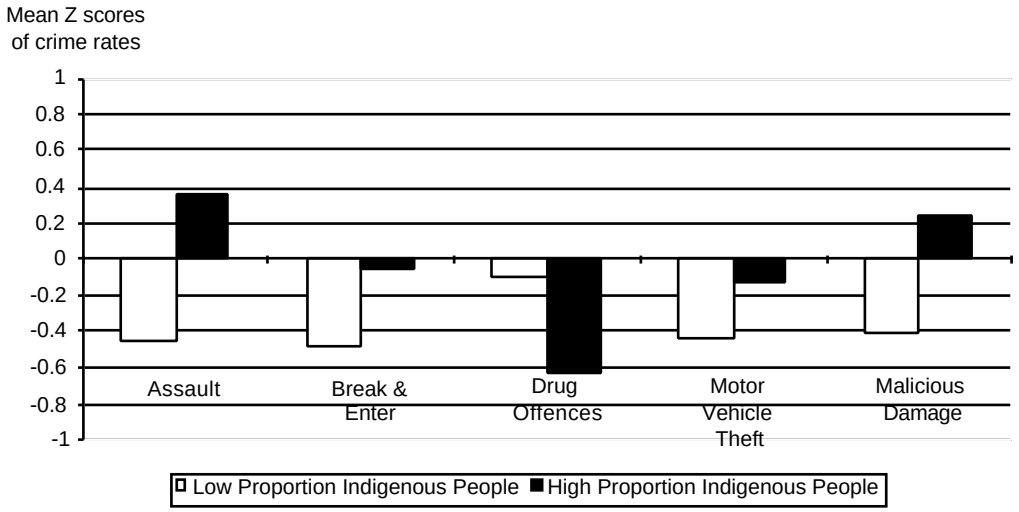


Figure 10.6:
Differences in means of standardised scores of rates of crimes committed in communities with high proportions of sole parent families with high proportions and low proportions of Indigenous populations.

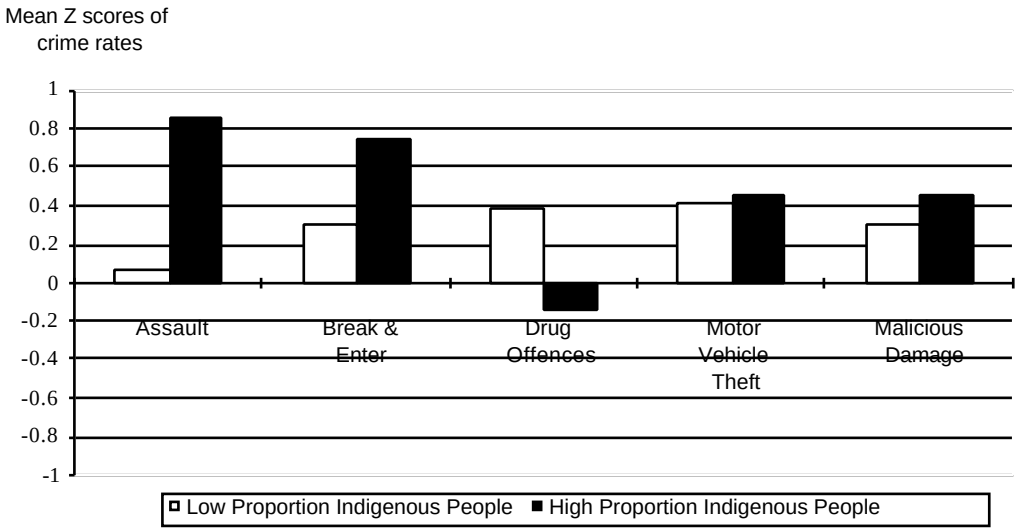


Figure 10. 7:
Differences in means of standardised scores of rates of crimes committed in communities with high proportions of married people with high proportions and low proportions of Indigenous populations.

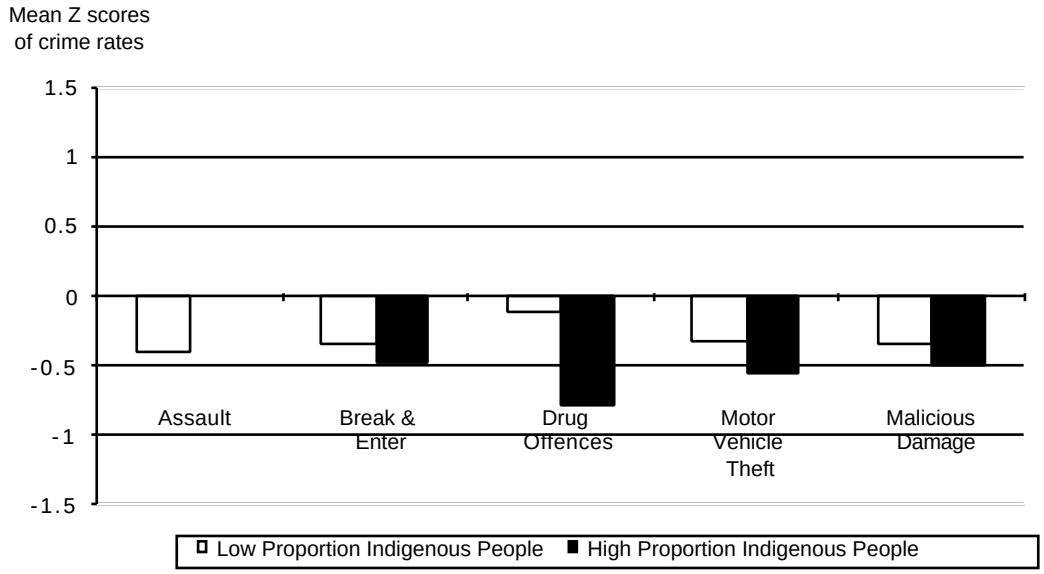
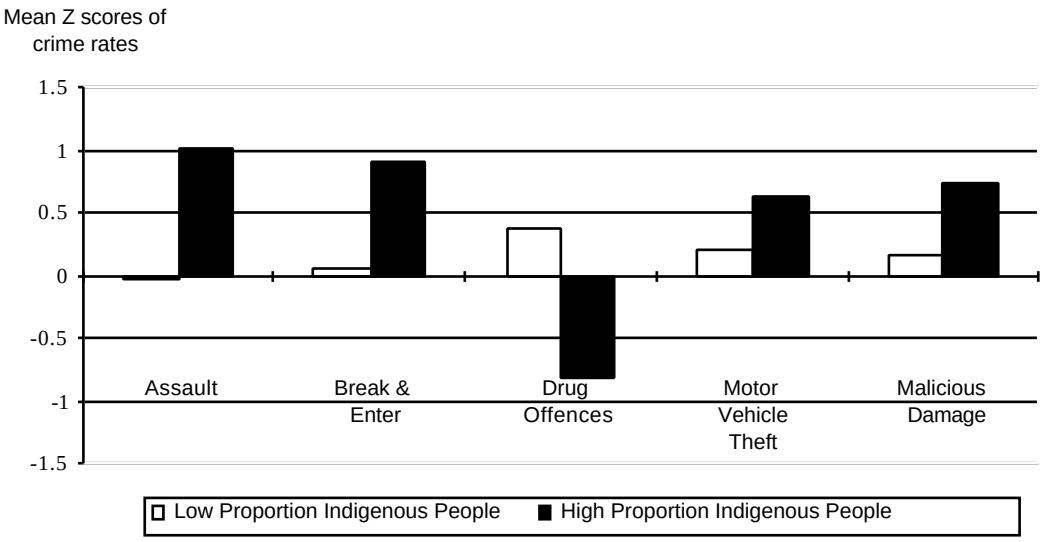


Figure 10.8:
Differences in means of standardised scores of rates of crimes committed in communities with low proportions of married people with high proportions and low proportions of Indigenous populations.



10.3.3 Economic Disadvantage

Previously, in both regression and cluster analyses, economic factors have not proven to be significantly associated with higher crime rates. However, as previous studies have highlighted the issues of economic disadvantage for Indigenous people, a decision was made to run similar analyses in order to examine the relationship between poverty, unemployment, Indigenous populations and crime. The sample was divided into high and low Indigenous employment, around the mean of the proportion of Indigenous people in the labour force in the community. Then, two analyses of variance were performed between crime and high and low Indigenous populations. These were calculated using, first, the sample of communities with high proportions of Indigenous employment and secondly, those communities with low Indigenous employment. Results were significant for both analyses.

For the sample with low employment, results were significant (Wilks Λ =0.72226, approx. F(5,50)=3.84547, p<0.005), and explained 28 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences for assault (F(1,54)=15.29514, p<0.0001, n2=0.22) and break and enter (F(1,54)=5.28757 , p=0.001, n2=0.09). No statistically significant differences were found for drug offences, motor vehicle theft and malicious damage.

For the sample with high employment, very similar results were found (Wilks Λ =0.78421, approx. F(5,60)=3.30199, p=0.01), explaining 22 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences again only for assault (F(1,64)=8.70194 , p<0.004, n2=0.12) and break and enter (F(164)=5.75248 , p=0.02, n2=0.08), but not for the other three offences. These results indicate that there are no substantial differences between high or low levels of labour force participation and differences between high and low populations of Indigenous people and levels of crime. See figures 10.9 and 10.10.

Similar analyses were then conducted by dividing the sample into high or low levels of poverty around the mean of the proportion of the population with incomes less than $25,000 per annum. Very similar results were found. For the sample with low poverty, results were significant (Wilks Λ =0.69043, approx. F(5,47)=4.21475, p<0.003), and explained 31 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences for assault (F(1,51)=15.97354 , p<0.0001, n2=0.24); break and enter (F(1,51)=12.95534 , p=0.001, n2=0.20); and malicious damage (F(1,51)= 6.68664, p=0.01, n2=0.12). No significant differences were found for drug offences or motor vehicle theft.

For the sample with high poverty, results were also significant (Wilks Λ =0.82703, approx. F(5,63)=2.63524, p=0.03) and explained 17 per cent of the variance. *Post hoc* univariate F-tests revealed significant differences for assault only (F(1,67)=9.75935, p=0.003, n2=0.13).

Figure 10. 9:
Differences in means of standardised scores of rates of crimes committed in communities with low proportions of Indigenous people in the labour force with high proportions and low proportions of Indigenous populations.

