Boy Troubles

Understanding Rising Suicide, Rising Crime and Educational Failure

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Boys and education

There has been a marked deterioration in the school performance of boys in the last decade. Up until the early 1990s, the average school performance of boys and girls was close to equal. Since then, the gender gap favouring girls has widened each year. This discrepancy has been the focus of a great deal of attention in recent years. Boys are now said to be 'disadvantaged' in relation to girls.

Whether or not there is any merit in comparing boys and girls has been the subject of considerable debate. Some claim that both boys and girls suffer from 'competitive victim syndrome' when they are constantly compared (Kenway & Willis 1997). Others argue that boys were only perceived to be disadvantaged when girls began to rival them in traditionally male-dominated subjects (Foster 1998). Notwithstanding this debate, the measurable discrepancy between boys' and girls' performance demands investigation.

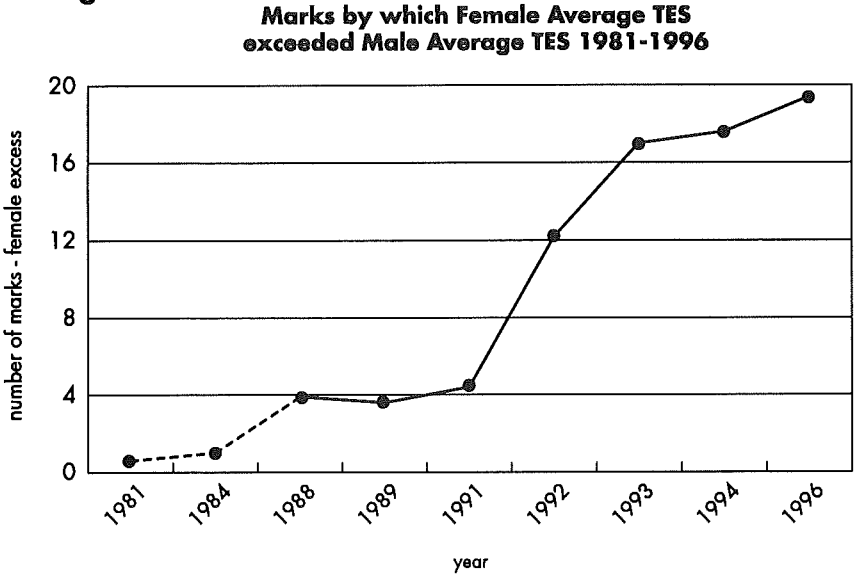
Some of the statistics which highlight this discrepancy are:

- In the 1996 NSW School Certificate (Year 10), girls outnumbered boys in the top 10% of students in 27 out of 32 subjects by up to 15%. In the other five subjects, girls equalled boys in science, or boys outnumbered girls, but only by 1%, in two maths subjects and two computer subjects (NSW Board of Studies 1997).
- The difference between boys' and girls' average Tertiary Entrance Score (TES), the NSW Year 12 aggregate, increased from 0.6 marks in 1981 to 19.4 marks in 1996, with girls outperforming boys. The largest divergence in the scores occurred in 1992, when the difference increased to 12.2 from 4.4 marks the previous year (figure 6, p. 30) (MacCann 1995; ABS 1998).
- In the 1998 NSW Higher School Certificate (Year 12), the girls' average mark exceeded the boys' in 64 out of 70 subjects, which had 100 or more students, by up to 11%. Boys' and girls' averages were equal in one further subject, 4-unit maths. For the five

subjects in which boys did better—3-unit computer studies, 3-unit economics, 2-unit Japanese, 2-unit maths in practice, and 3-unit music—their average exceeded girls' by 1% at most (NSW Board of Studies 1999).

- Of the 99 'all-round achievers' in the 1998 NSW Higher School Certificate, who were named by the NSW Board of Studies, only one in three were boys (*Sydney Morning Herald* 4 January 1999). The top 10% of HSC students comprised 58% girls and 42% boys (*Sydney Morning Herald* 19 July 1999).
- In Queensland in 1998, there was a greater proportion of girls than boys in the top performance bands in 36 out of 45 subjects in Year 12 (Queensland Board of Senior Secondary School Studies 1999).
- In South Australia in 1998, girls were over-represented in the top performance bands in 27 out of 34 subjects in Year 12 (Senior Secondary Assessment Board of South Australia 1998).

Figure 6.



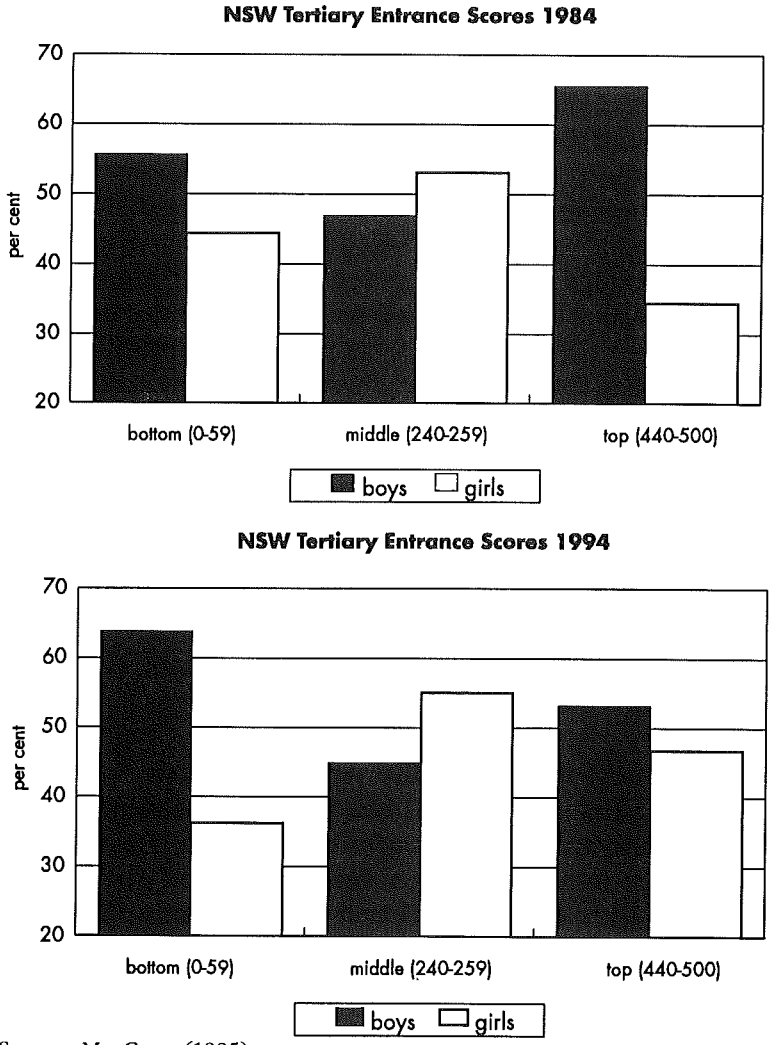
Source: MacCann (1995); ABS (1998)

These statistics are predominantly from NSW due to ease of access, but evidence from other states is consistent with these trends. They provide strong evidence that the educational

performance of boys is cause for concern, but they do not build a picture of the trends underlying the averages. It is not simply a case of all girls performing better than all boys. There are important underlying patterns behind the declining performance of boys.

The distribution of results for boys and girls is very different. Boys' scores are concentrated at the extremes of the scale—they

Figure 7.



Source: MacCann (1995)

tend to do very well or very poorly. Girls' scores tend to be closer to the middle of the scale, with fewer at the extremes. These gender-specific distributions are consistently found in school performance, as well as in IQ tests.

The divergence in the average scores appears to have resulted from a major shift in the proportion of boys at the extreme ends of the performance scale (figure 7, p.31). For example, in 1984 the predominance of boys in the top TES band was 65%, compared with 55% in the lowest TES band. In 1994, the position was reversed. The predominance of boys in the top TES band was reduced to 53%, with a subsequent greater proportion in the lowest TES band (64%).

Although there were still slightly more boys among the top performing students in 1994, this was outweighed by the increase in the number of boys among the poorest performing students. Hence, the average score for boys was much lower. More recent statistics show that boys are no longer in the majority among the top students, so their average has dropped even further.

It is becoming increasingly clear that one of the key contributors to the decline in boys' overall school performance is their particularly poor performance in literacy and school English. This is one of three related developments that have combined to produce the 'disadvantaged' status now afforded to boys. These three developments are:

1. boys' poor performance in literacy and English;
2. girls' improving performance in maths and science; and
3. recent changes to curriculum and assessment that have exacerbated the discrepancies.

Boys' poor performance in literacy and English

'Literacy', as measured by standardised tests in schools, is defined by the Commonwealth Department of Education, Training and Youth Affairs as the ability to 'read, write and spell at an appropriate level' (Masters & Forster 1997: 3). The appropriate level is determined by school year. *The National School English Literacy Survey* (NSELS) in 1996 assessed reading and writing by the following criteria:

Reading: 1. Ability to read and interpret a range of fiction and non-fiction texts with a degree of critical awareness.
2. Ability to understand main themes, ideas and points of view.
3. Appreciation of the writer's craft.
4. Awareness of the relationship between the communication medium and the message in written texts.

Writing: 1. Quality of thought (e.g. cohesiveness and creativity).
2. Language control (e.g. spelling and grammar).
3. Sense of purpose and audience.

'English performance' is understood as students' results in either public- or school-assessed examinations of the high school subject of English. The curriculum of English is determined by the Boards of Studies in the relevant States, and is generally a study of English literature, such as novels, plays and poetry.

- In the 1996 New South Wales *Basic Skills Tests*, boys underperformed in literacy compared to girls, in both Year 3 and Year 5 (Steering Committee for the Review of Commonwealth/ State Service Provision 1999).
- In the 1996 *National School English Literacy Survey* (Years 3 and 5), fewer boys than girls achieved the benchmark in each mode tested: reading, writing, listening, speaking and viewing (Masters & Forster 1997).
- According to the *Longitudinal Surveys of Australian Youth*, the proportion of 14 year old boys who were illiterate in 1995 was 35%, as compared to 27% of 14 year old girls. This proportion has increased from 30% and 25% respectively in 1975 (Kemp 1996).
- Year 12 performance data from Western Australia, South Australia and Queensland show stronger average English results for girls, with more girls than boys in the highest achievement band, and more boys than girls in the lowest (Teese et al. 1995; Senior Secondary Assessment Board of South Australia 1998).
- In the 1997 NSW Higher School Certificate, the ratio of girls to boys in the top 25% of English students was 2 to 1 (*Sydney Morning Herald* 4 January 1999).

Girls' improving performance in maths and science

Before the early 1990s, the gender gap in average school performance was small. This balance was maintained by the high scaling of maths and the physical sciences (physics and chemistry). Boys' comparatively poor performance in English was offset by their stronger performance and highly scaled results in maths and science. There was a slight difference in average score during the 1980s, favouring girls. This was probably due to the increasing participation, and improving performance, of girls in maths and science, which added to their already strong performance in English and the humanities.

Changes to curriculum and assessment

In 1992, boys lost their advantage when the scaling of HSC results became more equalised across subjects. The improved performance of girls across the board, and boys' poor English performance, combined to increase the gender gap in average performance three-fold.

When the compulsory inclusion of one unit of English in calculating the NSW HSC aggregate mark was introduced in 1995, boys' overall school results continued to deteriorate. Although there are subjects in which girls are comparatively weaker, such as computer studies, these subjects are elective. Therefore, if girls do not take computer studies, it will not affect their overall performance.

Some argue that this amounts to an unfair bias against boys, and that it will adversely affect their post-school outcomes (McGaw 1999). Although this may be true, others argue that boys' inferior performance in English is in itself cause for concern.

Why are boys' performing badly in literacy and English?

If boys' poor performance in English is a major aspect of their educational disadvantage, what is causing this disparity?

Psychologists, educationists and sociologists have identified a number of factors which may influence boys' ability to use and understand English. They include:

1. biological differences between the sexes affecting capacities and interests;
2. gender biases which define certain activities or skills as 'not masculine', or which underplay the role of masculine models in encouraging certain activities or skills;
3. teaching, curricula and assessment;
4. socioeconomic factors, including family income, family structure and parental education.

Each of these factors go some way to explaining the observed discrepancy between boys' and girls' English performance. To date, however, research has not provided conclusive evidence of the reasons for enduring gender differences, or for the *increasing* gap in English performance.

Biological differences

Some claim that boys' inferiority in school performance is innate and biologically determined. Moir and Jessel (1989) and, more recently, Biddulph (1997) have cited neurological evidence that boys' brains are different from girls', essentially in the capacity to process linguistic information. They claim that because of this difference, boys are naturally less competent in literacy and English.

The evidence for this has been gathered through experiments with rodents and monkeys, and from observation of people who have suffered either brain damage or some kind of defect in brain development. As a result of these studies, it is believed that the sex or gender of a brain is determined by the presence or absence of specific hormones before birth.

The brain is divided into two hemispheres, left and right. These perform specialised functions. The left is primarily involved in verbal abilities, and processing details and organised information. The right is primarily involved in more concrete, object-related information processing. Research has shown that there are fewer connections between the left and right hemispheres in male brains, but that male brains have more neurological connections *within* the right hemisphere.

For this reason, some believe that brain functions are more 'specific' in males, and more 'diffuse' in females. In other words,

females are more capable of using both their left and right hemispheres to complete a task, whereas males' abilities are more concentrated in the right hemisphere's capacities. This translates to a restriction of boys' language abilities (literacy and English), and enhancement of their visual-spatial abilities (maths and science).

Several studies have failed to show sex differences in brain structure (see Gilbert & Gilbert 1998). At this stage, however, the accumulated evidence for sex differences in brain structure and function is still quite persuasive.

Yet, although biological brain differences might explain enduring differences between boys' and girls' literacy skills and English performance, they do not explain the *increasing* gender difference in these areas.

Gender biases and expectations

The problem of boys and literacy is sociological, according to some educationists. They argue that behavioural differences between boys and girls arise from different expectations, and that these gender biases in turn influence educational outcomes. Some claim that conventional conceptions of masculinity and narrow stereotypes are restrictive and damaging to both boys and girls, if in different ways.

This view construes boys' inferiority in literacy as the result of a socialised aversion, rather than an innate deficiency. For instance, boys are equally as capable of reading as girls (Shaywitz et al. 1990; Flynn & Rahbar 1994). But the widely discussed and accepted view is that boys do not like to read. Apparently they think reading is 'uncool', and something that girls do. This seems to apply in particular to fiction (Brown & Fletcher 1995). Some claim that boys prefer physical activities, and if they do read, it is more likely to be magazines or manuals. This may strike a chord of truth with many, but the evidence is largely anecdotal and observational.

Part of the problem may stem from the definition and measurement of literacy and performance in English. Different tests of boys' literacy skills have been proposed on the grounds

that boys are capable of the mechanics of reading, but are disadvantaged by the subjective, introspective nature of the approach to English literature in schools. The *Boys and Literacy Project* (Martino 1995), for instance, claimed that the emotional element of English at school is in direct conflict with dominant conceptions of masculinity, and is therefore unacceptable to most boys.

Angela Phillips (1993) suggests that boys associate reading with femininity, because of the predominance of female teachers in early schooling. This then leads boys to reject reading, as they try to establish their masculinity. So although boys are capable of reading, they supposedly choose not to because it is at odds with what they perceive to be acceptable behaviour. Put simply, boys' literacy problems arise from a gendered aversion to reading. If this were true, however, the same aversion should occur for mathematics, which boys also first experience in primary school. This does not seem to be so.

In any case, this would not shed any light on the *deterioration* of boys' English performance. We still await convincing explanation for both their relative, and deteriorating, underperformance.

Teaching and curricula

In this area, two factors may be combining to weaken boys' literacy performance: the way that reading and writing is taught, and the way that literacy is assessed. A possible gender bias in school culture has also been implicated.

As discussed, for biological reasons of brain structure, boys may have a slight advantage in dealing with 'structured' subjects. A major change has occurred in literacy instruction which bears upon this difference and which may have affected boys' literacy and hence their overall school performance. The method of teaching reading has undergone a transformation since the 1960s, from a structured 'phonics' approach with rules and grammar, to a 'whole word' method where children are encouraged to recognise whole words. The methodical approach to teaching writing—using copy books, writing on lines, etc.—has also been abandoned.

