PATTERNS OF SUICIDE:
FACTORS AFFECTING AGE-SEX
DISTRIBUTIONS OF SUICIDE IN WESTERN SAMOA AND FIJI INDIANS

Heather Booth

Working Papers in Demography
No. 77
1999
Abstract

Excess female suicide over male is reported for very few populations. Two exceptions, as far as youth suicide is concerned, are Western Samoa and the Indian population of Fiji. This paper examines age-sex patterns of suicide in these two high-suicide populations and seeks to explain why female youth suicide exceeds that of males. Female suicide is concentrated at young ages to a greater extent than male. It is argued that this is due to differing causal factors. For females in both populations, these comprise sexuality, marriage and childbearing, whilst for males, economic and social status are important. The underlying factors for both sexes are gender and power in the context of social change. An important factor in Western Samoa is method of suicide which leads to sex-equality of fatality rates and thus contributes to excess female youth suicide.
PATTERNS OF SUICIDE:
FACTORS AFFECTING AGE-SEX DISTRIBUTIONS OF SUICIDE IN WESTERN SAMOA AND FIJI INDIANS

Heather Booth

Early studies of suicide, mostly of Western populations, showed a typical pattern of higher suicide rates at older ages with males outnumbering females to a considerable degree. In more recent decades, some populations have witnessed the emergence of suicide in youth as an important social issue. These include New Zealand and Australia where some of the highest youth suicide rates of the developed world are to be found. Whether at older ages or in youth, however, the sex balance of suicides has remained much the same: female rates are by far outweighed by those of males.

Suicide in the Pacific Islands is characterized by its youth. Rates in youth are high, and in some populations far exceed those of the developed world. It is generally assumed that youth suicide in these islands is also predominantly male. However, for two populations at least, this is far from the case. In Western Samoa and the Indian population of Fiji, female youth suicide rates exceed those of males. In global terms, this is highly unusual and deserves urgent and careful examination. The importance of the issue is underlined by the fact that these populations also experience higher female youth suicide rates than any reported elsewhere in the world (Booth, forthcoming(a)).

This paper examines youth suicide in these two populations. In particular, it examines age-sex patterns of suicide and seeks to explain why female youth suicide rates exceed those of males. The paper is thus concerned with relative rather than absolute rates. Absolute rates are, however, employed to demonstrate that levels of suicide in these populations are high by world standards. The paper does not attempt to explain why suicide levels are high,

---

1 Female suicide rates also exceed male in parts of Solomon Islands (Gegeo and Watson-Gegeo, 1985) and Papua New Guinea (Buchbinder, 1991; Pataki-Schweizer, 1985).
though it is clearly the case that any factor influencing age-sex patterns of suicide must also influence levels to some degree.

Definitions and data
Suicide is defined as death due to intentional self-inflicted injury. Attempted suicide is defined as intentional self-inflicted injury not resulting in death. Strictly speaking, both involve intent to cause death (Farmer, 1982), but drawing the distinction between intended and unintended death is often impracticable. A suicidal act is defined in this paper as an act of intentional self-inflicted injury regardless of the outcome. Suicidal acts are thus the sum of suicides and attempted suicides.

In virtually all populations, data on suicide suffer from omissions, though this varies in extent and does not preclude analysis (Sainsbury, 1983). In the Pacific, under-reporting arises from partial official statistical systems, for example covering only hospital deaths, as well as from omissions related to the event of suicide. In some cases, a suicide may be reported as an accident or natural death so as to conceal the true cause and avoid associated shame (Macpherson and Macpherson, 1987). In other cases, uncertainty of intent in inflicting self-injury precludes distinction between accidental death and suicide. Whatever the extent of omissions, there seems no reason to suspect significant sex or age selectivity.

The data on suicides for Western Samoa cover the periods 1981 and 1988-91. Those for 1981 were obtained from a special study of health, coroners’ and police records and are regarded as largely complete (Bowles, 1985). Those for 1988-91 cover only deaths in hospital (including dead on arrival) and are thus incomplete (Western Samoa, 1994). The data for Fiji Indians are from police records and cover similar periods: 1982-83 and 1989-90. For both periods, all drownings are omitted because of uncertainty of intent. The data for 1982-83 may be regarded as otherwise complete (Declo, 1987). The data for 1989-90, which are unpublished, also omit some months and are thus incomplete. For both populations, the earlier more complete data are used to indicate absolute levels, though it is recognised that these are minima. The more recent, incomplete data are used only for internal comparison, that is as relative rates.

As elsewhere in the world, data on attempted suicide for these two populations are less reliable than those on suicide per se. Omissions arise from the fact that they are hospital-based and from concealment of intent in inflicting self-injury. Again, such incomplete data are used for internal comparison rather than in absolute levels. However, they are also used in the calculation of fatality rates, that is the percentage of suicidal acts that are fatal. The lower coverage of attempted suicide than suicide normally results in the overestimation of fatality rates especially for less efficacious methods of suicide. For Western Samoa, however, the fact that data on suicides in 1988-91 are also hospital-based results in the under-estimation of fatality rates for more efficacious methods.

Absolute suicide rates are expressed as suicides per 100,000 population in the relevant age group. Youth rates refer to ages 15-24, following international definitions. The wider definition of ‘youth’ in Pacific societies is, however, recognised in discussion. A measure used throughout the paper is the ‘youth suicide gender ratio’. This is defined as the female youth suicide rate divided by the male rate. It is thus a function of the age-sex pattern of suicide only and not of absolute suicide levels. Relative suicide rates, used for internal comparison in Figures 1 and 2, similarly describe only the age-sex pattern of suicide; in each case, the sum of male and female rates is 100. For valid comparison of patterns over time or between populations, identical age groupings are necessary.

Patterns and Levels of Suicide
Figure 1 shows age-sex patterns of suicide for Fiji Indians in 1982-83 and Western Samoa in 1981 (dotted lines). In both populations, the female age pattern peaks at a younger age than the male. For Western Samoa, this is concomitant with the female rate exceeding the male rate at age 20-24. For Fiji Indians, the female suicide rate is slightly higher than the male rate at age 15-24. Increased rates occur at older ages, particularly in Fiji Indians, but are based on very few suicide cases.