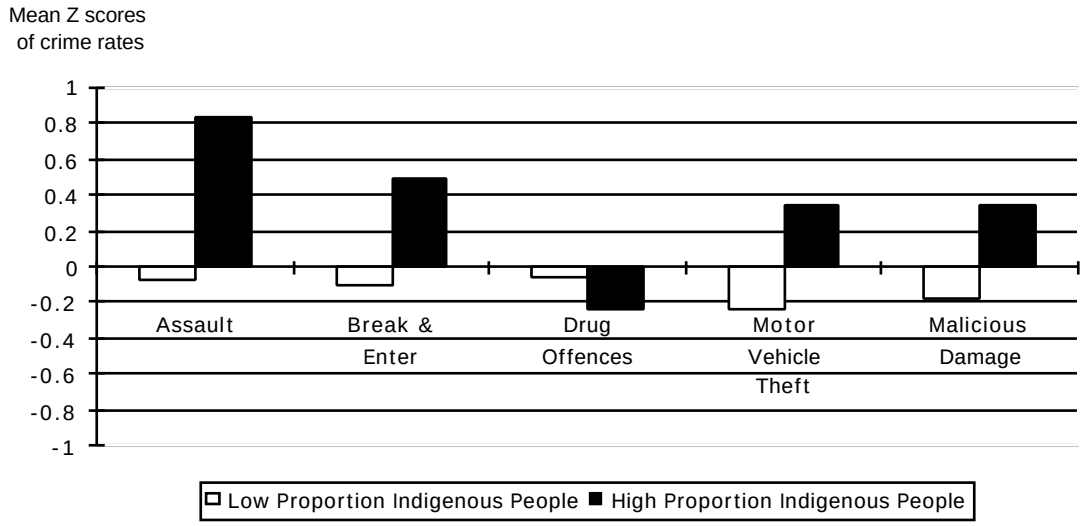
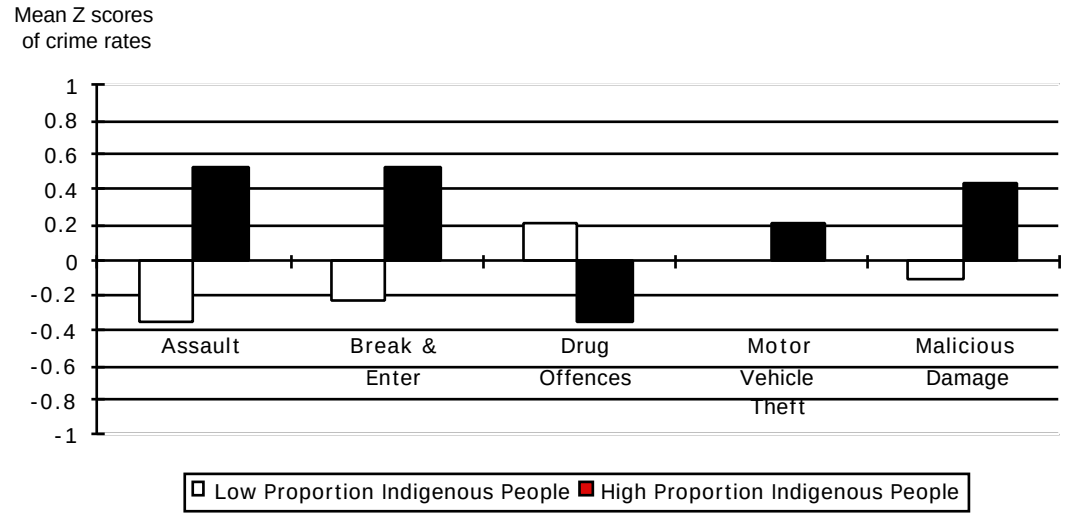


Figure 10. 10:
Differences in means of standardised scores of rates of crimes committed in communities with high proportions of Indigenous people in the labour force with high proportions and low proportions of Indigenous populations.



These results indicate that crime within communities with high proportions of Indigenous populations was more likely to occur in more prosperous communities. Figures 10.11 and 10.12 display the results. Similar trends were evident in the regression analyses previously conducted using the whole sample (see chapter five).

Figure 10. 11:
Differences in means of standardised scores of rates of crimes committed in communities within more prosperous communities with high proportions and low proportions of Indigenous populations.

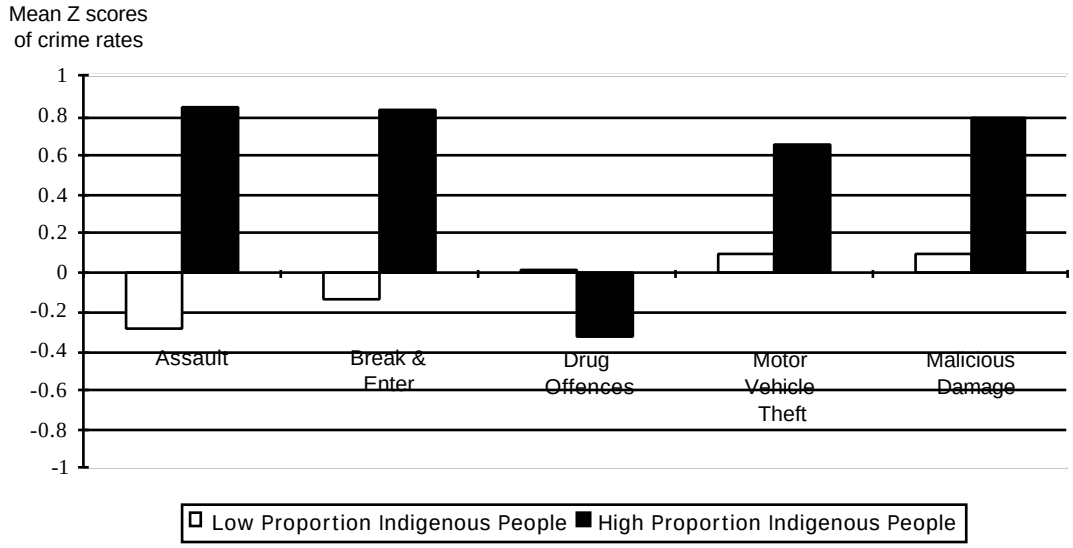
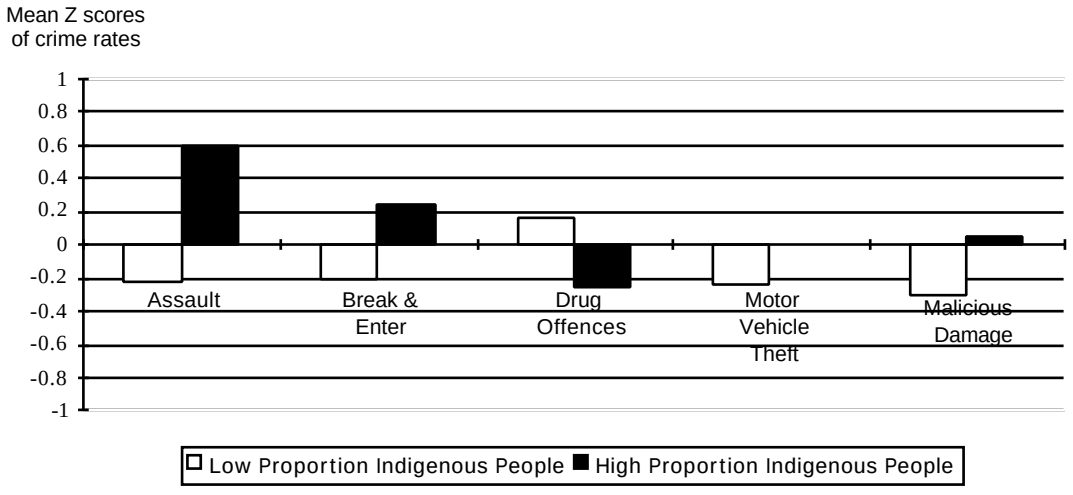


Figure 10. 12:
Differences in means of standardised scores of rates of crimes committed in communities within less prosperous communities with high proportions and low proportions of Indigenous populations.



10.4 DISCUSSION

The aim of the analysis in this chapter was to examine the impact of ethnicity upon crime in rural communities. Crime rates were compared across communities of high and low populations of Indigenous people while controlling for family and residential instability and economic disadvantage.

For residential instability, higher rates of crime were associated with communities with high population growth compared to those communities with low population growth, irrespective of the size of the Indigenous population within these communities. This finding supports residential instability as being predictive of higher crime rates. Areas with high residential instability and high proportions of Indigenous people, experience more assault, break and enter, motor vehicle theft and malicious damage offences than areas with low residential instability.

However, there were differences between communities with high and low Indigenous populations in communities with low average growth. Crime is a problem within communities with high Indigenous populations that were found to be experiencing low average growth. This finding reflects previous findings in the cluster and discriminant analyses where cluster five communities were discovered to be associated with low average growth but recorded higher rates of crime.

The strongest relationship with crime in these analyses of ethnic composition were found for family stability. Overwhelmingly, communities with fewer married people and more sole parents experienced significantly more crime than those communities where family stability was evident. No differences were found between areas of high or low Indigenous populations where strong family stability was apparent. This strongly supports Sampson's (1986) inclusion of family stability as a theme of social disorganisation and its relationship with higher rates of crime. While results of previous analyses have found an association between Aboriginality and higher rates of crime in rural communities, this finding also indicates that ethnicity is not uniquely predictive of crime. These analyses are on a statistical level and require confirmation by more qualitative research in order to describe the exact nature of crime in Indigenous communities. However, there are trends evident in the findings, which suggest that future policy directions should focus more upon family support in areas of high crime and to encourage more family and community solidarity.