There is some evidence that a more structured approach to literacy teaching has a beneficial effect on boys' performance (Victoria DET 1998; West 1995). Boys perform better in literacy when their instruction and assessment are more highly structured; for example, if they are told what is expected and how their work will be marked. Also, boys' writing style is generally more economical and less flamboyant. It is not known whether this is due to innate biological differences, or whether it is a result of their preference for reading material of the same nature, prescribed by gender expectations.

It is well established that girls mature, both mentally and physically, earlier than boys. Children who fail to learn to read in the early stages of their schooling may never catch up (Harrison & Zollner 1993). Therefore, by not allowing for boys' developmental delay (Cratty 1986; Vann 1991), boys may be disadvantaged, especially those who do not have support for reading at home. Such a disadvantage could seriously affect boys' subsequent performance in English.

The 'feminisation' of schools manifest in the high number of female teachers, the increasingly large proportion of girls in secondary schools, and the campaign to encourage girls to take male-dominated subjects suggest that the school culture and curriculum has resulted in a bias in favour of girls, and that this has alienated boys. This is conjecture rather than fact, although there is some confirmation of this theory in departmental documents about gender equity in education.

A related development has been the widespread introduction of coeducation. Fifteen years ago, discussion about coeducation focussed on girls' school performance. It was apparently taken for granted that boys were academically superior, and that they would probably dominate the classroom (Arnot 1984). The idea behind coeducation—economic incentives aside—was that proximity would lead to equality. And so coeducation was promoted, despite British research which had already shown that boys receive more negative attention in mixed classrooms (Delamont 1980; Lowenstein 1980), and despite the fact that boys' and girls' subject choices were more polarised into gender-

traditional categories in coeducational schools than in single-sex schools (UK Department for Education and Science 1975).

With the benefit of hindsight, it might have been prudent to take the step toward coeducation in Australia more tentatively. Again, there is a distinct lack of empirical research on the advantages and disadvantages of coeducation and single-sex schools. Most related research looks at the effect sex-segregated classrooms have on the performance of girls in mathematics (Keeves & Stacey 1999), although one NSW study has shown that the merging of two single-sex high schools into two coeducational high schools had no effect on the performance of either boys or girls in the short-term (Smith 1996).

In sum, boys may have been disadvantaged by a combination of several almost simultaneous developments in school education. Methods of teaching and assessment may well affect boys' literacy skills and English performance, but this does not explain *why* boys learn differently.

Socioeconomic factors

Literacy/English and socioeconomic status

There is a strong relationship between the socioeconomic status of parents and the educational performance of their children. Socioeconomic status is determined by household or parental income, family structure, and parental education. The higher the socioeconomic status of parents, the higher, on average, the literacy and English performance of their children, both boys and girls.

The performance indicators showing a gender gap (figures 6 and 7, pp 30, 31) must therefore be seen in the context of socioeconomic status. The gap between boys and girls varies with their socioeconomic circumstances. High socioeconomic status boys outperform low socioeconomic status girls. However, the gender gap between boys' and girls' performance persists within each socioeconomic level.

Extensive research by Richard Teese et al. (1995) has demonstrated the influence of this factor. In an analysis of Victorian Year 12 exam results (VCE), he found that school performance

varied with socioeconomic status for both boys and girls, with girls nevertheless outperforming boys in each socioeconomic category.

Alloway and Gilbert (1997) found comparable results in Year 3 students in NSW. When comparing girls and boys with the same socioeconomic ranking, girls still did better. At the bottom of the socioeconomic scale, both boys and girls exhibited the worst results for their gender, with boys performing worst of all.

The 1996 *National Schools English Literacy Survey* (NSELS) also found that boys and girls in higher socioeconomic groups obtained better literacy results. The performance gap between socioeconomic groups widened from Year 3 to Year 5 (Table 1). Thus, socioeconomic status influences the English performance of both girls and boys.

Of particular interest is the fact that higher socioeconomic status has a moderating effect on boys' performance relative to girls; in short, the gender gap is smaller in high socioeconomic groups. Results fall faster for boys than for girls with progression down the socioeconomic scale. (Teese et al. 1995). Socioeconomic

Table 1. Per cent of students *not* meeting standards in reading and writing, 1996, by Year of schooling, gender and socioeconomic status (SES)

	Reading	Writing
	% not meeting standard	*% not meeting standard*
YEAR 3		
Boys	34	35
Girls	23	19
High SES	12	10
Medium SES	28	27
Low SES	38	30
YEAR 5		
Boys	35	41
Girls	24	26
High SES	13	19
Medium SES	29	33
Low SES	53	43

Source: Masters and Foster (1997).

status appears to mediate English performance specifically, and hence school performance generally, by either enlarging or reducing the gender gap.

Maths and socioeconomic status

Year 12 results show that maths participation and performance also differ with socioeconomic status. But the gender divide between participation and performance in maths is not comparable to that for English. Boys are about twice as likely to enrol in advanced maths courses, and are overrepresented in the top performance bands, but they are also more likely to fail (MacCann 1995; Teese et al. 1995). Consequently, girls' average in maths now exceeds boys' except in the most advanced course, where they are equal (NSW Board of Studies 1999; Ludowyke & Scanlon, 1997).

Maths is traditionally a male course of study, and until this decade, boys dominated in participation and performance. This is less the case now. Teese et al. (1995) claim that there is increased participation and performance by girls from the higher socioeconomic groups, and decreased participation and performance by boys from the lower socioeconomic groups.

So, there has been a shift whereby girls in the higher socioeconomic groups are overcoming the traditional gender barriers, and are exceeding the performance of boys in the lower socioeconomic groups. This has created the illusion that all girls have made significant improvements in their educational outcomes. In fact, a subset of socioeconomically advantaged girls has improved and a subset of socioeconomically disadvantaged boys has deteriorated. The discrepancies in their performance in key aspects of education have been intensified by the recent changes in assessment described earlier.

It is now widely accepted, based on conclusive empirical evidence, that the family environment has a strong influence on school attainment. For example, an Australian study found that the family's socioeconomic status was positively related to cognitive scores, and that family factors accounted for variations in children's educational performance, even after controlling for intellectual ability (Marjoribanks 1987).

Why socioeconomic status affects English performance, school performance generally and the gender gap specifically, is less clear. Two aspects of socioeconomic status stand out in research findings: family income and family structure.

Family income

Does a lack of financial resources in low socioeconomic families account for lower school performance? The Western Australian Child Health Survey (Zubrick et al. 1997) showed a relationship between household income and school performance. It found that as income declined, overall academic competence declined. However, these results do not take into account other variables associated with differences in economic circumstances, such as family structure and parental education. Further, financial disadvantage would presumably affect both boys and girls equally, and this does seem to be the case. If socioeconomic status is relevant to the growing gender gap, there is presumably an aspect of low socioeconomic status families, other than low income, which affects boys more than girls.

Family structure

It has been found that divorce leads to a fall in socioeconomic status, and that this adversely effects children's educational outcomes (Demo & Acock 1988; National Health Strategy 1992). The Western Australian Child Health Survey also provides evidence of a relationship between family structure and school attainment: the proportion of children with low academic competence was almost twice as high for sole parent families as for couple families—30% and 17% respectively (Zubrick et al. 1997).

Even after controlling for income it has been found that children whose parents are divorced or separated have lower levels of educational attainment than children from intact families (Guidubaldi et al. 1983; Spruijt & de Goede 1997). If economic hardship were the main predictor of school performance, there would presumably be no difference between children in step-families and children in intact families, where both received similar incomes. Yet children in stepfamilies still generally perform less well, according to research (Amato & Keith 1991).

A custodial parent's remarriage also appears to have differential effects on boys and girls. The presence of a stepfather has been associated with the greater well-being of boys who have a custodial mother, but not girls (Amato & Keith 1991; Hetherington et al. 1985). Paul Amato and Bruce Keith (1991) found that for a variety of outcomes, there is an interaction between the gender of the child and the gender of the custodial parent. Boys seem to be better off with their fathers, and girls better off with their mothers. These findings provide more support for a parental absence or socialisation theory of child well-being, including educational outcomes.

One of the strongest predictors of low socioeconomic status is sole parenthood, which in turn is a predictor of lower average school performance. Nearly 90% of sole parent families are headed by mothers. Since the majority of these mothers have poorer educational attainments than mothers in general (ABS 1991), and insofar as parental education is a significant factor in children's educational performance, sole parent families, on average, are clearly a less propitious educational environment for children.

Studies have also shown that divorce has more pervasive and enduring negative consequences for boys than for girls (Guidubaldi et al. 1986), and that time spent in single mother families has a significantly stronger, adverse effect on boys' educational attainment than girls' (Krein & Beller 1988). This might be because boys in sole parent families frequently lack a male role model and miss the discipline exercised by most fathers. However, we lack substantial supporting evidence for such a view.

The importance of the family environment

The fact remains that some circumstances of low socioeconomic status families adversely affect boys more than girls. Without discounting the stresses and strains for parents with a low family income, when we look more closely at the correlation between socioeconomic status and school performance, family income *per se* declines in importance, and family structure, parental competence and parental influence come to the fore.

Summary

- Against a background of poor standards of literacy in both boys and girls, the general school achievement levels of boys are declining in comparison with girls.
- The notable features of this significant and increasing discrepancy are boys' more serious literacy problems and subsequent poor performance in English.
- Biological differences, possibly involving hormonal and brain structure differences, may play a part by influencing capacities, interests and motivations, and thus yielding advantages for boys in certain subjects, and for girls in others. The research evidence so far is inconclusive. But if significant innate gender differences do exist, any recent changes in curricula, instruction and assessment that are comparatively less congruent with boys' capabilities and interests, could be a factor in boys' declining performance.
- The socioeconomic backgrounds of children are strong predictors of their literacy skills and school performance. For boys' English performance, the relationship is particularly salient in that the gender gap increases with decreasing socioeconomic status. What matters most is not parental income, but rather parental education, general competence, and family stability. More broken families also entail the more frequent absence of a father from children's home life. A vital question is whether this disadvantages boys' education more than girls'.

Implications and recommendations

The declining educational achievement of boys is associated not only with subsequent unemployment, and an impoverished intellectual and social life, but also with the genesis of delinquency and crime (Kercher 1988; Gottfredson & Hirschi 1990). For these reasons alone, it is critical that the problem of boys' education be addressed in a systematic way.

The research evidence so far does not allow us to identify causes of the gender gap in performance with any confidence, but it does highlight areas where further research is urgently needed. Is the increasing absence of a father at home more salient for boys than for girls? Are gender-specific role models important?

Are there 'gender biases' in curricula, instruction and assessment? If so, how do they work and should they be reformed?

Key recommendation 1: *That methods of literacy instruction be critically examined and reviewed in light of the evidence that boys may not respond as well to the current methods.*

The intrinsic worth of education and its impact on quality of life attracts far less attention than the vocational outcomes of education. But what about the less tangible rewards of education, such as enjoyment of learning, the great satisfaction to be found in reading, and the ability to appreciate the arts? These neglected benefits seem to be regarded as the privilege of girls, and of children in socially advantaged families. Educationally disadvantaged boys, who tend to come from socially disadvantaged families, should have equal access to the intrinsic value of education as well as its vocational outcomes.

The success of feminist programs in promoting gender equity in schools has been evident for some time. Girls are now participating in education to a greater extent, widening their choice of subjects, and achieving comparable outcomes. Now the focus has shifted to boys. The NSW Government's Report on Boys' Education (O'Doherty 1994) emphasises 'gender equity' programmes as its key recommendation.

There is, however, danger in placing too much emphasis on gender. Gender equity strategies should attempt to minimise the importance of gender, rather than make it a central issue. Schools should question how their methods of teaching and assessment are unwittingly handicapping less resilient boys from an early age, instead of focussing on whether boys' and girls' subject choices in high school are polarised on the basis of gender identity.

Key recommendation 2: *That a wide-scale, possibly longitudinal, study using data held, or capable of being collected, by the Departments of Education or other government agencies, be commissioned to look into the effect of familial and environmental variables on both boys' and girls' educational performance in general, and literacy skills specifically.*

Ready access to data collected by Departments of Education

about performance of students and schools is vital to further research. Departments have been reluctant to release such information, presumably to protect poorly performing schools and teachers, and inappropriate teaching methods, from critical scrutiny. This data, however, combined with demographic data from other sources, could make an important contribution to understanding boys' declining educational achievement.

Key recommendation 3: *That strategies which promote gender equity be extended so that they target the obstacles to equal educational opportunities and enjoyment for boys and girls earlier rather than later, both in terms of curricula and gender biases.*
Inconclusive empirical evidence and speculative opinion are hampering the search for a solution to the puzzle of boys' educational decline. Until this situation changes, possibilities for reform are limited, and the educational outcomes for boys will remain uncertain.

Boys and suicide

Suicide is the leading cause of death among young Australian males aged 15-24 years. It accounts for 29% of total male deaths in this age group and 19% of all male suicides. In 1997, for the first time, there were more deaths attributed to suicide than to road traffic accidents, and it is possible that some of the latter may have been suicides too. In Australia, on average, at least one young male commits suicide each day (National Injury Surveillance Unit 1999).

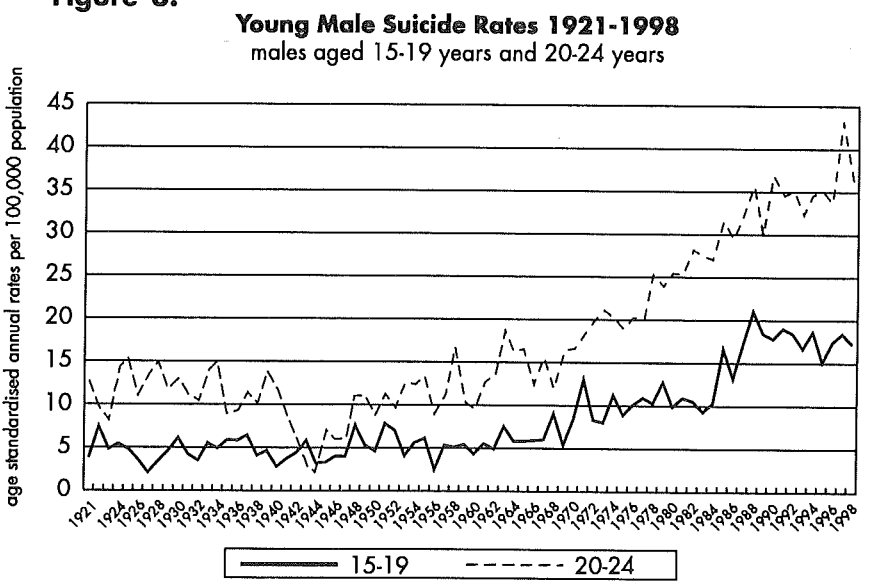
These latest statistics are the culmination of a disturbing trend in young male suicide rates over the past thirty years. Suicide rates among boys and young men are now about three times higher than in the early years of the century, despite the increased capacity nowadays for reclaiming lives through medical intervention.

Although the suicide rate for 15-24 year old males is not the highest age-specific suicide rate—the rate for males aged 75 years or more is higher—it has greater impact in terms of the years of potential life lost, calculated at 25,407 for 1997 (Cantor et al. 1999).

Figure 8 shows suicide rates for young males aged 15-19 years and 20-24 years, from 1921 to 1998. Suicide rates in both age groups have increased markedly over this period, but the increase for 20-24 year old males is especially notable. Since 1968, the suicide rate of the younger group has doubled, from 9 to 18 per 100,000, while that of the older group has tripled, from 12 to 36 per 100,000.

In comparison, female suicide rates for 15-19 year olds and 20-24 year olds have never exceeded 9 per 100,000 population since 1921. There is also no statistical correlation between the suicide rates for young males and females, which suggests that they may have different causes.

Figure 8.



Source: Australian Institute of Health & Welfare, unpublished data.

The considerable difference between male and female suicide rates raises a number of important questions which cannot be separated from the *reasons* why some people resort to suicide, and why they choose one method over another. This means that we cannot begin to understand why these gender differences exist without first examining the causes of suicide discussed in the research literature.

Why do people kill themselves?