2 Unpublished data provide the breakdown by sex.
High youth suicide gender ratios are of major concern only where levels of suicide are also high. This is the case in the two populations under consideration. Age-standardised overall suicide rates for both males and females are among the highest in the world, and youth suicide levels in the early 1980s are extremely high by global standards (Booth, forthcoming(a)). For both females and males, these Pacific rates far exceed experience elsewhere. For Western Samoa in 1981 the female youth suicide rate was 70 per 100,000; for Fiji Indians in 1982-83 the rate was 60. These rates are higher by a considerable margin than reported rates in other populations: 37 in China (rural), 17 in Mauritius and 12 or below elsewhere (World Health Organization, 1994). For males, youth rates of 64 in Western Samoa and 57 amongst Fiji Indians compare with a maximum elsewhere of 45 in Lithuania.

These global comparisons underline the extremity of youth suicide rates, in particular amongst females, in these two Pacific populations. Whilst male youth suicide has been widely acknowledged, the extremity of the female youth suicide rates has not been fully recognised in the populations in question. Though female suicide amongst Fiji Indians has been acknowledged, in Western Samoa it has been largely unrecognised. The tendency to focus on male suicide derives in part from a consideration of absolute numbers for all ages, thus overlooking relevant comparisons (Booth, forthcoming(a)), and in part from the gender biases of the relevant cultures.

Method of Suicide

Table 1 shows the relative frequency of use of different methods of suicide. It is seen that hanging is the most common method amongst Fiji Indians. In contrast, the most common method employed in Western Samoa is ingestion of paraquat, a highly toxic herbicide.

---

3 The exceptions are China (rural), China (urban), Mauritius and Tajikistan (which has low suicide rates), where youth suicide gender ratios exceed unity.

4 Male youth rates in Micronesia and Guam also exceed non-Pacific experience (Booth, forthcoming).

5 One mouthful of concentrated solution can kill, even if immediately expectorated. A diluted solution is used in agriculture. Most survivors have ingested a small amount of diluted solution (Imo and Grigor, 1974; Taylor et al., 1985).
Table 1  Method of suicide (% distribution) and fatality rates (% of suicidal acts resulting in death) by sex, Fiji Indians and Western Samoa

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanging</td>
<td>60</td>
<td>73</td>
<td>4</td>
<td>?</td>
</tr>
<tr>
<td>Paraquat</td>
<td>32</td>
<td>24</td>
<td>82</td>
<td>73</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>3</td>
<td>14</td>
<td>?</td>
</tr>
<tr>
<td>Fatality rate (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M&amp;F</td>
<td>-</td>
<td>37.39*</td>
<td>52</td>
<td>57</td>
</tr>
<tr>
<td>Female</td>
<td>-</td>
<td>-</td>
<td>52</td>
<td>56</td>
</tr>
<tr>
<td>Male</td>
<td>-</td>
<td>-</td>
<td>52</td>
<td>59</td>
</tr>
</tbody>
</table>

*1986

Table 1 also shows sex-specific fatality rates, that is probabilities that a suicidal act results in death. These are clearly determined by the relative frequency of different methods of suicide. Fatality rates for hanging are normally high, whilst they are low for the ingestion of toxic substances such as medicinal drugs, kerosene or household bleach. Paraquat ingestion, though a form of toxic ingestion, carries a high fatality rate.

In Fiji Indians in 1976-81, 56 per cent of suicidal acts involving paraquat were fatal (Ram and Rao, 1983), and in Western Samoa in 1988-91, the paraquat fatality rate was 58 per cent (though this is likely to be an underestimate). This high paraquat fatality rate combines with a high proportion of Samoan suicidal acts involving paraquat to produce an overall fatality rate of over 50 per cent, seen in Table 1. This is a much higher fatality rate than in other populations (Booth, forthcoming[a]). For Fiji Indians, the overall fatality rate in 1986 was almost 40 per cent (see Table 1), though this is likely to be an overestimate.

Previous studies of suicide, mostly of Western populations, have shown that suicidal behaviour is typically gender-specific (Dublin, 1963; Farmer, 1982; Halbwachs, 1930/1978; Kessler and McRae, 1983; Pritchard, 1995). According to these studies, females are more prone to making suicidal acts, but do so less successfully, because they are more likely to be making a plea for help. Males, on the other hand, are believed to be generally more intent on ending their lives. Thus, females are more likely to use less efficacious methods such as toxic ingestion, whilst males prefer more violent and effective means. Fatality rates for females are thus relatively low, leading to low suicide gender ratios.

Clearly, the experience of the two Pacific populations under consideration does not conform to previous research findings. In Western Samoa, in particular, a very different situation is found, namely no statistically significant sex differences in choice of method or fatality rates. In 1988-91, 75 per cent of female and 73 per cent of male suicidal acts involved paraquat ingestion, with fatality rates of 64 and 54 per cent respectively, and overall fatality rates were correspondingly similar (see Table 1). As a result of this equality, the main determining factor in the suicide gender ratio for Western Samoa is the gender balance in suicidal acts. This is seen in a comparison of suicidal acts and suicides per se. In 1988-91, 46 per cent of youth suicidal acts were female, with a youth gender ratio for suicidal acts of 1.05. This is virtually identical to the distribution of youth suicides per se, where females also comprised 46 per cent of the total, with a gender ratio of 1.04. The reported data suggest, therefore, that whilst relative to females in many other populations Samoan female youth are over-represented in suicides per se, they are under-represented in suicidal acts.

Data on suicide attempts by sex and method are not available for Fiji Indians. Data on method of suicide per se suggest only a small difference between the sexes: in 1989-90, 78 per cent of female suicides were by hanging compared with 70 per cent of male, with paraquat ingestion accounting for 20 per cent of female suicides and 27 per cent of male. However, the likelihood that females use less efficacious methods, not resulting in hospitalisation, to a greater extent than males would lead to gender ratios for suicidal acts being greater than those for suicides per se.

Causal Factors

Thus far, it has been established that the high youth suicide gender ratios in Western Samoa

---

6 The gender ratio for suicidal acts will be underestimated if, as is likely, females use methods not resulting in hospitalisation to a greater extent than males.
and Fijian Indians are due to a concentration of female suicides in youth compared with a later and/or less peaked distribution in males. Thus female youth suicide is greater than male despite the overall level of female suicide being lower than that of male. It has also been seen that the age-sex pattern of suicide is a function of sex-specific suicidal behaviour including choice of method of suicide and the age-sex pattern of suicidal acts. In order to understand age-sex patterns of suicide and the high youth suicide gender ratios, therefore, it is necessary to examine, where possible, the factors leading to choice of method and the distribution of suicidal acts.