Economic disadvantage, as measured by Indigenous labour force participation and annual individual income levels below $25,000, did not prove to have any impact upon differences in crime between communities of high or low Indigenous populations. Devery (1991), in a comparison of crime across New South Wales, found a high correlation between socio-economic variables and conviction rates in the Sydney SD, but found no

such relationship within country areas. Devery suggests that this was probably due the fact that each income group tended to live in particular LGAs in Sydney, whereas country LGAs were not so differentiated. Western inland communities in New South Wales, such as Moree, have proportionately high Indigenous populations and yet is one of the richest agricultural shires in Australia with large agribusinesses and international cotton companies. Yet years of drought and economic decline have rendered some farm families asset-rich but income-poor. The inequity in the socio-economic status of various groups within these communities, including the economically marginalised and under-employed Aborigines (Devery, 1991), is likely to have an impact upon the poverty statistics in this analysis. It is very likely that closer qualitative analysis of cluster five communities, which comprise these agricultural communities, may well find a relationship between economic disadvantage, Aboriginality and levels of crime. Certainly, previous studies have identified this relationship (Cunneen, 1992; Cunneen and Robb, 1987).

10.5 SUMMARY

In this chapter, we sought to establish the nature of the impact of ethnic diversity upon crime in rural communities. Due to the concerns within this country regarding the over representation of Indigenous people in the criminal justice system, the analysis of ethnic diversity was confined to an examination of Indigenous populations within rural communities. Crime was compared across communities of high and low populations of Indigenous people while controlling for three other aspects of social disorganisation, namely family and residential instability and economic disadvantage.

Evidence from other studies, both statistical and anecdotal, indicate there is a need to address the degree of over representation of Indigenous people (particularly Indigenous youth) in the criminal justice system. However, the results of this analysis suggest that policies which target family support are more likely to be effective in reducing the high rates of crime within these communities than punitive measures. There appears to be a complex interaction involving family structure among Indigenous people. Assumptions that Aboriginality is always associated with high crime rates does not hold up. These findings also demonstrate the necessity to look beyond official crime rates to deeper, underlying social and economic factors within rural communities in explanations of crime.

The implication is that the social structure has not been able to accommodate Indigenous people. The task for future policy makers is to develop programs that somehow draw in Indigenous people. Equal opportunity structures, of themselves, may make little, or limited improvement in the participation of Indigenous peoples into mainstream Australian society. Similarly they may do little to reduce crime. Programs

that facilitate family cohesion in the context of all citizens and especially Indigenous peoples, seem to be particularly worth pursuing.

Chapter 11

CONCLUSIONS AND IMPLICATIONS

11.1 SUMMARY

This study was initiated to examine the possible associations between the economic and social characteristics of Australian rural communities and their crime rates. The empirical objective was to calculate the statistical associations between demographic and structural characteristics of rural communities and crime. In particular, the goal was to ascertain inferential relationships between personal demographic characteristics and community structural characteristics with crime. The theoretical objective was to identify how disruptions and changes in social cohesion and integration, as empirically measured, explain crime in rural communities.

This report began with definitions of the terms *crime, rural, community* and *structure* in chapter two. Theories of social disorganisation, upon which the analyses in the research were based, were outlined. A review of the literature on crime in rural areas highlighted the dearth of research in examining crime in rural Australia. From this review, six hypotheses based on themes from social disorganisation theory were developed in order to test relationships between community characteristics and crime in rural Australia.

In chapter three, an overview of crime in rural New South Wales was provided. This chapter highlighted the fact that official crime statistics can be strongly influenced by changes in the willingness of people to report crime, in community attitudes regarding some types of crimes, in the priorities and effectiveness of policing various offences, and in the size of the population within a community. An examination of crime across rural statistical divisions revealed significant differences in the rates of crimes

between regions as well as variations between areas according to the type of offence.

A description of the procedures for analysis in this study was described in chapter four. The first stage of the analysis began in chapter five. Using regression analysis, the relationship between a range of social variables and the incidence of crime across rural communities in New South Wales was explored. Factors predictive of crime varied according to the type of crime. Residential instability, family instability, and ethnic heterogeneity were clearly associated with higher crime rates in rural communities.

The next stage in the analysis was to seek a typology of rural communities to summarise the great diversity of rural areas which could then be used as a basis for further analyses of crime data. In chapter six, LGAs were classified into six clusters, according to their scores on a range of social and economic variables drawn from the census. The six clusters appeared to group according to similar geographical locations irrespective of the fact that no geographical indicators were included in the analysis. Levels of crime were clearly differentiated across the clusters, indicating that crime was related to particular types of social structures that vary according to geographical location.

Chapter seven represents the third stage of the analysis. In chapter seven, trends in crime were examined across the six clusters of rural communities between 1991, 1995 and 1998, and the corresponding trends in social characteristics between the census years of 1991 and 1996. There appear to have been an overall increase in the rates of crime since 1991 across most crime types. In particular, assault, sexual assault, break and enter and malicious damage offences, increased steadily across the time period, and occurred in greater proportions in some rural clusters in comparison with the Sydney SD. Trends in social characteristics revealed a relationship between high residential instability, high family instability and ethnic diversity and higher crime rates. No significant relationships were found between economic measures and crime.

The final stage includes a focused investigation of the relationship between crime rates and three aspects of social disorganisation, namely residential instability, high family instability and ethnic diversity across the six types of rural communities. In chapter eight, residential instability was found to be clearly associated with higher rates of crime. Yet, the relationship was not straightforward. Cluster five (medium declining communities) presented a profile of population decline and high crime rates that differed from other clusters that experienced population growth in conjunction with high crime. Cluster five may experience residential instability in the form of transient families that pass through these districts seeking seasonal employment. The impact of transient populations upon the stability of communities, could not be accounted for in the data.

In chapter nine, the role of family instability was considered. A strong relationship was found between high rates of family breakdown within a

community and higher levels of crime. The growing community concern with the decline of the modern family and the corresponding rise in crime was discussed. In chapter ten, the issue of ethnic diversity and crime within rural communities was tested. As there is considerable concern within the criminal justice system, governments, researchers, and the general public regarding the degree of over-representation of Indigenous people in the criminal justice system, the focus of this analysis was upon comparisons of crime between communities with high and low proportions of Indigenous populations, while controlling for factors of social disorganisation. Results revealed the strong impact of family breakdown upon crime rates within rural communities. Communities with less family breakdown and more married persons experienced low crime rates, regardless of the proportions of Indigenous people within the population.

11.2 IMPLICATIONS

The analyses in this study have clearly identified important social factors that are associated with crime in rural New South Wales, and the locations in which those social factors are present. Association, of course, does not imply causation. As the data used in this analysis included the total population of rural New South Wales and was therefore not a random sample, the findings cannot be generalised to other populations. It would be useful to conduct further research to replicate this study in other states in order to re-test and verify the results.

The most important general finding in this study has been that crime is related to social structures that vary across identifiable types of geographic locations. The areas with highest crime varied, surprisingly, from the largest to nearly the smallest by population size. This finding indicates the enormous diversity of the relationship between social and geographic factors and crime. It dispels the notion that all small communities have less crime than all larger urban centres. While small towns generally have less crime, conditions of serious social disorganisation can lead to very high crime even in relatively small communities.

The hypothesis that a cumulative effect of crime will be evident, in that the more one type of crime is found, the more other types will be found was not supported. It was discovered that there were some interesting differences in rates of crime and types of crime across different kinds of rural communities. Rates of assault were found to be concentrated in a small number of highly disorganised communities. Thus, rural places, *per se*, did not have high assault. The findings further indicated that the five measures of crime were operating somewhat independently of each other. This suggests that each crime may be a marker of a different mix of causal factors. While the overall crime rates for some clusters were similar, the frequencies by which particular crimes are committed were very different. Medium declining communities have comparatively (and absolutely) high assault rates, while large urban centres have comparatively high motor

vehicle theft rates. The small farming communities, which consistently recorded the lowest rates of crime across the clusters for all five crime types, were found to have the highest rates of stock theft.

The information gleaned from this research demonstrates the vital need for crime statistics to be collected and published at the small area level. Such information is essential for the future development of crime prevention strategies which can be designed for particular community types. Ideally, uniform recording methods across all states in Australia at a small area level such as the LGA, should be established. This would enable the ABS to produce national crime data which would allow comparison of crime across small communities, between States, and between rural and urban areas as well as with other nations.

Rural data appear to be a promising source of information for conducting systematic tests of competing theories. Consistently throughout these analyses, the themes of social disorganisation theory, which were originally derived from comparisons among urban neighbourhoods in Chicago, have proven to be a very relevant explanation of crime within rural communities in Australia. Clusters of rural communities with high residential instability, high family instability and ethnic diversity were clearly associated with higher crime rates. Systematic theory testing of competing theoretical orientations would be a valuable contribution to criminological literature in Australia.

The hypothesis that high rates of crime would be positively associated with communities which experience high residential instability, and would be negatively associated with communities with stable populations was supported. However, the findings suggest that residential instability can be manifested in population decline in rural communities as well as in rapid growth. It is evident that there are qualitative differences in the experiences of residential stability and crime across diverse rural communities. Other social structures, including other elements of social disorganisation, may be mediating the relationship between residential instability and levels of crime.

The hypothesis that high rates of crime would be positively associated with communities with high family instability and negatively associated with communities with low family instability was also supported. From the strength and consistency of findings, it appears that family breakdown is a particularly vital element of social disorganisation within rural communities in Australia. In particular, the proportion of sole parents in a population was significantly associated with higher rates of crime. Thus, policies which support families in need are more likely to be effective in reducing the high rates of crime within these communities than are more punitive crime control strategies.

The hypothesis that high rates of crime would be positively associated with communities with high ethnic diversity and negatively associated with communities with low proportions of ethnic populations, was partially supported. The examination of ethnic diversity focused upon levels of crime comparing communities with high and low proportions of Indigenous people while controlling for other elements of social disorganisation. Hogg and Carrington (1998) have criticised the trend in research on rural crime that uses race as an analytical grid to describe and evaluate the scale of crime problems in rural communities. While the brief for the present study called for the consideration of the issue of Aboriginality and crime, the authors could be accused of following a similar path. However, the findings clearly demonstrated the fallacy of singling out one social factor for examination in relation to crime. While the results of analysis clearly indicate an association between high proportions of Indigenous people within a community and high rates of crime, when examined in relation with other conditions of social disorganisation, these results were qualified. These findings demonstrate the necessity to look beyond descriptive summaries of official crime rates to deeper, underlying social and economic factors within rural communities that can only be derived from a multivariate analytical approach, or from a more in-depth case study, qualitative approach.