Research on the aetiology of suicide is generally separated into two broad categories: social causes and individual causes. By far the greater amount of research has focussed on the latter, which is usually based on biological or psychological factors specific to individuals, such as neurotransmitter levels or mental illness. This research promotes a 'secondary prevention' approach to suicide prevention, whereby potentially suicidal persons are identified and treated.

Sociological research on the causes of suicide looks at broader factors—unemployment, birth rates, or divorce rates—as antecedents in suicide rates. It favours a 'primary prevention' approach that reduces the number of individuals exposed to social factors which may make them vulnerable to suicidal tendencies.

Yet, not all unemployed people commit suicide, nor do all young people suffering from mental illness commit suicide. It is therefore widely accepted that there is not one single causal factor leading to youth suicide. For this reason, the 'individual' and 'social' approaches to understanding the causes of suicide need to be examined separately in the context of gender differences.

Individual pathology and suicide

It is not possible to know the full extent to which mental illness contributes to young male suicides, because many of them do not seek treatment, but a variety of indicators suggest that it is substantial. Retrospective studies of young male and female suicides indicate that mental illness is involved in up to 90% of suicides, and that depressive illness is particularly important (Kosky & Goldney 1995). A New Zealand study found that mental illness increases the risk of attempted suicide in young males by a factor of ten, and that comorbidity of two mental disorders makes young males fifty times more likely to attempt suicide (Beautrais et al. 1996).

The most commonly implicated mental conditions for suicide and self-harm are schizophrenia and depression. Estimates of the suicide rates among people with schizophrenia and major depression are up to 15% and 10% of diagnosed sufferers respectively. Substance abuse disorders are becoming recognised as a major risk factor, especially for young males.

Schizophrenia affects around 1% of the population, but depression is much more common. According to the National Health and Medical Research Council (NHMRC), around 3% of young people are suffering from major depression at any one time, and up to 24% of adolescents have experienced an episode of major depression in their lifetimes. Although estimates vary from study to study, there is one consistency: both point-in-time

prevalence and lifetime prevalence of depression are at least twice as high for girls as for boys (Department of Health and Family Services 1997).

If suicide and mental disorders are strongly related, then an increase in suicide rates should be accompanied by an increase in the prevalence of mental disorders. There is some evidence to suggest that this is indeed the case. Studies in the United States have shown that the prevalence of depression is higher among younger birth cohorts (Fombonne 1995). In other words, adolescents are increasingly at risk of experiencing depression. This appears to be due in part to a decrease in the age of onset of depression, as well as a general increase in levels of mental illness.

In Australia, prescriptions for antidepressant medication increased seven-fold in the period from 1990 to 1997 (Sullivan et al. 1999). Unfortunately, there are no Australian mental health statistics that can be used to create a time series which would indicate whether this is due to an increase in the prevalence of depression or an increase in the willingness to prescribe drugs for treatment.

Various studies have estimated the prevalence of mental illness in Australia:

- *18-24 year olds*: The first population survey of adult mental health was conducted in 1997 by the Australian Bureau of Statistics (ABS). It reported that around 18% of adults had experienced symptoms of one of the major mental disorders in the twelve months prior to the survey. The overall rate was approximately equal for males and females, but there were marked differences in the type of disorder between males and females and between age groups. Affective (mood) disorders were most common among young females (aged 18-24); substance abuse disorders were most common among young males (ABS 1997).
- *15-24 year olds*: The Australian Institute of Health and Welfare assessed the burden of disease and injury in young adults aged 15-24 years and found that mental illness is by far the leading cause of loss of life and health among young people. For 15-24 year old males, depression was the seventh largest cause of disease

and injury in 1997. For females of the same age, depression was the leading cause of disease and injury. In comparison, drug dependence (alcohol or heroin) was a major cause of disease and injury for young males, but less so for young females. (Mathers et al. 1999)

• *4-16 year olds*: A child version of the ABS National Survey of Mental Health and Well being will be released in 2000, so to date the most comprehensive information on the mental health of children is from the Western Australian Child Health Survey. It found that 20% of boys and 16% of girls, both aged 4-16, had mental health problems (Zubrick et al. 1995).

Research on age trends in depression shows an interesting pattern. During childhood and up until puberty, boys report higher rates of depressed feelings than girls. At around the age of 13 the rates cross over, and rates of depression among girls become much higher than for boys. For females, the greatest increase in these rates is between the ages of 15 and 19; this continues to increase until the early twenties, thereafter declining (Hankin et al. 1998; Angold et al. 1998). This follows the same pattern as girls' suicide and self-injury rates.

For boys, the large increase in suicide from age 15 onwards, and the very high suicide rates in the early twenties, are not matched by high levels of depression. For boys especially, then, depression alone does not explain their comparatively high suicide rates. Young males are, however, much more likely to have a substance abuse disorder, i.e. a drug dependency, with the prevalence of this disorder increasing along with suicide rates in the 20-24 year old age group.

Substance abuse

Drugs are implicated in suicide in several ways: (i) as a source of 'dutch courage' to carry out a premeditated act; (ii) by causing personal problems that motivate the person to commit suicide; (iii) by causing or exacerbating a clinical mental illness which results in suicide; or (iv) by providing the means of suicide by drug overdose.

The relationship between drug use, mental health and suicide is complex. There is evidence that both alcohol dependency and frequent or high potency cannabis use can lead to depression (Schwartz 1987; Gold 1989; Davidson 1995; Brown et al. 1995). Research has also indicated a link between high level cannabis use and the onset and exacerbation of the symptoms of schizophrenia (Andreasson et al. 1987; Goodman et al. 1990). Or drug use may be secondary to an existing mental illness, in order to enhance mood or relieve the symptoms of the disorder. This 'self medication' is likely to result in a worsening of the problem.

Whether the onset of drug use precedes or follows the onset of mental illness, the harmful effects of drug dependency are considerable. Even though a cause and effect relationship has not been established, it is possible to conclude that, at the very least, drug use increases the likelihood of suicide. Drug dependence or 'substance abuse' is the most problematic, as compared with 'recreational' drug use. But the prevalence of recreational drug use is also an important indicator of a society's suicide risk, since the greater recreational use of drugs exposes a greater number of people to the possibility of developing a drug dependency.

Survey data of drug use by young people shows that use of both licit and illicit drugs is increasing. Although regular tobacco smoking seems to be decreasing among teenagers, dangerous levels of alcohol drinking are still prevalent. Between 1988 and 1995, the proportion of secondary school students (aged 14-17), who drank harmful amounts of alcohol, doubled. These 'harmful' amounts are those determined for adults by the National Medical Health and Research Council, so the effect on young brains and bodies must be even more damaging.

The rise in the prevalence of illicit drug use, both 'hard' and 'soft' drugs, is also remarkable. The proportion of 14-19 year old boys who had recently used an illicit drug rose from 28% to 38% between 1988 and 1998. For 14-19 year old girls, the increase was from 16% to 37%. Of the illicit drugs, marijuana is the most popular, continuing the long-term trend of increasing use of

this 'soft' drug (Australian Institute of Health & Welfare 1999).

The association between substance *abuse* (as compared to use) and suicide seems to be largely confined to young males (Gould et al. 1990). But the crux of the problem is *why* young people become drug users. It is possible that young men with existing mental health problems begin to use drugs as a coping mechanism. In effect, a problem that leads to clinical depression in young women may result in a substance abuse disorder in young men. The drug use may be instigated by social circumstances—unemployment, welfare dependency, poverty or adverse childhood experiences such as abuse or neglect. These can all cause mental health problems in their own right. Another possibility is that boys and young men use drugs as 'risk behaviour', in much the same way as they use fast driving. Some of the reasons why boys might engage in risk behaviour more than girls are outlined in the chapter on juvenile crime.

Given the data showing that substance abuse is a much greater problem for young men than depression, and given that the prevalence of this condition across the 15-24 age group closely follows suicide rates while depression does not, there is reason to believe that the psychological risk factors for young male and female suicide may be quite different. The implications of this for suicide prevention will be discussed later.

Social factors in suicide

Some argue that to commit suicide necessarily requires some degree of psychological disturbance. The urge to take one's own life is not a natural instinct. However, for medical professionals, the difference between a mental disorder and psychological disturbance in a 'normal' person depends on the severity and persistence of the condition.

Suicides that are not associated with a mental illness can be described as 'rational' suicides. People who do not suffer from a psychological or psychiatric condition may take their own life because they (rationally) believe that their problems are insurmountable, and that death is the best or only option. This decision might be made after a long period of time or more

suddenly. Several studies in the past have shown that adolescent suicide is likely to occur as an impulsive reaction to a negative life event, such as the break-up of a relationship, a family conflict or failure at school or work (Kessel 1965; Hoberman & Garfinkel 1988).

The French sociologist Emile Durkheim was the first to take a comprehensive social scientific approach to suicide research (Durkheim 1897). He attempted to identify 'macro' social factors that increase the individual predisposition to suicide within a society. Durkheim claimed that suicide incidence is negatively associated with the degree of 'social integration', i.e. the strength of an individual's ties to a social group and the stability of social relations within that group.

According to this theory, the social integration of a society is to be understood as the extent to which its members subscribe to the 'collective conscience', or the shared norms of behaviour. Integrated individuals feel anchored in a society. They participate in, and contribute to, the economic and social fabric of a society and take part in the common life. Non-integrated individuals feel detached from society and close relationships. Under adverse social conditions, such as high unemployment and endemic family fragmentation, there is a greater likelihood of detachment from a shared way of life. Some individuals may respond by killing themselves. Therefore, the more wide-reaching the absence of shared and satisfying social relationships, the more individuals who are vulnerable.

Sociological theories such as Durkheim's do not claim to explain all aspects of suicide. Rather, they attempt to explain some of its basic social conditions, its pattern of distribution and variations in frequency. Aspects of society—which Durkheim called 'currents'—predetermine the rate of suicide in a society, but not who will commit it. Under this paradigm, social factors dictate the conditions, and individual factors such as mental illness make certain people vulnerable to these conditions. Durkheim claimed that 'there is no pathological psychological condition that has a regular and indisputable relation with suicide' though such a

condition provides 'an eminently suitable field for the influence of causes which can determine a man to kill himself' (1897: 81).

Durkheim views mental illness as an individual vulnerability more likely to result in suicide when combined with social-emotional isolation or detachment from forms of common life. He also allows for 'rational' suicides, in the sense that mental illness is a factor which increases an individual's suicide risk, rather than a necessary or even a sufficient condition.

Several key social factors have emerged regularly in suicide research as risk factors. Those most often related to male suicide rates are unemployment and family factors.

Unemployment

Studies of the relationship between unemployment and mental health, and between unemployment and suicide, have consistently shown gender differences. Unemployment seems to be more detrimental to the well being of males than females, and the effect on males seems to vary with age.

The *National Action Plan for Youth Suicide Prevention* (DHAC 1998) made note of a recent Queensland study which found that 60% of people who died by suicide were unemployed or not in the workforce. In terms of suicidal behaviour, Beautrais et al. (1996) found that young people who had made a serious suicide attempt were more likely to be unemployed than other young people. Platt and Kreitman (1984) found the rate of attempted suicide among the unemployed to be over ten times that among the employed.

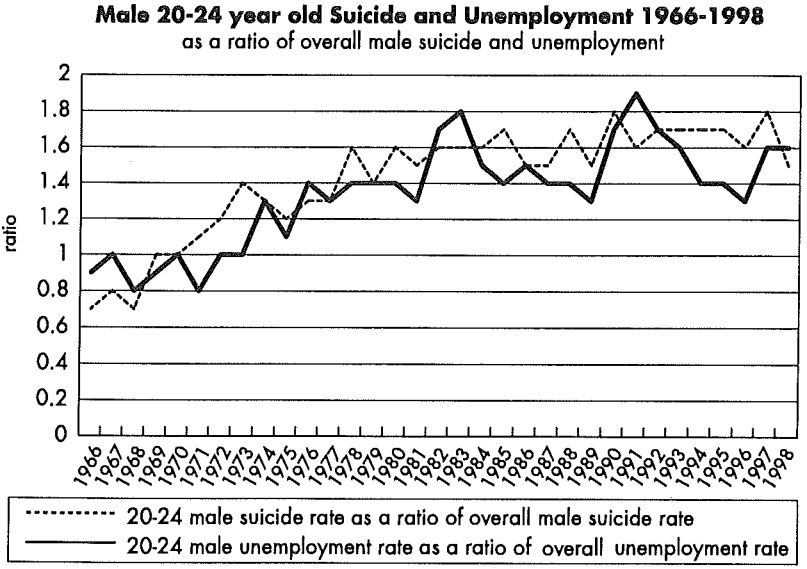
Young males' unemployment levels and their suicide rate have risen in tandem since the 1960s. Between 1966 and 1998, 15-19 year old male unemployment increased tenfold, from 2.5% to 25.2% of the teenage labour force. For 20-24 year olds, there was also a tenfold increase in the unemployment rate, from 1.4% to 13.3% (ABS 1996, 1999). Another important aspect of young male unemployment is its duration. In 1970, the average period of unemployment for young males was four weeks. In 1986 it had increased to 31 weeks, then in 1998 it was 28 weeks for 15-19

year olds and 42 weeks for 20-24 year olds (Hassan 1995; Wooden & VandenHeuvel 1999).

The strong association between unemployment and suicide rates for young males has been consistently confirmed by research (Eckersley 1996; Hawton & Fagg 1992). In a cross-national study for the World Health Organisation (WHO), Diekstra (1989) found that unemployment was a predictor of young male suicide in many countries. An important and widely cited Australian study by Stephen Morrell et al. (1993) showed that as the rate of young male unemployment increased relative to overall male unemployment rates between 1966 and 1994, the male youth suicide rate also increased relative to overall male suicide rates. This graph, first published in 1993, is updated in Figure 9 using data from the Australian Institute of Health and Welfare and the Australian Bureau of Statistics.

Statistical analysis of the two time series shown in Figure 9 also finds a very high correlation between unemployment and suicide for young males. This correlation determines that 70% of the variation in suicide rates can be predicted by the variation in

Figure 9.



Source: Update of graph from Morrell et al. (1993).

unemployment rates, or vice versa. Although no causal relationship can be inferred, it can be concluded that change in one of these variables is accompanied by change in the other. No such relationship was found for young female suicide and unemployment.

If it is true that unemployment has adverse consequences, what are the factors involved? The deprivation theory of unemployment (Jahoda 1981) asserts that employment has manifest benefits (income) and latent benefits (structure and activity). This theory assumes that any employment is better than none. However, the finding that suicide rates are still high in low income, low security occupations such as labouring contradicts this assumption (Hassan 1996). The benefit, therefore, lies in meaningful or satisfying work, rather than just any work.

Fryer's (1986) agency theory explains the adverse effects of unemployment as frustrating people's desire and ability to plan for themselves, as well as stifling the proactive and enterprising aspects of human nature. This can therefore apply as much to unsatisfying employment as to unemployment. Morrell et al. (1998) suggests that high levels of unemployment may have a generalised influence on the population by increasing the number of people in unsatisfactory employment. In this way, high unemployment affects both the unemployed and a sub-section of the employed population.

In Australia, unemployment and welfare are, for demographical purposes, synonymous. Some commentators, such as Riaz Hassan (1996) have suggested that the generous welfare system in Australia is the reason that Australian suicide rates are not as high as Japan or some European countries, such as Hungary. At the same time, Hassan claims that Australia's high rates of suicide among young males and elderly males is due to their higher levels of welfare dependency and its stigmatisation. It is difficult to reconcile these two points of view.

Australian male youth suicide rates are among the highest in the world, but our elderly male suicide rates are among the lowest (Cantor et al. 1999). Both age groups enjoy good welfare arrangements, but so too do elderly Europeans, whose suicide rates are the highest in the world.

Unemployment rates among young females are comparably high, but their suicide rates remain low and stable and do not correlate as strongly as young males with unemployment rates or welfare expenditure.

Examining welfare expenditure and suicide rates between 1969 and 1996 gives some interesting results. The correlation found between welfare expenditure and the overall male suicide rate was moderately high and positive. This correlation was not as strong as that for welfare expenditure and young male suicide rates, which was as high as the correlation for youth unemployment rates. An interesting and unexpected result was that for overall female suicide rates and welfare expenditure, there was a very high, negative correlation. Put simply, where welfare expenditure went up, young female suicide came down. In light of this high negative correlation between welfare expenditure and female suicide, Hassan's first claim may have some validity, but only in the case of women.