Durkheim (1897/1952) theorised that the collective inclination to suicide of any society depends on the basic conditions or social structure of that society and remains fairly constant as long as those conditions remain the same. Within a society, rates vary between different groups according to their social environment as determined by a complex of factors. Suicide rates change 'abruptly and completely whenever there is an abrupt change in social environment' (p.138). Halbwachs (1930) explained this in terms of the social hiatuses created by social and cultural disorganisation, hiatuses in which people cannot maintain the will to survive. Such hiatuses are particularly common 'when passing from an old and traditional style of life to a new and more complex type of civilisation' (p.289).

The relevance of these theories to the Pacific is supported by previous research. Studies of suicide in Western Samoa (Baker et al., 1986; Macpherson and Macpherson, 1987) and in Micronesia (Heisel, 1987, 1989; Rubinstein, 1983, 1987, 1992a, 1995) point to societal transition as the broad underlying causal theme of increased levels of youth suicide. Social change resulting from developmental influences involves a challenge to traditional structures, particularly on the part of youth leading to intergenerational conflict and pressures on the younger generation (Rubinstein, 1992b). Thus, suicide rates are highest in youth. However, in that these studies address theory, they have concentrated on how social change translates into high suicide rates amongst male youth. Female suicide has been largely ignored.

How then can high female youth suicide in the Pacific societies of Western Samoa and Fijian Indians be explained? The theory expounded by Durkheim does not adequately explain sex differentials per se, nor indeed age differentials (Gibbs & Martin, 1964:9; Halbwachs, 1930/1978:46). Even if it did, the pattern of experience of these contemporary Pacific populations with respect to age and, in youth, sex is the opposite of that of the late 19th century European populations on which the theory is based. Durkheim did, however, consistently reason (though without elaboration) that since the causes of suicide are social, lower female rates arise from women's lesser involvement in 'collective existence' or the social functions of society (e.g. pp299 & 341). Certainly, gender roles in Western Samoa and Fijian Indians would lead under this assertion to the expectation of lower female rates. It would appear, therefore, that in as far as they define societal involvement gender roles cannot explain the high gender ratios found.

Two demographic factors that Durkheim and Halbwachs identified as protective against suicide are marriage and parenthood: marriage protects males more than females, but the effect of marriage is largely, if not entirely, due to parenthood. Halbwachs (ch.8) also demonstrated the protective effect of increasing parity within marriage, especially amongst females. More recent studies (e.g., Charchon et al., 1993; Trovato, 1991; Veevers, 1973) have verified the protective effect of marriage regardless of parity, but the absence of data on parity precludes examination of the separate effects (Veevers, 1973). Marriage and parenthood might therefore be expected to be associated with age-sex patterns of suicide and hence youth suicide gender ratios.

In Western Samoa and Fijian Indians, suicide rates by marital status and parity are not

---

7 It is not the purpose of this paper to examine the three types of suicide (egotistic, altruistic and anomic) discussed in detail by Durkheim. For a discussion of altruistic and anomic suicide in Western Samoa, see Macpherson and Macpherson (1987). A fourth type, fatalistic suicide, mentioned by Durkheim in a footnote (p.276) might also be relevant, especially for females (see Lukes, 1972:207).

8 Durkheim also argued that suicide rates increase with age because of increased involvement in society at older ages (p.102). Again, Pacific experience does not accord with this argument.

9 The comparison here is between never-married and married persons. It is also the case that married
available, but possible effects can be discerned from overall patterns. The fact that females in both populations marry and attain parenthood at younger ages than males (Fiji, 1989; Western Samoa, 1991) might in part explain the earlier decline in female suicide rates after the initial peak. However, the higher proportions of females than males who are married and parous at age 15-24 would, ceteris paribus, be expected to lead to lower female suicide rates and hence low youth suicide gender ratios, rather than the high ratios found. Furthermore, the possibility of a greater protective effect of marriage and parenthood for males than for females, as suggested by Durkheim, would contribute to high gender ratios at ages beyond which most people are married, which is clearly not the case.

In view of these seeming contradictions, there is clearly a need to examine suicidal behaviour in Western Samoa and Fiji Indians in greater detail to determine the factors leading to high youth suicide gender ratios. This is done in the following sections. For Western Samoa, available data permit the analysis to be framed in terms of the factors separately underlying suicidal acts and mortality rates. For Fiji Indians, however, the analysis is discussed in relation to suicides per se since data on suicide attempts are not available. In that it is gender ratios that are the primary focus of interest, the analysis is concerned with explaining age-sex patterns of suicide rather than absolute levels. This in fact involves explanation of the separate age patterns by sex, with implicit recognition that these factors will also influence relative levels by sex.

Western Samoa

The population of Western Samoa has undergone, and continues to undergo, considerable social change as part of the transition to a modern economy (Baker et al., 1986; Cote, 1997; Macpherson and Macpherson, 1987; Yamamoto, 1994). However, the effects of social change on suicide remain largely unexamined. Available data give no information on the possible correlates of suicide or of suicidal acts and studies are few. The following analysis seeks to relate suicide patterns and the youth suicide gender ratio to socio-cultural factors in the context of social change. Since it has been shown above that the youth suicide gender ratio in Western Samoa is essentially determined by the age-sex pattern of suicidal acts, the analysis is focussed first on the likely determinants of the separate age patterns of suicidal acts and second on the determinants of method of suicide. Patterns of suicidal acts are shown in Figure 2.

![Figure 2](image.png)

Note: relative male and female rates sum to 100

The transition to a modern economy invariably involves changes in the status of women. In Western Samoa, the status of women does not immediately suggest an association with suicide gender ratios. Neither cultural factors nor available indicators (Western Samoa, 1993) would indicate that the status of women is particularly low. Though traditionally formal power lies almost exclusively with men (Meleisea, 1987:ch1), women do play an important role. Within the extended family or 'aiga, females derive their status from their 'aiga and are held in higher esteem as sisters than their brothers. After marriage, their status in their husband’s 'aiga derives from their outsider status and from their husband’s status. The former is low by definition, but the latter increases with age. Thus, women hold power formally and in their own right as sisters, and informally as wives through the influence they exert on their husbands.

---

10 Deoki (1987) obtained marital status and parity for a subset of 1982-83 Fiji Indian suicides.
Marriage is clearly a significant social landmark for females. The low status attached to being a wife and outsider might be considered a possible determinant of patterns of suicidal acts. Indeed, the profound transformation in status that marriage represents (virilocal residence being the norm), and the dual status that married females hold might be considered ancillary determinants. If low status can be equated with lesser involvement in the functions of society, then Durkheim’s assertion would lead ceteris paribus to rates that are low in young adulthood and increasing with age because of the status gained. Figure 2 shows that this is clearly not the case. Nor does the pattern of suicidal acts accord with the notion of low status being somehow linked to high suicide. Rather, it would appear that marriage, and subsequent childbearing, are protective from suicide: not only do rates decline as proportions married and parous increase (at ages 20-29) but the smaller relative decline in 1988-91 also accords with increasing age at marriage and first birth. The fact of choice in marriage and the absence of imperative in relation to childbearing would support such a protective effect. However, the high rates amongst those aged 15-19 in 1988-91, most of whom are unmarried, remain thus far unexplained.