The hypothesis that high rates of crime would be positively associated with communities with high economic disadvantage and negatively associated with more affluent communities was not supported. However, economic measures may be a hidden dimension responsible for some community characteristics that in turn predispose crime. For example, high unemployment may lead to population and family instability. Poor economic conditions exist in small farming communities, which have the lowest crime. However, coastal communities and medium declining communities experience both high social disorganisation and high economic disadvantage, and their high levels of crime are the consequence. It is also likely that economic factors mediate in the strong relationship between crime and the proportion of sole parents in a population. There is a need for a closer examination of the mediating role of economic factors in the relationship between elements of social disorganisation and crime.

The first hypothesis, that an absence of social cohesion would be associated with higher rates of crime and that smaller, more cohesive communities would be associated with lower levels of crime was sustained throughout the analyses. It is clear that factors of social disorganisation influence the rates of crime experienced in rural areas. It may be concluded that policies to address these elements of social disorganisation would offer appropriate solutions to crime control. However true this conclusion may be, it is necessary to remember that the original proponents of social disorganisation theory emphasised the 'community' aspect of explanations of crime. Strategies which only focus upon persons and individual families who have been identified as being 'at risk' for committing crime, could lead to further disintegration of social cohesion. Residential instability and ethnic diversity are facts of life within a modern multicultural nation such

as Australia. Furthermore, it is unlikely that Australian society will return to a predominance of traditional ideal/typical family models, although there maybe cyclical trends in family values. There will always be elements of social disorganisation within society. Therefore, there is a need for a more holistic approach to understanding crime within communities, and in the planning of community-based crime control initiatives rather than focussing upon one particular perceived cause of crime, such as sole parent families or Indigenous populations. Programs that support communities and the families and individuals within them will more effectively address the social problems within communities.

An example of a holistic approach in community crime prevention is a new rural crime prevention planning technique developed by the New South Wales Attorney General's Department Crime Prevention Division, that incorporates community participation (Shipway and Homel, 1999). First, the range of crime issues of concern to the local community are identified. Then local crime issues are prioritised through consultation with the community. Crime Profile Reports (CPRs) for each of the priority issues are then developed. CPRs describe locations, victims, perpetrators, circumstances, times, incentives and opportunities, and consequences of local crimes. CPRs also allow comparison of local crime characteristics with crime characteristics in other localities. Once critical components which combine to cause the occurrence of a particular crime in the community are identified, strategies for addressing local crimes are developed (Shipway and Homel, 1999). An approach of this type could further incorporate knowledge about the socially disorganising characteristics of any particular community into the strategies for preventing future crime.

11.3 FURTHER RESEARCH

Several possibilities for further research on crime in rural communities in Australia have emerged through the course of conducting this study. It would be important to extend the present study to other states to ensure that the findings generalise beyond rural New South Wales. A comparison of the findings of the present study with a closer examination of crime in rural communities through self reports of offending and victimisation surveys would highlight the discrepancies between official crime rates and the actual occurrence of crime. The degree of influence of a small town environment on the trends and patterns in the reporting of crime would be identified. The use of secondary data that record more specific characteristics of the crime and of those charged with the offence, would be especially valuable. It would help reduce the potential of ecological fallacy operating because it would measure acts and actors rather than merely the conditions affecting them. It is important to note that the quantitative analysis conducted in this study is but *one* method of analysis of crime in rural communities. The high variability in the data demonstrates the need for conducting qualitative case studies of individual communities in order to gain a much deeper understanding of the dynamics of crime and social factors within a

rural community. Closer examination of the size and strength of relationships or 'ties' within a community and crime rates would be interesting. The typology of rural communities identified by the cluster analysis within the present study could be a useful starting point for examination of a wider range of social problems, such as suicide or domestic violence.

There are clear trends evident in the crime rates across clusters that can guide further analysis of particular crimes. It would be beneficial to expand the range of crimes for comparison between communities to include a range of violent crimes. It would be useful to analyse data on the incidence of domestic violence and child sexual assault within rural communities to more closely examine the high rates of assault crimes in rural Australia. One issue would be to ascertain if all varieties of assault covary or if there are distinct patterns that distinguish different types of violence. The trends and patterns of reporting sexual assault crimes in rural areas would also be of interest. The finding that drug violations are ubiquitous and are interacting with other types of crimes in extremely different ways, is especially worthy of further pursuit. A closer examination of the nature and extent of crime which is specific to primary production in rural areas would also be very worthwhile. For example, cluster six, small farming communities, had the lowest rates of crime across all of the clusters, except in relation to stock theft. Trends and patterns in crimes such as stock, chemical, fuel, machinery and equipment theft, vandalism, and arson could also be examined.

Rural communities in Australia present different dynamics among structural variables which provide unique opportunities for testing and expanding theoretical issues. Further research could expand the range of structural variables to include factors, such as numbers of police in each area, which can influence crime rates, and more measures of poverty, such a size of household and welfare dependency. Future research should attempt to seek out information accompanying crime data on the ethnicity, gender and age of offenders. Unfortunately, such data which would have enriched the analysis of the present study, was unavailable.

The examination of residential instability highlighted the need for research on the social impact of transient families upon rural communities. There is also a need to investigate the impact of high family mobility upon transient families themselves, particularly on children's social integration and development. The difficulties in the collection of data on transient populations could also be examined. Closer investigations on the impact of rapid population growth within coastal communities, and the population decline within the medium declining communities, upon levels of crime and other social problems should be conducted.

The positive relationship between family instability and crime rates was one of the strongest findings of the present study. An examination of this relationship within rural communities to include measures of parental

style, parental conflict, single parents, blended families, and poverty in this equation would be valuable.

While the problem of over-representation of Indigenous people within the criminal justice system remains a serious concern, our findings suggest that future research should take a holistic approach in examining these issues at a community level. Comparisons between communities with high and low proportions of Indigenous populations may clarify the nature of crime within rural communities.

Finally, there is a need to conduct research on the relative effectiveness of crime prevention programs in rural areas. Given the heterogeneity of rural communities, it would be important to compare variations in effectiveness between programs standardised across communities versus programs that allow for variation in local implementation. Such analyses would have implications for the future development of policies and programs.

11.4 CONCLUSIONS

Crime in rural Australia has been a little studied phenomenon. Yet this issue is of vital importance to the well-being of all Australians. This report has demonstrated that crime is increasing in rural areas. Furthermore, rates for some types of crime far exceed those of the Sydney metropolitan area. An increase in crime can be seen as a threat to social order and the economic future of rural communities. Violence, which has been demonstrated to be comparatively common in some types of rural communities, is the most crucial threat. The characteristics of rural populations, their living conditions, and their problems, are distinct from urban centres. There is a need for ongoing research into the issues surrounding crime in rural communities in Australia.

11.5 RECOMMENDATIONS

The following recommendations have been drawn from the findings of this study.

- **Recommendation 1**

  That more research be conducted on the relationship between the unique social characteristics of rural communities and their experience of crime.

■ Recommendation 2

That further studies examine the trends and patterns in the reporting of crime by the general public in rural areas and the factors that effect crime data in rural areas.

■ Recommendation 3

That further research be conducted to extend the findings of the present study to other states of Australia.

■ Recommendation 4

That the Australian Bureau of Statistics seek to establish nationally, uniform recording and collection methods of small area data on crime, to enable analysis of crime to be conducted at a community level. Furthermore, that the Bureau publish data at the small area level such as the Local Government Area, to allow comparison between diverse communities, regions, and states.

■ Recommendation 5

That official crime statistics be broadened to include more information on the characteristics of criminal acts and of those persons charged and processed through the criminal justice system for those acts.

■ Recommendation 6

That further research be conducted on assault crimes, especially domestic violence and child sexual assault, within rural communities.

■ Recommendation 7

That further research be conducted on the nature and extent of agricultural crime, including livestock, machinery and farm supply and commodity theft, malicious damage to agricultural property and the economic impact of agricultural crime on the economic and social well-being of farm families.

■ Recommendation 8

That further research be conducted to investigate the nature of the impact of high population mobility upon rural communities and upon transient families.

■ Recommendation 9

That further comparative research be conducted on the impact of rapid population growth within coastal communities and the population decline within some inland communities upon levels of crime and other social problems.

■ Recommendation 10

That further research be conducted on the problems of family breakdown within rural communities.

■ Recommendation 11

That future research take a holistic approach in examining the issues of Indigenous offending, incorporating comparisons between communities with high and low proportions of Indigenous populations to clarify the relationship between ethnicity and crime within rural communities.

■ Recommendation 12

That more research be conducted on the mediating role of economic factors in the relationship between other factors of social disorganisation and crime within rural communities.

■ Recommendation 13

That future crime control programs be more holistic and more community based rather than targeting one particular social problem in isolation.

■ Recommendation 14

That State Governments and the Commonwealth Government provide more funding and support for organisations that provide support and counselling for families in need within rural communities.

■ Recommendation 15

That more community level crime prevention programs be implemented in rural communities.

■ Recommendation 16

That given the variability within rural communities, further research be conducted on the relative effectiveness of crime control and crime prevention programs both within the diverse contexts of different kinds rural communities.