So increased levels of welfare expenditure, which translate to an increased number of welfare dependants in a population, seem to have a different relationship with suicide rates for males and females. There is a strong positive relationship between welfare expenditure and young male suicide, and a strong negative relationship between welfare expenditure and female suicide. Since there is no correlation between female suicide and unemployment rates, the relationship between welfare expenditure and female suicide rates points to the sole parent pension. Having a child may give the mother something to live for and, perhaps for this reason, female suicide rates have remained lower than male suicide rates (Dorrance & Hughes, 1996). The sole parent pension enables women to have children without having a full-time father to provide for them financially. How this might also affect young males indirectly will be discussed later.

Family as a protective factor

The evidence that family functioning is related to the well being of children and adolescents is overwhelming, and mental health is no exception. It is therefore reasonable to expect that the significant changes in family structure and functioning in the post-

war years—such as the increase in sole parent and blended/stepfamilies due to increased rates of divorce and ex-nuptial births—would have some effect on the psychological well being of children and adolescents.

The role of the family is best understood as a 'protective factor'. Although family fragmentation has not been established as a specific risk factor for youth suicide, it seems that an intact family can give some immunity against the effect of other risk factors. According to the Western Australian Child Health Survey (Silburn et al. 1996), children in single parent and step/blended families have up to two times greater incidence of mental health problems than children in intact families (two natural parents). Garrison et al. (1997) documented an almost 15 times higher prevalence of depression in 12 to 14 year olds not living with both of their natural parents.

The *National Action Plan for Suicide Prevention* claims that 'young people with suicidal behaviours are less likely to be living with both of their biological parents and more likely to be from separated, divorced or single parent families, or from families where there are interpersonal conflicts' (DHAC 1998: 32). Indeed, several studies have found that suicide victims are more likely to come from a non-intact family of origin (Brent et al. 1994; Gould et al. 1996).

Other studies emphasise family cohesion as a protective factor. Maintaining closeness with parents tends to protect adolescents from depression, whereas other types of social support such as peer relationships do not (Petersen et al. 1991). Downey (1991) has suggested that the deterioration of the nuclear family may be contributing to youth suicide because of its waning influence in countering peer pressures to use drugs. She claims that the resulting increase in drug use is closely linked to increasing youth suicide rates.

Children in step and blended families may be at even greater risk of suicide than those in single parent families (Steinberg 1996; Garnefski & Diekstra 1997). A recent US study found that adolescents in remarried families had the highest incidence of suicidal behaviour (38%), compared with those in separated/divorced single parent families (20%) and intact families (9%).

Both an intact family and family cohesiveness were therefore found to be strong protective factors. Using statistical analyses, it was estimated that each reduces the odds of suicidal behaviour by about one third of what they would be for an adolescent without an intact family or without family cohesiveness (Rubenstein et al. 1998). Steinberg (1996) argues that each change in family structure may affect a child's ability to adjust. If this is the case, then family *stability* is as important as family structure.

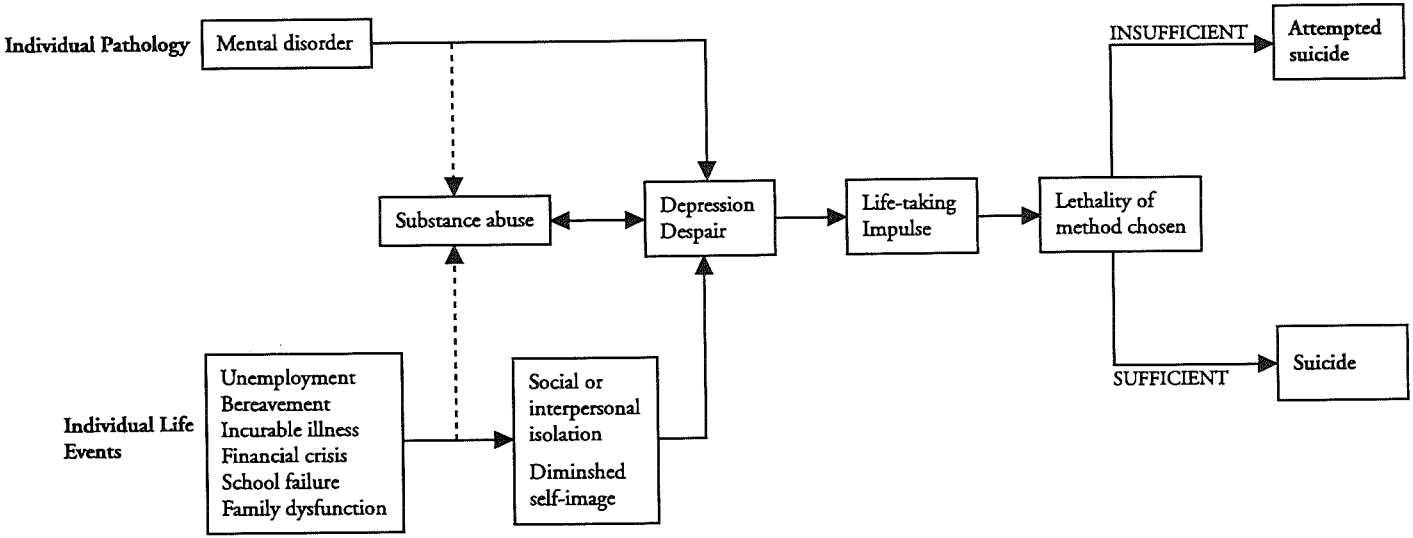
The most extreme form of adverse childhood experience is classified as abuse and neglect. The most recent data from 1997/98 shows that there were over 26,000 substantiated cases of child abuse and neglect in that year, 40% higher than in 1990-91. Some studies have shown child abuse to be a predictor of suicidal behaviour (Beautrais et al. 1996; de Wilde et al. 1992), but there is still insufficient evidence of a relationship between child abuse and neglect and suicide for any conclusions to be drawn about its effect on suicide rates.

The same is true for family socioeconomic circumstances. It is difficult to separate the effects of unemployment and/or family structure from household income. For children, the economic circumstances of their parents are pertinent. A relationship between parental income and child mental health was found in the Western Australian Child Health Survey, with children in the lowest income quintiles having the highest incidence of mental health problems. However, income did not affect intact families, indicating that intact family structure may be a protective factor against the effect of changes in income.

Overall, these findings of a relationship between social and economic variables and suicide are consistent with Durkheim's integration theory. Detachment from major social institutions such as work and family seems to have a detrimental effect on well being. They also deserve further scrutiny, particularly with regard to their effect on young people, and how they affect young males and females differently. This is an area of research that is worryingly deficient.

Figure 10 provides a model of the interconnections between the risk factors for suicide and shows how they might be understood as a causal pathway.

Figure 10. Suicide: A model of precipitating conditions



Summary

- Suicide rates among young males do not show the same trends as their rates of depression. The likely effectiveness of the emphasis on depression as a prime causal agent and as the focus of attention in government suicide prevention strategies is therefore doubtful.
- Rates of substance abuse are much higher than rates of depression in young males, and drug use is implicated in many suicides, either directly or indirectly.
- Unemployment and welfare dependency are also related to young male suicide.
- An intact family can act as a protective factor, with family stability and family cohesion also being important.

Why might these factors affect males in particular?

The evidence for a relationship between unemployment and suicide at a macro level is strong. What is not so clear is why unemployment, or welfare dependency, might adversely affect young males in particular.

Unemployment and masculinity

The most common explanation is that males and females are socialised to expect different things from life. When they cannot fulfil their traditional gender roles, they are subject to feelings of hopelessness and depression (Goldney 1996; Winefield 1996). Women, however, may not define as much of their identity through attachment to work, and are able to find satisfaction in domestic roles or motherhood. Men do not have this alternative (Hassan 1995; Winefield 1996). Welfare dependency is therefore equated with unemployment, and they experience feelings of inefficacy.

The socialisation theory is difficult to confirm quantitatively, but it cannot be disregarded. If unemployment results in lower social integration for males than for females, then this could explain the male/female differential. The more young men who are in this position, the greater will be their suicide rate. As for the genesis of these socialised priorities, evolutionary psychology suggests that they are innate, deriving from different reproductive roles; this is a contentious position.

Unemployment and financial deprivation

Young people may have higher disposable incomes than several decades ago, but they are more dependent on others, whether it be their parents subsidising their earnings or welfare dependency. Hassan (1995) suggests that the greater availability of unemployment benefits and study allowances over recent years may have resulted in more young people living in isolation and poverty, with concomitant psychological stresses. On the other hand, others argue that the increasing number of young people who are dependent on their parents for a longer period of time also causes strain and frustration (Zubrick et al. 1997).

Unemployment and mental illness

Unemployment may increase suicide rates by increasing the risk of mental illness. Indeed, there is evidence that unemployment increases the risk of mental illness in young people (Morrell et al. 1994). But the available research provides no confirmation of a greater incidence of depression, specifically, among young unemployed males. Studies either do not document gender differences (Patton & Noller 1990), or show higher levels of depressive symptoms in unemployed females (Feather & O'Brien 1986). This is yet more reason to question the emphasis placed on depression in youth suicide prevention. In comparison, many studies have shown particularly high levels of drug use by unemployed young males (Kandel & Davies 1990; Hammer 1992; Winefield et al. 1993; Fergusson & Horwood 1997; Fergusson et al. 1997).

Unemployment and family

Bob Birrell and Virginia Rapson, in their report *A Not So Perfect Match* (1999), found men with low incomes are less likely to have a partner than those with high incomes and high status occupations. Moreover, unemployed men and those not in the labour force are the least likely to have a partner. This absence of an intimate relationship might compound the existing social isolation due to lack of work, thereby increasing the likelihood of suicide. This is an important finding in the context of male suicide.

How do these factors affect *young* males in particular?

How might unemployment/welfare dependency be causally related to a suicidal motive in *young* males? As mentioned earlier, it may typify a situation of low social attachment. This may affect young males in particular because they are less likely than older age groups to have family responsibilities (wives and/or children), and so are even less socially attached.

Young males, unemployment and partnering

As welfare expenditure has increased, female suicide rates have decreased. Although correlations do not imply the direction of a possible causal relationship, it is difficult to imagine that decreasing female suicide has resulted in higher welfare expenditure. The lack of association between female unemployment and female suicide, together with the relationship between increased welfare and decreased female suicide, points to the sole parent pension as a possible protective factor for young females. Birrell and Rapson (1999) suggest that the increase in sole parenting may be linked, in part, to the increased number of unemployed young men. These young men may have been rejected as permanent partners by women because they are unable to provide for a family.

Absence of a father

As for gender differences in family influences on children, there is some evidence that the well being of children is related to the gender of the child and the gender of the custodial parent. In single parent families, it has been found that boys who lived with their father were better off than boys who lived with their mother. Furthermore, the well being of boys who lived with their mother improved when she remarried, as opposed to girls, whose well being declined when a new adult male was introduced to the household (Amato & Keith 1991; Hetherington et al. 1985). The absence of a male role model for boys is implicated in boys' school performance and in boys' delinquent behaviour. Its importance for boys' mental health is therefore a significant area for future research.

However, family income may also have a greater effect on boys than girls. Some research has shown that financial deficit causes more psychological distress for boys than for girls (Elder et al. 1985). This might also be because higher income is associated with households that have an adult male present, whether he be a single father, a stepfather or a male partner in a couple.

Substance abuse

What causes the gender differences in psychopathology described earlier? Why is substance abuse disorder the most common mental illness among young males, whereas depression is most common among young women? If, as the survey data indicates, there is little difference between the proportion of young males and females who have used drugs (recently or ever), why do young males have a greater tendency to become dependent? Unfortunately, there are no answers to these questions as yet. One possibility is that males are less likely to seek help for health problems, including psychological problems, than females (ABS 1997). They may then be more likely to 'self medicate' with drugs, which might lead to a drug dependency.

Conclusions: Understanding the differences in male and female youth suicide rates

So far, we have discussed the relationship between various factors and suicide, and how these relationships might be more salient for males in general, and young males in particular.

In what follows, some conclusions are drawn about how these relationships might help us to understand the gender differences in suicide rates.

Gender differences in method of suicide

The gender difference in suicide rates is often attributed to the method of suicide or self-injury. The most common methods of suicide for young males are the more violent, irreversible ones such as firearms and hanging. For young females, the most common method is poisoning, which is more likely to be reversible.

Hospitalisation statistics show that young females are admitted for self-injury—the only indicator of attempted suicide—at least 50% more often than young males. The hospital admissions-to-deaths ratio for self-injury is 34 to 1 for young females, and 5 to 1 for young males (NISU 1997). This information, along with the data for mode of self-injury, has been interpreted as evidence that young women attempt suicide at rates at least comparable to young men, if not higher. Their attempts, however, are less likely to be fatal due to the less violent means used.

There are several reasons for caution before concluding that gender differences in suicide rates are attributable to the method of suicide:

1. There has been no attempt to validate statistically the claim that gender differences in suicide rates are an artefact of gender differences in suicide methods. One rudimentary way is to consider the comparable suicide rates if suicides by firearms and hanging are removed from both the male and female rates. For 1995, the male youth rate is still two and a half times higher than the female rate, even when hanging and firearms are excluded. This means that the mode of suicide does not fully explain the gender difference.
2. There has not been an increase in the use of firearms and hanging comparable to the increase in young male suicides. In fact, the proportion of suicides due to firearms has decreased while the male suicide rate has increased.
3. We have not answered the questions: *Why* do boys choose more violent means of suicide than girls? Is it that they have greater access to firearms? Or is it that their will to die is stronger than girls'? This latter hypothesis has been described as 'lethality of intent' (Hassan 1995). Or are the gender differences in methods of suicide the result of differential socialisation? In other words, do boys and girls choose a method that they perceive to be more appropriate for their gender?

There may be other links between suicide methods and suicide rates which are not mediated by gender. For example, is there a relationship between the reason for suicide and the likelihood that it will be fatal? One Victorian study has shown that there

are substantial differences in motive between completed suicides and suicide attempts. Psychiatric problems and alcohol/drug problems were much more common reasons for completed suicides, as established by psychological autopsies; relationship problems and family conflict were much more common reasons given for suicide attempts (Krupinski et al. 1998).

A further unexplored possibility is that the method of suicide is related to the aetiology of the motive. For example, are people with schizophrenia more likely to use hanging to commit suicide? Are substance abusers more likely to use drugs to commit suicide?

In sum, we have no reason to dismiss the 'lethality of intent' explanation, so the huge difference between young male and young female suicide rates cannot be dismissed as an artefact of the method of suicide.

Individual pathology and suicide

There are clear differences in the prevalence of specific mental disorders between young males and young females. The higher incidence of substance abuse among young males may stem from a tendency to self-medicate with drugs, instead of seeking treatment for psychological problems.

Suicide prevention strategies focussing on depression may have failed to identify young males whose symptoms do not allow them to be identified as depressed, and might therefore have failed to reach a significant number of young males at risk of suicide. Even if these drug dependent young males are treated, it is often for depression rather than addiction, leaving them vulnerable to further depressive episodes and/or suicide.

Social factors in suicide

The social factors identified earlier seem to be more salient for males than females, and therefore place young males at greater risk. They can summarised as follows:

- Unemployment may affect young males more than young females due to differences in the importance they place on work as a source of self esteem and social standing.

- High and rising welfare payments might have resulted in welfare dependency for both males and females. As it relates to unemployment, this has been detrimental to males, but beneficial for females, as a measure enabling sole parenthood with a pension.
- The adverse effect of unemployment on young males might be exacerbated by rejection by females who prefer not to marry them, even after having their children.
- Intact family structure is a vital protective factor, but may be more salient for boys than for girls, possibly because the lack of a father in the home has a greater impact on boys.

Implications and recommendations

Rising suicide rates among young males, over a thirty year period, suggest that this key public health issue is either being neglected in health policy, or that existing suicide prevention strategies are having little effect. Since the Commonwealth government spent $31 million on the National Youth Suicide Prevention Strategy (NYSPS 1995-1999), the latter must be the case. A new Commonwealth initiative, the National Action Plan for Suicide Prevention, builds on the objectives of the NYSPS, and is to be implemented over the next four years.