For males, marriage would appear to be largely irrelevant as a factor in suicide levels. The rates in Figure 2 suggest neither a protective nor causative effect: this is true of the separate patterns shown and of comparison over time since male age at marriage is also increasing. The absence of an effect is supported by the fact that marriage represents only a slight change to male status (Schoeffel, 1979:531).

Concern with recognition and status is central to Samoan society, producing tensions and possibly influencing suicide gender ratios. The most significant factor in the determination of status in Samoan society is age. In a gerontocracy such as Samoa, the status of youth is low. The role of adolescents and youth is to serve; service (sauato) is the path to recognition and power, especially for males, and deference to power must be observed (Macpherson and Macpherson, 1987; Schoeffel, 1979). Traditionally, males render service in the form of labour for subsistence activities, though educational attainment and cash income, often earned abroad, form the more modern rites of passage (Cote, 1997; Norton, 1984; Ritchie and Ritchie, 1979-93). Females also render service in this way, but their main role is to uphold the honour of the ‘aiga through their dignity, purity and grace (Freeman, 1983:ch.16; Patterson, 1983; Schoeffel, 1979:139). However, whilst this role is central to the status of sister and determines behavioural norms, it is mainly ceremonial and secondary in everyday affairs to the lowly status of youth.

These roles of service and deference, coupled with the exclusion of youth from decision-making, mean that youth (and therefore low) status can be equated with lesser involvement in the functions of society. Again, however, the suicide patterns seen in Figure 2 refute the notion that low status leads to low suicide rates, suggesting instead a possible link to the high rates found in youth. The existence of such a link is explained by the context of social change. In such a context, the significant status differential between youth and those in positions of power and the authoritarian and punitive exercise of that power (Baiker et al., 1986:157; Booth, unpublished; Freeman, 1983:219; Gerber, 1975:ch.2; Macpherson and Macpherson, 1987; Mageo, 1988), hold the potential for considerable intergenerational conflict, as evident in the increasing numbers of discontented youth (Cote, 1997; Norton, 1984). Thus, suicide rates would be expected to be highest at the ages defining youth. This is in fact the case: the different patterns of suicide between the sexes can be broadly attributed to the differing definitions of youth.

---

11 As far as data accuracy permits estimation, the average age at marriage for females was about 23 years in 1981 and about 24 years in 1991 (calculated from data in Western Samoa, 1981; Western Samoa, 1991). Fertility rates at 15-19 and 20-24 decreased over roughly the same period (Western Samoa, 1983; Western Samoa, 1990).

12 Childbearing or parenthood is the expected greater effect. Samoans value children, but do not denigrate childless women. Indeed, childlessness is perceived as a male shortcoming (Mageo, 1988). Adoption is not uncommon and is considered the normal response to childlessness (Gratton, 1948:11; Ritchie and Ritchie, 1979:34).

13 For males, these averages were 27 in 1981 and 28 in 1991 (calculated from data in Western Samoa, 1981; Western Samoa, 1991)).
For males, the status of youth is synonymous with that of being untitled. The gaining of a title, or matai status, typically occurs in ‘middle age’ (Schoeffel, 1979:531) and represents a major change of status. Since all Samoans are eligible for a title but succession is not automatic (though usually bestowed on males), matai status is an honour to which every male aspires and can expect eventually to attain (Meleisea, 1987; Norton, 1984; Yamamoto, 1994). The Samoan male therefore spends his youth essentially striving to gain recognition. In the context of social change, this increasingly involves reconciling traditional and modern value systems. The tradition that untitled men follow the orders of their matai is challenged by education and by the modern market economy that rewards initiative and individuality (Cote, 1997; Norton, 1984). Indeed, for many youth the cycle of tautua has already been broken: it is no longer tolerable to render service since it is clear that service will never be rendered in return by succeeding generations of youth (O’Meara, 1990:162).

Further, the modern economy raises expectations, but offers little guarantee of success. Indeed, the complexities of the modern economy, not least the interrelatedness of national and foreign economies, especially for migrant labour, render individual success more dependent on the vicissitudes of those economies than on individual effort. It is the growing gap between individual expectations and actual opportunities that Macpherson and Macpherson (1987) have highlighted as the main cause of male youth suicide.

The Samoan male youth is therefore to a large extent powerless. The disillusionment, alienation and intergenerational conflict that ensues (Cote, 1997; Macpherson and Macpherson, 1987; Norton, 1984) contributes to high levels of suicidal acts in youth. The rates in Figure 2 suggest that the frustrations involved in this process increase to age 30 or 35, after which a sharp decline occurs, broadly marking the end of the period of major striving and the beginning of the period when titles are gained. The pattern of male suicide can thus be attributed to the definition and status of male youth.

For females, youth status is less well-defined than for males. Females tend to be regarded as youth until after marriage and their first or second birth. Thus, youth status for females is confined to adolescence and young adulthood. To the extent that youth status is synonymous with the never-married state, its meaning is principally derived from the role of female sexuality in maintaining family honour (Schoeffel, 1979:167). This ‘burden’ of honour is especially onerous in a shame-based culture such as Samoa (Cote, 1997; Macpherson and Macpherson, 1987), and is made all the more oppressive by the fact that male sexuality is indulged as ‘belonging to nature’ (Schoeffel, 1979:532). The sexual exploitation of young women has its roots in the traditional practices of moe totolo14 (Freeman, 1983:244-249; O’Meara, 1990:103-109; Schoeffel, 1979:178-190) and the ceremonial digital deforation of virgins prior to marriage (Freeman, 1983:230-1; Mageo, 1986) and in the male prestige involved (Freeman, 1983:236; O’Meara, 1990:107; Schoeffel, 1979:178). Data on reported offences against morality suggest that sexual exploitation in Western Samoa is relatively common (Freeman, 1983:249&262; Western Samoa, 1996). That these data are deficient, in that they exclude cases where the perpetrator is accepted as husband to avoid shame (O’Meara, 1990:107), cases not made public (O’Meara, 1990:107) and cases dealt with by traditional means, merely underlines the frequency of offence. Thus, the burden of honour is considerable and would be expected to heighten the significance of sexual assault and abuse as determining factors in suicidal acts (Davidson et al., 1996; van Egmond et al., 1993), especially in the context of social change. Very little evidence on cause of suicide is available, but case studies suggest that female suicide is frequently associated with shame and in particular with offences against sexual morality (Macpherson and Macpherson, 1987:316)15.