LIST OF ABBREVIATIONS

Australian Bureau of Statistics	ABS
Australian National Classification of Offences	ANCO
Australian Standard Geographical Classification	ASGC
Bureau of Crime Statistics and Research	BOCSAR
Collection District	CD
Computerised Operational Policing System	COPS
Crime Profile Reports	CPR
Local Government Area	LGA
National Roads and Motorists' Association	NRMA
Statistical Division	SD
Statistical Local Area	SLA
Statistical Sub-Division	SSD
Western Aboriginal Legal Centre	WALS

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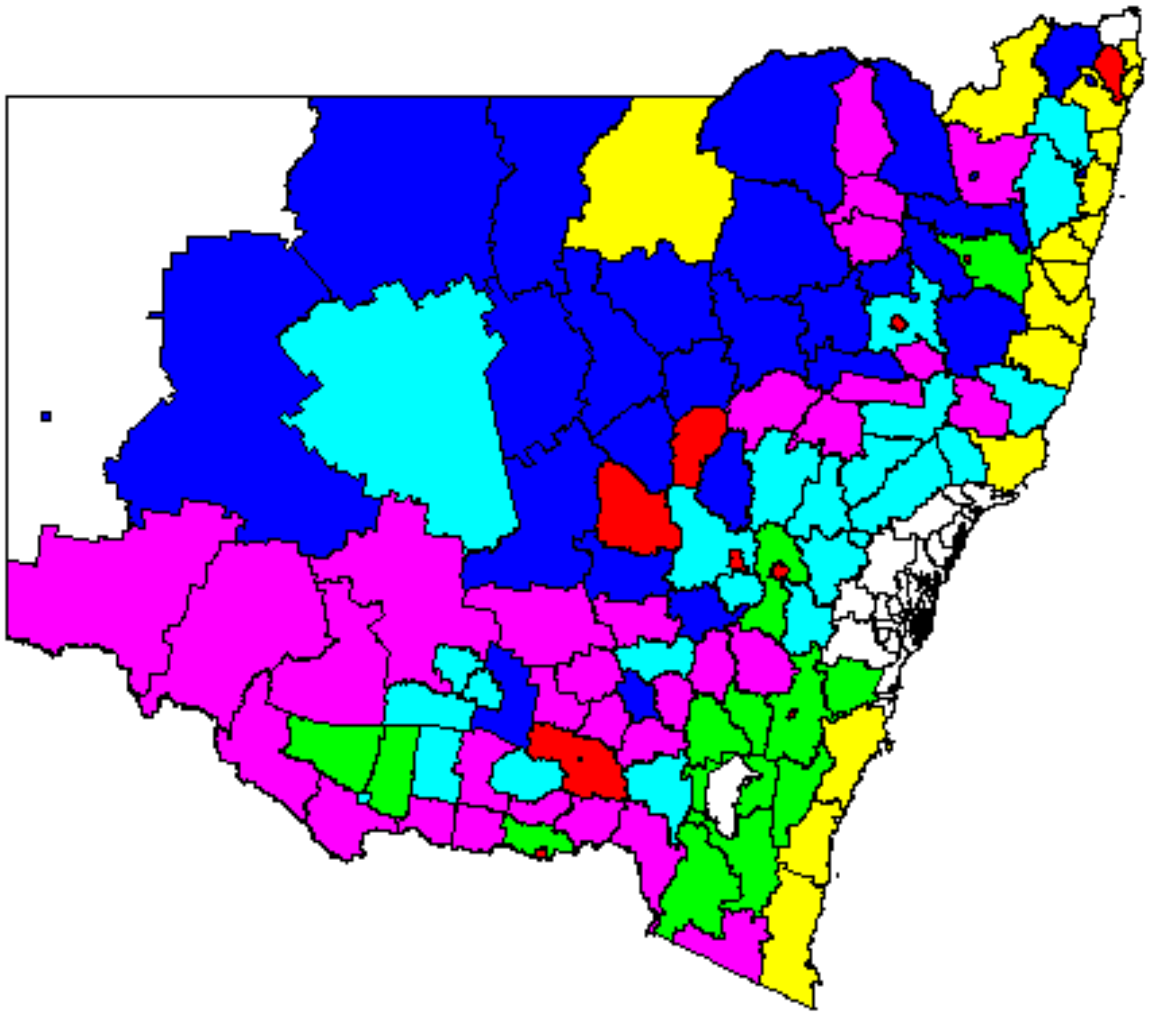
Appendix 1

Crime Rates per 100,000 by LGA in New South Wales, 1998.

Map of New South Wales displaying the clusters of social variables



- Metropolitan areas and Unincorporated Far West
- Cluster 1: Urban centres
- Cluster 2: Coastal communities
- Cluster 3: Satellite communities
- Cluster 4: Medium stable communities
- Cluster 5: Medium declining communities
- Cluster 6: Small farming communities

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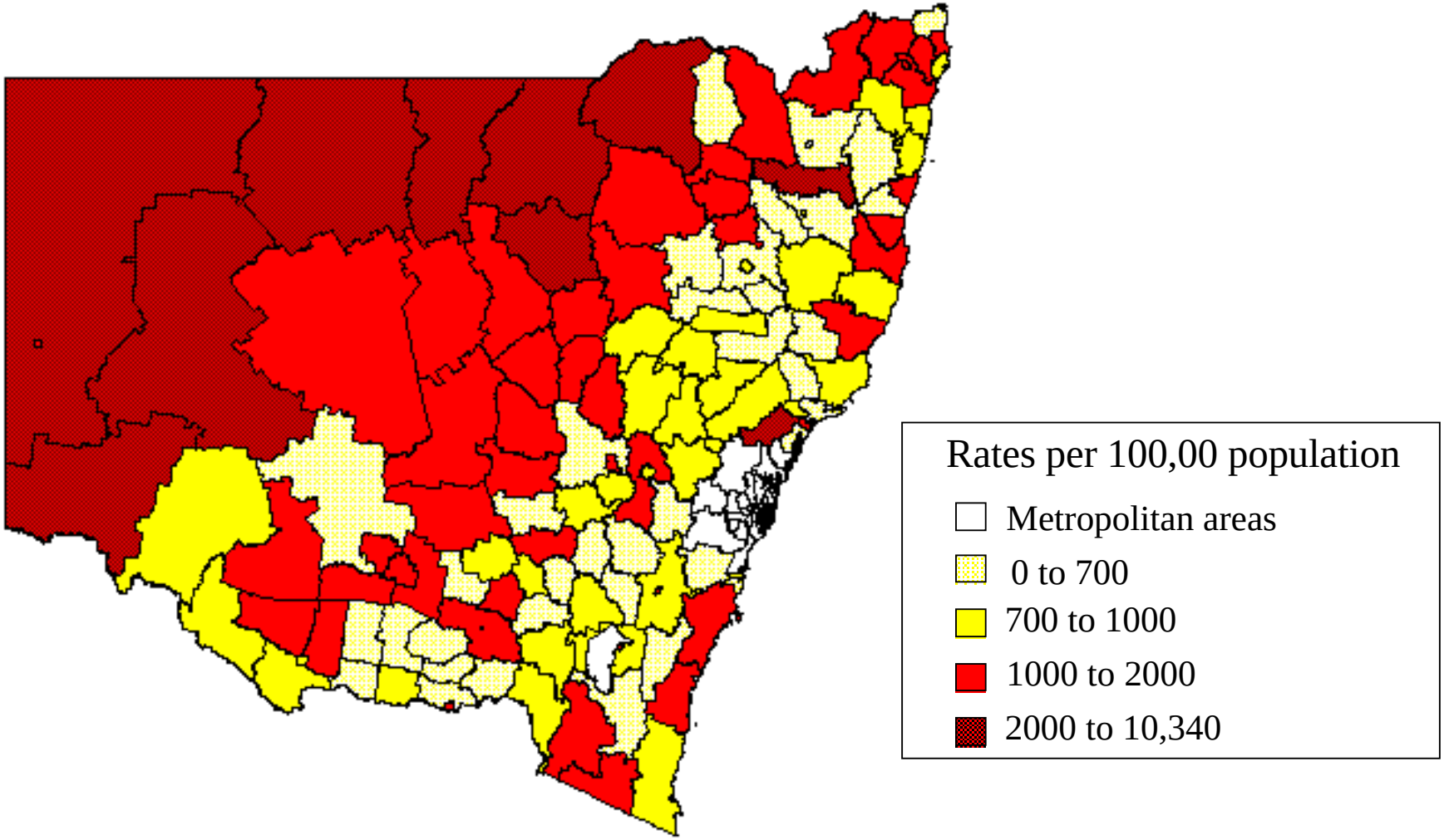
Rate of assault offences per 100,000 population for 1998



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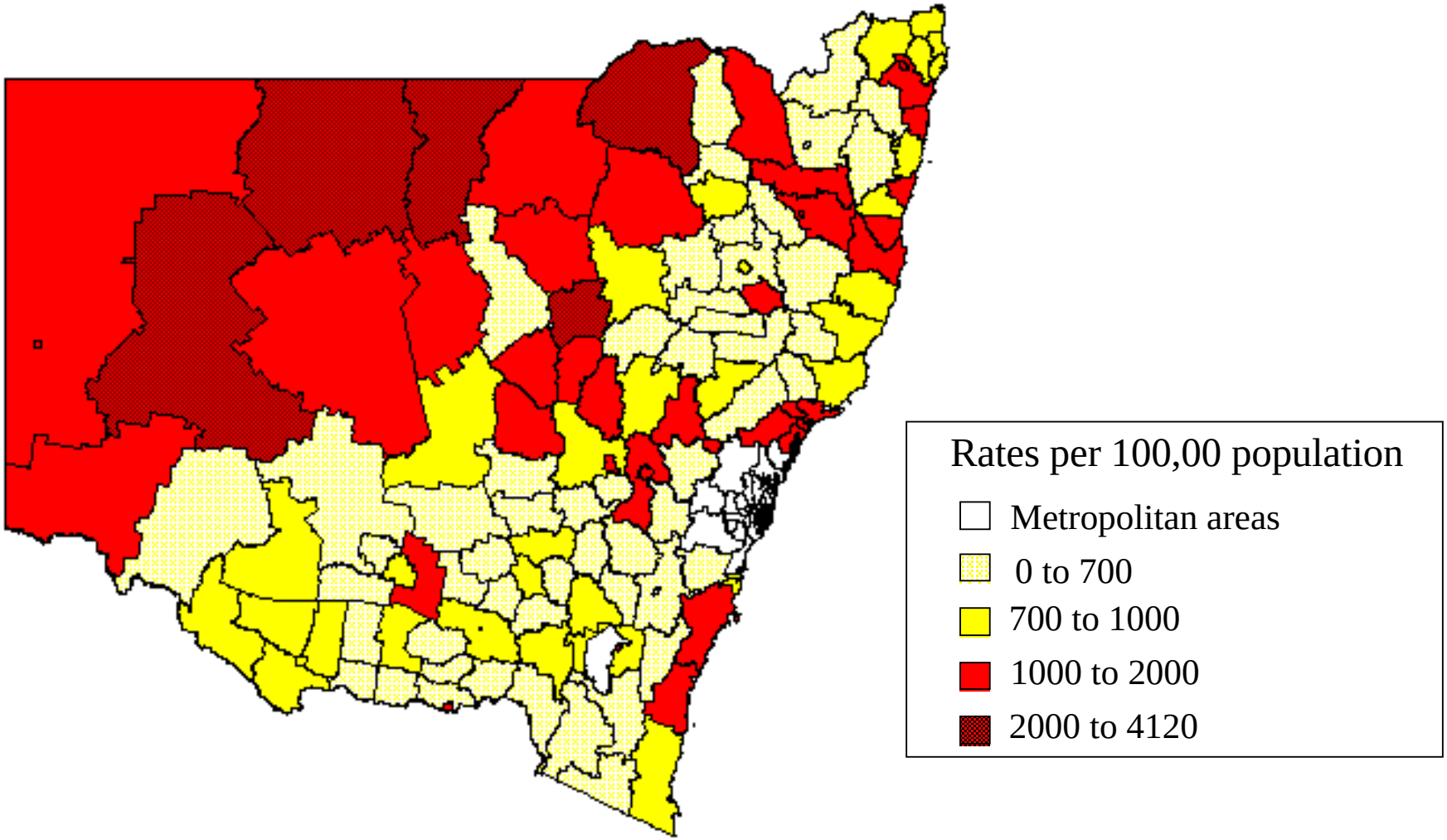
Rate of break and enter offences per 100,000 population for 1998