Secondary prevention

Although the role of drug use and abuse in suicide is widely acknowledged (Department of Health and Family Services 1997), suicide prevention strategies remain focussed on depression. This targets young females well, among whom affective disorders have an incidence of 14%. It is, however, a questionable approach for preventing young male suicide. Only 3% of young males have affective disorders, compared to 22% with substance abuse disorders. These gender differences also exist for adolescents.

The lack of progress in arresting the rise in young male suicide may therefore be partly attributable to misguided suicide prevention strategies. The almost sole focus on identifying and treating depression in young people may have contributed to the stability of the much lower female suicide rate and therefore should certainly not be disregarded. But it has failed to address the most

important risk factors for young male suicide.

Granted, the high levels of substance abuse (as distinct from drug use, which is not gender-specific) among young males may indeed stem from a depressive disorder, but the objective of secondary prevention is to identify and treat individuals who are at risk. A young man who does not exhibit the symptoms of a depressive condition, because his problem has progressed to substance abuse, may 'slip through the net' because he does not fit the criteria.

Arguably, the most important issue is to identify the factors which might make young people more inclined to use drugs, in order to reduce the number of young people exposed to these risk factors. This could conceivably include some forms of drug education.

Recommendation: *That the mental health of young people be recognised as a critical public health issue, and that a greater amount of research and policy attention be paid to it, particularly in terms of its social and environmental genesis.*

Recommendation: *That suicide prevention strategies be reviewed to take into consideration the gender differences in psychopathology; that is, the greater incidence of substance abuse among young males.*

As noted in the first section, 'Boys and Crime' (pp.1-27), discussion of policy regarding drug use by young people, including drug education in schools, will be held over until the last chapter, 'Policy and the Issues in Context' (p.71).

Primary prevention

Specific suicide prevention strategies are generally concerned with secondary prevention. Including primary prevention factors, such as those identified here, in future strategies or 'action plans' may reinforce the importance of these factors. Those which are most pertinent for young males seem to be:

1. rates and duration of unemployment and welfare dependency;
2. family breakdown.

These are variables which indicate a low level of social integration. Primary prevention is therefore the ideal way to combat suicide as a key public health issue. It targets not only the social factors that increase the likelihood of suicide, but also the individual risk factors, such as drug use and adolescent depression, which are themselves important problems.

Welfare dependency is fundamental to this issue. The *National Youth Suicide Prevention Strategy* (NYSPS) (1995-1999) only pays lip-service to this problem compared to other issues—hardly an appropriate emphasis given the evidence of its influence. Youth unemployment, also, is not specifically mentioned in the objectives and strategies of the *National Action Plan for Youth Suicide Prevention* (NAPYSP) (1999-2003).

The magnitude of the influence of the family environment is also often overlooked in discussions of public mental health. Like youth unemployment, its effects are wide-ranging, but often not immediately obvious.

The NYSPS (1995-1999) stated that 'government has identified childhood antecedents of youth suicide as a priority area for research.' We have not yet seen the results of such research if it has taken place, and there is no mention of family environment as a youth suicide risk factor in the strategies and objectives of the NAPYSP (1999-2003).

Again, a more detailed discussion of the issues of youth unemployment and non-intact families is deferred to the concluding chapter.

Policy and the Issues in Context

The title of this monograph, *Boy Troubles*, is not intended to suggest that the problems we have discussed are exclusively masculine. Girls may also be significantly affected by most of the suspected causal factors. But the statistics indicate that boys are differentially affected to an unexpected and alarming degree. Our analysis of the research findings has suggested some reasons why this might be so. It is now time to place the analysis in a broader context, and to consider what the identified factors might imply for national policies.

This concluding section pulls some of the main threads together and emphasises what the reader will have already discerned; namely, that a relatively small group of factors—family dysfunction, youth unemployment and drug abuse—loom large in the genesis of juvenile crime, educational failure and youth suicide.

The changing family

Pre-eminent amongst these predisposing factors is the quality of a child's home and family life. The child with a strong affectionate family, whose parents care for his or her welfare, and supervise his or her behaviour and schooling, is more likely to be successful at school, less likely to become suicidal, and less likely to fall into delinquency and juvenile crime. Such a family is a protective and positive factor in every sense.

Sole parent families, despite the inherent difficulties they face, may also raise their children well and successfully. But, on average, the risks are greater. Statistically, sole parent families figure disproportionately in the backgrounds of boys in trouble. In nearly 90% of sole parent families, the natural father is absent, and the absence of fathers in the lives of their children, especially boys, emerges as a significant risk factor. Stepfamilies and blended families also tend to be statistically associated with greater risks for children, but to a lesser extent than sole parent families.

For boys particularly, the absence of a father in the home is a deprivation. Whether we like it or not, it still makes sense to speak of a masculine culture and of ideals of manhood to which most boys aspire, be it consciously or unconsciously. Boys look for models and guidance from the men and other boys with whom they have contact. But if such contact is devoid of strength of character, or if it is emotionally and morally 'thin', a developmental influence of the greatest importance will be missing or misdirected.

By and large, it is a boy's natural father who will have the strongest motives to be a good father. When such fathers are absent, or when they are prevented by divorce and separation from full participation in the lives of their children, their sons are more likely to achieve only second best, or worse, in their search for a masculine identity.

Demographic figures reveal much about the loss of fathers from families:

- The percentage of births to unmarried mothers has increased sixfold from 5% of all births in the early 1960s to 29% today.
- The divorce rate has tripled over the same period. Divorce and separation are the main reasons for sole parenting.
- About one child in four is living in a home in which one of the natural parents—usually the father—is absent.
- The percentage of intact 'original' families has declined since the 1960s from 88% of all families to about 70% today.
- Approximately 9% of couples, and hence 7% of children, are living in de facto relationships, and the break-up rate of such relationships is many times higher than the divorce rate.

The sources of change

There are many reasons why family life has changed and become less settled. Since so many of the responsible factors interact, a clear sequence of cause and effect is difficult to establish.

Divorce rates began to rise in the 1960s, following changes to family law. The pace accelerated after the Family Law Act of 1975, which introduced no-fault divorce and divorce after one year's separation. Changes in the law were probably a causal

factor, and also made it easier to end marriages that had failed for other reasons.

The moral climate of our culture changed in the late 1960s, embracing greater personal freedom, more 'permissiveness' and more experimentation. Stigmas formerly placed upon divorce, living together outside marriage, and having ex-nuptial children began to disappear.

Affluence rose, the welfare state expanded rapidly from the 1970s on, taxation became less friendly to the single income family with dependent children, and mothers began to enter the workforce in greater numbers. Today 25% of mothers with children aged 5-9 are working full-time (35 hours or more per week), and 35% of mothers with children aged 10-14 are working full-time (ABS 1984, 1998). The number of children in out-of-home child care for many hours per week, or without parental supervision in the after-school hours, has grown considerably since the 1970s.

Sole parent pensions have removed some of the financial disincentives to divorce and to ex-nuptial parenting, both of which have increased since the pension was introduced.

Government allowances for children have made it easier for them to leave home early and live unsupervised lives, although access to such allowances has been restricted in recent years.

The legitimation of de facto living and the devaluation of marriage may now be further advanced by proposals under consideration by the NSW State Government. These would treat da facto couples as equivalent to married couples in terms of property settlements upon break-up.

What can be done?

Adults may have differing opinions about the desirability of the changes that have taken place in marriage and family life. Yet, there is now powerful evidence, not only from the Australian data presented here, but also from countries which have undergone similar changes in family life, to show that the consequences for children are, in the main, deeply disturbing. Adults may survive the dissolution of a partnership without any long-term distress, but the evidence is that children frequently do not.

Divorce and marital instability

The stability of marriage, or a socially recognised and sustained man-woman partnership, is absolutely central to the stability of families and the lives of children. There can be no successful solution to the problems of boys, and children generally, unless we come to terms with the reality of marital instability, and the disrupted and uncertain parenting that accompanies it.

This state of affairs presents a policy priority for government. The issues involved in relation to family stability are clearly complex, and an extensive inquiry is needed to deal with them comprehensively and systematically. That cannot be attempted here, but it is a responsibility which government should accept.

Recommendation 1: *That the federal government commission an inquiry to examine the causes of marital and partnership instability, and sole parenting, and their consequences for children, with a view to recommending measures that might be taken to improve the stability of parental relationships and reduce the incidence of sole parenting.*

Youth unemployment

Young people have not enjoyed the same reduction in unemployment that has occurred in the overall population. Although the overall unemployment rate in Australia was 7% in 1999, a lesser-known figure is that in 1999, 25% of 15-19 year olds in the labour force could not find full-time work (ABS 1999). When we include those teenagers who are not in the labour market, this translates to around 189,000 teenagers who were unemployed and not in education. Another estimate, based on a lower unemployment rate (22%), is somewhat lower at 167,000 (Gittins 1999). Yet, even this more conservative estimate is high.

Unemployment is demoralising. For young males, it is especially so because work figures so strongly in the construction of masculine identity. Unemployment detaches young energies from the constructive and cooperative responsibilities that work implies. The alternatives of idleness, and the search for other means of self-expression and social participation, frequently lead to

delinquency and crime, especially for the poorly educated, the unskilled, and the ill-supervised.

The current labour market has few opportunities for unskilled young people, which means that many young people are disillusioned about their futures. Reform in this area has been slow, and there are still several key areas which government might investigate more thoroughly in pursuing a reduction in youth unemployment.

Welfare reform

Current strategies to include work as a condition of unemployment benefits, such as Work for the Dole, affects those unemployed youths who could be working if they so chose and, indeed, it seems to be having some positive effects. It may also help to integrate unemployed people into the community again and restore their self confidence, thereby leading them toward employment in this way. Yet, welfare reform does not necessarily create employment opportunities. While maintaining the disincentives for welfare dependency as a matter of course, the more important issue of creating an employable youth labour force must be given attention.

Minimum wages

Minimum wage legislation plays a part in reducing the employment opportunities of young people, especially those who are unskilled and inexperienced (Day 1999). It prices them out of the labour market by establishing an unfavourable costs to productivity ratio for employers. Employers who would otherwise hire young unskilled labour at lower rates can no longer afford to. The result is that the unemployed person still has no job, and has also lost the prospect of acquiring skills and moving onto a higher wage.

Apprenticeships

The number of apprenticeships available has declined measurably, and this has contributed to youth unemployment in a major way (Dorrance & Hughes 1996). Young people unsuited to extended schooling or higher education once had the option of on-the-job

training for a trade, often with a job guaranteed once they were qualified. This opportunity has become relatively rare, leaving many young people either killing time at school or unemployed. Apprenticeship is an important area for reform.

Education and training

Minimum wages and apprenticeships are factors that affect the supply of jobs. There are also factors that affect the supply of labour to meet the requirements of these jobs. The most pertinent issue is education and training. Young people with low levels of education face the poorest prospects of employment (Ainley & Mackenzie 1999). The most poorly educated are sometimes unemployable, and we have seen that boys are increasingly predominant in this group. For this reason, adequate standards of education in state schools and the quality of training in TAFE colleges and universities are of paramount importance. Some argue that they have deteriorated markedly and require urgent attention. (For details on how reform might proceed, see Dorrance & Hughes 1996).

Recommendation 2: *The reduction of youth unemployment should be addressed systematically and urgently. Barriers to youth employment that should be looked at include:*

- *minimum wage legislation as it applies to unskilled young people;*
- *apprenticeships;*
- *the quality and availability of education and training in our key educational institutions.*

Drug abuse

Drug use has been shown repeatedly to be a major factor in juvenile crime. Drug dependency, from which one in five young males suffers, has strong links to suicide. It is also an important public health issue in its own right.

Substance abuse disorder is a very common condition amongst one of our most suicidal groups—young males. Yet, depression is the primary focus of suicide prevention strategies. It is not our

Boy Troubles

Understanding Rising Suicide, Rising Crime and Educational Failure

Jennifer Buckingham

CIS Policy Monographs 46

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Foreword

Calling a study 'Boy Troubles' may suggest to some that we are either firing a shot in what has been called (unhappily) the 'gender wars' or dealing with the romantic contretemps of girls. Nothing could be further from the truth. The title is to be taken literally, as singling out boys for attention here is a response to some remarkable statistics of relatively recent provenance.

These statistics suggest that some disturbing things are happening in the lives of more and more boys, which we do not fully understand, but which seriously threaten boys' well being to an extent simply not true for girls. Indeed, it is the remarkable differences between boys and girls in the figures on crime, suicide and educational performance which constitute a puzzle of the first order. Girls commit only a fraction of the crimes that boys do; their school performance is better and outpacing boys; and they do not commit suicide at anything like the rate of boys.

In gathering the data and reviewing the research disclosed in the pages that follow, Jennifer Buckingham has brought together an impressive body of information, evidence and speculation. This cries out for the attention and concern of the general public and those who formulate policy at state and federal levels.

The reader, however, is not left with wholly unresolved puzzles. As the evidence accumulates, the study invites the reader to consider a variety of hypotheses that may go some way toward unravelling the underlying causes of the phenomena concerned. The various factors that seem to be important are then systematically combined in models illustrating the hypotheses.

This study is part of the Centre's continuing programme of research, publications and policy proposals under the title of 'Taking Children Seriously'. The programme has pioneered a

variety of research initiatives whose ultimate objectives are: to critically examine the present circumstances of the lives of Australian children; to gather the facts on situations that threaten their well being; and to offer policy and public action proposals, based on sound evidence, that are practicable and likely to be successful. *Boy Troubles* realises those objectives.

Greg Lindsay
Executive Director
The Centre for Independent Studies

About the Author

Jennifer Buckingham is Policy Analyst with the *Taking Children Seriously* research programme at The Centre for Independent Studies (CIS). She co-authored *State of the Nation 1999: Indicators of a Changing Australia* (CIS 1999), and wrote the acclaimed *The Puzzle of Boys Educational Decline: A Review of the Evidence*, a CIS Issue Analysis paper (1999).

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TAKING CHILDREN SERIOUSLY

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Introduction

It may have always been the case that raising boys is more problematic than raising girls, but we cannot be sure. What we do know is that the recent history of boyhood in Australia reveals a variety of troubles. The statistics show that boys are failing at school, killing themselves and getting into trouble with the law at ever higher rates, and much more so than girls. These facts raise four important questions. Why are the rates so high? Why are they increasing? Why are they higher than the rates for girls, and why is the gap between boys' and girls' school performance growing?

In the pages that follow, these questions guide the presentation of evidence and the discussion of their meaning and implications. The ultimate objectives of such a study are, first, to throw some light upon the causes of the changes taking place; second, to offer some recommendations about what might be done to mitigate or reverse what is happening and to deal more effectively with the consequences. It hardly needs to be said that final and definitive answers about the causes of some complex issues must await further research. There is, however, enough known now about many of the predisposing conditions of the problems concerned to enable us to focus attention on some key components, with reasonable confidence that appropriate action will yield benefits.

The physical and mental health, the competence, the nascent citizenship and the happiness of a society's children and young people are matters of the utmost importance—not only for the children themselves, but also for the adults who bear responsibility for them. Understanding the problems facing them entails asking serious questions about some of our major social institutions, such as the family and schooling, which bear much of the responsibility for the early years of children's lives. It is in the interaction between the natural endowments of children, these key institutions and the broader social and economic environment that the dramas of success and failure, crime and punishment, and life and death are played out. Consequently, the scope of this study is necessarily broad and the variables with which it must deal are many.

What can be said here at once is that this review exposes a variety of recent developments, the roots of which are deep within Australian society. These will not yield easily or readily to simple palliatives. Sustained, long term attention at the highest levels of federal and state policymaking will be necessary. This will require the concern, consent and support of a public sufficiently aroused to the seriousness of the problems to demand such action from their governments. It is in the service of a community better informed about 'boy troubles' that this study is offered.

Boys and crime

There is a large and growing body of research about juvenile crime, which is gradually revealing a picture of who young criminals are and what is behind their behaviour. The available statistics, although incomplete, give reason to believe that juvenile crime is a growing national problem.

One thing is clear from the statistics: boys make up the overwhelming majority of offenders. The typical juvenile offender is male, has committed property crime, comes from a broken family and has minimal contact with his father. He is poorly supervised, has a learning problem, is disruptive at school and uses drugs. These scenarios are not exhaustive, but they are the most commonly observed risk factors for juvenile crime.

The task of research then is, first, to build a picture of the ways in which various risk factors interact with each other; second, to build a cumulative causal pattern which, as different factors are added in, increases the likelihood that a given individual will become involved in juvenile crime.