An important consequence of the burden of honour is restriction. Young unmarried females are closely guarded and constantly chaperoned (Cote, 1997; Mageo, 1988; O’Meara, 1990:108; Schoeffel, 1979:139&167). Any transgression on their part is met

14 Literally ‘sleepcrawling’. The sleepcrawler would digitally rape a sleeping virgin thereby obliging her to elope with him or publicly suffer the shame of losing her virginity (Schoeffel, 1979:182).
15 Macpherson and Macpherson actually report a lack of sex bias for shame suicides. Given the larger number of male suicides overall, this would mean that shame is a relatively more common cause in females than in males.
with severe punishment, which is usually physical (Freeman, 1983:237; Gerber, 1975:97; O'Meara, 1990:108). That despite, or because of, her high ceremonial status as sister and upholder of family honour, the young Samoan female is powerless. Such powerlessness, restriction and punishment would also be expected to be associated with suicide (Counts, 1984; Ferguson and Lynskey, 1997; Mageo, 1988). Both the burden of honour and the restrictions it entails would therefore point to suicide being associated with the never-married state. There are no available data to verify or refute such an association directly. However, the fact that a large part of the burden of honour, the maintenance of purity, disappears on marriage would explain, in part at least, why marriage (and subsequent childbearing) appear to protect from suicide.

The powerlessness and restriction of young females do not end on marriage, however: 'young women, whether single or married are surrounded with restrictions and have the least opportunity to express anger, resentment or aggression' (Schoeffel, 1979:415). Indeed, the transformation in status that marriage represents contributes to the continuation of the lowly status of youth after marriage. It is not until the Samoan female has reached her thirties that freedom of movement and action is attained (Schoeffel, 1979:252). Thus, in as far as suicide is a result of restriction and powerlessness, relatively high rates continue into the early years of marriage. Suicide is therefore associated with youth status rather than the never-married state per se. This association is reinforced by the fact that youth status is loosely conterminous with childbearing in the early years of marriage, which in itself is expected to protect from suicide. As in the case of males, the age pattern of suicidal acts in females is determined by the definition and meaning of the status of youth.

It is in the context of social change and demands for greater freedom that the burden of honour and the restrictions placed on young females form the basis of increased intergenerational conflict and resultant suicide. Parental shame arising from expressions of female sexuality are not only central to this conflict, but are also inevitable in the context of changing norms (Mageo, 1988). In addition to the direct effects of conflict, the centrality of sexuality involves further risk of suicide. The young female's response to conflict is sometimes the rebellious violation of the boundaries of accepted sexual behaviour so as to bring shame to her 'aiga (Gerber, 1975:237; Mageo, 1988; O'Meara, 1990:108), but also to herself. Further, any freedoms gained increase the exposure of young women to the risks of dishonour, in particular the irresponsible sexual behaviour of young males (Freeman, 1983:236; O'Meara, 1990:107; Schoeffel, 1979:178).

For both males and females, therefore, youth status can be associated with suicide. The sex difference in age patterns of suicidal acts is thus attributable to the different definitions of youth. This association is also seen in the changing age patterns of suicidal acts over time. The broadening of the female distribution towards older ages has already been associated with later age at marriage and first birth. For males, the marked reduction in the relative rate at age 30-34 between 1981 and 1988-91 may be partly influenced by changes in the availability of titles. Title-splitting and the creation of new titles for political gain resulted in a rapid increase in titles during the 1960s, but about 2000 were deregistered in 1969 (Meleisea, 1987:200-205; Norton, 1984).

The greater competition for the legally valid titles that remained would have led to titles being gained at older ages. Continued title-splitting during the 1980s would have eased the competition, with the age at which titles were gained being reduced. In addition, the shift to younger suicide in both females and males, seen in Figure 2 in the higher relative rates at age 15-19 in 1988-91, is consistent with the general tendency for modernising influences to affect younger and younger people, a tendency that Samoa has not escaped (Booth, unpublished). This shift to younger suicide is the only feature of Samoan suicide to have changed in recent years (Booth, forthcoming(b)).

16 The erosion of the traditional institution of unmarried females has served to increase this powerlessness. This and other Western influences have resulted in a loss of status of females relative to males (Cote, 1997).

17 Among female urban underemployed youth, 49 per cent cited improving their relationship with their parents as necessary for improving their social life (Western Samoa, 1995).

18 Until universal suffrage was introduced in 1990, voting rights were restricted to mami.
The more marked relative increase in suicide at age 15-19 in females may also be related to increased restrictions as a result of the continuing transition towards the nuclear family and modern housing styles (Cote, 1997; Mageo, 1988).

The above discussion has shown that youth status is a function of gender and power. It follows that in the context of social change the age-sex pattern of suicidal acts and hence the youth gender ratio for suicidal acts are also determined in part at least by gender and power19. Thus, gender and power also contribute to the youth gender ratio for suicides per se. The total effect of these factors on suicide per se, however, also derives from their role in determining the fact of sex-equality in choice of method and fatality rates.

When it is considered that in general females are likely to be making a cry for help and frequently choose toxic ingestion as method of suicide, the high proportion of Samoan female suicidal acts involving toxic ingestion is not unusual. Evidence from 1981-83 suggests that Samoan females are indeed more likely than males to be making a cry for help (Booth, forthcoming(b)). However, when the toxic substance is paraquat, fatality rates are high, translating many cries for help into tragic mistakes. Thus, paraquat ingestion can be implicated in high female suicide rates relative to male. The reason why males also choose paraquat ingestion in high proportions is unclear. Possible explanations include knowledge of the high toxicity of paraquat, its ready availability, and a 'suicide culture' of paraquat ingestion. It would appear that paraquat ingestion is used by males as an effective alternative to more violent methods such as hanging or overt bodily harm.