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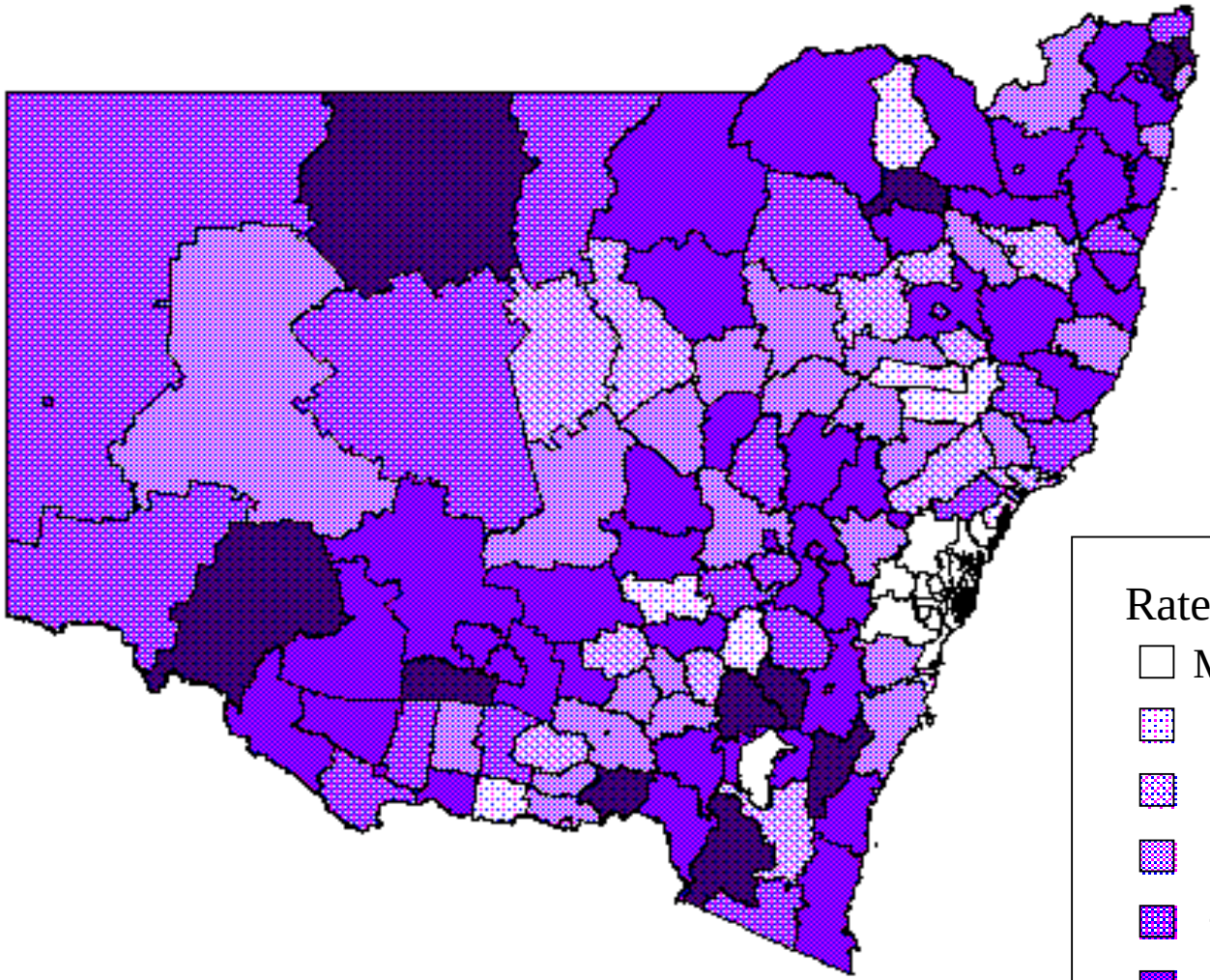
Rate of drug offences per 100,000 population for 1998



Rates per 100,00 population

- Metropolitan areas
- 0 to 200
- 200 to 300
- 300 to 400
- 400 to 500
- 500 to 1000
- 1000 to 3240

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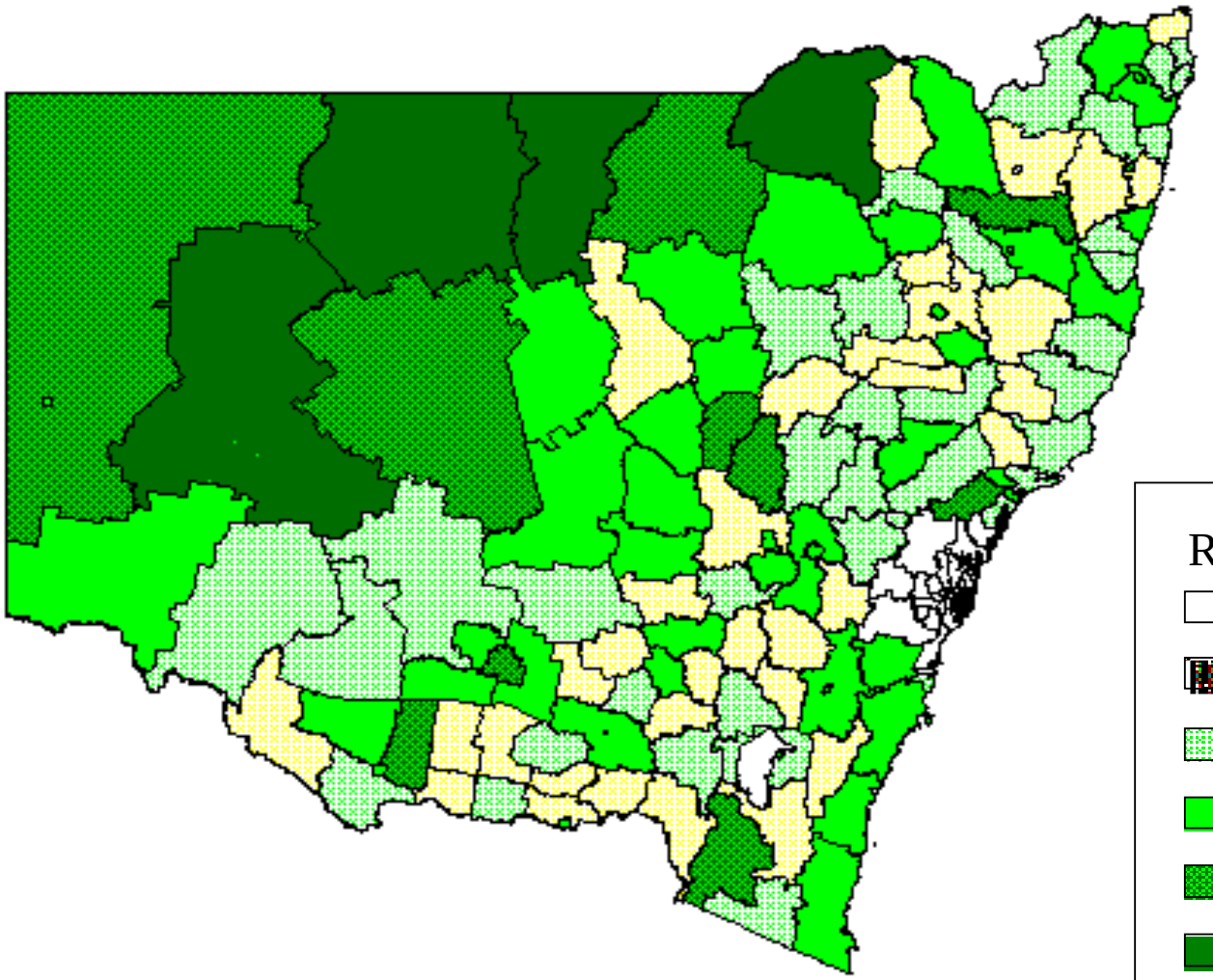
Rate of malicious damage offences per 100,000 population for 1998



Rates per 100,00 population

- Metropolitan areas
- 0 to 1000
- 1000 to 1500
- 1500 to 2000
- 2000 to 3000
- 3000 to 6300