Boys are much more likely to be offenders than girls for two main reasons:

(i) gender-specific biological factors are involved, in the case of boys, which are salient in precipitating delinquent and criminal behaviour;

(ii) boys are more vulnerable than girls to some of the major risk factors (e.g. the absence of a father in the home).

Finally, research must take into account those factors that increase the probability that a juvenile offender will become a long-term adult offender.

Measuring juvenile crime

Statistics

Before we begin, it must be noted that due to differences and deficiencies in crime recording procedures across the States, the measurement of juvenile crime on a national level is inexact. Juvenile crime data from each jurisdiction, and for each recording period, are not directly comparable because of differences in both the definition of 'juveniles' and the measurement of crime participation. For example, Victoria and Queensland define a juvenile as aged between 10 and 16; in Western Australia it is between 10 and 17, and in Tasmania between 7 and 16. Some States measure clearance rates while others measure arrests made; this can change from year to year.

Nonetheless, a national twenty year time series of juvenile arrest rates has been compiled and published (Mukherjee 1997a). Although the most recent data are for 1994/5, examination of the state-by-state data for more recent years indicates that the upward trend shown in these figures has continued.

It should also be noted that arrest statistics are not the most accurate record of crime participation, as they only measure crimes cleared, and cannot necessarily be extrapolated to uncleared crimes. They do, however, provide the most consistent data available to date.

Figures 1 to 4 show juvenile crime rates, for the period 1973/4 to 1994/5, for four offences: break, enter and steal; motor vehicle theft; robbery; and serious assault. As noted, these statistics must be interpreted with caution as there are some missing data. Despite this, apparent trends suggest a substantial increase in juvenile participation in violent crime and a less substantial increase in property crime.

These juvenile arrest statistics also show that rates of property crime have doubled in the period from 1973/4 to 1994/5, and that rates of violent crime were five times higher at the end of the period than at the beginning.

Figure 1.

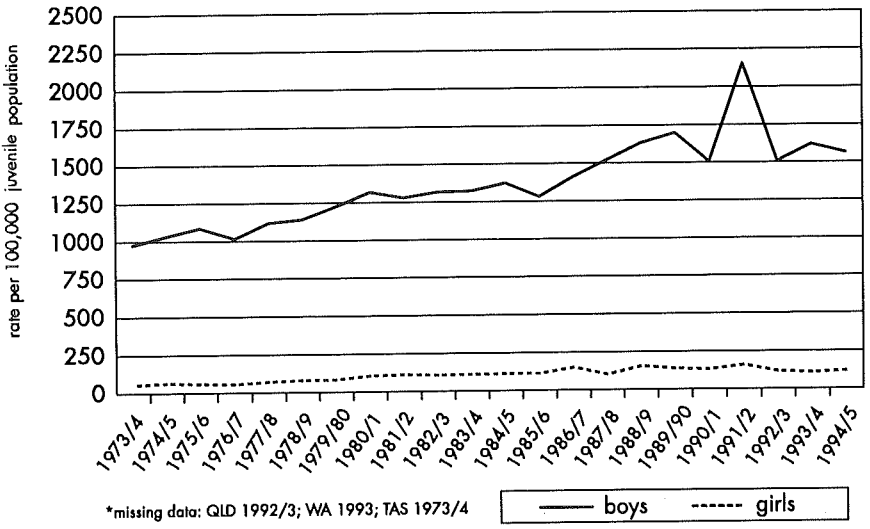


Figure 2.

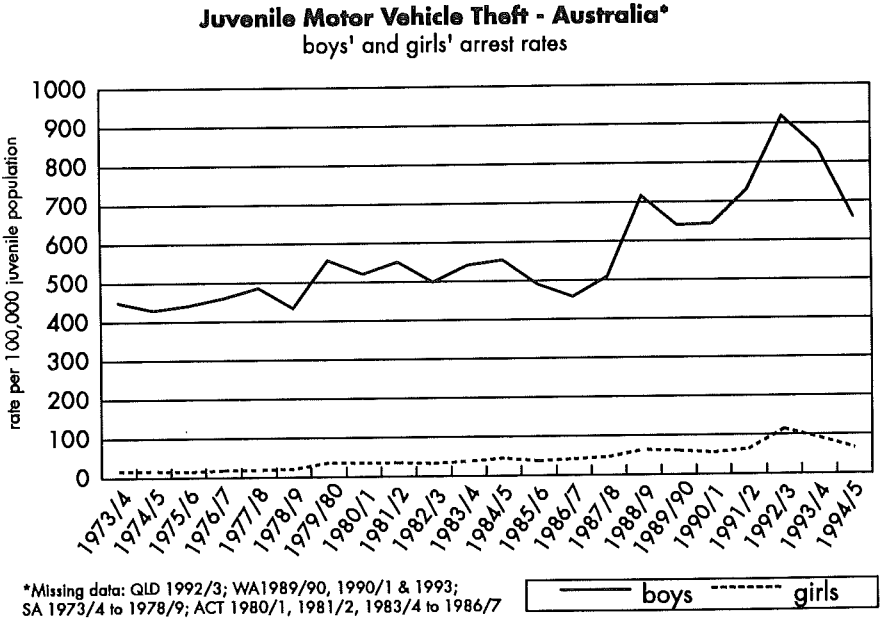
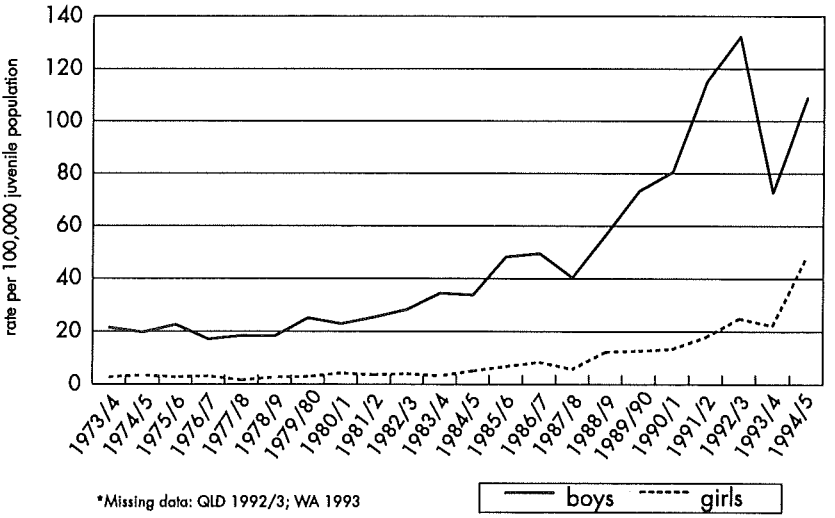


Figure 3.

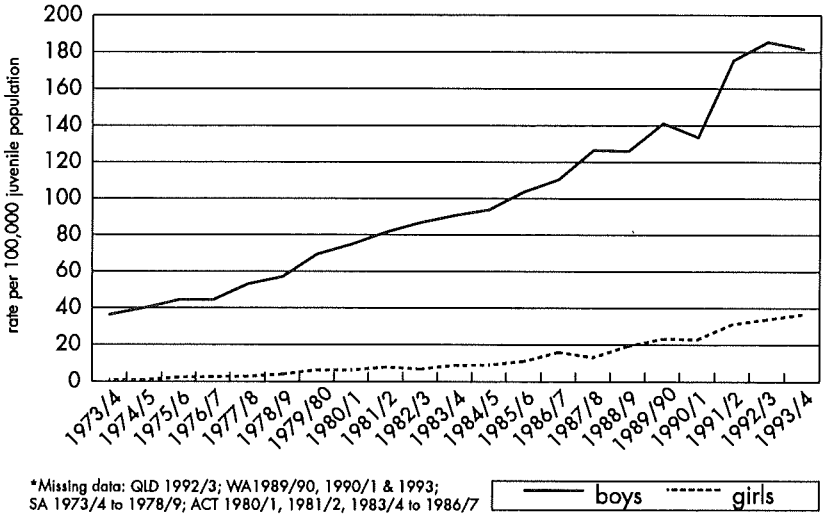
Juvenile Robbery - Australia*
boys' and girls' arrest rates



*Missing data: QLD 1992/3; WA 1993

Figure 4.

Juvenile Serious Assault - Australia*
boys' and girls' arrest rates



*Missing data: QLD 1992/3; WA1989/90, 1990/1 & 1993;
SA 1973/4 to 1978/9; ACT 1980/1, 1981/2, 1983/4 to 1986/7

Source (Figures 1-4): Mukherjee, S. (1997a).

Gender differences

The figures show that juvenile crime rates, as measured by the number of arrests, are much higher for boys than for girls. The gender gap is particularly large for property crime. The arrest ratio of girls for violent juvenile crime (serious assault and robbery) has increased significantly in this twenty year period, whereas the arrest ratio of girls for property crime (break, enter and steal; motor vehicle theft) has remained relatively stable. In 1973/4, girls represented 8% of juvenile arrests for violent crimes. In 1993/4, this proportion was 20%. For property crime, the relative increase was from 5% to 7%, a minor change in comparison.

It is difficult to say whether the increase in arrest rates for girls is due to an actual change in the participation rates or to a change in the action taken by police. Given that there is no evidence of the latter, an increase in participation seems to be the most plausible explanation. The fact remains, however, that young men still make up by far the majority of offenders.

Victims

The statistics also indicate that boys and young men are over-represented as victims, compared to girls. Victimisation rates—the victims of crime as a proportion of the population—were higher among males than among females for all violent crimes in 1997, except sexual assault and kidnapping. Victimisation rates for assault and attempted murder were highest among young men aged 15 to 24. So, not only are young men the perpetrators of a disproportionate amount of violent juvenile crime, they are also the victims of it. Moreover, young people are less likely to report crimes if they are the victims, especially if they have a difficult relationship with authorities (Cuneen & White 1995). Consequently, juvenile crime and victimisation may be underreported.

Chronic offenders

The majority of juvenile crime is committed by a minority of offenders. Cain (1996) found that in NSW, 9% of juvenile offenders brought before the NSW Children's Court between 1986 and 1994

were responsible for 31% of offences. This is consistent with Mukherjee's (1997b) estimate that a small percentage, around 6-7%, of young offenders will become persistent offenders who commit a disproportionate amount of crime. If this estimate is correct, then chronic offenders who commit a disproportionate amount of juvenile crime represent less than 1% of the juvenile population.

The juvenile crime risk factors

The risk factors that research has shown to be correlated with juvenile crime can be sub-divided into four groups:

1. Underlying—familial and home environment
2. Individual—genetic and personality (including gender)
3. Social-environmental
4. Situational

Longitudinal research studies, which track over several years the life histories of individuals and cohorts who subsequently become delinquents or criminals, have been especially valuable in illuminating the parts played by these factors and the ways they may interact with each other. Such research can be combined with cross-sectional studies, which describe the individual, social-economic and demographic features of offenders at one given point in time. This, in turn, enables us to develop a hypothetical model of the factors underlying and accompanying the emergence of juvenile and long-term offenders, and the ways in which these factors interact.

This is important because a single factor, such as low intelligence or a disordered family, is rarely sufficient in itself for the emergence of juvenile criminality. It is the combination of individual factors with familial and broadly environmental risk factors which is significant.

Underlying family and home risk factors

Research studies over many years have consistently identified an unfavourable family and home environment as a precursor of offending behaviour.

Neglect and abuse

Child neglect is currently the most powerful social predictor of juvenile crime. A recent report from the NSW Bureau of Crime Statistics and Research (BOCSAR) implicates neglect as the strongest underlying factor in juvenile crime participation (Weatherburn & Lind 1997). Abuse and neglect usually occur together, but this report confirmed the findings of other researchers (see Loeber & Stouthamer-Loeber 1986); namely, that indicators of the strength of the parent-child bond and parental monitoring are more closely related to juvenile delinquency than measures of family conflict and harsh parental discipline. In other words, parental attention and involvement with a child lowers the risk of participation in crime more than the absence of abuse.

Abuse, however, cannot be disregarded in the context of juvenile crime. Child abuse has been shown to be related to violent juvenile crime, but not to property crime (Farrington 1978; Patterson 1982; Widom 1989). This accounts for its lesser predictive strength in overall juvenile crime, as violent crime makes up a relatively small proportion of juvenile crime (around 9%). The mechanism of inter-generational transfer of violence is not yet clear. Some research suggests a genetic violent tendency may be passed from parent to child, whereas other evidence indicates a behavioural modelling explanation (DiLalla & Gottesman 1991).

Poor parental supervision

Poor parental supervision is an aspect of neglect, although neglect constitutes a more extreme situation in that a child's nutrition, medical and hygiene needs are not adequately met. Poor parental supervision, however, involves the failure to monitor a child's whereabouts and activities. It can also signal a lack of emotional involvement with a child.

A strong correlation between poor parental supervision and juvenile crime has consistently been found by numerous researchers (McCord 1979; Wilson 1980; Riley & Shaw 1985; Mak 1994; Salmelainen 1996; Baker 1998). Poor parental supervision seems to precipitate delinquency due to a lack of discipline and socialisation, while also providing juveniles with the opportunity

to become involved in criminal activities. It is more closely related to the early, rather than late, onset of offending (Farrington 1984, 1985; Patterson & Yoerger 1993) and is thus implicated in long-term and frequent offending.

Harsh and/or erratic discipline

Harsh and erratic discipline, which may border on abuse, is also related to juvenile crime participation. According to Trasler's (1962) application of classical conditioning theory to child discipline, when a child is disciplined consistently and reasonably, a feeling of anxiety will eventually arise in anticipation of punishment and this prevents the child from misbehaving. Discipline that is neither immediate nor related to the misbehaviour will not set up the anxiety response critical to the socialisation process. It also disables the parent-child emotional bond that is so important. This has been demonstrated empirically many times (Snyder & Patterson 1987; Henggeler 1989; Milner et al. 1990).

Intact family

An intact family is a significant protective factor. Without it, there is a much greater chance that a child will be exposed to the underlying risk factors that precipitate long-term offending. Australian statistics show that children living in a blended or step family, or a sole parent family, are up to ten times more likely to suffer child abuse or neglect than children living with both of their natural parents (Australian Institute of Health & Welfare 1998). Other estimates have been as high as forty times (Daly & Wilson 1985).

Criminal parents

A parent's involvement in crime also has a strong effect. A boy whose parent has a criminal record is likely to be convicted as a juvenile (McCord 1979, Loeber & Dishion 1983; Wilson 1987; Reiss & Roth 1993). This owes more to the poorer supervision by criminal parents than the parents encouraging and abetting juvenile crime. It does not seem to be due to stigmatisation of the child by police and the justice system.

Large family size/overcrowding
Large family size is a predictor of delinquency as it may also lead to inadequate supervision (Fischer 1984; Ouston 1984; Newson, Newson & Adams 1993; Reiss & Roth 1993). Some studies suggest that overcrowding, due to large family size, leads to tension and conflict in the home, resulting in a breakdown of the parent-child bond (Ferguson 1952; West & Farrington 1973). Large family size, as it relates to overcrowding, has been shown to predict both juvenile and adult crime (Farrington 1992, 1993).

The importance of underlying risk factors
All of the above indicates that the first element of risk is determined by the parent-child bond and the socialisation that arises from that relationship. Family and home environment risk factors may be experienced equally by boys and girls, and are associated with frequent long-term offending. One of the most important findings is that an intact family is protective. In other words, an intact family can reduce the risk of a child becoming involved in juvenile crime, even in the presence of other risk factors. Since neglect and abuse, and poor parental supervision, are more common in non-intact families, family structure is clearly important when predicting juvenile crime.

Individual genetic and personality (including gender) risk factors

These are the child-specific risk factors that are generally innate or biological. There is some suspicion and some evidence, though, that they might partly be the result of socialisation. Some can be described as gender-related factors, as they are more likely to affect boys than girls. The gender-related factors are hyperactivity/impulsivity, high testosterone, reading/learning disabilities and risk taking.