The availability of paraquat is clearly a major determinant of its use. Numerous studies have shown that choice of method is largely determined by the methods at hand (e.g., (Charlton et al., 1993; Clarke and Lester, 1989; Kreisman and Platt, 1984; Oliver and Hetzel, 1972). Paraquat was introduced into Samoa in 1972 (Bowles, 1985), and as such represents an agent of development and social change. Its introduction and the subsequent control over access are effectively a function of gender and power concerns. When in the early 1980s it was realised that paraquat was the leading method of suicide, representations were made by health authorities to ban its importation, but without success. At this national level, the predominantly male economic and agricultural concerns took precedence over the mainly female health and social concerns. Similarly at the community level, access to terms of the distribution and storage of paraquat is largely the responsibility of matai. Thus, not only do gender and power determine access to paraquat, but the greater propensity of females to be making a cry for help results in that access being instrumental in determining high female suicide levels and hence high gender ratios.

Gender and power thus contribute to the determination of the high youth suicide gender ratio in Western Samoa in two distinct ways: first through the definition of youth status and hence the age-sex pattern of suicidal acts, and second through control over access to paraquat and the determination of fatality rates. Both are important: the high youth suicide gender ratio would not be achieved if the effect of gender and power through either were diminished. In other words, without the existing pattern of suicidal acts, equality of fatality rates would not result in the high youth suicide gender ratio; nor would the existing pattern produce the high ratio if female fatality rates were lower than male, as would in all likelihood be the case if paraquat were not accessible. The fact that the youth gender ratio for suicidal acts is low compared with other populations20 underlines the critical role of accessibility of paraquat in determining the high youth suicide gender ratio.

**Fiji Indians**

Examination of suicide amongst Fiji Indians is necessarily based on suicides per se because of the unavailability of data on suicidal acts. The existence of several previous studies demonstrated with respect to suicidal acts at all ages (Booth, forthcoming(b)).

20 Any underestimation (see footnote 7) would be counterbalanced by the corresponding overestimation of the female fatality rate. Such errors in reporting are separate to the effect of...
greatly facilitates this analysis of age-sex patterns and the youth suicide gender ratio. These studies have not, however, examined the causes of suicide in any depth nor have they addressed the issue of social change.

The two demographic factors identified by Durkheim and Halbwachs as protective from suicide, namely marriage and childbearing, might be expected to be significant factors in determining the youth suicide gender ratio in Fiji Indians because of their central importance in Indian cultures. Arranged marriage is still very much the norm in Fiji Indian societies21. Marriage does not appear to be a major protective factor, however. Indeed, various studies have suggested that the early years of marriage are positively associated with young adult female suicide because of disharmony with husband and/or relatives-in-law (Deoki, 1987; Haynes, 1984; Karim and Price, 1975; Ree, 1971). Even before marriage, issues relating to marriage and sexuality lead to suicide in female youth: these include familial disputes and tensions concerning proposed marriage, whether arranged or 'love', and problems relating to pre-marital relationships (Deoki, 1987; Haynes, 1984; Karim and Price, 1975). Female suicides due to pressures to succeed at school also highlight the tensions surrounding marriage, since education is the passport to a 'good' marriage and/or avoidance of arranged marriage. Within marriage, evidence of the protective effect of parenthood against female suicide was found in several early studies (Haynes, 1984; Ree, 1971). Again, however, this factor was more positive, in inducing suicide (amongst the nulliparous), than protective (amongst the parous), since childlessness was often a direct cause (Haynes, 1984; Ree, 1971). However, Deoki (1987) found no such association, possibly suggesting a diminishing effect.

For males, the most common reported causes of suicide are economic and family conflict (Haynes, 1984; Karim and Price, 1975). The absence of a formal transitional marker between adolescence and adulthood commonly leads to intergenerational conflict about status and treatment (Brenneis, 1990). Other causes include status concerns such as the shame of legal action or of financial or academic failure (Haynes, 1984; Karim and Price, 1975), indicative of the importance of reputation to social status (Brenneis, 1990). Haynes (1984) points to the emphasis on education and achievement, as well as to the frustrations of the family farm, including isolation and authoritarian paternal control. Furthermore, the element of choice in marriage and the tendency to apportion blame for childlessness (or sonlessness) on females (Wilson, 1978) suggest that marriage and parenthood would have, if anything, a protective effect, albeit at somewhat older ages due to later marriage. The differing age patterns of suicide between the sexes are clearly influenced by these different causal profiles. For females, the association of sexuality, marriage and childbearing with suicide results in a clear focus on youth. For males, the causes are less focused on any particular age group. Thus, the male distribution is less peaked than the female, as Figure 1 shows. The greater female focus on youth contributes to the high youth suicide gender ratio.

These different causes of suicide point to gender as an important determinant of the high youth suicide gender ratio. Further, the manner in which sexuality, marriage and childbearing influence female suicide would appear to point to the low status or powerlessness of women as an underlying cause. Indeed, low status was identified as such in several studies (Haynes, 1984; Karim and Price, 1975; Ree, 1971) and this accords with studies of Indian communities elsewhere (Freed and Freed, 1989; Mehta, 1990). The fact that gender ratios are highest at young ages would therefore appear to stem from the focus of women's powerlessness on sexuality, marriage and childbearing. This focus is culturally-determined: in all Indian societies, the centrality of female virginity in maintaining family honour and of women's roles in arranged marriage and the reproduction of (male) labour lead to restrictive and punitive measures to ensure women's compliance (Wilson, 1978: 1-15). In the early years of marriage in particular, the status of women is especially low (Haynes, 1984).

However, whilst the low status of women may contribute to female suicide, it cannot in itself account for high suicide gender ratios. If low status were the sole underlying cause, reducing access to parity.

21 There are several distinct communities within the Fiji Indians population. These include three main Hindu communities (Cochrane, 'North Indians' and 'South Indians'), Muslims and a small Sikh community. Intermarriage is not practiced except between North and South Indians.
then high suicide gender ratios would be the norm rather than the exception because of the universality of lower female than male status. Furthermore, if low status can be equated with lesser involvement in collective society, Durkheim's assertion would lead to the expectation of low gender ratios. The explanation for these seeming contradictions lies in the context of social change. As in any population undergoing development, contemporary Fiji Indian society has undergone considerable transition in recent decades. Based on Durkheim, Hallwachs and the above-cited studies of other Pacific populations, such transition would be expected to lead to increased levels of suicide. Whilst the data to monitor absolute levels are not available, the gender dimensions of social change can be examined in relation to suicide patterns and gender ratios.²²

For females, the main focus of social change has been a rapid transition to later marriage, accompanied by rising levels of education and employment. During the period 1956 to 1986, the female average age at marriage increased from 18.1 to 21.6 years (Fiji, 1989). Proportions married declined correspondingly: at 15-19 from 46 to 16 per cent and at 20-24 from 91 to 66 per cent. Major increases in female literacy and educational attainment took place in 15-24 year olds and female participation in the labour force at this age reached 20 per cent (Fiji, 1989; Fiji, 1994). Such a transition has clear implications for sexuality and childbearing. The changing pattern of suicide accords with this transition. Increasing age at marriage implies both later marital/familial disharmony and later childbearing and may in part account for the broadening of the peak in Figure 1. At the same time, later marriage and rising levels of education and employment increase exposure to the possibility of premarital relationships, maintaining relatively high suicide rates at 15-24. Furthermore, the apparent diminishing importance of nulliparity may be partly due to increased age at first birth, itself due to later marriage (Booth, 1994), since teenage subfecundity will have a reduced effect and women facing nulliparity will be somewhat more mature.