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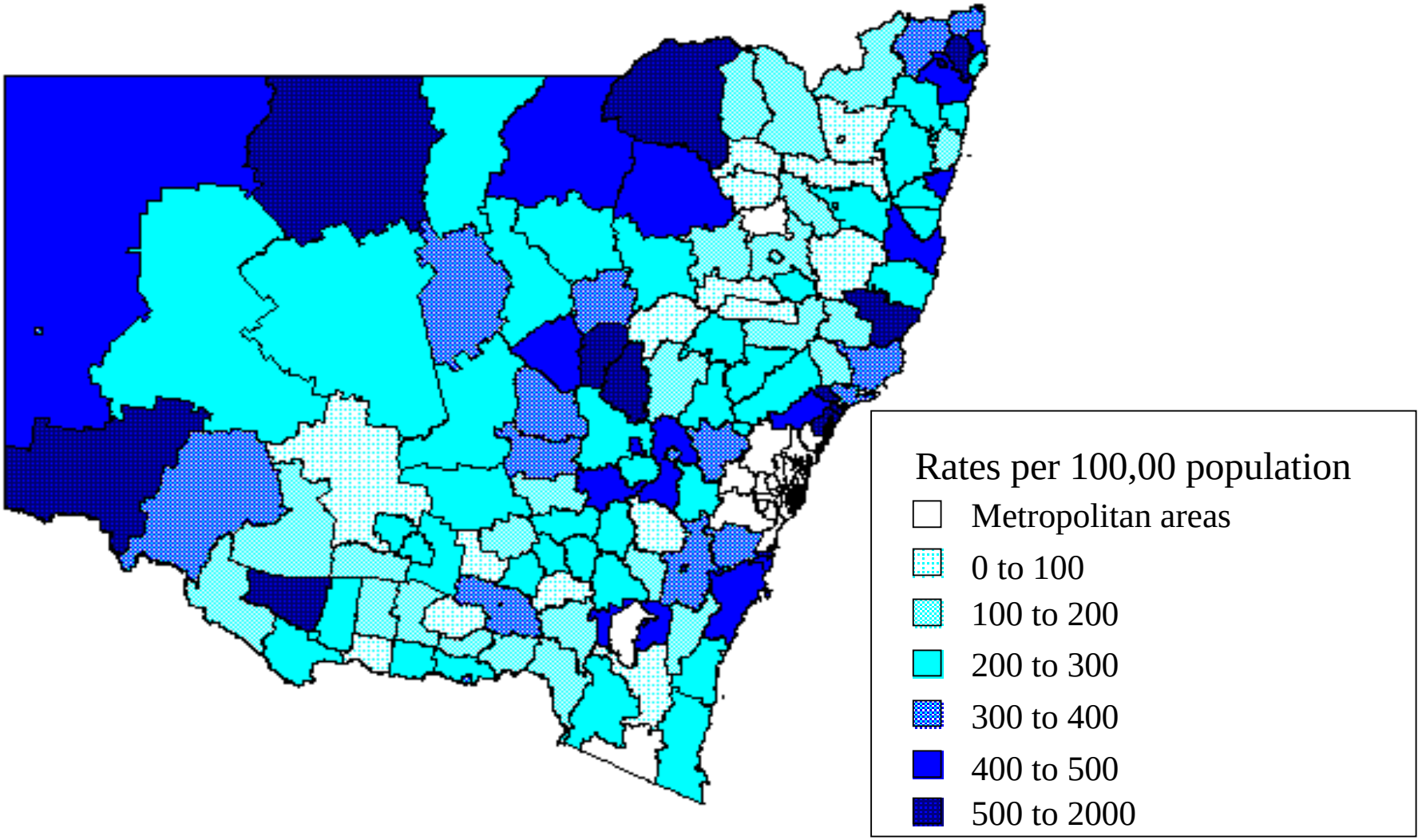
Rate of motor vehicle theft offences per 100,000 population for 1998



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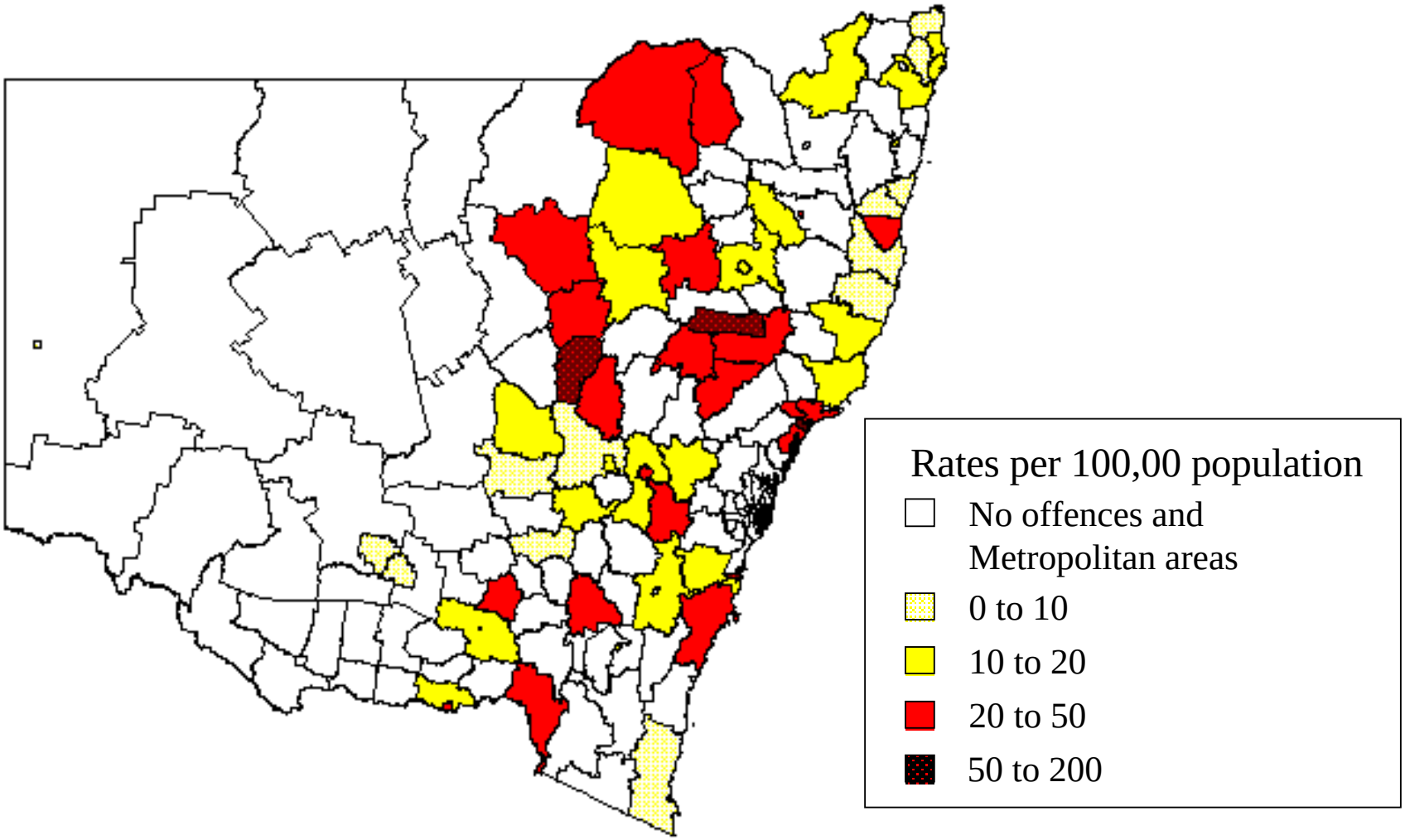
Rate of robbery with a weapon-not a firearm offences per 100,000 population for 1998



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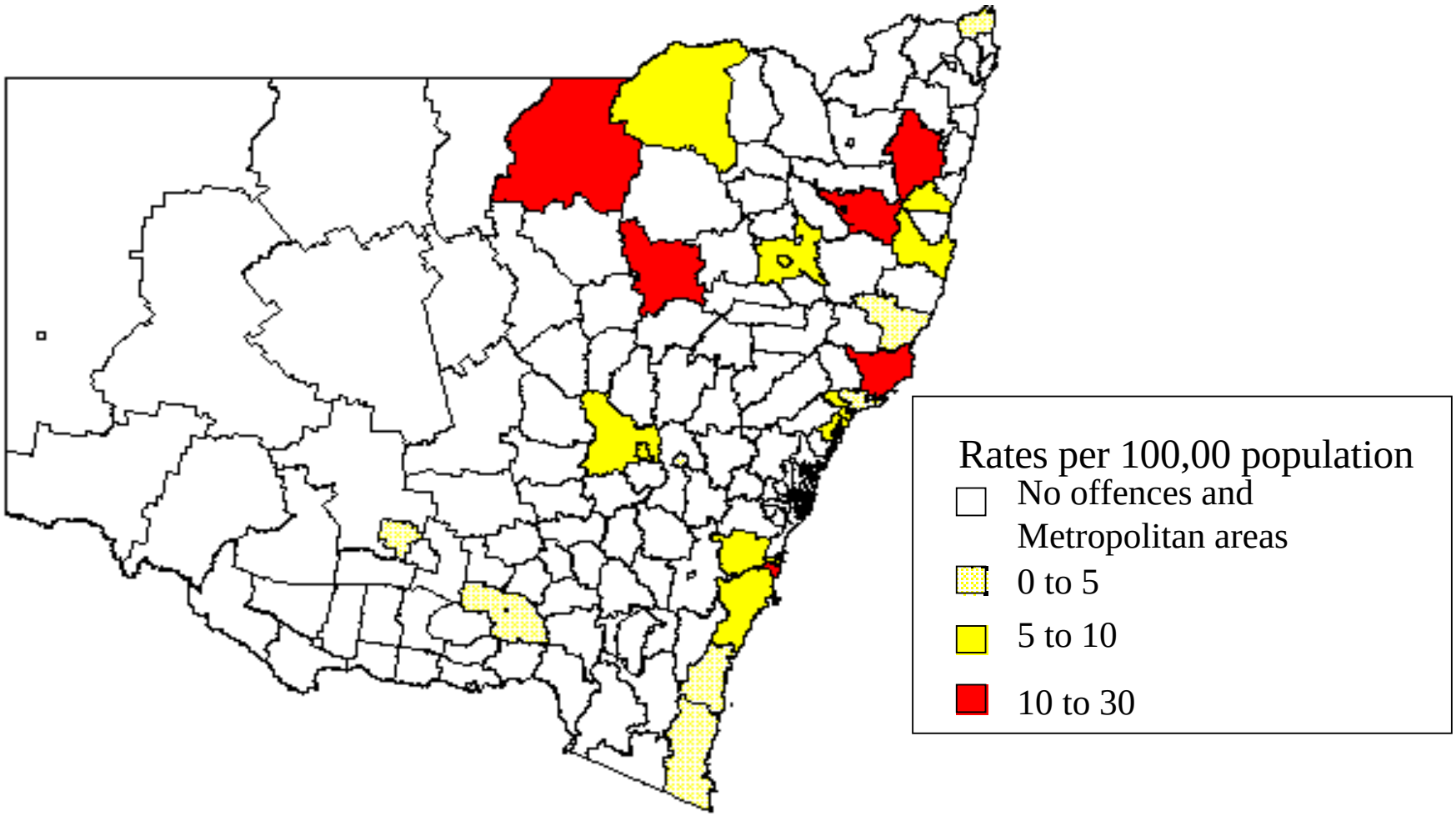
Rate of robbery with a weapon offences per 100,000 population for 1998