Hyperactivity/impulsivity
Hyperactive and impulsive behaviour has been associated with a significant proportion of juvenile offenders. Given the increasing problems presented by Attention Deficit Disorder (ADD) and

Attention Deficit Hyperactivity Disorder (ADHD), the question of a link between these disorders and anti-social behaviour is pertinent. Prescriptions for ADD/ADHD medication in Australia increased twentyone fold from 1990 to 1997, and as many as 75% of diagnoses are for boys. The data do not indicate whether the increase in prescriptions is commensurate with an increase in diagnoses. Whether such an increase in diagnoses might be due to a greater number of genuine cases, or a greater willingness to ascribe naughtiness to pathology, is unclear.

One study of the link between ADHD and delinquency showed that half of the boys diagnosed with ADHD in their study were delinquent, a much higher proportion than in the general population (Anderson 1994). More importantly, the study indicated that good family circumstances could help circumvent the risk for delinquency associated with ADHD.

Risk taking

David P. Farrington (1996) suggests that hyperactivity may be the behavioural consequence of low physiological arousal, as measured by low brain activity. It is not a large step, then, to speculate that such indicators as low serotonin levels and low heart rate may impel some young people to engage in risk taking behaviour, such as motor vehicle theft. Likewise, it may be this physiological state that makes drug use attractive.

Low physiological arousal

Research has shown that juvenile offenders have lower than normal levels of indicators of physiological arousal such as skin conductance and blood pressure, and have a lower standing heart rate than non-delinquent adolescents (Venables & Raine 1987; Farrington 1987a). It should be noted that this relationship was only found for delinquents who were not psychopathic, i.e. with no clinical mental disorder. Psychologically, low skin conductance is interpreted as low anxiety, and low standing heart rate as 'fearlessness'.

It is not yet conclusive whether these physiological variables are hereditary or socialised, for example, by inconsistent discipline. There is evidence for both means of transmission, as well as for

an interaction of the two. Furthermore, several studies have shown that the heightened risk of delinquency, due to low levels of physiological arousal, is tempered by protective family factors, such as good parenting, but exacerbated by an adverse early home environment (Mednick & Kandel 1988; Raine & Mednick 1989).

Serotonin

Serotonin is a neurotransmitter normally associated with sleep. It has been implicated in several disorders, including ADD/ADHD, schizophrenia and depression. Serotonin levels have been found to be significantly lower in antisocial than in normal individuals in a meta-analysis of twenty nine studies by Scerbo and Raine (1992). Conversely, elevated levels of serotonin are associated with reduced aggression (Brizer 1988).

Testotesterone

It is a commonly held belief that a great deal of juvenile delinquency, and particularly aggression, can be attributed to the higher levels of testosterone in males, and the extra high levels during adolescence. This view has been strongly promoted by Moir and Jessel (1989) and, later, Biddulph (1997). Both cite studies demonstrating that increased testosterone is related to increased aggression.

A large proportion of testosterone studies uses animals, usually rodents and monkeys. Human studies often involve case studies of abnormal individuals (children overexposed or underexposed to testosterone before birth), or convicted offenders. When combined, they show a relationship between testosterone and aggressive behaviour. Therefore, testosterone may be especially relevant to violent crimes rather than property crimes, and may also account for the difference in violent crime participation levels between boys and girls. Evidence of its influence, however, remains relatively weak and variable (Turner 1994).

Low intelligence

Low intelligence is an important risk factor. Criminals and delinquents have significantly lower IQs, on average, than other

control groups (West & Farrington 1973; Wilson & Herrnstein 1985; Hodgins 1992). The problems associated with low intelligence, however, are often countered by protective factors like a good family environment.

Intelligence, particularly verbal intelligence, is related to the development of moral reasoning, or making decisions about right and wrong behaviour (Wilson & Herrnstein 1985). There is evidence of a stronger relationship between low IQ and delinquency for boys than for girls. In a New Zealand longitudinal study, there was no difference in delinquency between girls with low and high IQ, whereas there was a marked link between low IQ and boys' delinquency (White, Moffit & Silva 1989).

It is difficult to extricate low intelligence from low school attainment, as both are related to juvenile crime participation (Hirschi & Hindelang 1977). Low intelligence indicates a greater likelihood of lack of engagement with school and lower performance. This in turn leads to truancy and/or periods of exclusion due to disruptive behaviour, leading to delinquency and crime.

Reading/learning disability

The relationship between learning disabilities and crime is somewhat more complex. Many reviews fail to differentiate between low IQ (intellectual disability) and learning disabilities (cognitive deficits unrelated to IQ). It is clear, however, that they have a similarly close relationship to crime (Larson 1988; Lombardo & Lombardo 1991). Yet the mechanisms by which they influence delinquency are more difficult to establish. Both result in low school attainment, and both are related to moral reasoning. Boys are also much more likely to have these disabilities (McGuiness 1985; O'Doherty 1994).

The importance of individual factors

Individual factors are characteristics of a child that increase the risk that they will become involved in juvenile crime. When an individual factor is combined with one of the underlying (family and home) factors, the risk is further heightened. For example, a

child who experiences poor parental supervision and has low intelligence is more likely to become involved in juvenile crime than a child who experiences only one of these factors.

Correlated social-environmental factors

These are factors which are not necessary or sufficient causes of juvenile delinquency, but which often coincide with juvenile crime participation. They increase the probability of juvenile crime participation among those children and adolescents already predisposed to such behaviour.

Instability of employment

Unstable employment often arises from low school attainment. It then creates a self-reinforcing cycle of unemployment and crime participation, as unemployment feeds into the cost-benefit ratio of crime by decreasing the prospects of obtaining material goods by legitimate means.

Although there is no statistical relationship between serious crime and unemployment rates in the overall population, as Sullivan (1997) demonstrated, this may not hold true for juveniles, and property crime in particular. It is not possible, however, to compare unemployment rates with juvenile crime rates by constructing a time series over an extended period, due to the lack of adequate data.

There has been some dispute over whether a relationship between juvenile crime and youth unemployment exists at all (Bessant & Hil 1997), or whether it can be explained by other factors such as IQ (Wilson & Herrnstein 1985). Nonetheless, there is evidence that the crime participation of individuals increases during periods of unemployment (Chiricos 1987).

Poor school performance

Poor school performance has been linked to juvenile delinquency and crime by various researchers (Tremblay et al. 1992; Maguin & Loeber 1996; Wolfgang et al. 1972; Salmelainen 1995). It may even increase the risk of crime participation in several ways. Cohen (1955) proposed that persons frustrated by a lack of

achievement at school might seek less legitimate means of gaining status amongst their peers. Hirschi (1969) suggests that students who do not do well at school do not form the same bonds with the school and therefore do not conform to its values. It is also plausible that the association between school failure and juvenile offending is mediated by low intelligence, as described earlier.

Recent research, however, involving a survey of secondary school students (Baker 1998) has shown that school performance does not predict juvenile crime participation after controlling for other developmental and demographic variables such as parental supervision, family structure and drug use. This suggests that poor school performance and juvenile criminality might be symptoms of the same problem.

Drug use/abuse

Property crime and violent crime are strongly linked to drug taking, both licit and illicit. Indeed, there are numerous studies showing that juvenile crime participation is more prevalent among illicit drug users than non-drug users (Johnson et al. 1991; Nurco, Kinlock & Balter 1993; Dembo et al. 1994; Baker 1998).

One recent report on the prevalence of drug use among juvenile offenders revealed that approximately 50% of juvenile offenders in detention were heroin users, three times the rate four years ago (compared to 1% in the 14-19 year old population). Other drug use by juvenile offenders has also increased: 92% had used cannabis, 34% had used cocaine, and almost 60% had used speed or amphetamines (*Sydney Morning Herald*, 10 February 2000: 5) These rates are up to six times higher than in the 14-19 year-old population (Moon et al. 2000).

The NSW Bureau of Crime Statistics and Research (BOCSAR) conducted a survey of young offenders in custody, of whom 96% were male, which revealed some interesting relationships between the reason for offending and the *frequency* of offending (Salmelainen 1995). In particular, those break and enter and motor vehicle theft offenders who cited money to buy drugs as their main reason for offending were more likely to be high frequency offenders. In comparison, those who cited emotive reasons,

such as excitement or to relieve boredom, were likely to be low frequency offenders.

A survey of NSW secondary school students (Baker 1998) found that drug use predicted current (self-reported) crime participation among juveniles. In the case of alcohol and cannabis, the greater the use of these substances, the higher the juvenile crime participation rates. The survey also found that, in general, drug users still had higher juvenile crime participation rates than non-drug users, even after controlling for developmental (family background) and demographic (e.g. ethnicity) variables.

Gender/peer influences

Since a lot of juvenile crime is committed in groups, it is not surprising that there is a relationship between the delinquent behaviour of an individual and the delinquency of his or her peers (Glueck & Glueck 1950; West & Farrington 1973; Farrington 1996). The strength of this relationship, however, has been questioned (Wilson & Herrnstein 1985; Gottfredson & Hirschi 1990; Loeber 1990). There is some evidence to suggest that peer relations only influence the more minor forms of delinquency (Blumstein et al. 1986).

The causal direction of this relationship—whether delinquent peers influence an individual to become delinquent, or whether delinquent individuals tend to congregate—has not yet been determined. Farrington (1987b) found no evidence that affiliation with delinquent friends precedes delinquency. Several other studies have also shown that delinquent peers are not related to the early onset, and high frequency, of offending that typifies chronic, long-term offenders (Wilson & Herrnstein 1985; Farrington & Hawkins 1991). Therefore, it follows that affiliation with delinquent peers is most likely to facilitate short-term juvenile crime participation in those individuals with a predisposition to delinquency.

Research has also shown a higher rate of delinquency among girls who affiliate with boys, but does not elucidate the effect of affiliation with girls on boys' delinquency. According to a New Zealand study, girls in co-educational secondary schools engaged in anti-social behaviour more than girls in girls' schools, even

after controlling for personal and family characteristics such as family income, religious beliefs, educational goals and previous behavioural problems (Moffit & Harrington 1996). Whether this effect holds true for boys is not discussed, but it would be of great interest.

Drug use and gender/peer influences

If drug use predicts crime, one might expect that because girls commit less crime, their drug use would be proportionately lower than boys' drug use. This does not seem to be the case. The latest National Drug Strategy Household Survey (NDSHS), conducted in 1998, found that drug use—alcohol, tobacco, marijuana, injecting drugs, hallucinogens—among 14-19 year old girls was almost equivalent to that of their male peers. Likewise, the statistics for alcohol use showed that 14-19 year old girls were actually more likely than boys to drink at a level which the National Health and Medical Research Council (NHMRC) considers to be risky. This may be because girls drink at the same rate as boys, but boys' alcohol tolerance is higher.

So, if drug use predicts crime, and if as many girls use drugs as boys, why are girls not participating in crime at a corresponding level? Perhaps it is because girls do not purchase the drugs themselves; the boys they socialise with buy and provide them instead.

So, if girls use drugs purchased by boys, do they typically use them only when they socialise with boys? If this is the case, then it may go some way to explaining the greater incidence of substance abuse disorder (or addiction) among young men. In other words, girls might use drugs socially, whereas boys might be more likely to use drugs in an addictive dependent way, leading to more sustained drug use and eventual overdose. Nonetheless, the greater increase in arrest rates for girls may well be the direct result of an increase in girls' drug use.

The importance of correlated social-environmental factors

Although factors such as unemployment, drug use and delinquent friends have not been established as precursors of juvenile

offending, they can be considered as risk factors. For example, an adolescent who has delinquent friends may refrain from such behaviour if he or she has a stable, close family and/or is of high intelligence. On the other hand, these factors may heighten the possibility that an already at-risk child will become delinquent.

Situational factors

Situational risk factors—opportunity, need, and perceived risk of detection—are not among the determinants of criminal propensity, but they increase the likelihood that an existing propensity will be activated. Most attempts to combat crime are directed against situational risk factors. Crime prevention strategies often attempt to reduce the opportunity for crime and increase the chance of detection, thereby influencing the costs-benefits ratio. For example, stores set up expensive anti-shoplifting equipment, and security cameras are installed in public places. These measures, however, may decrease a particular crime in the area, only to displace it to another location or another crime.

A causal model for juvenile delinquency and criminality

The sets of factors described so far (excluding the situational factors) can be organised into a hypothetical developmental pathway of juvenile crime participation. This model sheds some light on the general question of how particular children become involved in juvenile crime, as well as some more specific questions, which will be raised later.

As mentioned earlier, the effect of the risk factors appears to be cumulative and interactive. Each successive risk factor to which a child is exposed, increases the risk that he or she will become involved in juvenile crime. In this way, some children become juvenile offenders by what is essentially a process of progressive selection.

The present model is similar to that proposed by Barry Maley (1996), which likewise emphasises the importance of inadequate parenting as a predictor of juvenile delinquency, and also suggests a cumulative effect of risk factors. Maley's model proposes

that a child's risk of delinquency is dependent on two major factors: family environment and cognitive ability (intelligence). In his model, 'low individual capacity and intelligence' alone is not as strong a predictor of delinquency as 'degraded social and personal milieu', but experienced together they place a child at high risk (Maley 1996: 41). According to Maley's model, the highest propensity for criminal activity is among those who have low individual capacity and a degraded social and personal milieu; the least risk of criminality is among people of high individual capacity who have enjoyed a propitious social and personal milieu. Other combinations of the two factors create intermediate levels of risk.

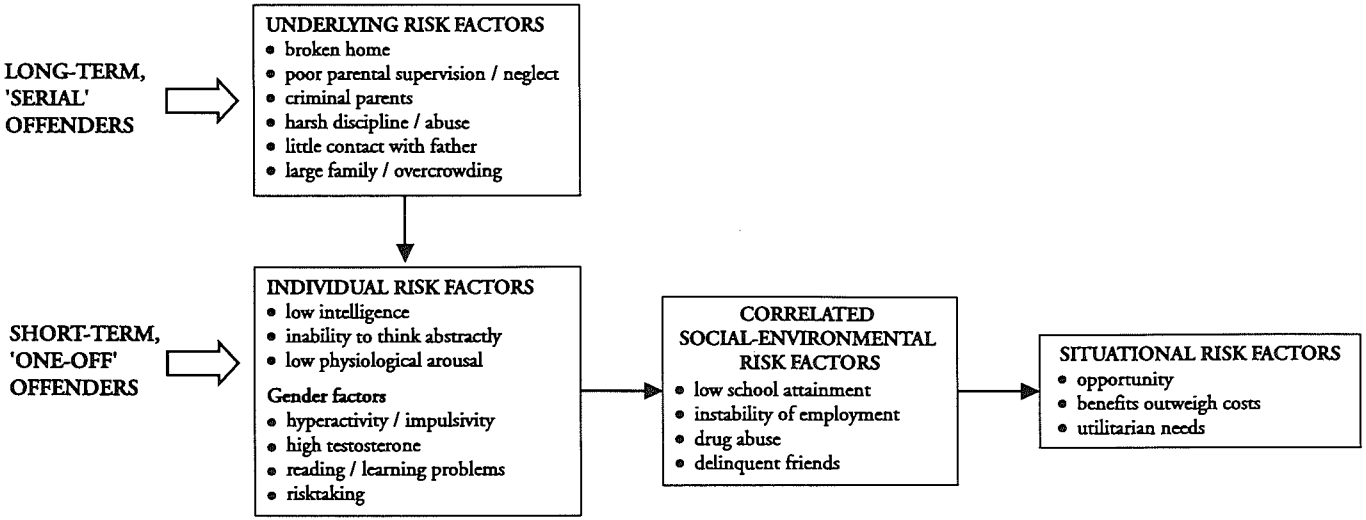
The pathway described in the model proposed here differs from Maley's in two major ways: it differentiates between the causes of long-term and short-term offending, and it incorporates gender differences.

The model starts with underlying (family and home) factors. These precursors of offending behaviour lay the foundations for juvenile crime participation. Obviously, not all children who experience them go on to become juvenile offenders; this is where individual factors are important. For example, not all children who are poorly supervised become juvenile offenders, but those children who are also hyperactive or impulsive are more likely to do so. Likewise, not all hyperactive or impulsive children become juvenile offenders, but those who are poorly supervised are much more likely to offend.

There seems to be a special relationship between the underlying factors and chronic offending. This is depicted in Figure 5 by distinguishing between long-term and short-term offenders. According to the research evidence, underlying factors predict chronic offending, but are not necessarily precursors of short-term, or 'one-off', offending. Individual factors are the most important influences on short-term juvenile criminality.