In contrast to this major transition among females, only a relatively minor transition occurred among males during the period in question. Gains in literacy and educational attainment were relatively modest since initial levels were high. Similarly, the labour force participation rate remained fairly constant at 80-90 per cent (Fiji, 1989). Furthermore, though the male average age at marriage increased from 21.7 to 24.3 years (Fiji, 1989), this did not affect those aged 15-19 since the proportion married in 1956 was only 7 per cent, declining to 3 per cent in 1986. The only transition for male youth was thus in the proportion married among those aged 20-24, which declined from 62 to 36 per cent, but its significance for youth suicide would be expected to be small because marriage does not feature as an important cause. Thus not only has recent social change been less pronounced for males than for females, but it has also been less focussed on youth. Both contribute to the high youth suicide gender ratio.

The greater significance of social change for suicide in females than in males is supported by examination of its timing in relation to youth suicide gender ratios. The most rapid changes took place in the 1950s and 1960s with continued but slower changes thereafter.²³ Re-examination of early data for Macuata Province (Haynes, 1984; Ree, 1971), where suicide rates were particularly high, shows that the youth suicide gender ratio was roughly 3.3 in 1962-66 but declined to 1.7 in 1979-82. At the national level, the ratio declined from 1.44 in 1971-72 (calculated from data in Karim and Price (1975)) to 1.05 in 1982-83, with a slight increase to 1.11 in 1989-90. Youth suicide gender ratios were thus higher during the period of most rapid social change for the young female population.

This transition towards later marriage and increased education and employment has not involved a commensurate change in attitudes towards females, especially with regard to sexuality, arranged marriage and reproduction. Daughters are still regarded as liabilities, the expense of their marriage reflecting family social status (Haynes, 1984). The greater importance attached by parents to arranged marriage and the control of female sexuality than to female education is seen in the withdrawal of girls from school. Females are under-

²² The coup of 1987 imposed an additional element of stress on the Fiji Indian population. The effect on suicide and on the youth suicide gender ratio is unknown.

²³ Female average age at marriage was 20.3 in 1966 and 21.1 in 1976; corresponding male values are 23.4 and 23.5. Female labour force participation (aged 15+) was 12 per cent in 1976 and 18 per cent in 1986 (Fiji, 1989).
represented in Forms VI and VII (ages 17-18) despite higher female school attendance rates up to Form V and lower class repeater rates at both primary and secondary levels (Fiji, 1988; Fiji, 1994). The persistence of arranged marriage underlines its continued importance in building patriarchal social networks, which now extend to Fiji Indian emigrant-destination countries such as Canada, USA and Australia. Further evidence of unchanging social attitudes is seen in the constancy over time of the average interval between marriage and first birth (Booth, 1994): this one-year interval is indicative of the importance attached to childbearing immediately after marriage.

These unchanging attitudes in the face of social change clearly hold the potential for considerable intergenerational conflict for female youth. Furthermore, the fact that social change is focussed on the same issues on which women's powerlessness is focussed, namely sexuality, marriage and childbearing, can only serve to heighten that conflict and to focus it more clearly on those issues. It is to be expected, therefore, that female suicide is associated with sexuality, marriage and childbearing. Thus, the association between suicide and sexuality, marriage and childbearing is not a result of low female status per se, even when focussed on these issues, but the result of the increase in female status (which is focussed on the same issues) without a commensurate change in relevant attitudes. It is young women's challenge to gender and power relations, through the expression of their sexuality and the questioning of arranged marriage and their reproductive role, that leads to intergenerational conflict and ultimately high youth suicide rates. The fact that over the same period only a minor transition occurred in males, with correspondingly less potential for conflict and without a focus on youth, leads to high youth suicide gender ratios.

Discussion
This analysis has sought to explain the age-sex patterns of suicide in Western Samoas and Fiji Indians. For both populations, the concentration of female suicides in youth (ages 15-24) compared with a later and/or less peaked distribution in males results in higher female than male youth suicide rates, despite the overall level of female suicide being lower than that of male.

It has been argued that these sex differences in the age patterns of suicide are to a large extent determined by the closely inter-related factors, gender and power in the context of social change. The context of social change is important, since gender and power alone do not necessarily lead to high suicide rates and high suicide gender ratios. In traditional societies, for example, gender and power structures are generally accepted. Social change leads youth, as the section of society most influenced by social change, to challenge these structures, resulting in intergenerational conflict and increased suicide rates. Indeed, it is the context of social change that explains the seeming contradiction between Pacific experience and Durkheim's assertion that lower female suicide is due to women's lesser involvement in the social functions of society. The recent experience of Samoan and Fiji Indian females is one of considerable social change in comparison with that of females in late 19th century Europe, though the Pacific female's involvement in the functions of society is at least as slight as was the European. The same is true of age.

Whilst gender and power are common factors underlying suicide patterns in both sexes, they operate in different ways for females and males. For females, the more proximate influences on suicide patterns are sexuality, marriage and childbearing. For males, status concerns are paramount. This is true of both populations, despite the dissimilarity of the cultures involved.

For females, the influence of sexuality, marriage and childbearing is seen most clearly in the case of Fiji Indians, but it is also true of Western Samoans since it is essentially sexuality, marriage and childbearing that define female youth status. The similarities are clear. In both cultures, family honour is invested in the purity and virginity of their daughters, with institutionalised control of sexuality through restriction and punishment. The status invested in their virginity is lost on marriage, leaving only the lowly status of the female gender (for Fiji Indians) or of youth (in Western Samoa). Furthermore, in both cultures, the early years of marriage define a period when females are subject to further control, and women gain status through childbearing, either directly (for Fiji Indians) or as a marker of age (in Western Samoa). The nature of
these traditional female roles is essentially passive and autonomy is slight. Social change renders conformity to these roles and the lack of autonomy increasingly unacceptable. The resulting challenge to both gender and power is considerable. Further, the authoritarian and punitive response on the part of patriarchal power serves to heighten the perception of powerlessness on the part of female youth, leading to increased levels of suicide.