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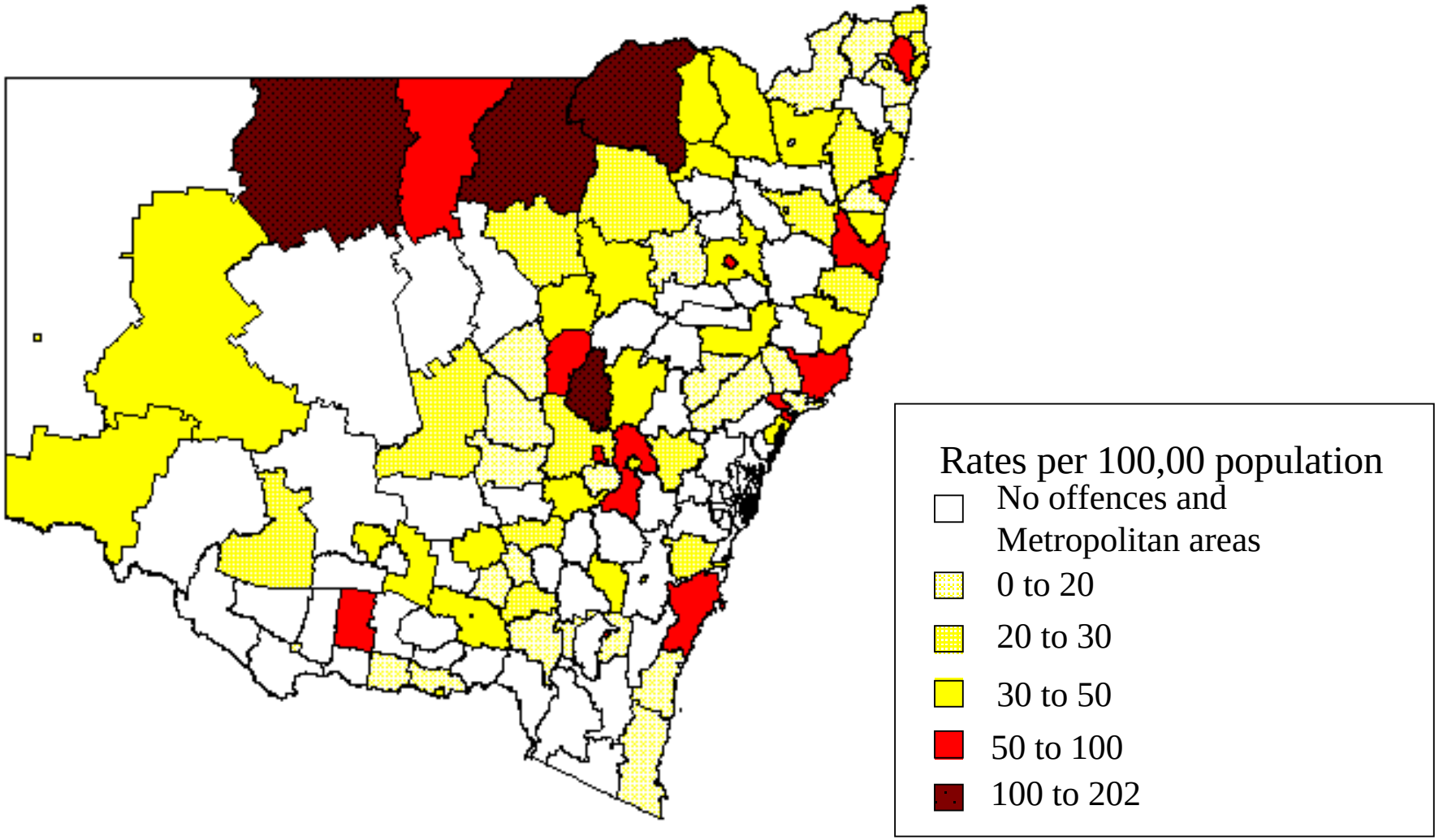
Rate of robbery without a weapon offences per 100,000 population for 1998



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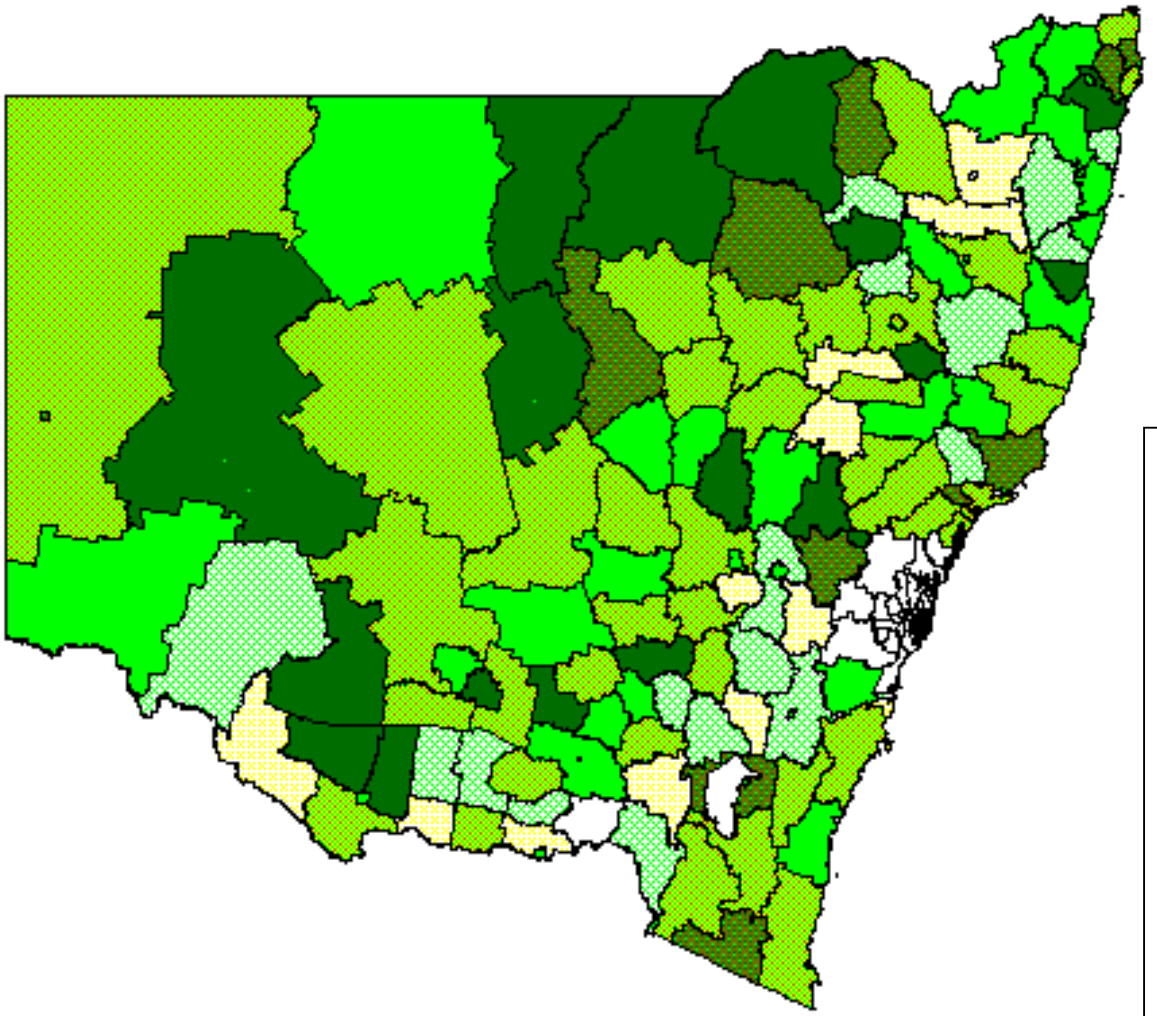
Rate of sexual assault offences per 100,000 population for 1998



Rates per 100,00 population

- No offences and Metropolitan areas
- 0 to 50
- 50 to 100
- 100 to 150
- 150 to 200
- 200 to 250
- 250 to 577

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Appendix 2

Clusters of Rural LGAs in New South Wales

Cluster 1 Large Urban Centres	Cluster 2 Coastal Communities	Cluster 3 Satellite Communities	Cluster 4 Medium Stable Communities	Cluster 5 Medium Declining Communities	Cluster 6 Small Farming Communities
Albury	Ballina	Conargo	Blayney	Bogan	Balranald
Armidale	Bega Valley	Cooma	Cabonne	Bourke	Barraba
Bathurst	Bellingen	Dumaresq	Cobar	Brewarrina	Berrigan
Dubbo	Byron Bay	Evans	Copmanhurst	Broken Hill	Bingara
Goulburn	Coffs Harbour	Gunning	Deniliquin	Casino	Bland
Lismore	Eurobodella	Hume	Dungog	Central Darling	Bombala
Orange	Great Lakes	Mulwaree	Griffith	Coonamble	Boorowa
Parkes	Hastings	Snowy	Jerilderie	Coonabarabran	Carrathool
Tamworth	Kempsey	Tallanganda	Leeton	Cootamundra	Coolah
Wagga Wagga	Maclean	Windouran	Lithgow	Cowra	Coolamon
	Nambucca	Wingecarribee	Lockhart	Forbes	Corowa
	Richmond River	Yarralumla	Mudgee	Gilgandra	Crookwell
	Shoalhaven	Yass	Murrumbidgee	Glen Innes	Culcairne
	Tenterfield		Muswellbrook	Grafton	Gloucester
	Ulmarra		Nymboida	Gunnedah	Gundagai
	Walgett		Oberon	Guyra	Harden
			Parry	Inverell	Hay
			Rylestone	Kyogle	Holbrook
			Scone	Lachlan	Junee
			Singleton	Manilla	Merriwa
			Taree	Moree	Murray
			Tumut	Narrabri	Murrurundi
			Young	Narrandera	Nundle
				Narromine	Severn
				Quirindi	Temora
				Uralla	Tumbarumba
				Walcha	Urana
				Warren	Wakool
				Wellington	Weddin
					Wentworth
					Yallaroi