What about the other factors, such as correlating social-environmental factors and situational factors? The former increase the risk of juvenile crime participation by compounding the influence of underlying and individual factors. Situational factors provide conducive circumstances. For example, a child who

Figure 5. A Causal Model of Juvenile Delinquency and Criminality



is poorly supervised and has low intelligence is already at risk. Add the influence of delinquent peers and the opportunity to commit a crime, and the probability that he or she will do so is amplified.

We can now begin to explain how and why certain children become juvenile offenders. We can also begin to provide answers to some more specific questions.

Why is juvenile crime increasing?

We already know that most of the increase in juvenile crime is attributable to boys' involvement in crime. What might be the reasons for an increase in boys' juvenile crime rates?

To answer this question, underlying factors and individual factors must be examined. We also need to ask whether an increased number of children are being exposed to these risk factors.

It would be difficult to prove that the prevalence of individual risk factors is increasing. It is not known—and it is unlikely that it ever will be—whether there is a growing number of children who have a low IQ, as IQ testing has now been more or less abandoned. With the exception of ADD/ADHD, the direct contribution of individual risk factors to the observed increase in juvenile crime rate is unknowable.

On the other hand, it can be shown that the incidence of at least some of the underlying factors has increased:

- Rates of neglect and abuse have increased over the period since such statistics have been collected. Between 1988-89 and 1998-99, annual substantiations of child neglect and abuse have increased from 21 447 to 26 025 (AIHW 1999).
- The number of children in broken families has been steadily increasing. In the twenty five year period from 1972 to 1997, the number of children entering a non-intact family (either by ex-nuptial birth or by divorce) each year increased by 270%, from 18 to 49 children per 100 children born (ABS, various years).

From this we can infer that the increased prevalence of risk factors for juvenile crime is the most probable source of an increasing juvenile crime rate.

Why are boys' juvenile crime rates higher than girls'?
Underlying risk factors lay the foundations for long-term juvenile crime participation. Because boys and girls may be exposed to them equally, they may not account for the higher rates of boys' delinquency.

Gender differences become relevant at the individual risk factor level, with one possible exception. There is some evidence that the absence of a father at home, which accounts for 90% of sole parent families, may affect boys more than girls (Amato & Keith 1991; Camara & Resnick 1988; Hetherington et al. 1982; Hetherington 1993). If the presence of a father at home is a more important source of discipline and supervision for boys than for girls, it is reasonable to assume that this will lead to less effective socialisation and control of boys.

Many of the individual risk factors that are consistently demonstrated to be related to juvenile crime are more prevalent in boys than girls. For example, boys have rates of intellectual disability two to three times greater than girls. Most children diagnosed with ADD and ADHD are boys. Both these problems are associated with juvenile delinquency. If an intellectually disabled boy has been neglected, his risk of juvenile crime participation is further increased.

Thus, with the possible exception of the absence of a father at home for boys, both boys and girls experience the underlying risk factors equally. Yet, more boys than girls experience the added effects of individual risk factors. In Figure 5 (p.19), this is the second set of risk factors in the long-term offending pathway, and the first set of risk factors in the short-term pathway.

In sum, more boys become involved in juvenile crime than girls because boys are more likely to experience specific individual risk factors, such as ADD/ADHD, high testosterone, reading and learning disabilities. Boys also seem more likely to experience adverse effects from other risk factors such as the absence of a father in the home. As a result, boys have a greater risk of becoming both short-term and long-term offenders.

Summary

- Juvenile crime has increased over the past twenty years, and most of this increase can be attributed to boys' increasing juvenile crime rates.
- A large proportion of juvenile crime is committed by a small percentage of frequent offenders, who typically start offending early and continue on to adult criminal activity. These are also most likely to be boys.
- Research has identified a number of factors that increase the probability that a child will become a juvenile offender. Their varying relationships with the onset and duration of juvenile crime participation allows them to be separated into four categories: underlying risk factors, individual risk factors, correlating social-environmental risk factors, and situational risk factors.
- Where long-term and short-term offenders seem to differ is in their experience of the underlying risk factors. Persistent offending is dependent on the stability of the delinquent predisposition that is built up over a long-term learning process. So, underlying risk factors coupled with individual risk factors predispose a young person to long-term delinquency, placing them in the small group of chronic offenders committing the bulk of juvenile crime. The correlating social-environmental factors and situational factors provide the final criteria.
- Short-term offenders are generally predisposed to juvenile crime when experiencing the combination of individual factors, such as low intelligence, as well as the correlating social-environmental factors of juvenile crime, such as instability of employment, and situational factors such as opportunity. Without the added effect of underlying conditions, such as a broken family, their chances of being a long-term offender are much reduced.
- Boys are more likely than girls to experience the individual risk factors for juvenile crime participation and are therefore at greater risk of becoming juvenile offenders. This greater risk is reflected in their higher juvenile crime rates.

In synopsis, for a child to become a juvenile offender, especially a frequent long-term offender, there is a clear developmental pathway. Like all models based on empirical evidence, it is predictive, rather than prescriptive. Human behaviour is never

formulaic, and there will always be exceptions, but we are convinced by the research evidence that the probability of a given child becoming a criminal increases cumulatively as he or she is exposed to more and more risk factors. And, further, several of these risk factors are more salient for boys than for girls.

Children's home and family experiences have a profound and pervasive influence on their later behaviour, both as adolescents and as adults. The parent-child relationship is especially important, and inadequate or incompetent parenting can result in anti-social behaviour that extends beyond adolescent delinquency into chronic criminal behaviour.

The need for better data

In canvassing the issues discussed so far, it has become apparent to us that there is a pressing need for more consistent records of juvenile crime statistics. Data that can be compiled nationally, and compared chronologically, is imperative for understanding juvenile crime participation. Presently, development of a national juvenile justice data collection is being initiated by two federal government bodies. This is a fundamental issue, and one which must be given priority by federal and state governments.

Further, if familial-demographic data were to be collected by the police or the criminal justice system when a juvenile is arrested or convicted, this would be an invaluable source of information for researchers and policymakers. At present, some data about family circumstances are collected, but again it is inconsistent. Any data that have been recorded are kept in individual files in local centres and are not collated. Here is a key opportunity for data collection that is not being utilised.

Implications for prevention

The individual genetic and personality factors in juvenile crime, such as low intelligence, are not, in the main, amenable to preventive measures. Significant progress in prevention depends primarily upon dealing with the situational, social-environmental, and underlying familial factors—especially the latter—which shape behaviour and attitudes.

As mentioned earlier, measures to deal with situational factors, such as opportunity to commit a crime and the likelihood of detection, can play their parts in decreasing crime but may often simply result in changing its location. The focus of attention therefore shifts to the social-environmental and underlying (family) factors.

Social-environmental factors

Unemployment

These factors exacerbate or potentiate the propensity for criminal activity implicit in the individual factors described earlier by narrowing the range of alternative forms of licit activity or by encouraging illicit activity. The prime example is unemployment, which blocks the opportunity for meeting needs and wants by legitimate means.

Unemployment is a larger concern for young men than for young women. Traditional notions of manhood are based on work. Men are defined by what they do for a living. Despite all the progress in 'gender equity', it is still less socially acceptable for a man to be unemployed. Those young men who feel that they have no hope of finding work often seek alternative means of fulfilment—whether it be the excitement generated by the criminal activity itself, or the material gain. The greater impact of work on males' well-being is also manifest in the relationship between young male suicide and unemployment.

Because the question of youth unemployment figures largely in the discussion of suicide that follows shortly, we will defer further discussion and the offering of some policy recommendations on this subject until we come to our concluding 'Policy and the Issues in Context' chapter (pp.71-80).

Drug Use

Drug use poses a big problem for adolescents, particularly those whose personal circumstances make them more prone to become dependent. Ken Buttram, head of the NSW Department of Juvenile Justice, recently stated to a parliamentary inquiry that drug use is 'a major social problem influencing youth crime'.

Not only does frequent, high potency drug use have adverse psychological and physiological effects, it also requires a high level of financial resources. Drug use among young people has escalated in recent years, and the age of initiation has decreased. A successful strategy to combat rising drug use is yet to be seen.

Drug use appears later as a key factor in our discussion of youth suicide, so we will also defer further discussion and recommendations on this subject to the concluding chapter.

The underlying (familial) risk factors

The critical focus in the prevention of juvenile crime, and crime generally, is those factors which are most salient in the genesis of long-term and chronic offending. It is estimated that 1% of children commit almost a third of juvenile crime. Yet few juvenile crime prevention strategies target the key factors of family circumstances and the role of the family in caring for and socialising children which are most relevant.

Often, delinquent juveniles first come to the attention of authorities after their first offence. The majority of juvenile offenders—somewhere between 70% and 85%—make only one appearance in the juvenile justice system (Atkinson 1994). However, those children who commit a large proportion of juvenile crime start at an early age, and are already on a path to chronic offending. This is certainly not to say that there is no hope for them, but it makes the task much more difficult. Moreover, Baker (1998) claims that because most juvenile offenders are unlikely to ever come into contact with the police or the courts, criminal justice approaches to juvenile crime prevention, such as tougher penalties, are ineffective.

Child neglect is an important factor in the genesis of juvenile crime. It has been highlighted in research already referred to, and clearly indicates family dysfunction. Although government has become more aware of neglect as a problem, it is rarely placed in context as a symptom of broad family dysfunction, and is seen as less serious than emotional, physical and sexual abuse. Dubowitz (1994) suggests that the greater focus on child abuse over neglect, despite the greater adverse affect of neglect, is due to the problem with defining and diagnosing neglect. The

most recent report from the NSW Child Death Review Team shows that neglect is one of the major causes of non-accidental, non-natural child deaths. The perilous circumstances of many of the children who died as a result of neglect (or abuse) were known to the Department of Community Services prior to their deaths.

The absence of a specific policy linkage between the rising incidence of family dysfunction and crime prevention emerges from a recent report. A 1999 audit of early intervention services by National Crime Prevention found no service that had crime prevention as a specific goal (National Crime Prevention 1999). However, the report concludes that early intervention programs (which they estimate at 10,000) may nonetheless be having an 'impact on the incidence of social problems such as juvenile crime and substance abuse, even though that is not their intention' (p 176).

According to the above report, there is a considerable gap in the official data on early intervention programs for children and families. This is apparently because of diversity in administrative and funding bodies, variation in involvement of different levels of government, different philosophical and theoretical underpinnings of the programs and a lack of national and/or State databases regarding services. Consequently, the report concludes, there is a lack of 'cross-fertilisation' in the field, meaning that there is no sharing of resources and experiences, and no learning from successes and failures. Perhaps more importantly, the report suggests that services therefore have problems providing for the special needs of children with particular disadvantages—those from sole parent families, from non-English speaking or Indigenous backgrounds, and those with a disability.

Family dysfunction

The evidence we have discussed points unreservedly to the critical importance of strong families and sound parenting as the most important factors in protecting children against descent into juvenile crime and long-term offending. So the obvious

question arises: How can public policy contribute to the prevention of juvenile crime through appropriate family policies? To ask that question is to raise the related one: What are the causes of dysfunctional family life and circumstances?

We will, however, hold those questions over until we have dealt with the troubles facing boys in their declining educational performance and in their rising suicide rates, because in both of those issues the question of the role of the family arises with similar urgency. In our concluding 'Policy and the Issues In Context', at the end of the monograph, we do our best to throw some light on these questions and to offer some policy recommendations.

intention here to dismiss the significance of depression in suicide and general public health. The growing problem of depression has recently been recognised in the federal government's decision to establish a national institute for research in this area. But the risk of drug abuse is, to date, relatively neglected in relation to suicide.

Drug strategies

Young people's use and abuse of drugs have certainly not been ignored in other contexts. In the past two years, over $500 million of public funds has been spent on the Commonwealth government's *National Illicit Drug Strategy*. The previous *National Drug Strategy* and *National Campaign Against Drug Abuse* attracted similarly large grants.

Unfortunately, the information to date indicates that illicit drug use has not decreased among young people. In many cases, it has increased. An evaluation titled *Progress of the National Drug Strategy: Key National Indicators* shows that out of the twelve indicators of illicit drug use in the overall population, only four showed any progress toward a reduction in drug use and harm; the remainder showed the opposite. The negative results were primarily due to the increase in illicit drug use by young people.

It is important to note that these statistics measure recent use of illicit drugs, rather than abuse or dependency. Nevertheless, they do indicate that there has been no sign of abatement in the use of illicit drugs by young people.

Why might drug use by young people be increasing? Because the policy of 'harm minimisation' has not been opposed to drug use, and has concentrated on physiological harm rather than mental effects. However, the statistics for hospitalisation and death due to illicit drug use show that even this objective has not been achieved. A better strategy might have been 'use minimisation'. Although various initiatives acknowledge that reducing the number of drug users is a significant factor in harm minimisation, there seems to be little enthusiasm for this as a policy objective in its own right.

Drug education

A case in point is the pending *National Schools Drug Education Strategy* (NSDES). In keeping with public opinion that education is the best approach to the drug problem, this drug education strategy is to be implemented in schools in 2000. The NSDES has a clear mandate: no illicit drugs in schools. In practice, such a principle will be difficult to enforce if the view is promoted that young people should be allowed to make choices, and that the role of drug education should be restricted to providing the facts. This is where drug education is most likely to fail. It is possible to argue that adults should be free to make decisions about risks to their health and well being, but to extend this privilege to children may be unwise, if not irresponsible. Young people need the guidance of the adults who are entrusted with their care. Without it, they are less likely to make the right choices.

On the basis of research reviews on school drug education, some propose that drug education is most likely to succeed in reducing drug use when it teaches students 'social resistance skills' that actively encourage and help students to reject drugs, rather than merely instructing them on the effects or harm associated with drug use (Gottfredson 1997; Hawkins, Catalano & Miller 1992). Conceivably, a combination of the two would be most effective. Although it has been found that such drug education strategies provided relatively short-term benefits, frequent reinforcement might well have a positive effect.

The 'QUIT' campaign seems to have had some success, as tobacco use has recently fallen among young people. Similar youth-targeted campaigns relating to illicit drug use could have some positive effects.

Recommendation 3:

- *Drug education in schools should convey a clear message of abstinence, from both a health and legal perspective, rather than one of individual choice.*
- *Drug use and abuse by young people should be addressed with an aggressive campaign of prevention through schools, the media and other appropriate forums.*

Conclusion

The troubles afflicting a substantial and growing proportion of boys are recent and serious. The last ten to fifteen years have seen a rapid increase in deteriorating school performance, suicide and juvenile crime. The causes, as we have shown, are many, deep-seated, and related in complex ways. The problems have increased in tandem with the social and cultural changes we have just discussed.

Proof in the social sciences is difficult. We cannot perform laboratory experiments with human beings. We usually have to look for statistical correlations and go from there. The fact that two distinct phenomena show significant correlations does not demonstrate that one is necessarily causally related to the other. But it is suggestive, and if we can show independently that there are good reasons why there might be a plausible causal relationship, so much the better. Causal connection becomes even more plausible still if similar correlations are repeated in different countries experiencing similar changes. We believe that the evidence presented here points irresistibly towards causal relationships between the problems we have discussed and the various factors we have identified.

The roots of these problems are cultural and institutional. They have conspired to build an environment for boys which is demoralising and defrauding for many, and fatal for some. It is shameful that scores of thousands of youths do not work when there is in fact work aplenty to be done in this rich and dynamic society. The reasons for this are familiar to economists, politicians, businessmen, trade union leaders, and to anybody else who gives the economics of the labour market, and this subject in particular, some thought. Yet, the situation has persisted for many years and progress has been unsatisfactorily slow.

Abolishing youth unemployment would make a significant contribution to reducing juvenile crime and suicide. But the latter problems will not yield, as unemployment itself would, to relatively simple measures. As we have tried to show, the key to understanding these matters is to look more closely at the institutions of the family and schooling on the one hand, and to

critically examine cultural changes which have promoted, or failed to resist, the prevalence of drug taking by youths, on the other.

Our primary conclusion is that the great changes that have taken place in the Australian family over the last 30 years—its growing instability, and the detachment of many children from a full and close life with both of their parents— appear to have been the most significant causal factors contributing to boy troubles. For many adults, and for policymakers, it seems too difficult an issue to confront. But if this continues, the consequences will be painful and destructive for more and more children and, in the long term, for all of us.

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