For males, socio-economic status is gained through achievement and it is the expectation of society that young males achieve. The influence of status on suicide is most clearly seen in Western Samoa where status is highly institutionalised in the *mutai* system. It is also seen in Fiji Indians, where economic and status concerns feature explicitly in stated reasons for suicide and implicitly in much of family conflict. Though it is less focussed on any specific age than the influences on females, and remains of some concern through much of adult life, the influence of status operates mainly at the age of major striving to achieve, in other words at young adult ages. Despite societal expectations, the traditional male role involves a degree of autonomy since the mode of achievement is not prescribed. Further, social change does not involve a challenge to gender nor render unacceptable the role of achievement itself. Nevertheless, the male perception of powerlessness is heightened. In the context of social change, the achievement of socio-economic status is dependent less on individual effort and more on the economic environment in which that effort is made. Thus, autonomy is diminished and powerlessness increased. More significantly, the shortfall between individual expectation and achievement heightens the perception of powerlessness in male youth.

It is argued here that the perception of powerlessness is a necessary part of the process of suicide. Just as gender and power do not lead to suicide in the absence of social change, it is the perception of powerlessness rather than powerlessness per se that leads to suicide. This is seen in females where the perception of powerlessness is increased, though the challenge to gender and power in fact stems from increased female status as a result of social change. This is not to deny that powerlessness is real, but rather to emphasise its lack of acceptability in the face of social change. It is the perception of powerlessness that leads both male and female youth to challenge existing power structures. The result is intergenerational conflict, both furthering perceived powerlessness and contributing to suicide. The extent to which powerlessness and the perception of powerlessness are gender-based will influence suicide gender ratios. Though the relative effects on female and male suicide levels cannot be ascertained from available data, it is clearly the case that any factor influencing age patterns of suicide must also influence levels.

It is recalled that this discussion of the ways in which gender and power operate concerns suicide in Fiji Indians and suicidal acts in Western Samoa. Comparison between the two populations would ideally focus on suicidal acts in both, but this is precluded by the absence of such data for Fiji Indians. The above comparison is valid on two grounds, however. First, identification of the ways in which gender and power influence suicide in Fiji Indians is based on stated reasons for suicide and not on consistencies between suicide patterns and possible related factors. Second, the age patterns of suicide and suicidal acts within sex differ only to the extent that fatality rates vary by age, which is unlikely to be significant.

The fact that the underlying causes of suicide and the ways in which they operate are similar in these two culturally-dissimilar populations would indicate their possible wider applicability to other populations. Whilst gender and power have been identified as the underlying causes of the unusually high youth suicide gender ratios, these factors clearly operate in all populations to some degree. Indeed, there is no evidence to suggest that the high youth suicide gender ratio is due to underlying causal factors that are somehow unique to, or exaggerated in, these Pacific populations. In the case of Western Samoa at least, the youth gender ratio for suicidal acts is not unusually high.

---

24 Females seeking to achieve socio-economic status in the modern economy are subject to this influence in addition to sexuality, marriage and childbearing.

25 Males not conforming to the role of achievement risk conflict and hence suicide. Females seeking to achieve socio-economic status are essentially non-conformist, adding to the difficulties in meeting individual expectation.
and in fact appears to be low in comparison with other populations. Whether the youth gender ratio for suicidal acts is also low for Fiji Indians remains unknown due to the absence of relevant data.

Rather than the age-sex pattern of suicidal acts, it is sex-equality in fatality rates that is the unusual feature of Samoan suicide. Since it is the use of paraquat ingestion as predominant method of suicide by both females and males that results in fatality rates being equal, paraquat ingestion is a significant factor in the determination of the youth suicide gender ratio. It is paraquat ingestion that translates the low youth gender ratio for suicidal acts into the high youth gender ratio for suicides per se. Since, as has been shown, gender, power and social change also underlie paraquat ingestion, the high youth suicide gender ratio can be largely attributed to the interaction of the effects of gender, power and social change on the age-sex pattern of suicidal acts and on paraquat ingestion. For Fiji Indians, the significance of method of suicide in determining the youth suicide gender ratio remains unknown. However, it is clearly the case that if the sex-balance in fatality rates conforms to the norm of significantly lower female fatality rates than male, a higher gender ratio for suicidal acts than for suicides per se would result, underlining gender in causal factors to a greater extent. On the other hand, an unusual degree of sex-equality in fatality rates would suggest similar levels of use of effective methods in suicidal acts by both females and males. Whilst it is noted that almost all suicides of both sexes are by hanging or paraquat ingestion (Table 1), this does not imply sex-equality in fatality rates.

Conclusion
This analysis has identified gender and power in the context of social change as the underlying determinants of the age patterns by sex of suicidal acts in Western Samoa and of suicides per se in Fiji Indians. These factors also influence the relative levels of male and female suicide, and are thus determinants of the youth suicide gender ratio. It has been shown that for females, gender and power influence suicide patterns through sexuality, marriage and childbearing, and that for males the main influence is through socio-economic status. The context of social change is an essential criterion since it is in this context that the perception of powerlessness is heightened. These factors do not necessarily lead to high youth suicide gender ratios, however. The case of Western Samoa shows that the youth gender ratio for suicidal acts is low, and that it is only because fatality rates are equal that the youth suicide gender ratio is high. Thus method of suicide can be instrumental in determining high suicide gender ratios. The fact that in the Samoan case, choice of method is also determined by gender and power underlines the importance of these factors in determining suicide patterns and the suicide gender ratios.

Acknowledgments
I am grateful to the Fiji Police Force and the Western Samoa Department of Health for access to unpublished data. Adrian Hayes, Steve Kuniz, Geoff McNicoll, Penny Schoefield and Chris Wilson made useful comments on an earlier version of this paper.

References


Booth, Heather, forthcoming(b). The gender dimension in Pacific suicide: the case of Western Samoa, in Margaret Jolly and Vicki Lukere (eds.), Engendering Health in the Pacific (working title).

Booth, Heather, unpublished. Focus group discussion with Samoan youth.


Brenneis, Donald, 1990. Dramatic gestures: the Fiji Indian pancayat as therapeutic event, in


Schoeffel, Penelope, 1979. _Daughters of Sina: A Study of Gender, Status and Power in Western Samoa_. Unpublished PhD, Australian National University, Canberra.


